

**SECTION 000101
PROJECT TITLE PAGE**

**PROJECT MANUAL
FOR
OCC SF25-003 – DRIVING PAD AND STORAGE**



Barton Malow

BUILDERS

**22322 RUTLAND DR
SOUTHFIELD, MICHIGAN 48075**

DATE: APRIL 23, 2025

PREPARED BY:

BARTON MALOW BUILDERS



END OF SECTION 000101

**SECTION 000102
PROJECT INFORMATION**

PART 1 GENERAL

1.01 PROJECT IDENTIFICATION

- A. Project: Driving Pad and Storage
- B. Bid Package Number: SF25-003
- C. Located at: 22322 Rutland Dr.
- D. Southfield, Michigan 48075
- E. Owner: OCC
- F. Owner's Project Number: SF25-003
- G. 2900 Featherstone Rd. .
- H. Auburn Hills, MI, 48326
- I. Construction Manager: Barton Malow Builders
- J. 26500 American Drive
- K. Southfield, MI 48034
- L. 947-226-0577
- M. Architect: Integrated Design Solutions (IDS)
- N. Architect's Project Number: 24140-1000
1441 W Long Lake Rd #200
Troy, MI 48098

1.02 NOTICE TO PROSPECTIVE DESIGN-BUILDERS

- A. These documents constitute an invitation to prospective Design-Builders to submit qualifications and proposals for the design and construction of the project described below.

1.03 PROJECT DESCRIPTION

- A. Contract Terms: Lump sum (fixed price, stipulated sum).

1.04 PROJECT CONSULTANTS

- A. The Architect and Engineer, hereinafter referred to as Architect/Engineer: Integrated Design Solutions (IDS)
 - 1. Address: 1441 W Long Lake Rd #200
 - 2. City, State, Zip: Troy, MI 48098
 - 3. Phone/Fax: 248-823-2100

1.05 PROCUREMENT TIMETABLE

- A. Pre-Construction Conference: May 7th, 2025 at 1:00 P.M.
- B. Last Request for Information Due: May 13th, 2025
- C. Proposal Due Date: May 22th 2025, before 2 PM local time.
- D. Proposal Opening: Same day, 2 PM local time.
- E. Post-Bid Interviews: Tentatively week of May 26th, 2025
- F. Notice of Award: TBD.
- G. Proposals May Not Be Withdrawn Until: 90 days after due date.
- H. The Owner reserves the right to change the schedule or terminate the entire procurement process at any time.

1.06 PROCUREMENT DOCUMENTS

- A. Availability of Documents: Complete sets of procurement documents may be viewed & downloaded via Building Connected.
- B. Documents are on display at the offices of the following construction plan rooms:
 - 1. Building Connected and Barton Malow Plan Room

1.07 BID SECURITY

- A. Bids shall be accompanied by a security deposit as follows:
 - 1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.
 - 2. Certified check in the amount of a sum no less than 5 percent of the Bid Amount

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 000102

**SECTION 000103
PROJECT DIRECTORY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Identification of project team members and their contact information.

1.02 OWNER:

- A. Name: OCC
 - 1. Address Line 1: 2900 Featherstone Rd
 - 2. City, State, & Zip Code: Auburn Hills, MI, 48326
 - 3. Telephone: 248-522-3400
- B. Primary Contact: All correspondence from Contractors to the Architect IDS shall be through Barton Malow Builders, unless alternate arrangements are mutually agreed upon at pre-construction meeting.
 - 1. Title: Project Engineer
 - 2. Name: Nicholas Sesi
 - 3. Email: Nicholas.sesi@barotonmalow.com

1.03 CONSULTANTS:

- A. Integrated Design Solutions: Design Professional of Record. All correspondence from Construction Manager regarding construction documents authored by Architect/Engineer's consultants will be through Barton Malow Builders , unless alternate arrangements are mutually agreed upon at pre-construction meeting.
 - 1. Company Name: Integrated Design Solutions
 - a. Address Line 1: 1441 W Long Lake Rd #200
 - b. City, State Zip Code: Troy, MI 48098.

1.04 CONSTRUCTION MANAGER:

- A. Company Name: Barton Malow Builders
 - 1. Address Line 1: 26500 American Drive
 - 2. City, State & Zip Code: Southfield, Mi 48034
- B. Primary Contact:
 - 1. Title: Project Engineer
 - 2. Name: Nicholas Sesi
 - 3. Email: Nicholas.sesi@bartonmalow.com

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 000103

**SECTION 000110
TABLE OF CONTENTS**

PROCUREMENT AND CONTRACTING REQUIREMENTS

1.01 DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

- A. 000101 - Project Title Page
- B. 000102 - Project Information
- C. 000103 - Project Directory
- D. 000110 - Table of Contents
- E. 001113 - Advertisement for Bids
- F. 002113 - Instructions to Bidders
- G. 002200 - Work Scopes
- H. 003100 - Available Project Information
- I. 003200.01 - SUB PREQUALIFICATION and BIDDING
- J. 004000 - Procurement Forms and Supplements
- K. 004100 - Bid Form
- L. 004325 - Substitution Request Form - During Procurement
- M. 005200 - Agreement Form
- N. 006000 - Project Forms
- O. 007100 - Contracting Definitions
- P. 007200 - General Conditions
- Q. 007300 - Supplementary Conditions

SPECIFICATIONS

2.01 DIVISION 01 -- GENERAL REQUIREMENTS

- A. 011000 - Summary
- B. 012000 - Price and Payment Procedures
- C. 012100 - Allowances
- D. 012200 - Unit Prices
- E. 012300 - Alternates
- F. 012500 - Substitution Procedures
- G. 013000 - Administrative Requirements
- H. 013114 - Coordination Drawings (Not 3D)
- I. 013216 - Construction Progress Schedule
- J. 013553 - Security Procedures
- K. 013700 - 3D COORDINATION
- L. 014000 - Quality Requirements
- M. 014100 - Regulatory Requirements
- N. 014216 - Definitions
- O. 015000 - Temporary Facilities and Controls
- P. 015100 - Temporary Utilities
- Q. 015213 - Field Offices and Sheds
- R. 015500 - Vehicular Access and Parking

SF25-003 Driving Pad and Storage

- S. 015713 - Temporary Erosion and Sediment Control
- T. 015813 - Temporary Project Signage
- U. 017000 - Execution and Closeout Requirements
- V. 017120 - ON-SITE PROJECT SAFETY
- W. 017123 - Field Engineering
- X. 017419 - Construction Waste Management and Disposal
- Y. 017800 - Closeout Submittals
- Z. 017900 - Demonstration and Training

2.02 DIVISION 34 -- TRANSPORTATION

END OF SECTION 000110

**SECTION 001113
ADVERTISEMENT FOR BIDS**

FROM:

1.01 CONSTRUCTION MANAGER (HEREINAFTER REFERRED TO AS BARTON MALOW BUILDERS):

- A. Address:
26500 American Drive
Southfield, Mi 48034

1.02 AND THE ARCHITECT/ENGINEER (HEREINAFTER REFERRED TO AS IDS):

- A. Address:
1441 W Long Lake Rd. #200, Troy, MI, 48098

1.03 AND THE OWNER (HEREINAFTER REFERRED TO AS OCC:

1.04 TO: POTENTIAL BIDDERS

- A. Barton Malow Builders requests Bid Proposals on behalf of Owner for the construction of OCC SF25-003 Parking Deck Restoration work. Bid Proposals will be received via Building Connected.
1. Electronic bids are to be submitted via Building Connected.
 - a. A bid opening will be held via live stream and physical bid opening.
 - 1) Live stream can be viewed at
 2. Alternatively, Bidder's may, but shall not be obligated to, submit bids electronically via Building Connected. If a Bidder chooses to submit an electronic bid, it assumes any and all risk related to software, connectivity, or any other issues related to the electronic bidding process. It is further recommended, but not required, that any electronic bids be submitted at least two hours before the deadline for bid submission to confirm that the bid has been timely, accurately, and completely received.
 - a. To the attention of:
 - 1) Barton Malow Builders
 - 2) 2900 Featherstone Rd
 - 3) Auburn Hills, Michigan 48326
 - 4) Proposals must be sealed with Bidder's name on the outside of the envelope and designated as follows:

Sealed Proposal Bid # Enter number only
Project Name: Parking Deck Restoration
Bid Package Number: SF25-003
Bid Category:
Subcontractor/Vendor Name, Address, Phone Number
- B. Proposals shall be based on the requirements set forth in the Barton Malow Builders project manual dated Design Professional's Project Number and construction bidding documents prepared by IDS project drawings and specifications dated April 3, 2025 for:
1. Bid Category: All
- C. Bidding Documents will be available for examination and distribution on or after 12 am local standard time on April 29, 2025 . Examination may be made at: Barton Malow Builders's Site Office, Building Connected, or CAM.
- D. Accepted Bidders will be required, as a condition precedent to award of Contract, to furnish, satisfactory Performance Bond and Payment Bond and Certificates of Insurance as required in the Project Manual
- E. Project is subject to state sales and/or use taxes and Bidder is required to include such taxes in its Bid Proposal.
- F. Project is not subject to prevailing wage rates.

SF25-003 Driving Pad and Storage

- G. Barton Malow Builders has been contracted by the Owner in the capacity of Construction Manager for the Project, and shall act as representative of the Owner to the extent required/allowed under its Owner contract.
- H. A required pre-bid conference and site visit/tour will be held for all trades at 1:00 pm local standard time on May 7th, 2025 at: All Bidders are responsible for attendance at the pre-bid conference. Pre-bid conference minutes will be distributed to all attendees and invited bidders. Information disclosed in the pre-bid conference minutes will be considered part of the Bidding and Contract Documents.
OCC SF25-003 Driving Pad and Storage
22322 Rutland Dr. .
Southfield, Michigan 48075
- I. Bidders may be required to be pre-qualified to the requirements described in Document 002113 - Instructions to Bidders for this bid package by Barton Malow Builders before document distribution or receipt of bids per the Instructions to Bidders. Barton Malow Builders reserve the right to request qualification forms or additional information from any Bidder before issuing Bidding Documents, receiving Bid Proposals or awarding the Agreement.
- J. Refer to other bidding requirements described in Document 002113 - Instructions to Bidders and Document 003100 - Available Project Information.
- K. Bid Proposals shall be on forms furnished by Barton Malow Builders via Building Connected. Bidders shall not withdraw or revoke Bid Proposals for a period of 90 Days after date for receipt of Bid Proposals.
- L. Bidders will be required to submit with their Bid Proposals a Bid Security, in the amount of 5% of base bid, by a qualified surety authorized to do business in the state where the Project is located.
- M. Bidders with an Experience Modification Rate (EMR) greater than 1.0 may not be considered for contract award.
- N. The successful bidder will be required to enter into a contract with OCC on the AIA Document A132-2019 Standard Form of Agreement between Owner and Contractor, Construction Manager as Advisor Edition.
- O. The Owner reserves the right to accept or reject any or all offers.

END OF SECTION 001113

**SECTION 002113
INSTRUCTIONS TO BIDDERS**

SUMMARY

1.01 DOCUMENT INCLUDES

- A. Invitation
 - 1. Bid Submission
- B. Bidding Documents and Contract Documents
 - 1. Definitions
 - 2. Contract Documents Identification
 - 3. Availability
 - 4. Pre-bid RFI's, Inquiries, and Addenda
 - 5. Product/Assembly/System Substitutions
- C. Site Assessment
 - 1. Site Examination
 - 2. Prebid Conference
- D. Qualifications
 - 1. Qualifications
 - 2. Prequalification
 - 3. Subcontractors/Suppliers/Others
- E. Bid Submission
 - 1. Submission Procedure
- F. Bid Enclosures/Requirements
 - 1. Consent of Surety
 - 2. Performance Assurance
 - 3. Insurance
 - 4. Bid Form Requirements
 - 5. Fees for Changes in the work
 - 6. Bid Form Signature
 - 7. Additional Bid Information
 - 8. Selection and Award of Alternates
- G. Offer Acceptance/Rejection
 - 1. Duration of Offer
 - 2. Acceptance of Offer

1.02 RELATED DOCUMENTS

- A. Document 011000 - Use of Premises.
- B. Document 001113 - Advertisement for Bids.
- C. Document 003100 - Available Project Information.

INVITATION

2.01 BID SUBMISSION

- A. By making its bid, all bidders represent that:
 - 1. Bidder has carefully read, reviewed and understands the Bidding Documents and its Bid Proposal is made in accordance therewith.
 - 2. Bidder's Bid Proposal is based upon the materials, systems, equipment, terms and conditions required by the Bidding Documents without exception.
 - 3. Bidder certifies that it:
 - a. has visited and examined the project site.
 - b. has carefully reviewed the Bidding Documents.
 - c. has compared its examination of the project site with the Bidding Documents.

- d. is satisfied as to the condition of the project site, any surface or subsurface obstruction, the actual levels, and all excavating, filling in, removal and demolition, measurements and quantities involved in the Work.
 - e. is familiar with weather conditions of the Project area.
 - f. has taken account of all of these factors in preparing and presenting its Bid Proposal.
- 4. Bidder further certifies that it:
 - a. has fully acquainted itself with the character and extent of the Owner's, Barton Malow Builders's and other Contractor's operations in the area of the Work.
 - b. has taken account of coordination of operations of others in its construction plans set forth in the Bid Proposal.
- 5. No change orders will be issued to the Contractor for or on account of costs or expenses occasioned by its failure to comply with the provisions of this paragraph, or by reason of error or oversight on the part of the Contractor, or on account of interferences by the Owner's, Barton Malow Builders's or other contractor's activities.
- 6. The Bidder, by submitting its Bid Proposal, represents that it has carefully reviewed the project schedule, along with the related requirements of the Project's Schedule and Phasing, and acknowledges that these are acceptable and have been taken into account in preparing its Bid Proposal.
- B. Bids signed, executed, and dated will be received via Building Connected before 2:00 p.m. local standard time on May 22nd, 2025.
 - 1. Alternatively, Bidder's may, but shall not be obligated to, submit bids electronically via Building Connected. If a Bidder chooses to submit an electronic bid, it assumes any and all risk related to software, connectivity, or any other issues related to the electronic bidding process. It is further recommended, but not required, that any electronic bids be submitted at least two hours before the deadline for bid submission to confirm that the bid has been timely, accurately, and completely received.
- C. Offers submitted after the above time shall not be opened.
- D. Offers will be opened publicly immediately after the time for receipt of bids.
 - 1. A live stream bid opening will be held via live stream and a physical bid opening will still be available.

2.02 INTENT

- A. The intent of this Bid request is to obtain an offer to perform Work to complete OCC SF25-003 Driving Pad and Storage located at 22322 Rutland Dr. Southfield, MI for a Stipulated Sum contract, in accordance with Contract Documents.

2.03 CONTRACT TIME

- A. Perform the work within the Preliminary Project Schedule time stated in section 013216-Schedule & Phasing.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 DEFINITIONS

- A. **"Addenda"** means the written and graphic instruments issued by the Architect and/or Construction Manager prior to the execution of the Agreement that modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections.
- B. **"Agreement"** means the document defined in the Project Manual, including all other documents incorporated by reference in the Agreement.
- C. **"An Alternate Bid"** (or **"Alternate"**) is an amount stated in the Bid Proposal to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.
- D. **"Architect"** means the person or entity listed in section 00030 of the Project Manual and may include professional engineers if so designated.

- E. **“Base Bid”** is the sum stated in the Bid Proposal for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which work may be added to or deducted from for sums stated in Alternate Bids.
- F. A **“Bidder”** is a person or legal entity that submits a Bid Proposal in conformance with the Bidding Documents. After award of the Agreement, the Bidder will be referred to as the Contractor. All Contractors on this project are considered prime/principal contractors.
- G. **“Bid Categories”** are units of work performed by a Contractor and its Subordinate Parties which form part of the total Project. The term **“Bid Category”** should not be confused with the term **“Technical Section”**. Technical Sections of the Specification establish quality and performance criteria, and the Bid Categories designate work scope and assignment.
- H. **“Bidding Documents”** means the Bidding Requirements, the Contract Documents, and the Reference Documents collectively.
- I. A **“Bid Package”** means a series of Bid Categories that are released for bidding in the same set of Bidding Documents.
- J. **“Bidding Requirements”** include the Instructions to Bidders, Information Available to Bidders, and Bid forms and supplements.
- K. **“Bid Proposal”** is a complete and properly signed proposal to do the work of an individual Bid Category(ies) for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- L. The **“Contract Documents”** consist of all Contracting Requirements set forth in the Project Manual, including, but not limited to, the Contract Forms (the Agreement, Performance/Payment Bonds, and Certificates), the Conditions of the Contract (General, Supplementary or Special), the General Requirements of the Project Manual, the Technical Specifications, Drawings, and all other documents incorporated into the Agreement by reference, all Addenda issued prior to and all modifications issued after execution of the Agreement.
- M. **“Contractor”** means the entity to which the Owner issues a contract for performance of the Work.
- N. **“Day”** means calendar day, unless otherwise defined in the particular Contract Document.
- O. **“Hazard Communications Program”** means Contractor's own hazard communications program that will govern project safety for its work. The Hazard Communications Program must be submitted to Barton Malow Builders by each successful Bidder before commencing work and be no less stringent than the Barton Malow Builders Safety Manual.
- P. **“Hazardous Materials”** means asbestos; asbestos containing material; lead (including lead-based paint); PCB; molds; any other chemical, material, or substance subject to regulation as a hazardous material, hazardous substance, toxic substance, or otherwise, under applicable federal, state, or local law; and any other chemical, material, or substance that may have adverse effects on human health or the environment.
- Q. **“Lowest Responsive, Responsible Bidder”** means a Bidder who's Bid Proposal conforms in all material aspects to the contract documents, terms, conditions, specifications and requirements of the solicitations and who has demonstrated the ability to properly perform the Work.
- R. **“MBE/WBE/SBE”** means Minority Owned Business Enterprise/Women Owned Business Enterprise/ Small Business Enterprise as these terms are defined in the applicable ordinances and laws governing the Project.
- S. **“Project Safety Program”** means the Contractor's site safety program that will govern project safety for its work. The Project Safety Program must be submitted to Barton Malow Builders by each successful Bidder before commencing work and be no less stringent than the Barton Malow Builders Safety Manual.

- T. **“Reference Documents”** are drawings that do not form a part of the Contract Documents and are included in the Bidding Documents as a courtesy only. The Bidder is not entitled to rely upon the accuracy of the Resource Drawings and they are not warranted to be correct or reliable by the Owner or Barton Malow Builders. The Bidder is expected to have conducted its own investigation into the reliability or accuracy of any Reference Documents, and no adjustment to the Base Bid shall be made if such request arises or results from the Bidder's failure to conduct such investigation.
- U. **“Contractor”** means the entity to whom OCC issues a contract for the Work.
- V. **“Subordinate Parties”** means all of Contractor's employees, workers, laborers, agents, consultants, suppliers or subcontractors, at any tier, who perform, assist with, or otherwise are involved in any of the Work.
- W. A **“Unit Price”** is an amount stated in the Bid Proposal as a price per unit of measurement for materials or services as described in the Bidding Documents or in the proposed Contract Documents.
- X. The **“work”** includes all work and responsibilities performed or to be performed by Contractor under the Contract Agreement.
- Y. Bid Documents: Contract Documents supplemented with Invitation To Bid, Instructions to Bidders, Information Available to Bidders, Bid Form Supplements To Bid Forms and Appendices identified.

3.02 CONTRACT DOCUMENTS IDENTIFICATION

- A. Contract Documents are identified as Barton Malow Builders Project Manual as prepared by Barton Malow Builders, Architect's Drawings & Specifications Project Number: 24140-1000 , as prepared by IDS and with contents as identified in the Table of Contents.

3.03 AVAILABILITY

- A. Bid documents may be obtained via:
- B. Building Connected
- C. Bid Documents are made available only for the purpose of obtaining Bid Proposals for this project. Their use does not grant a license for other purposes.
- D. Bidders shall use complete sets of Bidding Documents in preparing Bid Proposals. Neither the Owner, CM nor the Architect shall be responsible for errors, omissions or misinterpretations resulting from the Bidder's use of partial sets of Bidding Documents.

3.04 EXAMINATION

- A. Bid Documents may be viewed at the office of Owner at 2900 Featherstone Rd, Auburn Hills, MI, 48326
- B. Bid Documents are on display at the offices of the following construction plan rooms:
 - 1. Building Connected
- C. Upon receipt of Bid Documents verify that documents are complete. Notify Barton Malow Builders should the documents be incomplete.
- D. Immediately notify Barton Malow Builders in writing upon finding discrepancies or omissions in the Bid Documents.

3.05 PRE-BID RFI'S, INQUIRIES, AND ADDENDA

- A. Bidder shall promptly notify Barton Malow Builders in writing of all ambiguities, inconsistencies, or errors that it may discover upon examination of the Bidding Documents or upon examination of the Project site and local conditions. Bidders requesting clarification or interpretation of the Bidding Documents shall make a written request, which shall reach Barton Malow Builders at least 7 days prior to the date for receipt of Bid Proposals. Direct all questions to:
- B. Barton Malow Builders Representative Name: Nicholas Sesi, email; Nicholas.sesi@bartonmalow.com , telephone 248-508-7825.

- C. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.
- D. Any interpretation, correction, or change of the Bidding Documents will be made by Addendum and/or Bid Clarification. Interpretations, corrections, or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.
- E. Addenda and/or Bid Clarifications will be distributed to all who are known by CM to have received a complete set of Bidding Documents. Copies of Addenda and/or Bid Clarifications will be made available for inspection wherever Bidding Documents are on file for that purpose.
- F. No Addenda or Bid Clarifications will be issued later than 5 days prior to the date for receipt of Bids except an Addendum or Bid Clarification withdrawing or postponing the request for Bid Proposals.
- G. Verbal answers are not binding on any party.
- H. Clarifications requested by bidders must be in writing not less than 10 days before date set for receipt of bids.

3.06 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. Substitute products will be considered if submitted as an voluntary alternate on the Bid Form. Bids must be submitted per plans and specifications.
- B. When a request to substitute a product is made via voluntary alternate, Owner may approve the substitution and will be taken in consideration in contract award.
- C. In submission of substitutions to products specified, bidders shall include in their bid all changes required in the Work and changes to Contract Time and Contract Sum to accommodate such substitutions. A later claim by the bidder for an addition to the Contract Time or Contract Sum because of changes in work necessitated by use of substitutions shall not be considered.
- D. The Bid Submission shall provide sufficient information to determine acceptability of such products.
- E. The Bid Submission shall provide complete information on required revisions to other work to accommodate each proposed substitution.
- F. The Bid Submission shall provide products as specified unless substitutions are submitted in this manner and accepted.

SITE ASSESSMENT

4.01 SITE EXAMINATION

- A. Examine the project site before submitting a bid.
- B. A visit to the project site/conference has been arranged for Bidders as follows May 7th, 2025 at 1:00 P.M.

4.02 PRE-BID CONFERENCE

- A. A Bidders Conference has been scheduled for 1:00 p.m. on May 7th, 2025 at the Southfield OCC Campus
- B. All Contract bidders are invited.
- C. Representatives of Architect/Engineer and Owner may be in attendance.
- D. Summarized minutes of this meeting will be circulated to attendees. These minutes will form part of Contract Documents.
- E. Information relevant to the Bid Documents will be recorded and issued to Bid Document recipients via Building Connected.

QUALIFICATION OF BIDDER

5.01 EVIDENCE OF QUALIFICATIONS

- A. To demonstrate qualification for performing the work of this Contract, bidders may be requested to submit written evidence of financial position, license to perform work in the State and project references of equivalent size and scope .

5.02 PREQUALIFICATION

- A. Bidders shall complete the Barton Malow Prequalification prior to execution of the Contract Agreement.
- B. Reference Section 003200 for Prequalification Procedures
- C. The Owner and/or Barton Malow Builders may require Bidders to be prequalified prior to bids.
- D. Completed Barton Malow Builders Contractors Qualification Form can be found at:
<http://www.bartonmalow.com/subcontractors/subcontractors.htm>
- E. The Barton Malow Builders and Owner reserve the right to request qualification forms or additional information from any Bidder before issuing documents, receiving Bid Proposals or awarding an Agreement. The Barton Malow Builders and Owner may, at their sole discretion, accept or reject Bidders as qualified. The right to waive any informalities or irregularities in qualification materials is reserved by the Barton Malow Builders and Owner.

5.03 CONTRACTORS/SUBCONTRACTOR/SUPPLIERS/OTHERS

- A. OCC reserves the right to reject a proposed Contractor and or subordinate party for reasonable cause.

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
- B. Improperly completed information, irregularities in Bid Form, Security Deposit, Bid Bond, Familiar Disclosure Affidavit, or Iran Sanctions Affidavit, may be cause not to accept the Bid and declare the bid invalid or informal.
- C. Improperly completed information, irregularities in Security Deposit, Bid Bond, Familiar Disclosure Affidavit, or Iran Sanctions Affidavit, may be cause not read the Bid Form and declare the bid invalid or informal.
- D. An abstract summary of submitted bids will be made available to all bidders following bid opening.

6.02 BID INELIGIBILITY

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.

BID ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

- A. Bids shall be accompanied by a security deposit as follows:
 - 1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.
 - 2. Certified check in the amount of a sum no less than 5 percent of the Bid Amount
- B. Endorse the Bid Bond in the name of the OCC as obligee and Barton Malow Builders as dual obligee, signed and sealed by the principal Contractor and surety.
- C. Endorse the certified check in the name of OCC.
- D. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.

- E. The cost of bid security in the Bid Amount.
- F. If no contract is awarded, all security deposits will be returned.

7.02 PERFORMANCE ASSURANCE

- A. Include the cost of performance assurance bonds in the Bid Amount.

7.03 INSURANCE

- A. Provide an executed "Undertaking of Insurance" on the form provided stating their intention to provide insurance to the bidder in accordance with the insurance requirements of Contract Documents.

7.04 BID FORM REQUIREMENTS

- A. Complete all requested information in the Bid Form and Appendices.

7.05 BID FORM SIGNATURE

- A. The Bid Form shall be signed by the bidder, as follows (except when submitted electronically via BuildingConnected):
 - 1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
 - 2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
 - 3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of directors authorizing them to do so, must also be submitted with the Bid Form in the bid envelope.

7.06 ADDITIONAL BID INFORMATION

7.07 SELECTION AND AWARD OF ALTERNATES/VOLUNTARY ALTERNATES

- A. See Section 012300 Alternates
- B. Indicate variation of bid price for Alternates/voluntary alternates listed on the Bid Form.
- C. Bids will be evaluated on the total of the base bid price and all of the Alternates and Voluntary Alternates. After determination of the successful bidder, consideration will be given to which Alternates or Voluntary Alternates will be included in the work accepted by the Owner.

OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of 90 days after the bid closing date.

8.02 ACCEPTANCE OF OFFER

- A. Owner reserves the right to accept or reject any or all offers.
- B. After acceptance by Owner, Barton Malow Builders on behalf of Owner, will issue to the successful bidder, a written Letter of Intent (LOI) or Notice to Proceed (NTP).

END OF SECTION 002113

**SECTION 002200
WORK SCOPES**

PART 1 GENERAL - NOT USED

PART 2 PRODUCTS – NOT USED

PART 3 WORK SCOPE

3.01 REFERENCE APPROPRIATE BID CATEGORY FOR YOUR SCOPE OF WORK

A. REFERENCE DRAWINGS FOR MATERIAL AND METHODS SPECIFICATIONS

- 1. CARPENTRY AND GENERAL TRADES**
- 2. ELECTRICAL**
- 3. FENCING**
- 4. LANDSCAPE**
- 5. MASONRY**
- 6. MECHANICAL/PLUMBING/HVAC**
- 7. PAINTING**
- 8. SITE WORK**

END OF SECTION 00220

WORK SCOPE**BID CATEGORY – CARPENTRY AND GENERAL TRADES**

The work of this bid category includes, but is not limited to providing all labor, equipment, materials, scaffolding, hoisting and incidentals to complete all **carpentry and general trades work** in accordance with the specifications, drawings and applicable codes. All work is to be performed as shown on the plans and specified in the following technical specification sections:

- IDS drawings and Specifications dated April 4, 2025 for the Oakland Community College SF – Driving Pad and Storage
- Barton Malow Builders Project Manual dated August 23, 2025 for the Oakland Community College SF – Driving Pad and Storage

DIVISION 00 – Procurement and Contracting Requirements – Complete**DIVISION 01 – General Requirements – Complete****DIVISION 05 – Metals - Complete**

05 3100	Steel Decking
05 4000	Cold-Formed Metal Framing
05 4400	Cold-Formed Metal Trusses
05 5000	Metal Fabrications

DIVISION 06 – Wood, Plastics and Composites - Complete

06 1000	Rough Carpentry
---------	-----------------

DIVISION 07 – Thermal and Moisture Protection

07 1113	Bituminous Dampproofing
07 1900	Water Repellents
07 2100	Thermal Insulation
07 2700	Fluid Applied Membrane Air Barriers
07 4113	Metal Roof Panels
07 4213	Formed Metal Wall Panels
07 7100	Manufactured Roof Specialties
07 9200	Joint Sealants – As Applicable

DIVISION 08 – Openings – Complete

08 1113	Hollow Metal Doors and Frames
08 3113	Access Doors and Frames
08 3613	Sectional Doors
08 4113	Aluminum-Framed Storefronts
08 7100	Door Hardware
08 8000	Glazing
08 9000	Louvers

DIVISION 09 – Finishes – Complete

09 2216	Non Structural Metal Framing
09 2900	Gypsum Board
09 5113	Acoustical Panel Ceilings

09 6513	Resilient Base and Accessories
09 6713	Resinous Flooring

DIVISION 10 – Specialties – Complete

10 2213	Wire Mesh Partitions
10 2800	Toilet Bath and Laundry Accessories
10 4413	Fire Protection Specialties

DIVISION 12 – Furnishings – Complete

12 3216	Manufactured Plastic-Laminate-Clad Casework
12 3661	Solid Surface Countertops

DIVISION 13 – Special Construction – Complete

13 3613	Metal Towers
---------	--------------

DIVISION 14 – Conveying Equipment – Complete

14 4513	Vehicle Service Lifts
---------	-----------------------

1.01 IN ADDITION TO THE ABOVE, THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

PART 2 PRODUCTS – NOT USED**PART 3 EXECUTION****3.01 GENERAL****THE SCOPE OF WORK WILL INCLUDED AND IS NOT LIMITED TO THE FOLLOWING ITEMS:**

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:
 - 1. Additional Meetings & Quality Control Requirements:
 - a. Mockups
 - b. Additional Photographic documentation, etc.
 - c. As-builts
- D. **Submittals/Close Out:**
 - 1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).
 - 2. Submit all shop drawings in accordance with the contract documents and all code requirements within four (4) weeks after Notice to Proceed (NTP).
 - 3. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include

- submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.
4. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractors cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
 5. Engineered shop drawings must be signed and sealed by a Registered Engineer in accordance with contract documents and state law.
 6. Contractor shall include all cost necessary for as-built, asset sheet data spreadsheet, closeout documents (including O&M manuals, valve charts, guarantees or warranties on equipment and/or materials, testing and system check-out or approval, and Owner's training as required) per the Contract Documents.
 7. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.
 8. Architect/Engineer's punch list will not start until all work has been completed.
 9. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.
 10. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. Unless otherwise directed or authorized, in writing, by Contractor, all RFI's, submittals, and project documents, for Subcontractor and its sub-subcontractors and suppliers, shall be submitted to Contractor using the Autodesk Build application. Subcontractor shall be responsible for the fees and costs owed associated with Subcontractor's use of Autodesk Build. Fees to Subcontractors are calculated as 0.1% of contract value. Subcontractor will be invoiced directly at project start-up and payment must be submitted prior to the start of work.
2. All rigging done by this contractor will be the responsibility of this contractor, there will be no crane on site for contractors use.
3. Any removal of temporary protection, i.e. tarps, handrails, etc. must be reinstalled by this contractor. If not reinstalled, cost associated with fixing the temporary protection will be the responsibility of this contractor.
4. Break areas will be designated to the contractor's furnished by Barton Malow Builders.
5. Contractor to not enter into existing Oakland Community College building unless authorized and coordinated with Barton Malow Builders.
6. A site specific safety orientation is required to attend by all trades prior to any work starting on site. Orientations will take place from 7:00 a.m. to 8:00 a.m.
7. Contractor to have safety representative visit the site weekly to ensure work is being completed per Barton Malow Builders safety standard and MIOSHA.
8. This contractor is to submit with their bid a detailed schedule including estimated lead times, and durations for scope of work.

9. All foremen must have OSHA 30. This shall be turned over to Barton Malow Builders during the submittal process or prior to starting on site.
10. Contractor to provide mockups according to IDS project manual.
11. Barton Malow Company reserves the right to enforce all applicable safety requirements. Each contractor is fully responsible to ensure its respective field personnel (including subcontractors and suppliers) are practicing safe work habits per industry standards and in compliance with regulations noted in company's safety policy, Barton Malow Company's safety information (Safety Manual and section 00810 of the Project Manual) and MIOSHA. In the event there is a conflict, the most strict standard will apply. BMC reserves the right to remove any person(s) on the site that practices unsafe work habits. The contractor shall be fully responsible to maintain the schedule regardless of the definite or indefinite removal of such person(s).
12. Any working trades person working on site shall wear proper PPE. High-vis vest/shirts must have company logo.
13. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
14. All bidders are required to review the General Conditions of the Contract located in the project manual.
15. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
16. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
17. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
18. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.
19. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.
20. Contractor shall have their Superintendent/Foreman attend a daily coordination meeting every morning. Participation is mandatory.
21. All pre-task plans must be reviewed and signed off by Barton Malow Builders prior to starting work.
22. Project daily working hours are Monday – Friday, Site Opens @ 7:00 a.m. and closes at 3:30 p.m.. unless coordinated with Oakland Community College and Barton Malow Builders. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.
23. In the event contractor has to work weekends, they shall inform Barton Malow Builders and Oakland Community College by not later than Wednesday of that week.
24. Contractor is only to take direction from Barton Malow Builders.
25. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.

26. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.
27. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
28. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
29. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and Box in section 013000-Administrative Requirements.
30. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
31. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
32. This project surrounded by OCC staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and OCC Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.
33. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.
34. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.
35. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
36. In the event a road closure is necessary, contractor to coordinate with Barton Malow Builders 30 days prior.
37. All materials are to be coordinated with Barton Malow Builders 1 day prior to delivery and all deliveries are just in time. Deliveries must be scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
38. All deliveries shall have a spotter to open and close gates. Contractor to guide trucks and flag traffic with proper signage.
39. All deliveries are to come off 9 mile road as directed by Barton Malow Builders.
40. Contractor is responsible for storage of all materials. Deliver materials to the site as needed.

41. Stocking of material on floors will be limited to a three (3) day maximum in the area of work, if approved by Barton Malow Builders Superintendent. No other material storage will be allowed in the building.
42. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
43. Include all rigging and hoisting to deliver, install, and remove materials.
44. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
45. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
46. Scaffolding and staging as required. Engineered installation drawings, as required.
47. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
48. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
49. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.
50. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Representative must be able to make all decisions for their Company and Contractors.
51. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the “entire” scope of work including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.
52. Contractor must complete and submit electronic daily pre-task plans via AutoDesk to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day’s specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor’s monthly payments until satisfied with this Contractor’s response.
53. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner's items are missing, it is this contractor's responsibility to purchase and replace with new materials.
54. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.
55. Locate all underground utilities (public and private) prior to any excavation and temporary road/staging area install. Note that Miss Dig will not locate private utilities on the Owner's property. It is the responsibility of this contractor to hire an outside firm and locate private

utilities. Damage to existing utilities, public or private, including communication and parking/walkway lighting lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.

56. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.
57. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
58. Provide all cutting/patching, coring, patching of penetrations, and block-outs for work of this bid category. This is to include but not limited to cutting and patching of all openings in deck (concrete or metal) if required. Patch walls where adjacent existing walls were removed. Patch and repair work is to be done professionally by trained, skilled craftsmen.
59. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be removable sections and that they do not present a tripping hazard. If work is not performed to OSHA standard, then Barton Malow Builders will perform the work with a back charge to the contractor.
60. Contractor is responsible for all dewatering and snow/ice removal necessary to complete this Scope of Work.
61. Contractor responsible for protection during winter weathers, i.e. frost blankets, ground thawing systems, etc.
62. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
63. Contractor shall participate in the Composite Cleanup Crew as described in the project manual. These requirements are in addition to normal daily cleaning responsibilities and costs for this are included in the contract price.
64. Contractor is required to protect any openings caused by scope of work i.e., covering up poke through's during construction with ¾ in. plywood.

THE SCOPE OF WORK IS TO INCLUDE, but is not limited to the following items:

1. Temporary Measures:
 - a. Protect All Materials from damage prior to installation
2. Temporary Electricity
 - a. Temporary electricity (120V/1PH/20A) will be available for use by this Contractor. This Contractor is responsible for all means to access power to the points of work. The Owner will pay for power consumption. This Contractor will be responsible for costs to establish additional power requirements from new panels (i.e., 208V)

- required for their work. If generators are to be used diesel units shall use bio-fuel and have scrubbers installed.
3. Temporary Lighting:
 - A. Contractor shall provide talk lighting and temporary light stands as necessary.
 4. This contractor shall be responsible for all layout, engineering, elevations and layout coordination with other contractors. It is the responsibility of this contractor to layout all work of this category from established control lines. Upon completion of the work, furnish signed and sealed as-builts that tie all site improvements to property lines and/or building corners and meet the requirements
 5. Provide and install all wood Nailers as indicated within the working documents. This includes all wood work shown at the roof curbs and parapet walls.
 6. Provide and install all hollow metal frames and doors. Verify hollow metal frames are plumb and set in masonry and gypsum board. Coordinate with mason and drywall contractor for installation. Notify Barton Malow Company if there is a problem, so it can be corrected in a timely manner prior to finishes. Grout all hollow metal frames as required.
 7. Perform all troubleshooting, adjustments and corrections of hardware problems after Owner occupancy for the duration of the warranty period.
 8. Provide and install all door hardware. Adjust and shim doors for proper swing and closure.
 9. Provide all wood blocking/plywood for work in this bid category.
 10. Casework:
 - b. Contractor to coordinate with the electrical contractor the location of conduit, wiring, lighting, LED drivers, etc. that are integral with this contractor.
 - c. This contractor is responsible for all cut outs, this includes but is not limited to outlets, penetrations, sinks, grommets, lights
 - d. This contractor is responsible for all shimming and adjusting for all level install.
 - e. Provide finish caulking of all tops and splashes per approved color submittals.
 - f. Provide finished end panels and or returns at opened ended cabinets and countertops.
 - g. All cutting associated with the installation of work covered under this bid category, including but not necessarily limited to the following: sink cut-outs, countertop grommets, plumbing pipe penetrations/connections, electrical box penetrations, communication, accessories, etc. All holes are to be cut tight and neat to the penetrating item.
 - h. Provide and install all grommets.
 - i. Contractor to provide any locks as specified.
 - j. Provide and install all solid surface counter tops, back splashes, and sills as indicated in the contract documents.
 - k. Coordinate installation of sinks in solid surface material with the Mechanical contractor.
 - l. Contractor is to provide and install all details shown from the plywood out, including but not limited to:
 - 1) $\frac{3}{4}$ " treated plywood (non-com)- specifically behind your own work including Window shades
 - 2) Cement Board associated with Quartz.
 - 3) Wood framing
 - 4) Quartz
 - 5) Concealed brackets
 - 6) Hardwood
 - 7) Joint sealants
 - 8) Protection of finishes once complete
 - 9) Grommets

- 10) Finish wood panels
- 11) Cabinets
- 12) Glass shelving
- 13) Wall cladding
- 14) Contractor to provide and install all plastic laminate ceilings shown on the drawings and specifications. Including insulation shown above.
- m. Window Film
 - 1) Contractor to provide and install window film shown on the door schedule.
- 11. Furnish and install all casework as shown/describes in bid documents
- 12. Contractor to furnish and install all insulation as described in the bid documents
- 13. Contractor to furnish and install all items associated with roofing as described in drawings and spec.
- 14. Contractor to furnish and install all garage doors
- 15. Contractor to furnish and install all acoustical ceiling as described and located in bid documents
- 16. Contractor to furnish and install all Conveying Equipment, Vehicle Service lifts as described in the bid documents
- 17. Contract to provide labor equipment and material for resinous flooring
- 18. Contractor to furnish and install metal tower as described in bid documents.
- 19. Contractor to furnish and install acoustical ceiling as shown in the bid documents
- 20. Furnish and install all plastic laminate and solid surface countertops that go on top of new casework provided by this category.
- 21. Furnish and install architectural joint systems and control joints for all work of this category, including all accessories.
- 22. Provide and install all roller window shades as shown and specified.
- 23. Install all owner provided marker boards and tackboards as shown.
- 24. Provide all scaffolding, hoisting and rigging equipment required for the completion of work related to this category.
- 25. Caulk all products and materials installed by this Bid Category.
- 26. Provide and install all interior architectural woodwork as indicated within the working documents and specification section. Coordinate with all trades on rough-ins.
- 27. Provide and install all solid surface sills.
- 28. Provide and install all corner guards. As required
- 29. Provide and install any access panels, as may be indicated, as well as those provided to you by other trades.
- 30. Provide all layout required for your work.
- 31. Furnish and install all toilet compartments complete including all related accessories required to fully complete the installation, as specified.
- 32. Provide and install all toilet and bath accessories as shown and specified. The Owner will furnish the paper towel dispensers, toilet paper dispensers and soap dispensers with the contractor installing.
- 33. Contractor is responsible for all wire mesh partitions as described in the bid documents.
- 34. Provide and install all millwork and casework for this project.
- 35. Provide Fire Cabinets with extinguishers. Drywall and masonry contractor will install.
- 36. This contractor will be responsible for all re-mobilization costs for all phases of work.

SPECIAL REQUIREMENTS:

1. Project Safety – The following bullet points are requirements of all workers and anyone visiting this project, in addition to all other Barton Malow safety requirements as defined in the project manual. All costs associated with the purchase and implementation of all safety requirements must be included as part of your bid:
 - Provide each worker within this category with a hardhat (newer than 5 years old), safety glasses, reflective safety attire, work gloves, and other PPE required to perform job per the Barton Malow safety requirements. This is required at all times while working onsite. Failure to provide will result in removal of worker from site. Please review Barton Malow safety manual for specifics.
 - Each person working on site shall review the BMC safety orientation video before beginning work. Each contractor shall submit documentation that all of their employees have viewed the video.
 - It is this contractor's responsibility to provide full fall protection per Barton Malow requirements. Any workers found deficient will be permanently removed from the jobsite
 - Provide guardrails per the OSHA height requirements on all scaffolds used by this bid category. This includes top, mid and toe board rails. Also, all accessories required by the scaffold manufacture for a complete scaffold erection must be used at all times. A competent person must supervise the installation of scaffold built on site. Failure to complete these guidelines could result in removal of workers from site.
 - All contractors are to take part in Barton Malow's stretch and flex program daily and turn a sign in sheet with daily report with those who participated in the program. Please review the Barton Malow safety manual for specifics.
 - All contractors must provide a person who is trained and certified in working around lead materials. This "certified lead renovator" must be on site when all demolition is occurring or when lead materials are effected by construction. Proof of training and a certificate must be provided to Barton Malow during submittal phase confirming the training of the individual. The contractor must also meet all new Federal, OSHA, MIOSHA, and DEQ requirements regarding lead.
2. All contractors must submit the training cards for the competent person to be trained in CPR, First Aid, Asbestos Awareness, Lead Renovator, and any other certifications required by the trade and area of work.
3. The Roofing contractor will install the warning line system/control access zone on the flat section of the roof. This contractor is responsible for all maintenance and inspection of the warning line system as required during work of this category. Replacement of portions of the warning line will be the responsibility of the Roofing contractor. Inform the Barton Malow superintendent of any required repairs. All work outside of the warning line system and after removal of the warning line system falls under the Barton Malow/MIOSHA fall protection standards.
4. All contractors are to provide daily clean-up according to Barton Malow standards, including daily removal of all materials and debris related to this category. If daily clean-up is not performed, the Construction manager will provide a laborer to complete the clean-up and the appropriate contractor will be back charged.
5. It is the responsibility of this Bid Category to review all drawings and drawing notes, including civil, architectural, structural, mechanical and electrical drawings, and include items requiring work that is generally defined as the responsibility of this Bid Category within the work description.
6. Bidder shall complete the Bid Proposal form in its entirety. Special attention is directed to the Alternates and Unit Prices Section of this form.

7. This Bidder is required to submit alternate prices identified in the bidding documents that pertain to their work. These alternate prices must be separate from their base bid on the bid proposal form as described in Section 00200, Instruction to Bidders.
8. The special provisions outlined in Section 00210, Description of the Work, form a part of this Bid Category work description and apply to this bidder's scope of work.
9. All contractors are required to meet the schedule as outlined in Section 00230 Schedule and Phasing. All contractors' bids must account for any overtime necessary to meet the schedule.
10. If contractor is behind schedule and is notified by Barton Malow Company, the contractor shall be required to accelerate the work at its own expense. The contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow, is in conformance with the project construction schedule.
11. All work under this scope shall comply with proper trade jurisdictions, even if it is necessary to assemble composite crews or subcontract to appropriate trades.
12. All contractors are required to coordinate with other trades, including mandatory participation in job meetings.
13. It is highly recommended that all bidders visit the sites to view existing conditions prior to submission of bid.
14. Contractor is responsible to furnish all Barton Malow Company start-up documents within two (2) weeks of contract award. This includes signed contract, bonds, certificate of insurance with **CG 20 10 01 85** AND **CG 20 37 10 01 endorsements**, schedule of values, contact list, signature list, sub/supplier list, site specific safety program, MSDS's, and the Barton Malow Company Safety Certificate (section 01600). The submittal register will be issued at award of contract and the due date of the submittals will be provided at that time. Each contractor and office engineer is to attend a Construction Kick-Off Meeting and Pre-Construction Meetings.

ALTERNATES:**ALLOWANCES:**

1. Provide a \$25,000 allowance. This allowance will be used as directed by Barton Malow. Time tickets must be submitted to Barton Malow daily. When billed, allowance must be exclusive of all mark-up and fees. Any unused allowance will be returned to the owner in a deduct change order.

UNIT PRICING:

None.

END OF BID CATEGORY – GENERAL TRADES

**SECTION 002226.01
ELECTRICAL - SCOPE OF WORK
PERMANENTBID PACKAGE SF25-003
BID CATEGORY – ELECTRICAL**

GENERAL

2.01 THE WORK OF THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO PROVIDING ALL LABOR, EQUIPMENT, MATERIALS, SCAFFOLDING, HOISTING AND INCIDENTALS TO COMPLETE THE WORK PER ALL CONTRACT DOCUMENTS FOR THE SF25-003 BP #1D DRIVING PAD AND STORAGE - PROJECT MANUAL PROJECT AS DEFINED BY THE BID PACKAGE NO. SF25-003 BID/WORK SCOPE DOCUMENT INCLUDING ITS SUPPLEMENTARY DOCUMENTS AND IN ACCORDANCE WITH ANY APPLICABLE CODES. ALL WORK IS TO BE PERFORMED AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE FOLLOWING TECHNICAL SPECIFICATION SECTIONS:

Division 00 – Procurement and Contracting Requirements (Complete)

Division 01 – General Requirements (Complete)

Division 02 – Existing Conditions

02 4100 – Demolition – As Applicable

Division 07 – Thermal and Moisture Protection

07 8400 – Firestopping – As Applicable

07 9200 – Joint Sealants – As Applicable

07 9200.01 – Joint Sealants Appendix A – As Applicable

Division 26 – Electrical (Complete)

Division 27 – Communications (Complete)

Division 28 – Electronic Safety and Security (Complete)

Division 31 – Earthwork

31 0000 – Earthwork – As Applicable

INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

PRODUCTS – NOT USED

3.01 EXECUTION

THE SCOPE OF WORK WILL INCLUDE AND IS NOT LIMITED TO THE FOLLOWING ITEMS:

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:
 - 1. Additional Meetings & Quality Control Requirements:

- a. Coordination drawings & As-builts for MEP, etc

D. Submittals/Close Out:

1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).
2. Submit all shop drawings in accordance with the contract documents and all code requirements within four (4) weeks after Notice to Proceed (NTP).
3. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.
4. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractors cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
5. Engineered shop drawings must be signed and sealed by a Registered Engineer in accordance with contract documents and state law.
6. Contractor shall include all cost necessary for as-built, asset sheet data spreadsheet, closeout documents (including O&M manuals, valve charts, guarantees or warranties on equipment and/or materials, testing and system check-out or approval, and Owner's training as required) per the Contract Documents.
7. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.
8. Architect/Engineer's punch list will not start until all work has been completed.
9. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.
10. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. All rigging done by this contractor will be the responsibility of this contractor, there will be no crane on site for contractors use.
2. Due to the specified finishes, i.e. polished concrete floors, coffee, soft drinks, energy drinks, etc. are NOT allowed inside the new building during or after construction. Any damages that occur by this contractor is the responsibility of this contractor.
3. When working on site, the smoking of cigarettes, vapes, tobacco, etc. will NOT be prohibited.
4. Any removal of temporary protection, i.e. tarps, handrails, etc. must be reinstalled by this contractor. If not reinstalled, cost associated with fixing the temporary protection will be the responsibility of this contractor.
5. Contractor to not enter into existing Oakland Community College building unless authorized and coordinated with Barton Malow Builders.

6. A site specific safety orientation is required to attend by all trades prior to any work starting on site. Orientations will take place from 7:00 a.m. to 8:00 a.m.
7. Contractor to have safety representative visit the site weekly to ensure work is being completed per Barton Malow Builders safety standard and MIOSHA.
8. This contractor is to submit with their bid a detailed schedule including estimated lead times, and durations for scope of work.
9. All foremen must have OSHA 30. This shall be turned over to Barton Malow Builders during the submittal process or prior to starting on site.
10. Contractor to provide mockups according to IDS project manual.
11. Barton Malow Builders reserves the right to enforce all applicable safety requirements. Each contractor is fully responsible to ensure its respective field personnel (including subcontractors and suppliers) are practicing safe work habits per industry standards and in compliance with regulations noted in company's safety policy, Barton Malow Builder's safety information (Safety Manual and section 00810 of the Project Manual) and MIOSHA. In the event there is a conflict, the most strict standard will apply. BMB reserves the right to remove any person(s) on the site that practices unsafe work habits. The contractor shall be fully responsible to maintain the schedule regardless of the definite or indefinite removal of such person(s).
12. Any working trades person working on site shall wear proper PPE. High-vis vest/shirts must have company logo.
13. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
14. All bidders are required to review the General Conditions of the Contract located in the project manual.
15. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
16. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
17. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
18. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.
19. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.
20. Contractor shall have their Superintendent/Foreman attend a daily coordination meeting every morning. Participation is mandatory.
21. All pre-task plans must be reviewed and signed off by Barton Malow Builders prior to starting work.
22. Project daily working hours are Monday – Friday, Site Opens @ 7:00 a.m. and closes at 3:30 p.m. unless coordinated with Oakland Community College and Barton Malow Builders. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.

23. In the event contractor has to work weekends, they shall inform Barton Malow Builders and Oakland Community College by not later than Wednesday of that week.
24. Contractor is only to take direction from Barton Malow Builders.
25. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.
26. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.
27. Contractor will be required to perform after-hours and overtime work as necessary to minimize disruption to OCC for schedule shutdowns for MEP operations.
28. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
29. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
30. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and Box in section 013000-Administrative Requirements.
31. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
32. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
33. This project surrounded by OCC staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and OCC Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.
34. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.
35. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.
36. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, and landscaping during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
37. In the event a road closure is necessary, contractor to coordinate with Barton Malow Builders 30 days prior.
38. All materials are to be coordinated with Barton Malow Builders 1 day prior to delivery and all deliveries are just in time. Deliveries must be scheduled with a Barton Malow Builders

- Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
39. All deliveries shall have a spotter to open and close gates. Contractor to guide trucks and flag traffic with proper signage.
 40. All deliveries are to come off 9-mile road as directed by Barton Malow Builders.
 41. Stocking of material on floors will be limited to a three (3) day maximum in the area of work, if approved by Barton Malow Builders Superintendent. No other material storage will be allowed in the building.
 42. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
 43. Include all rigging and hoisting to deliver, install, and remove materials to / from all floor levels complete.
 44. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
 45. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
 46. Scaffolding and staging as required. Engineered installation drawings, as required.
 47. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
 48. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
 49. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.
 50. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Representative must be able to make all decisions for their Company and Contractors.
 51. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the "entire" scope of work including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.
 52. Contractor must complete and submit electronic daily pre-task plans via AutoDesk to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day's specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor's monthly payments until satisfied with this Contractor's response.
 53. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner's items are missing, it is this contractor's responsibility to purchase and replace with new materials.
 54. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain

strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.

55. Locate all underground utilities (public and private) prior to any excavation and temporary road/staging area install. Note that Miss Dig will not locate private utilities on the Owner's property. It is the responsibility of this contractor to hire an outside firm and locate private utilities. Damage to existing utilities, public or private, including communication and parking/walkway lighting lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
56. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.
57. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
58. Provide all cutting/patching, coring, patching of penetrations, and block-outs for work of this bid category. This is to include but not limited to cutting and patching of all openings in deck (concrete or metal) if required. Patch walls where adjacent existing walls were removed. Patch and repair work is to be done professionally by trained, skilled craftsmen.
59. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be removable sections and that they do not present a tripping hazard. If work is not performed to OSHA standard, then Barton Malow Builders will perform the work with a back charge to the contractor.
60. Contractor is responsible for all dewatering and snow/ice removal necessary to complete this Scope of Work.
61. Contractor responsible for protection during winter weathers, i.e. frost blankets, ground thawing systems, etc.
62. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
63. Include all cost in base bid to comply with the latest Federal mandate, State of Michigan Executive Order, OSHA requirements, Local Jurisdiction Requirements, Owners Requirements, whichever is more stringent related to Covid-19: testing, PPE, social distancing, and all other requirements for your workers and subordinate parties. This shall include identifying your competent Covid 19 supervisor that will review, monitor, record, and enforce all requirements. In addition, each worker onsite is required to sign in each day prior to work using the Barton Malow QR Reader Questionnaire on a smart phone or tablet.

64. Contractor is required to protect any openings caused by scope of work i.e., covering up poke through's during construction with ¾ in. plywood.

F. Specific Scope:

1. Install final connection of all heat traces including temporary heat trace for temporary water.
2. Contractor is to provide power to roll up doors, including conduits and boxes for controllers for the roll up door contractor's use.
3. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
4. Obtain and pay for all permits and inspection fees as required for work of this category.
5. Obtain and pay for any low volt permits required for work of this bid category.
6. Provide and install a complete, operational, and code compliant Electrical and Fire Alarm System for all designated building areas per the Contract Documents. Drawings are diagrammatic. All materials, offsets, fittings, etc. required for means and methods are to be included.
7. Provide all Electrical Work as noted on the Contract Documents including but not limited to high voltage, medium voltage primary, secondary and branch distribution electrical systems, low voltage communications and alarm systems, devices and fixtures for building and site.
8. Provide and install all Electrical and Fire Alarm materials and equipment noted on all Electrical and Fire Alarm drawings, regardless if it is or is not in the schedule or specifications.
9. Only competent electricians are allowed to work on electrical circuits and equipment. All electrical tools and equipment operating off the site supply must be regularly inspected, tested and marked safe to use.
10. Coordinate location of equipment to ensure required electrical clearances are met.
11. Primary Gear, switches, motor control, transformers, and related equipment must be checked, tested, and started per project schedule providing permanent power to the building through project completion.
12. Stud and Masonry will be placed prior to mechanical and electrical overhead work.
 - a. Stud install will include installation of one side drywall top out to the corridor side.
13. Contractor shall include multiple mobilizations to complete the Work.
14. This Contractor shall verify and notify Barton Malow Builders and Architect/Engineer immediately for any discrepancies in the contract documents where noted to tie into existing utilities.
15. Notification to Barton Malow Builders and Architect/Engineer of any non-code compliant items noticed during installation.
16. Coordinate tie-ins with Barton Malow Builders and Owner. Shutdown of the existing system will require a minimum forty-eight (72) hour notice. Systems will be required to be functional by the end of each work day.
17. Protections
 - a. Maintain an effective lock-out tag-out procedure throughout the duration of the Project.
 - b. Protection of work prior to dry-in
18. Final Cleaning:
 - a. This Contractor shall vacuum clean all in-wall gang boxes for communications, power, switching, etc. prior to the installation of devices and/or cover plates.
 - b. Final clean all electrical equipment provided and/or installed by this Contractor prior to commissioning and final acceptance by the Owner including but not limited to panels, starters, disconnects, light fixtures (interior/exterior), etc.
19. Temporary Measures and Extended Warranties:

- a. For any permanent equipment that will be used for temporary work during construction, include extended warranties to cover the time the equipment is in use prior to Substantial Completion.
 - b. Provide, maintain, and remove temporary systems upon completion and activation for use of the permanent systems.
 - c. Protect all materials from damage prior to installation.
20. Providing and Maintaining Temporary Electricity:
- a. Owner will pay for power usage costs.
21. Temporary Lighting and Power: Provide and maintain temporary power and lighting for the following:
- General project power and lighting as defined by:
- 1) As the building is enclosed, provide and install temp lighting to meet OSHA standards for minimum lighting in a work area and per room, closet, storage rooms, etc. The design of the system should account for general lighting to be turned off by use of a timer during non-working hours. Minimum egress lighting, including stairways, doorways, and general egress paths on the floors should be circuited separately and be always left on. There are no rooms exempt from this requirement.
 - 2) Provide, install, and maintain exterior site lighting to a minimum of 6 locations. These lights (LED) are to be installed on the roof and / or manmade mounting brackets to minimally disrupt construction activities. This work will take place immediately after contract is awarded.
 - 3) Contractors are to use LED type light fixtures and bulbs.
 - 4) All temporary wiring must be MC type cable or installed in conduit
 - 5) Fire-stop all holes left by the temporary system when removed.
 - 6) The temporary power design must be reviewed and accepted by Barton Malow Builders prior to any installations. A preliminary design must be made available at the post-bid interview for review and discussion.
 - 7) Power for Sump Pumps (provided by the Underground Mechanical Contractor) for temporary water removal.
 - 8) Contractor must visit site to confirm available temporary power for the temporary lights and temporary power for the building. A site visit can be coordinated with the Project Engineer (Nick Sesi, 248.508.7825, Nicholas.sesi@bartonmalow.com) or can be confirmed during the pre-bid walkthrough.
22. FURNISH SITE TEMPORARY SYSTEM: Include a 200 amp temporary service and distribution to the Barton Malow Builders and Owner office and meeting trailer area. Provide connection of trailers to the service. Include construction of panels. See attached logistics plan for location of job trailer and existing electrical room.
- a. Installation of 4 exterior grade GFCI receptacles mounted on outside face of trailer.
 - b. One (1) exterior grade flood light mounted at face of the trailer.
 - c. USE EXISTING TEMPORARY SYSTEM: Temporary electricity will be available for use by this Contractor. This Contractor is responsible for all means to access power to the points of work. The Owner will pay for power consumption. This Contractor will be responsible for costs to establish additional power requirements from new panels (i.e., 208V) required for their work. If generators are to be used diesel units shall use bio-fuel and have scrubbers installed.
 - d. REMOVAL OF TEMPORARY SYSTEM: This Contractor is to remove of all temporary electrical and lighting services when determined ready by Barton Malow Builders. This is anticipated to occur at some time after permanent power is energized into the building and permanent fixtures are in place to provide adequate lighting near the end of the Project.
 - e. Contractor to visit site to determine where temporary power is available, contractor is required to provide temporary lights and power for civil site work and foundation work.
23. Temporary Guardrail Systems:

- a. Maintain all temporary guardrail system during the course of construction. At such time when it can or must be removed to perform work, appropriate safety precautions are to be implemented. After this Contractor completes areas of work, which do not offer appropriate fall protection due to gaps or openings, this Contractor is to provide appropriate temporary guardrails across openings.
- 24. Coordination and Layout
 - a. Actively participate in Mechanical, Electrical and Plumbing (M/E/P) coordination process per the Barton Malow Builders Project Manual, and coordinate the installation of this Contractor's work to allow installation and access to all other M/E/P and architectural/structural supports. Installed piping must be placed where determined in the overhead coordination process; deviations will not be acceptable and will be at the Contractors' expense to correct if found in the field.
 - b. Contractor will be responsible for the complete coordination of work of this bid category with all other trades to identify and resolve conflicts. Any and all financial implications emanating from this Contractor's lack of planning and coordination will be borne by this Contractor. This shall include blocking, backing conduits, sleeves, penetrations, and any other appurtenances which may not be specifically identified by the contract documents but are required to complete this scope of work.
 - c. This Contractor is responsible for all detailed layout required for proper location and coordination of work.
 - d. Contractor shall review the critical dimensions and elevations of all work and shall otherwise verify the conformity of existing work to the Contract Documents and to its suitability. Contractor shall promptly submit a written statement to Barton Malow Builders and Architect/Engineer noting any discrepancies or unacceptable conditions as they relate to its work
 - e. Contractor shall attend all meetings as required to properly coordinate its Work with that of Others. Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - f. Contractor shall visit the site and attend meetings as required to properly coordinate the Work.
 - 1) Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
- 25. This Contractor is responsible for all detailed layout required for proper location and coordination of work. This includes work to coordinate:
 - a. This Contractor to coordinate penetrations, power requirements, access panels, and dimensions in cabinets and casework. Provide materials and installation of all raceways for power, communication, access control, including but not limited to lighting, phone systems, IT equipment, computers, printers, refrigerators, café systems, automatic soap dispensers, paper towel dispensers, night lights, scone lighting and make final connections within cabinets and casework
 - b. With Millwork, Furniture, Fixture, & Equipment and any owner provided items.
 - c. Location of devices provided in Contract Drawings are not final/exact. This Contractor is responsible to coordinate with Architect/Engineer and other trades final location of all devices.
 - d. With Concrete Contractor for placement of any devices that will be placed in the slab.
 - e. Exterior lighting/devices with exterior finish Contractor, ensure all penetrations thru the facade of the building are coordinated with conjunction of exterior facade Contractor. All sleeves and necessary attachment methods are to be coordinated.
 - f. Roof penetrations with roofing and Mechanical Contractors for power locations for equipment.
 - g. Cable tray locations and raceways, attachment, routing, and elevations with other trades. No raceways to be placed above equipment/panels in specialty rooms unless coordinated and approved.
- 26. Demolition

- a. Cut, cap, tag, and make systems safe for the removal in all buildings/areas, light poles, ect.. "Make safe" includes physical disconnection from any equipment/components that are existing to remain.
 - b. Ground Penetrating Radar (GPR)
 - 1) Provide GPR of areas impacted by construction and results in form of PDF or CAD before proceeding with any underground demolition work.
27. Electrical New Work
- a. Provide protection of all equipment and materials supplied under this contract. Damage to equipment due to lack of adequate protection will be the responsibility of this Contractor.
 - b. All equipment shall bear Underwriters Laboratory assembly labels.
 - c. This Contractor shall include all expansion joint fittings at rough-ins and hangers as required.
 - d. All cover plates and trims are to be installed after final paint.
 - e. Receive, store, and install all loose Variable Frequency Controllers (VFCs) from Mechanical (wet) contractor.
 - f. This Contractor shall be responsible for all hangers, rods, trapeze, strut, fasteners, isolators, embeds, plates, anchors, sway bars, spreaders, stands, supports and accessories associated with this scope of Work.
 - g. Provide and Install any earthwork and engineered fill required for work of this bid category. Excavations must be compacted and ready to accept concrete.
 - h. Contractor shall coordinate lighting layout with the Mechanical, Fire Suppression, and Architectural Contractors to avoid interferences.
 - i. Contractor responsible for any required equipment pads that are not shown on the drawings. Coordinate and layout all other equipment pad locations with Concrete Contractor.
 - j. Contractor shall provide power and connection for roller window shades.
 - k. Coordinate location of equipment to ensure required electrical clearances are met.
 - l. Junction boxes and other items requiring access panels should NOT be installed above hard lid ceilings if it can be avoided. If items are shown or required to be installed above hard lid ceilings, notify the Architect/Engineer immediately prior to installation for possible relocation.
 - m. Minimize amount of access doors necessary, especially in public areas.
 - n. During MEP coordination process make a good faith effort to share access doors with other Architectural, Fire Suppression, Plumbing, and Electrical trades to further minimize quantity of access doors. Instances of shared access doors will be the Contractors' responsibility to split and determine cost. A highlighted drawing of Access doors locations shall be required for exact location identification.
 - o. Coordinate the locations and gain approval of locations from the design team prior to installation.
 - p. This Contractor shall provide all access doors and frames for proper access to valves and devices for maintenance. Access panels required but not shown on the drawings will be provided by this Contractor and installed by Architectural Contractor. Minimum access door size shall be 12" x 12" unless otherwise approved by Barton Malow Builders, Owner, and Architect/Engineer. Include fire rating requirements if applicable.
 - q. Provide any unistrut support as required to mount equipment provided by this scope.
 - r. Provide and install all misc. steel support and hangers shown on electrical and per specification.
 - s. Provide any blocking required for installation of electrical equipment.
 - t. Provide all backing as necessary for items provided and/or installed by this work category
 - u. Provide all electrical equipment backboards NOT shown or indicated on drawings but required for this Contractor's work. Paint boards on all sides prior to installation.

- v. Contractor is to provide any earthwork and engineered fill required for installation of new work. Excavations must be compacted and ready to accept concrete.
- w. Provide and install required raceways per the contract drawings.
- x. All conduit should be a minimum of ¾" unless otherwise noted.
- y. All wiring shall be in conduit unless otherwise noted.
- z. Coordinate work in block walls with the Masonry Contractor.
- aa. Provide all power and raceway for electric door hardware and card readers, garage doors, ect. Coordinate with Architectural and Glazing Contractor.
- bb. Provide all electrical testing and electric metering as specified.
- cc. Provide and install floor box and poke through assemblies including all accessories shown or specified.
- dd. Coordinate work in casework with the Architectural Contractor.
- ee. Coordinate electrical rough for mechanical equipment with the Mechanical Contractor.
- ff. Provide and install all mechanical equipment connections including but not limited to Variable Frequency Drives, Exhaust Fans, Motors, Mini split, Electric VAV Boxes, Control Panel, Pumps, and Electric Radiant Panels supplied by Mechanical Contractor.
- gg. Contractor is to provide power, boxes to window shades shown on architectural drawings.
- hh. Disconnects are provided and installed by this Contractor for MEP equipment. Coordinate with the Mechanical Contractor to ensure compatibility. All final connections associated with equipment are by this Contractor.
- ii. Install all variable frequency drives scheduled or shown on the contract documents provided by the Mechanical Contractor.
- jj. Provide and install NEMA rated enclosures as required for location/ application.
- kk. Provide all final electrical connections to Owner furnished equipment.
- ll. All electrical rooms are to be cleaned/ maintained daily throughout construction by this contractor. Final electrical room cleaning is by this contractor.
- mm. Provide and install wiring of power for line voltage fire/smoke dampers as required.
- nn. Provide and install labeling of all receptacles as required by the contract documents and all applicable codes. Ceiling grid is to be labeled with a small red dot to locate and smoke detector, fire/smoke damper, etc. above ceiling.
- oo. Provide verification of all Exhaust Fans, Motors, AHU/RTU's, and ERU's equipment shutdowns per required sequence and interlocking with fire alarm testing.
- pp. Provide and install wire support for all light fixtures only as required by the contract drawings and Governing Agency. Contractor to spray paint supporting wires.
- qq. Coordinate, provide, and install all wiring, conduits, circuits, and final connections to electrically operated finish hardware, including low volt wiring, (i.e. power doors, access control, etc.) as shown on the drawings. Coordinate with the Glazing Contractor.
- rr. Provide and Install all interior sealants associated with work of this bid category.
- ss. Provide and Install all through wall fire resistive fire stopping spray/joint sealant per approved UL Systems for all rated wall, floor, & deck penetrations for work of this bid category. Both sides of wall, floor, or deck are to be fire stopped.
- tt. Provide and Install all acoustical and through wall smoke spray/joint sealants for all non-rated wall, floor, and deck penetrations for work of this bid category. Both sides of wall, floor, or deck are to receive acoustical sealant
- uu. Floor penetrations that are associated with this scope of work is the responsibility of this contractor.
- vv. All exterior wall, floor, and roof penetrations for equipment installed under this scope of work shall be flashed and made watertight. Coordinate roof penetrations with roofing Contractor and ensure that roof warranty is not voided due to equipment installed under this scope.

- ww. Provide fire-stopping at all new electrical penetrations through walls. Include weather tight patching at exterior penetrations.
 - xx. Provide and install fire rating of all back-boxes and fixtures where required (putty packs).
 - yy. Provide pre-final inspection to ensure all systems are fully functional and operational. Includes checking of all penetrations for proper fire-stopping.
 - zz. Permanent building power and related equipment must be checked, tested, and started per project schedule providing electricity to the building through project completion.
 - aaa. Provide and install all conduit, boxes, and associated items for the A/V raceway system. A/V contractor will be responsible to install bridal rings and cabling.
 - bbb. Provide and install conduit, boxes, raceways, and infrastructure for network cabling as shown.
 - ccc. Specialty systems, including fire alarm, intercom, cable, smoke purge interface, and public address, etc. as indicated on the low voltage documents.
 - ddd. Provide all electrical testing as specified.
 - eee. Test emergency lighting system prior to final inspection in the presence of Barton Malow Builders. Include time in base bid to be present during fire alarm State and City final inspection.
 - fff. Install all heat tracing of mechanical and plumbing piping shown on the Contract Documents.
 - ggg. All starters and disconnects shall be provided and installed by this Contractor unless otherwise noted to be provided by another Contractor. Disconnects and starters provided by others will be installed by this Contractor.
 - hhh. Fire rating of all back-boxes and fixtures as required (i.e. putty packs)
28. Doors
- a. Provide single point power connection for – WHAT IS NEEDED. ELECTRICAL J-BOX OR DISCONNECT OR ELECTRICAL TO CONNECT TO DOOR CONTROL PANEL.
 - 1) Automatic doors
 - 2) Automatic sliding entrance gates.
 - 3) Overhead coiling doors/grilles
 - 4) All electrically operated doors
 - 5) Provide all wiring, conduits, circuits and final connections to electrically operated finish hardware (i.e. power doors, access control, etc.)
 - 6) Magnetic door holders furnished by others. Conduit, wiring and connections are by this Contractor
 - 7) Front gate
29. Electronic Hardware:
- a. Provide wiring and installation of all electronic hardware as specified and required for hinges, electric pivot sets, exit devices, electric strikes, automatic doors, openers, magnetic hold opens, door position sensors, push buttons, hand waves, fire alarm contacts, card readers, etc., as furnished by Hardware Supplier. Carpentry Contractor will provide typical hardware installation of items not required to remain loose for electrical connections.
 - 1) It is the responsibility of this contractor to provide power and hook up for new front gate, security cameras, ect.
 - 2) Reference hardware specification and door/hardware schedule to coordinate electronic hardware requirements.
 - b. Coordinate with necessary Contractors to provide access control matrix of responsibility.
30. Lighting and Lighting Controls
- a. Provide all interior and exterior lighting, lighting control devices.
 - b. Building mounted exterior lighting.

- c. In floor fixtures, floor boxes, & poke thru assemblies complete including all accessories.
 - d. Mounting of devices in areas of glass walls and ceilings.
 - e. including but not limited to all fixtures, raceways, switching, wiring, grounding, trim out.
 - f. Leave protective plastic wrap on light fixtures after they are installed. Until the Construction Manager directs that it be removed.
 - g. All lighting lenses to be covered during construction and/or cleaned by this Contractor at Substantial Completion.
 - h. Include time for a return trip to adjust artwork lighting after artwork has been installed.
 - i. Coordinate under cabinet lighting with casework shop drawings. Verify that the specified fixture will fit in the allotted space.
 - j. Coordinate with the Millwork and Drywall Contractors for placement of fixtures, local and remote ballasts, and lamps, potentially to be performed offsite
 - k. Include all lighting controls.
31. Lightning Protection & Building Grounding:
- a. Provide a complete lighting protection system including UL Master Label Certification.
 - b. Coordinate installation of roof top wiring and air terminals with Roofing Contractor.
 - c. Provide interior building grounding loops as shown on the construction documents. Include perimeter building grounding.
 - d. Provide all ground system testing required for grounding and lighting protection. lightning protection system, systems commissioning, etc., grounding
 - e. Tie into and extend building ground ring around building addition
 - f. Primary and secondary electrical service as indicated on the plans.
 - 1) Define point of connection of raceways.
 - 2) Define cable pull and terminations from utility to building service connection
 - 3) Coordinate installation with Local Utility Company.
 - g. Electrical I.D., per the Contract documents.
32. Site Electrical Work
- a. Complete site electrical system.
 - b. Utility locating and documentation of findings prior to excavation
 - c. Contractor shall document any site light to be re-used/relocated is fully functional prior to work. Any fixture to be relocated shall be stored as needed until returned to site for installation. This Contractor shall include all costs to repair all existing lighting returned from storage in a non-working order
 - d. Provide and install all site lighting complete.
 - e. Provide and install new conduit and wire for work of this bid category per drawings and specifications.
 - f. Excavate and backfill conduit trenches. Backfill with engineered fill and compact. Remove unsuitable soils. All soils are to be treated as contaminated and disposed of at a landfill.
 - g. Contractor shall use a State of Michigan licensed surveyor to lay out light pole bases.
 - h. Provide and install cast in place light pole bases complete including anchor bolts.
 - i. Provide and install all photo cells, timers, and over ride switches shown or specified.
- Underground and Duct bank Work
- j. Install utility duct bank per local Utility Company requirements.
 - k. Utility locating documentation of findings prior to excavation.
 - l. Installation of all Duct bank Work, Raceways and Structures including High Voltage, Telecommunication per Drawings and Specifications.
 - m. Include all excavation, concrete encasement, removal of spoils (assume all spoils as contaminated and dispose of properly) and backfill required for Duct banks and Manholes. Include all drainage and tie-ins to nearest storm drain.

- n. At locations where new manhole structures are installed adjacent to, around or on existing duct banks and/or structures include all shoring of existing duct bank, temporary support necessary complete this work.
 - 1) Include additional permanent shoring/hangers as required to support existing Duct bank within Manhole.
 - 2) Make new structure water-tight at all penetrations (existing and new).
 - 3) Protect all open trenches during Duct bank and Manhole Installations per MIOSHA/Barton Malow Builders Safety standards.
 - 4) Provide Conduit and Cabling for HV and Telecom Duct bank and proper marking/painting
- 33. Pneumatic Tube System:
 - a. In general, the Pneumatic Tube Contractor is responsible for providing mounting all control panels and performing all interconnecting and control wiring described in their specification sections. It is the responsibility of this Contractor to provide final power connections to a single point for each piece of equipment shown on the documents. Equipment that falls into this category includes control panels, motors, pneumatic tube stations, etc. unless stated otherwise.
 - 1) Provide normal power to all above-ceiling transfer units. Connect to the closest normal power panel.
 - 2) Exclude: Pneumatic Tube Systems Panels and Equipment control panels, etc. which are provided by the Pneumatic Tube Contractor.
 - 3) Exclude: Supplemental raceways, junction boxes, gang boxes, etc. as required for the system but not indicated on the drawings. These will be by the Pneumatic Tube Contractor.
- 34. Plumbing
 - a. All electrical work included in the Plumbing specifications for power to
 - 1) Electric Trap Primers
 - 2) Sensor/Electrically Operated Plumbing Fixtures
 - 3) Hand dryers
 - 4) Water heaters
 - 5) Pumps
- 35. Heating, Ventilating, and Air-Conditioning (HVAC)
 - a. All electrical work included in the HVAC specifications and specifically outlined as follows.
 - 1) This Contractor shall examine the Mechanical documents and those of the other trades to ascertain full extent of motor requirements.
 - 2) Receive from the Mechanical Contractors the loose starters and combination starter/disconnects for installation by this Contractor.
 - 3) If disconnects are not integral to equipment provided by Mechanical Contractor, this Contractor is responsible to provide and install
 - 4) All disconnects shall be provided and installed by this Contractor, with the exception of existing kitchen equipment being relocated from Orchard Ridge.
 - 5) This Contractor shall receive, install, and provide power to all Variable Frequency Drives (VFD's) loose Variable Frequency Controllers (VFCs) provided by others. Conduit and wiring to line and load side of VFC shall be provided and installed by this Contractor.
 - b. Heating Units
 - 1) Receive, inventory, unpack, convey and install all electric Heating Units, including but not limited to cabinet unit heaters (electric coils), and electric radiant heaters.
 - 2) Units will be provided to this Contractor by the Mechanical Contractor
 - c. Receive material from Mechanical trades and install all heat-trace cable, controls, labeling and identification of system as shown and specified.
 - 1) Heat-trace material to be supplied by respective Mechanical trades.

- d. Contractor responsible for properly sizing feeders to motors and equipment and cannot rely solely on the feeder sizes shown on the Contract Documents.
 - e. Contractor is responsible to develop an Electrical Coordination Schedule with HVAC showing for each mechanical equipment (Volts/phase, Starter/VFD by, Disconnect by, Power wiring by, Control wiring by).
 - f. Install and connect the speed control and power wiring at the High-Volume Low speed fans between the Speed Controller and the Fan Unit. Wiring harness between fan and speed controller to be provided by the Mechanical Contractor
 - g. Coordinate equipment hook ups with the Mechanical and Temperature Controls Contractor to ensure compatibility. All integral combination motor/starters/disconnects and variable frequency drives (VFD's) for mechanical equipment are provided by the mechanical Contractor. All final connections associated with equipment are by this Contractor.
36. Contractor shall provide power and coordinate all site lighting necessary as described in contract documents. This includes any poles and providing anchor bolts for concrete contractor to install.
37. Contractor responsible for any excavation/trenching needed for any underground conduit or piping and foundatoins, as necessary. Refer to drawings.
38. **Training and Acceptance Testing**
- a. Prior to completion:
 - 1) Perform Final Cleaning just prior to Training and Testing
 - 2) Provide finish coatings and touch up of electrical equipment as specified.
 - b. At completion:
 - 1) Assist in performance and document testing for all systems installed upon completion of systems and per specifications.
 - 2) Coordinate and participate with the independent Balancing Contractor.
 - 3) Provide final connections, testing and start-up of all equipment and assist Owner's Commissioning Agent with facility commissioning.
 - 4) Participate in the Owner's commissioning process and instruct the Owner's maintenance personnel in proper service and operation of the system as required in the specifications and/or as directed by Barton Malow Builders.
 - 5) Provide Owner training for all systems installed in this scope of work. Follow project specifications for training requirements. In the event the project Specifications are not clear, Contractor shall provide a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and locations.
 - (a) Training modules shall include:
 - (1) Basis of System Design, Operational Requirements and Criteria
 - (2) Documentation: review of all documentation pertaining the scope, including O&Ms, Record Documents, Warranties and bonds, Service Agreements, etc.
 - (3) Emergencies
 - (4) Operations of systems installed in this scope, including adjustments, troubleshooting, maintenance and repairs.
 - (b) Agenda must be approved prior to proceeding.
 - (c) Include demonstration and training video recordings. Submit video recordings on Thumb Drive.
39. Commissioning
- a. Provide commissioning assistance as required.

Excluded:

40. Demo of site lighting bases, however, disconnecting is by this Contractor.

3.02 SPECIAL CONSIDERATIONS:

- A. Labor Rates/Unit Prices/Alternates: Provide the following information on the bid form:
 - 1. Labor/Equipment Rates:
 - a. This Contractor is to provide as a part of his proposal a fully detailed labor rates for Barton Malow Builders approval for work associated with this Contractor's and for each of their Subordinate Parties Trades. In addition, labor rates will be required for all equipment involved with the performance of the work required by this Bid Category.
 - 2. Allowances: This Contractor must obtain written authorization from Barton Malow Builders prior to performing the associated work below. Include in this Contractor's bid, allowances for work as follows.
 - a. Provide Allowance for the following:
 - 1) **\$20,000 for misc. electrical work at Barton Malow's discretion.**
 - 3. Alternate:
 - a. None

END OF SECTION 002226.01

SECTION 002209.01
PAINT AND WALL COVERINGS - SCOPE OF WORK
BID CATEGORY – Fencing

PART 1 GENERAL

1.01 THE WORK OF THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO PROVIDING ALL SUPERVISION, LABOR, EQUIPMENT, MATERIALS, TAXES, BONDS, INSURANCE, SCAFFOLDING, HOISTING AND INCIDENTALS TO COMPLETE THE WORK PER ALL CONTRACT DOCUMENTS FOR THE OCC SOUTHFIELD DRIVING PAD AS DEFINED BY THE BID PACKAGE NO. 1f BID/WORK SCOPE DOCUMENT INCLUDING ITS SUPPLEMENTARY DOCUMENTS AND IN ACCORDANCE WITH ANY APPLICABLE CODES. ALL WORK IS TO BE PERFORMED AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE FOLLOWING TECHNICAL SPECIFICATION SECTIONS:

- A. Division 0 - Procurement and Contracting Complete
- B. Division 01 – General Requirements - Complete
- C. Division 32 – Exterior Improvements
 - 1. 32 3100 – Fences and Gates – Complete

IN ADDITION TO THE ABOVE, THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

PART 2 PRODUCTS – NOT USED**PART 3 EXECUTION**

THE SCOPE OF WORK WILL INCLUDED AND IS NOT LIMITED TO THE FOLLOWING ITEMS:

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:
 - 1. Additional Meetings & Quality Control Requirements:
 - a. Pre-Install Conferences
 - b. Mockups
 - c. Additional Photographic documentation, etc
- D. **Submittals/Close Out:**
 - 1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).

2. Submit all shop drawings in accordance with the contract documents and all code requirements within four (4) weeks after Notice to Proceed (NTP).
3. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.
4. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractors cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
5. Contractor shall include all cost necessary for closeout documents (including O&M manuals, guarantees or warranties on materials) per the Contract Documents.
6. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.
7. Architect/Engineer's punch list will not start until all work has been completed.
8. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.
9. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
2. All bidders are required to review the General Conditions of the Contract located in the project manual.
3. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
4. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
5. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
6. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.

7. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.
8. Contractor shall have their Superintendent/Foreperson attend a daily coordination meeting every morning from 6:45am - 7:00am. Participation is mandatory.
9. Project daily working hours are Monday – Friday, Site Opens @ 7:00am and closes at 3:30pm. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.
10. Contractor is only to take direction from Barton Malow Builders.
11. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.
12. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.
13. Contractor will be required to perform after-hours and overtime work as necessary to minimize disruption to Oakland Community College.
14. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
15. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
16. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and AutoDesk Build in section 013000-Administrative Requirements.
17. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
18. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
19. This project surrounded by Oakland Community College staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and Oakland Community College Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.
20. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.

21. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.
22. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, and landscaping during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
23. Deliveries must occur after 7am and prior to 2pm and not between noon and 1pm, unless scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
24. Contractor is responsible for storage of all materials. Deliver materials to the site as needed. Storage in the building will be limited. Materials in building must be on pallets or material/pipe carts.
25. Stocking of material on floors will be limited to a three (3) day maximum in the area of work, if approved by Barton Malow Builders Superintendent. No other material storage will be allowed in the building.
26. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
27. All materials are to be coordinated with Barton Malow Builders 1 day prior to delivery and all deliveries are just in time. Deliveries must be scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
28. All deliveries shall have a spotter to open and close gates. Contractor to guide trucks and flag traffic with proper signage.
29. All deliveries are to come off 9 mile road. as directed by Barton Malow Builders.
30. Include all rigging and hoisting to deliver, install, and remove materials to / from all floor levels complete.
31. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
32. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
33. Scaffolding and staging as required. Engineered installation drawings, as required.
34. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
35. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
36. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.

37. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Minimum eight (8) hours per week shall be included for meetings and coordination with Barton Malow Builders. Representative must be able to make all decisions for their Company and Contractors.
38. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the “entire” scope of work including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.
39. Contractor is to provide site Supervision and Foreman an Apple iPad with unlimited data/cellular plan service. It is required that Contractor download BluebeamRevu and Autodesk Build via the app store on each device. Contractor may access Owner guest Wi-Fi network if available.
40. Contractor must complete and submit electronic daily pre-task plans via Autodesk Build to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day’s specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor’s monthly payments until satisfied with this Contractor’s response.
41. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner’s items are missing, it is this contractor’s responsibility to purchase and replace with new materials.
42. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.
43. Provide Ground Penetrating Radar (GPR) to locate and mark existing gas, water, electrical site utilities, conduits, fiber, and mechanical piping prior to proceeding with any demo or excavation work.
 - a. Locate all underground utilities (public and private) prior to any demo or excavations. Note that Miss Dig will not locate private utilities on the Owner’s property. It is the responsibility of this contractor to hire an outside firm and locate private utilities.
 - 1) Damage to existing utilities, public or private, including but not limited to gas, water, electric, mechanical, communication, and irrigation lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
 - (a) Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
 - (b) Contractor will also be charged a minimum of \$1,500 for each occurrence for Barton Malow administrative costs.
 - (c) Contractor will be responsible for all Owner personnel, administrative costs, and damages for each occurrences.
44. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials

used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.

45. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
46. Provide all cutting/patching, coring, patching of penetrations, and block-outs for work of this bid category. This is to include but not limited to cutting and patching of all openings in deck (concrete or metal) if required. Patch walls where adjacent existing walls were removed. Patch and repair work is to be done professionally by trained, skilled craftsmen.
47. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be removable sections and that they do not present a tripping hazard.
48. Contractor is responsible for all dewatering and snow/ice removal necessary to complete this Scope of Work.
49. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
50. Contractor shall participate in the Composite Cleanup Crew as described in the project manual. These requirements are in addition to normal daily cleaning responsibilities and costs for this are included in the contract price.
51. Include all cost in base bid to comply with the latest Federal mandate, State of Michigan Executive Order, OSHA requirements, Local Jurisdiction Requirements, Owners Requirements, whichever is more stringent related to Covid-19: testing, PPE, social distancing, and all other requirements for your workers and subordinate parties. This shall include identifying your competent Covid 19 supervisor that will review, monitor, record, and enforce all requirements. In addition, each worker onsite is required to sign in each day prior to work using the Barton Malow QR Reader Questionnaire on a smart phone or tablet.
52. Contractor bid to be based on full plans and specs related to all fencing and temporary fencing.

F. Specific Scope:

1. Temporary Measures:
 - a. Protect all materials from damage prior to installation. This includes installing protection measures needed to protect adjacent surfaces from any Overspray or dripping. Removal of protective measures is to occur upon completion of the Work.
2. Temporary Electricity:
 - a. Temporary electricity (120V/1PH/20A) will be available for use by this Contractor. This Contractor is responsible for all means to access power to the points of work.
3. Temporary Water:
 - a. Temporary water will be made available during this Contractor's Work.
4. Temporary Lighting:
 - a. Contractor shall provide task lighting and temporary light stands as necessary.

5. Coordination and Layout
 - a. Contractor will be responsible for the complete coordination of work of this bid category with all other trades to identify and resolve conflicts. Any and all financial implications emanating from this Contractor's lack of planning and coordination will be borne by this Contractor. This shall include blocking, backing conduits, sleeves, penetrations, and any other appurtenances which may not be specifically identified by the contract documents but are required to complete this scope of work.
 - b. This Contractor is responsible for all detailed layout required for proper location and coordination of work.
 - c. Contractor shall review the critical dimensions and elevations of all work and shall otherwise verify the conformity of existing work to the Contract Documents and to its suitability. Contractor shall promptly submit a written statement to Barton Malow Builders and Architect/Engineer noting any discrepancies or unacceptable conditions as they relate to its work
 - d. Contractor shall attend all meetings as required to properly coordinate its Work with that of Others. Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - e. Contractor shall visit the site and attend meetings as required to properly coordinate the Work.
 - 1) Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
6. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
7. Contractor shall include multiple mobilizations to complete the Work.
8. **Fencing**
 - a. Contractor to include cost to furnish, install and removal of temporary construction fencing for the duration of the project. Contractor to include two large gates/access points and two main gates in temporary fencing.
 - b. Contractor to furnish and install all fencing per bid documents, including but not limited to Ornamental Fence and Chain Link Fence.
 - c. Contractor to furnish and install Motorized gate. (Electrical connections to be completed by electrical contractor)
 - d. All adjusting and cleaning shall be performed as specified at the end of each spec section.

1.02 SPECIAL CONSIDERATIONS:

- A. Labor Rates/Unit Prices/Alternates: Provide the following information on the bid form:
- B. Labor/Equipment Rates:
 - 1. This Contractor is to provide as a part of his proposal a fully detailed labor rates for Barton Malow Builders approval for work associated with this Contractor's and for each of their Subordinate Parties Trades. In addition, labor rates will be required for all equipment involved with the performance of the work required by this Bid Category.
- C. Unit Pricing:
 - 1. _____
- D. Allowances: This Contractor must obtain written authorization from Barton Malow Builders prior to performing the associated work below. Include in this Contractor's bid, allowances for work as follows.
 - a. General Allowance: \$15,000 (only used at BMB direction)
- E. Alternates: None.

END OF SECTION 002209.01

**SECTION 002232.01
LANDSCAPE AND IRRIGATION - SCOPE OF WORK
BID PACKAGE SF25-003
BID CATEGORY – LANDSCAPE**

PART 1 GENERAL

1.01 THE WORK OF THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO PROVIDING ALL SUPERVISION, LABOR, EQUIPMENT, MATERIALS, TAXES, BONDS, INSURANCE, SCAFFOLDING, HOISTING AND INCIDENTALS TO COMPLETE THE WORK PER ALL CONTRACT DOCUMENTS FOR THE SF25-003 BP #1H DRIVING PAD AND STORAGE - PROJECT MANUAL AS DEFINED BY THE BID PACKAGE NO. SF25-003, BID SCOPE DOCUMENT INCLUDING ITS SUPPLEMENTARY DOCUMENTS AND IN ACCORDANCE WITH ANY APPLICABLE CODES. ALL WORK IS TO BE PERFORMED AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE FOLLOWING TECHNICAL SPECIFICATION SECTIONS:

- A. Division 00 – Procurement & Contracting Requirements – Complete**
- B. Division 01 – General Requirements – Complete**
- C. Division 32 – Exterior Improvements – As Applicable**

IN ADDITION TO THE ABOVE, THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

PART 3 EXECUTION

THE SCOPE OF WORK WILL INCLUDED AND IS NOT LIMITED TO THE FOLLOWING ITEMS:

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.**
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.**
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:**
 - 1. Additional Meetings & Quality Control Requirements:**
 - a. Mockups**
 - b. Additional Photographic documentation, etc**
 - c. As-builts**
- D. Submittals/Close Out:**
 - 1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).**
 - 2. Submit all shop drawings in accordance with the contract documents and all code requirements within four (4) weeks after Notice to Proceed (NTP).**
 - 3. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.**

4. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractors cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
5. Contractor shall include all cost necessary for as-built, asset sheet data spreadsheet, closeout documents (including O&M manuals, valve charts, guarantees or warranties on equipment and/or materials, testing and system check-out or approval, and Owner's training as required) per the Contract Documents.
6. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.
7. Architect/Engineer's punch list will not start until all work has been completed.
8. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.
9. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. Unless otherwise directed or authorized, in writing, by Contractor, all RFI's, submittals, and project documents, for Subcontractor and its sub-subcontractors and suppliers, shall be submitted to Contractor using the Autodesk Build (BIM 360) application. Subcontractor shall be responsible for the fees and costs owed associated with Subcontractor's use of Autodesk Build (BIM 360). Fees to Subcontractors are calculated as 0.1% of contract value. Subcontractor will be invoiced directly at project start-up and payment must be submitted prior to the start of work.
2. All rigging done by this contractor will be the responsibility of this contractor, there will be no crane on site for contractors use.
3. Due to the specified finishes, i.e. polished concrete floors, coffee, soft drinks, energy drinks, etc. are NOT allowed inside the new building during or after construction. Any damages that occur by this contractor is the responsibility of this contractor.
4. When working on site, the smoking of cigarettes, vapes, tobacco, etc. will NOT be prohibited.
5. Any removal of temporary protection, i.e. tarps, handrails, etc. must be reinstalled by this contractor. If not reinstalled, cost associated with fixing the temporary protection will be the responsibility of this contractor.
6. Contractor to not enter into existing Oakland Community College building unless authorized and coordinated with Barton Malow Builders.
7. A site specific safety orientation is required to attend by all trades prior to any work starting on site. Orientations will take place from 7:00 a.m. to 8:00 a.m.
8. Contractor to have safety representative visit the site weekly to ensure work is being completed per Barton Malow Builders safety standard and MIOSHA.

9. This contractor is to submit with their bid a detailed schedule including estimated lead times, and durations for scope of work.
10. All foremen must have OSHA 3. This shall be turned over to Barton Malow Builders during the submittal process or prior to starting on site.
11. Contractor to provide mockups according to IDS project manual.
12. Barton Malow Company reserves the right to enforce all applicable safety requirements. Each contractor is fully responsible to ensure its respective field personnel (including subcontractors and suppliers) are practicing safe work habits per industry standards and in compliance with regulations noted in company's safety policy, Barton Malow Company's safety information (Safety Manual and section 00810 of the Project Manual) and MIOSHA. In the event there is a conflict, the most strict standard will apply. BMC reserves the right to remove any person(s) on the site that practices unsafe work habits. The contractor shall be fully responsible to maintain the schedule regardless of the definite or indefinite removal of such person(s).
13. Any working trades person working on site shall wear proper PPE. High-vis vest/shirts must have company logo.
14. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
15. All bidders are required to review the General Conditions of the Contract located in the project manual.
16. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
17. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
18. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
19. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.
20. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.
21. Contractor shall have their Superintendent/Foreman attend a daily coordination meeting every morning. Participation is mandatory.
22. All pre-task plans must be reviewed and signed off by Barton Malow Builders prior to starting work.
23. Contractor will be required to submit daily pre task plans via AutoDesk everyday.
24. Project daily working hours are Monday – Friday, Site Opens @ 7:00 a.m. and closes at 3:30 p.m.. unless coordinated with Oakland Community College and Barton Malow Builders. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.
25. In the event contractor has to work weekends, they shall inform Barton Malow Builders and Oakland Community College by not later than Wednesday of that week.

26. Contractor is only to take direction from Barton Malow Builders.
27. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.
28. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.
29. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
30. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
31. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and Box in section 013000-Administrative Requirements.
32. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
33. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
34. This project surrounded by OCC staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and OCC Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.
35. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.
36. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.
37. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, and landscaping during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
38. In the event a road closure is necessary, contractor to coordinate with Barton Malow Builders 30 days prior.
39. All materials are to be coordinated with Barton Malow Builders 1 day prior to delivery and all deliveries are just in time. Deliveries must be scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.

40. All deliveries shall have a spotter to open and close gates. Contractor to guide trucks and flag traffic with proper signage.
41. All deliveries are to come off 9 mile road as directed by Barton Malow Builders.
42. Contractor is responsible for storage of all materials. Deliver materials to the site as needed. Storage in the building will be limited. Materials in building must be on pallets or material/pipe carts.
43. Stocking of material on floors will be limited to a three (3) day maximum in the area of work, if approved by Barton Malow Builders Superintendent. No other material storage will be allowed in the building.
44. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
45. Include all rigging and hoisting to deliver, install, and remove materials to / from all floor levels complete.
46. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
47. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
48. Scaffolding and staging as required. Engineered installation drawings, as required.
49. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
50. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
51. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.
52. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Minimum eight (8) hours per week shall be included for meetings and coordination with Barton Malow Builders. Representative must be able to make all decisions for their Company and Contractors.
53. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the "entire" scope of work including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.
54. Contractor is to provide site Supervision and Foreman an Apple iPad with unlimited data/cellular plan service. It is required that Contractor download BluebeamRevu, Autodesk Build, and Box via the app store on each device. Contractor may access Owner guest Wi-Fi network if available.
55. Contractor must complete and submit electronic daily pre-task plans via AutoDesk to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day's specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor's monthly payments until satisfied with this Contractor's response.

56. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner's items are missing, it is this contractor's responsibility to purchase and replace with new materials.
57. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.
58. Locate all underground utilities (public and private) prior to any excavation and temporary road/staging area install. Note that Miss Dig will not locate private utilities on the Owner's property. It is the responsibility of this contractor to hire an outside firm and locate private utilities. Damage to existing utilities, public or private, including communication and parking/walkway lighting lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
59. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.
60. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
61. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be removable sections and that they do not present a tripping hazard. If work is not performed to OSHA standard, then Barton Malow Builders will perform the work with a back charge to the contractor.
62. Contractor is responsible for all dewatering and snow/ice removal necessary to complete this Scope of Work.
63. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
64. Contractor shall participate in the Composite Cleanup Crew as described in the project manual. These requirements are in addition to normal daily cleaning responsibilities and costs for this are included in the contract price.
65. Contractor is required to protect any openings caused by scope of work i.e., covering up poke through's during construction with ¾ in. plywood.

F. Specific Scope:

1. Underdrainage in the tree pits is the responsibility of this contractor. Stubs into existing drain lines has been completed by another contractor.

2. The hardscape contractor is responsible for compacted subgrade to 1' down from top of curb to all landscape curbs (planting beds and grass). This contractor (landscape) is responsible for everything above 1' below subgrade.
3. Temporary Measures:
 - a. Provide, maintain, and remove temporary systems upon completion and activation for use of the permanent systems
 - b. Protect all materials from damage prior to installation.
4. Temporary Electricity:
 - a. No temporary electricity will be available to this Contractor. Contractor to provide all gas or diesel operated generators required for their scope of work
5. Temporary Lighting:
 - a. Contractor shall provide task lighting and temporary light stands as necessary.
6. Coordination and Layout
 - a. Contractor shall review the critical dimensions and elevations of all work and shall otherwise verify the conformity of existing work to the Contract Documents and to its suitability. Contractor shall promptly submit a written statement to Barton Malow Builders and Architect/Engineer noting any discrepancies or unacceptable conditions as they relate to its work
 - b. Contractor shall attend all meetings as required to properly coordinate its Work with that of Others. Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - c. Contractor shall visit the site and attend meetings as required to properly coordinate the Work.
 - 1) Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - d. Initial benchmarks are shown on the project drawings.
7. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
8. Contractor shall include multiple mobilizations to complete the Work.
9. Landscaping
 - a. Provide all labor, material and equipment as required to complete the Landscaping Work as shown and specified within the Contract Documents and as clarified herein.
 - b. Multiple mobilizations are to be included as may be required to complete the Work.
 - c. Contractor is responsible for all surveying and layout required to perform its Work.
 - d. Locate all underground utilities (public and private) prior to any excavation. Note that Miss Dig will not locate private utilities on the Owner's property. It is the responsibility of this contractor to hire an outside firm and locate private utilities. Damage to existing utilities, public or private, including communication and parking/walkway lighting lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
 - e. Contractor shall coordinate with others the removal of any tree or soil erosion temporary protection measures as its work progresses.
 - 1) Removal of all soil erosion measures after lawn acceptance. Fill in trench with topsoil, grade and seed.
 - f. Provide and install all topsoil. Final grading (and achievement of final design grades) of the site is to be by this Contractor. Contractor shall have a surveyor spot check the rough grades provided by the Civil/Site Contractor and confirm that they are acceptable.

- g. Work of this bid category shall include excavation of existing soil and its removal from the site.
- h. Provide and install new plantings, tree and ground cover with specified species shown and outlined on the contract documents.
- i. Excavation of tree pits, beds, and/or islands for topsoil, mulch and/or planter fill and remove excess offsite.
- j. Provide and install all soil types as shown or specified in the contract documents.
- k. Provide prepared planting soil and any special soils. Soil mixing and/or fertilizer as required.
- l. Contractor shall provide any samples and test reports required by the Contract Documents.
- m. Contractor shall remove or relocate any plant materials as required.
- n. Provide edging where shown or required.
- o. Provide and install all weed barriers shown or specified.
- p. Provide and install mulch as shown and to depths shown or specified.
- q. Provide and install all decorative stone as shown.
- r. Sodding and seeding as shown or specified on the Contract Documents.
 - 1) Provide sod stakes as necessary.
 - 2) Provide straw blanket stakes as necessary.
 - 3) Provide geo fiber lawn reinforcement where called out
- s. Provide all hydro-seeding as shown or specified.
 - 1) Clean off all overspray from building, walks, bollards, ect.
- t. Provide and install topsoiling, seeding, of all areas disturbed during construction.
- u. All tree materials shall be staked and supported as required. Contractor shall include maintenance of the staking material during the grow-in or warranty period. Work shall also include the removal and disposal of tree staking upon completion of the grow-in or warranty period.
- v. All new landscaping must be kept watered by this bid category until the irrigation system is fully operational and turned over to the Owner.
- w. Provide and install all excavation, engineered fill, and compaction for work of this bid category.
- x. Provide weeding of beds and fertilizer/herbicides of lawns.
- y. Provide final clean up of grounds and pavement after completion.
 - 1) Contractor shall pressure wash any topsoil, other planting debris, or equipment markings left by its Work, from adjacent finished sidewalks, paving, or other finished surfaces.
- z. Maintain new work until substantial completion and acceptance by the Architect/Engineer and Owner. Warranties begin after acceptance by the Architect/Engineer and Owner.
- aa. Contractor shall provide temporary watering and proper care of materials during the grow-in and warranty period.
- bb. Contractor shall protect all adjacent finished surfaces. If required, Contractor shall pressure wash any topsoil, other planting debris, or equipment markings left by its Work, from adjacent finished sidewalks, or other finished surfaces.
- cc. Provide all cuttings, fertilizations, herbicides, waterings, etc. called out in the drawings or specifications.
- dd. Final As-Built Drawings are to be provided by this Contractor in the appropriate format.
- ee. Provide and install decomposed granite including 6" 21AA base, and level/compact subgrade below.
- ff. Frames around trees in the ROW will be set by the hardscape contractor. Grates will be furnished by hardscape contractor to be installed by this contractor.
- gg. Arborist shall perform crown raising pruning to existing trees.

hh. Repair existing lawn areas noted.

3.02 SPECIAL CONSIDERATIONS:

- A. Labor Rates/Unit Prices/Alternates: Provide the following information on the bid form:
- B. Labor/Equipment Rates:
- C. This Contractor is to provide as a part of his proposal a fully detailed labor rates for Barton Malow Builders approval for work associated with this Contractor's and for each of their Subordinate Parties Trades. In addition, labor rates will be required for all equipment involved with the performance of the work required by this Bid Category.
- D. Allowances: This Contractor must obtain written authorization from Barton Malow Builders prior to performing the associated work below. Include in this Contractor's bid, allowances for work as follows.
 - 1. Provide Allowance for the following
 - a. **\$30,000 allowance for miscellaneous landscape work at Barton Malow's discretion.**
- E. Alternates: See alternate no. 1, provide add alternate price to replace all plant material removed during perimeter berm reshaping.

END OF SECTION 002232.01

SECTION 002204.01
MASONRY - SCOPE OF WORK
BID PACKAGE SF25-003
BID CATEGORY – MASONRY

PART 1 GENERAL

2.01 THE WORK OF THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO PROVIDING ALL SUPERVISION, LABOR, EQUIPMENT, MATERIALS, TAXES, BONDS, INSURANCE, SCAFFOLDING, HOISTING AND INCIDENTALS TO COMPLETE THE WORK PER ALL CONTRACT DOCUMENTS FOR THE OCC SF25-003 DRIVING PAD AND STORAGE AS DEFINED BY THE BID PACKAGE NO. 1C SF25-003 BID/WORK SCOPE DOCUMENT INCLUDING ITS SUPPLEMENTARY DOCUMENTS AND IN ACCORDANCE WITH ANY APPLICABLE CODES. ALL WORK IS TO BE PERFORMED AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE FOLLOWING TECHNICAL SPECIFICATION SECTIONS:

- A. Division 00 – Procurement and Contracting Requirements – Complete
- B. Division 01 – General Requirements – Complete
- C. Division 04 – Masonry – Complete
 - 1. 04 2000 – Unit Masonry
 - 2. 04 4200 – Exterior Stone Cladding
- D. Division 07 – Thermal and Moisture Protection
 - 1. 07 1113 – Bituminous Dampproofing - As Applicable
 - 2. 07 1900 – Water Repellents – As Applicable
 - 3. 07 2100 – Thermal Insulation - As Applicable
 - 4. 07 2700 – Fluid-Applied Membrane Air Barriers - As Applicable
 - 5. 07 4113 – Metal Roof Panels - As Applicable
 - 6. 07 4213 – Formed Metal Wall Panels - As Applicable
 - 7. 07 6200 – Sheet Metal Flashing and Trim - As Applicable
 - 8. 07 7100 – Manufactured Roof Specialties - As Applicable
 - 9. 07 9200 – Joint Sealants - As Applicable
- E. Division 08 – Openings
 - 1. 08 1113 – Hollow Metal Doors and Frames – As Applicable
 - 2. 08 3113 – Access Doors and Frames - As Applicable
 - 3. 08 3613 – Sectional Doors - As Applicable
 - 4. 08 4113 – Aluminum-Framed Storefronts - As Applicable
 - 5. 08 9000 – Louvers - As Applicable

IN ADDITION TO THE ABOVE, THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

THE SCOPE OF WORK WILL INCLUDED AND IS NOT LIMITED TO THE FOLLOWING ITEMS:

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:
 - 1. Additional Meetings & Quality Control Requirements:
 - a. Mockups
 - b. Additional Photographic documentation, etc.
 - c. As-builts
- D. **Submittals/Close Out:**
 - 1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).
 - 2. Submit all shop drawings in accordance with the contract documents and all code requirements within four (4) weeks after Notice to Proceed (NTP).
 - 3. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.
 - 4. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractors cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
 - 5. Provide shop drawings for reinforcing steel.
 - 6. Engineered shoring drawings must be signed and sealed by a Registered Engineer in accordance with contract documents and state law.
 - 7. Contractor shall include all cost necessary for as-built, asset sheet data spreadsheet, closeout documents (including O&M manuals, valve charts, guarantees or warranties on equipment and/or materials, testing and system check-out or approval, and Owner's training as required) per the Contract Documents.
 - 8. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.
 - 9. Architect/Engineer's punch list will not start until all work has been completed.
 - 10. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to

date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.

11. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. Contractor to not enter into existing Oakland Community College building unless authorized and coordinated with Barton Malow Builders.
2. A site specific safety orientation is required to attend by all trades prior to any work starting on site. Orientations will take place from 7:00 a.m. to 8:00 a.m.
3. Contractor to have safety representative visit the site weekly to ensure work is being completed per Barton Malow Builders safety standard and MIOSHA.
4. This contractor is to submit with their bid a detailed schedule including estimated lead times, and durations for scope of work.
5. All foremen must have OSHA 30 and / or MUST Modules. This shall be turned over to Barton Malow Builders during the submittal process or prior to starting on site.
6. Contractor to provide mockups according to HED project manual.
7. Barton Malow Company reserves the right to enforce all applicable safety requirements. Each contractor is fully responsible to ensure its respective field personnel (including subcontractors and suppliers) are practicing safe work habits per industry standards and in compliance with regulations noted in company's safety policy, Barton Malow Company's safety information (Safety Manual and section 00810 of the Project Manual) and MIOSHA. In the event there is a conflict, the most strict standard will apply. BMC reserves the right to remove any person(s) on the site that practices unsafe work habits. The contractor shall be fully responsible to maintain the schedule regardless of the definite or indefinite removal of such person(s).
8. Any working trades person working on site shall wear proper PPE. High-vis vest/shirts must have company logo.
9. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
10. All bidders are required to review the General Conditions of the Contract located in the project manual.
11. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
12. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
13. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
14. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.
15. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.

OCC Southfield – Driving Pad and
Storage

16. Contractor shall have their Superintendent/Foreman attend a daily coordination meeting every morning. Participation is mandatory.
17. All pre-task plans must be reviewed and signed off by Barton Malow Builders prior to starting work.
18. Project daily working hours are Monday – Friday, Site Opens @ 7:00 a.m. and closes at 3:30 p.m. unless coordinated with Oakland Community College and Barton Malow Builders. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.
19. In the event contractor has to work weekends, they shall inform Barton Malow Builders and Oakland Community College by not later than Wednesday of that week.
20. Contractor is only to take direction from Barton Malow Builders.
21. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.
22. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.
23. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
24. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
25. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and Box in section 013000-Administrative Requirements.
26. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
27. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
28. This project surrounded by OCC staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and OCC Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.
29. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.
30. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.

OCC Southfield – Driving Pad and
Storage

31. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, and landscaping during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
32. In the event a road closure is necessary, contractor to coordinate with Barton Malow Builders 30 days prior.
33. All materials are to be coordinated with Barton Malow Builders 1 day prior to delivery and all deliveries are just in time. Deliveries must be scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
34. All deliveries shall have a spotter to open and close gates. Contractor to guide trucks and flag traffic with proper signage.
35. All deliveries are to come off 9 mile Road street as directed by Barton Malow Builders.
36. Contractor is responsible for storage of all materials. Deliver materials to the site as needed. Storage in the building will be limited. Materials in building must be on pallets or material/pipe carts.
37. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
38. Include all rigging and hoisting to deliver, install, and remove materials to / from all floor levels complete.
39. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
40. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
41. Scaffolding and staging as required. Engineered installation drawings, as required.
42. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
43. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
44. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.
45. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Minimum eight (8) hours per week shall be included for meetings and coordination with Barton Malow Builders. Representative must be able to make all decisions for their Company and Contractors.
46. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the “entire” scope of work including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.

OCC Southfield – Driving Pad and
Storage

47. Contractor is to provide site Supervision and Foreman an Apple iPad with unlimited data/cellular plan service. It is required that Contractor download BluebeamRevu, Autodesk Build, and Box via the app store on each device. Contractor may access Owner guest Wi-Fi network if available.
48. Contractor must complete and submit electronic daily pre-task plans via AutoDesk to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day's specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor's monthly payments until satisfied with this Contractor's response.
49. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner's items are missing, it is this contractor's responsibility to purchase and replace with new materials.
50. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.
51. Locate all underground utilities (public and private) prior to any excavation and temporary road/staging area install. Note that Miss Dig will not locate private utilities on the Owner's property. It is the responsibility of this contractor to hire an outside firm and locate private utilities. Damage to existing utilities, public or private, including communication and parking/walkway lighting lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
52. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.
53. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
54. Provide all cutting/patching, coring, patching of penetrations, and block-outs for work of this bid category. This is to include but not limited to cutting and patching of all openings in deck (concrete or metal) if required. Patch walls where adjacent existing walls were removed. Patch and repair work is to be done professionally by trained, skilled craftsmen.
55. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be removable sections and that they do not present a tripping hazard. If work is not performed to OSHA standard, then Barton Malow Builders will perform the work with a back charge to the contractor.
56. Contractor is responsible for all dewatering and snow/ice removal necessary to complete this Scope of Work.
57. Contractor responsible for protection during winter weathers, i.e. frost blankets, ground thawing systems, etc.

58. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
59. Contractor shall participate in the Composite Cleanup Crew as described in the project manual. These requirements are in addition to normal daily cleaning responsibilities and costs for this are included in the contract price.

F. Specific Scope:

1. Temporary Measures:
 - a. Protect all materials from damage prior to installation.
2. Temporary Guardrail Systems:
 - a. Maintain all temporary guardrail system during the course of construction. At such time when it can or must be removed to perform work, appropriate safety precautions are to be implemented. After this Contractor completes areas of work, which do not offer appropriate fall protection due to gaps or openings, this Contractor is to provide appropriate temporary guardrails across openings.
 - b. Contractor to remove temporary cable and steel angles installed by the steel contractor as the installation of masonry takes place.
3. Contractor includes any mock-ups per specifications. Mock-ups will require the early release fabrication and delivery of all materials necessary to build the mock-up for Architect/Engineer and Owner approval.
4. Coordination and Layout
 - a. Contractor will be responsible for the complete coordination of work of this bid category with all other trades to identify and resolve conflicts. Any and all financial implications emanating from this Contractor's lack of planning and coordination will be borne by this Contractor. This shall include blocking, backing conduits, sleeves, penetrations, and any other appurtenances which may not be specifically identified by the contract documents but are required to complete this scope of work.
 - b. This Contractor is responsible for all detailed layout required for proper location and coordination of work.
 - c. Contractor shall review the critical dimensions and elevations of all work and shall otherwise verify the conformity of existing work to the Contract Documents and to its suitability. Contractor shall promptly submit a written statement to Barton Malow Builders and Architect/Engineer noting any discrepancies or unacceptable conditions as they relate to its work
 - d. Contractor shall attend all meetings as required to properly coordinate its Work with that of Others. Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - e. Contractor shall visit the site and attend meetings as required to properly coordinate the Work.
 - 1) Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - f. Initial benchmarks are shown on the project drawings.
 - g. Coordinate installation of piping and conduit with the Electrical, Mechanical, and Temperature Control Contractors in new masonry walls.
5. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
6. Contractor shall include multiple mobilizations to complete the Work.
7. The Owner will independently contract a testing agency to test and inspect the work at the Owner's expense. Though the Owner will test and inspect the work, this does not absolve this Contractor from the proper execution of its work including its own testing and

inspection. This Contractor is responsible to prepare for, coordinate with, and respond to the Owner's testing of the work including discovered deficiencies. This Contractor to provide access and assistance to the Owner's Testing Agency and Architect/Engineer in order to adequately reach testing locations as required (lift, ladder, etc.).

- a. Contractor shall immediately correct all deficiencies noted by Owner's Testing Agency and Architect/Engineer.
8. Provide hoses for water supply and they shall be in proper working condition. Leaking hoses will be removed. This Contractor is responsible for associated clean up.
9. Provide masonry washout service for work of this bid category and is to be in accordance with County/EPA requirements.
10. Dry cutting of masonry and concrete will not be permitted.
11. Coordination of masonry scope of work with other trades to insure that necessary provisions are made to accommodate items including but not limited to embeds, sleeving, door frames, conduit/boxes, pipes, anchors, flashing systems, and similar materials.
12. Receive, handle, set, and grout solid all hollow metal doors frames, and windows (provided by others) at new masonry walls. Coordinate electrical raceways with the Electrical, and Security Contractors prior to grouting. For door frames required to be left out for access, leave oversized opening and tooth in masonry when directed by Barton Malow Builders. Contractor to notified Barton Malow Builders of any missing or damaged materials.
13. HM Frames to be grouted solid prior to install.
14. Grout and insulate all masonry wall cavities as shown and or required.
15. Work includes installation of loose steel lintels (provided by others). This includes the receiving, unloading, and storing of lintels on the jobsite until installation.
16. Provide and install all rigid and semi-rigid cavity insulation as shown on documents.
17. Includes blocking out of masonry and coordination for all penetrations.
18. Includes setting of sleeves and anchors provided by others.
19. All masonry joints shall be tooled, cleaned and ready for application of paint or other finishes specified.
20. Provide and install cell fill (concrete and/or insulation), mortar and grout. Provide inspection holes, as specified or required.
21. Provide and install all horizontal and vertical wall reinforcing as specified or required.
22. Provide and install reinforcing steel above foundations at CMU walls, as indicated per the contract documents or required.
23. Provide and install lintels at all masonry opening including but not limited to: doors, windows, garage doors, etc. Furnishing lintels listed on all lintel schedules.
24. Contractor includes installing any embeds provided by others as shown on documents.
25. Contractor to provide and installing any embeds as shown on documents.
26. Coordinate and Install all access doors provided by others in masonry walls.
27. Coordinate layout of construction joints in masonry with the Barton Malow Builders and Architect/Engineer.
28. Joint sealant for masonry expansion/isolation joints for work of this bid category as shown, required, or specified.
29. Install joint sealants at the bottom of masonry walls as shown and/or required.
30. All walls are to go to deck unless otherwise noted and to be fire or smoke rated/sealed.
31. Provide and Install all top of masonry wall fire resistive joint fire stopping per approved UL Systems including insulation for all rated walls shown on the drawings. Both sides of walls are to be fire sprayed/joint sealed.
32. Provide and Install all top of wall acoustical smoke sealants for all non-rated masonry walls as shown on the drawings. Both sides of walls are to be acoustically sprayed/joint sealed as shown on drawings.
33. Contractor will be responsible for review/coordination of approved shop drawings such as the door and window openings, etc. prior to work taking place. These documents can be obtained for review from the Construction Manager.

34. Masonry wall cavities and top of walls shall be covered and protected each day.
35. Clean and wash all masonry and stone as specified and in accordance with approved sample. Protect all adjacent finished products from the cleaning agents.
 - a. Remove water and debris created from masonry cleaning.
36. Clean and seal all existing and new masonry shown or specified.
 - a. Remove water and debris created from masonry cleaning.
 - b. Protect existing items to remain when sealing masonry.
37. Provide and install all waterproofing, damp proofing, and insulation on masonry walls. Overlap on dissimilar materials as specified or required.
 - a. Protect any new and/or existing adjacent surfaces from over spray of insulation, waterproofing, damp proofing.
38. Fluid-applied membrane, air barrier and/or damp proofing behind the masonry system within wall cavity, regardless of the substrate. Where flashing is installed over the fluid applied membrane, it is this Contractor's responsibility to provide a lap of fluid applied membrane over the flashing.
 - a. Protect any new and/or existing adjacent surfaces from over spray of insulation, waterproofing, damp proofing or mortar droppings.
39. Contractor is responsible for cleaning of and de-mudding foundations and brick ledges prior to installation.
40. Concrete Masonry Units/Scored Block/Burnish Block
 - a. Provide and install all concrete unit masonry with all associated ties and reinforcing, through-wall flashing, weeps, dowels (including drilling and grout), grout, mortar, mortar net, bond beams, reinforcing steel, joint fillers, expansion joints, joint reinforcing, ties, anchors, insulation, damp-proofing, control strip joints, and all miscellaneous accessories to provide a complete masonry system.
 - b. Refer to structural drawings for requirements of reinforced masonry.
 - c. Receive and install plates, angles, channel, bearing plates, etc. to be embedded for beam connections, top of wall clips and bracing, door openings, etc. and which are integral parts of the masonry system.
 - d. Provide and touch-up painting of any exposed connections for masonry ties. This Contractor is responsible for patching of fireproofing at ties that are installed after fireproofing.
 - e. Provide block outs/recesses in masonry for mechanical, electrical, structural, etc.
 - f. Coordinate and cooperate with other Contractors of in wall rough-ins and penetrations.
 - g. Provide and install horizontal and vertical masonry wall reinforcement, anchors, through wall flashing, bond beams, insulation, fire stopping (including perimeter of walls), top of wall plates, sealants, caulking, expansion joints assemblies and covers, compressible fillers, expansion joint fillers, and isolation material.
 - h. All through wall flashings shall be inspected by local building authority (if applicable), Architect/Engineer and Barton Malow Builders prior to being concealed.
 - i. All exposed and above ceiling CMU joints shall be tooled, cleaned and ready for application of paint or other finishes.
 - j. Includes setting of sleeves and anchors (provided by others) or coordination with other Contractors for sleeve to be set.
41. Exterior Stone Cladding
 - a. Provide required stone samples as well as a mock-up wall as indicated in the specifications, to be reviewed and approved by the Architect/Engineer and Owner prior to construction starting for this Work Scope.
 - b. Provide and install all masonry assemblies (including site walls), fabricated and/or cut stone assemblies, natural stone veneer, limestone, etc. including necessary anchoring of all work to structural back-up systems including weeps and vents. Includes all labor, material, accessories, and equipment for a complete installation.
42. Cast Stone

OCC Southfield – Driving Pad and
Storage

- a. Provide required cast stone samples as well as a mock-up wall as indicated in the specifications, to be reviewed and approved by the Architect/Engineer and Owner prior to construction starting for this Work Scope.
 - b. Work includes cast stone caps at site walls.
 - c. Provide and install cast stone assemblies, shapes, trims, sills, copings, caps, water tables, etc. (including site walls), shop and fabrication drawings, including necessary anchoring of all work to structural back-up systems. Includes all labor, material, accessories, and equipment for a complete installation.
43. Manufactured Stone
- a. Provide required stone samples as well as a mock-up wall as indicated in the specifications, to be reviewed and approved by the Architect/Engineer and Owner prior to construction starting for this Work Scope.
 - b. Provide and install all manufactured stone assemblies (including site walls), including mortars, grouts, brown and scratch base coats, expanded metal lath, etc. Includes all labor, material, accessories, and equipment for a complete installation.
44. Owner has 1800 eight inch units of block that will be provided for use in the project. Block is currently located at the OCC Orchard Ridge Campus. It is the responsibility of this contractor to relocate the block to the OCC Southfield Campus for use of this project.
- a. Contractor is to include any additional block needed in their bid for the project besides the quantity already provided by the owner.

G. Exclusions:

1. Providing of Hollow Metal Frames.

4.02 SPECIAL CONSIDERATIONS:

- A. Labor Rates/Unit Prices/Alternates: Provide the following information on the bid form:
- B. Labor/Equipment Rates:
 1. This Contractor is to provide as a part of his proposal a fully detailed labor rates for Barton Malow Builders approval for work associated with this Contractor's and for each of their Subordinate Parties Trades. In addition, labor rates will be required for all equipment involved with the performance of the work required by this Bid Category.
- C. Unit Costs:
- D. Allowances: This Contractor must obtain written authorization from Barton Malow Builders prior to performing the associated work below. Include in this Contractor's bid, allowances for work as follows.
 1. Proposal to include \$40,000 Allowance. To be used only at BMB direction.

END OF SECTION 002204.01

SECTION 002222.01
PLUMBING/MECHANICAL/HVAC - SCOPE OF WORK
BID PACKAGE SF25-003
BID CATEGORY – PLUMBING/MECHANICAL/HVAC

GENERAL

2.01 THE WORK OF THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO PROVIDING ALL LABOR, EQUIPMENT, MATERIALS, SCAFFOLDING, HOISTING AND INCIDENTALS TO COMPLETE THE WORK PER ALL CONTRACT DOCUMENTS FOR THE SF25-003 BP #1E DRIVING PAD AND STORAGE - PROJECT MANUAL PROJECT AS DEFINED BY THE BID PACKAGE NO. SF25-003 BID/WORK SCOPE DOCUMENT INCLUDING ITS SUPPLEMENTARY DOCUMENTS AND IN ACCORDANCE WITH ANY APPLICABLE CODES. ALL WORK IS TO BE PERFORMED AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE FOLLOWING TECHNICAL SPECIFICATION SECTIONS:

- A. Division 00 – Procurement and Contracting Requirements (Complete)**
- B. Division 01 – General Requirements (Complete)**
- C. Division 07 – Thermal and Moisture Protection**
 - 1. 07 9200 – Joint Sealants – As Applicable
 - 2. 07 1113 – Water Repellents – As Applicable
 - 3. 07 2100 – Thermal Insulation – As Applicable
- D. Division 20 – Common Mechanical Requirements (Complete)**
- E. Division 22 – Plumbing (Complete)**
- F. Division 23 – Heating, Ventilating, and Air Conditioning (Complete)**
- G. Division 31 – Earthwork**
 - 1. 31 0000 – Earthwork – As Applicable

IN ADDITION TO THE ABOVE, THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

2.02 EXECUTION

THE SCOPE OF WORK WILL INCLUDE AND IS NOT LIMITED TO THE FOLLOWING ITEMS:

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.**
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.**
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:**
 - 1. Additional Meetings & Quality Control Requirements:
 - 2. Coordination drawings & As-builts for MEP, etc
- D. Submittals/Close Out:**
 - 1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).
 - 2. Coordinate and distribute AutoCAD plumbing piping & equipment coordination drawings with the Architectural, Fire Suppression, Electrical, and HVAC Contractors to avoid interferences. Final AutoCAD coordination drawings from each trade is to be consolidated and submitted by the HVAC Contractor for Architect/Engineer approval. Lack of, or delay

in coordination with other Trades will result in a backcharge to maintain project schedule. Coordination drawings must be approved by the Architect/Engineer prior to submission of shop drawings.

3. Coordinate and distribute AutoCAD plumbing drawings with the Architectural, Fire Suppression, Electrical, and HVAC Contractors to avoid interferences. Final AutoCAD coordination drawings from each trade is to be consolidated and submitted by the HVAC Contractor for Architect/Engineer approval. Lack of, or delay in coordination with other Trades will result in a backcharge to maintain project schedule. Coordination drawings must be approved by the Architect/Engineer prior to submission of shop drawings.
4. Submit all shop drawings in accordance with the contract documents and all code requirements within four (4) weeks after Notice to Proceed (NTP).
5. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.
6. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractor's cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
7. Engineered shop drawings must be signed and sealed by a Registered Engineer in accordance with contract documents and state law.
8. Contractor shall include all cost necessary for as-built, asset sheet data spreadsheet, closeout documents (including O&M manuals, valve charts, guarantees or warranties on equipment and/or materials, testing and system check-out or approval, and Owner's training as required) per the Contract Documents.
9. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.
10. Architect/Engineer's punch list will not start until all work has been completed.
11. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.
12. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. All rigging done by this contractor will be the responsibility of this contractor, there will be no crane on site for contractors use.
2. Due to the specified finishes, i.e. polished concrete floors, coffee, soft drinks, energy drinks, etc. are NOT allowed inside the new building during or after construction. Any damages that occur by this contractor is the responsibility of this contractor.
3. Contractor to not enter into existing Oakland Community College building unless authorized and coordinated with Barton Malow Builders.
4. A site specific safety orientation is required to attend by all trades prior to any work starting on site. Orientations will take place from 7:00 a.m. to 8:00 a.m.

5. Contractor to have safety representative visit the site weekly to ensure work is being completed per Barton Malow Builders safety standard and MIOSHA.
6. This contractor is to submit with their bid a detailed schedule including estimated lead times, and durations for scope of work.
7. All foremen must have OSHA 30 and / or MUST Modules. This shall be turned over to Barton Malow Builders during the submittal process or prior to starting on site.
8. Contractor to provide mockups according to HED project manual.
9. This bidder shall actively participate in 3D Coordination per Section 013700 of the BMB Project Manual. Bidder shall coordinate scope of work utilizing a 3D model, including but not limited to installation, sequencing, and access to all systems. This includes coordination with all other adjacent systems to ensure adequate maintenance access is provided (MEP/FP, architectural/structural supports, etc.). Scope of work shall be installed as modeled in the 3D coordination process; deviations will not be acceptable. Model file types submitted by bidder shall be specified by BMB; anticipate .DWG, .NWC, or .DWFx exports being required. Navisworks Manage shall be used for clash detection and review. All Revit files used on the project shall be in Revit 2020. Attendance at weekly coordination meetings is required
 - a. Model, note and adhere to the strict requirements for clearances of Mechanical/Electrical equipment, conduit, ductwork, units, etc.
 - b. At all kitchen equipment locations, coordinate connection, equipment and clearance requirements
10. Barton Malow Company reserves the right to enforce all applicable safety requirements. Each contractor is fully responsible to ensure its respective field personnel (including subcontractors and suppliers) are practicing safe work habits per industry standards and in compliance with regulations noted in company's safety policy, Barton Malow Company's safety information (Safety Manual and section 00810 of the Project Manual) and MIOSHA. In the event there is a conflict, the most strict standard will apply. BMC reserves the right to remove any person(s) on the site that practices unsafe work habits. The contractor shall be fully responsible to maintain the schedule regardless of the definite or indefinite removal of such person(s).
11. Any working trades person working on site shall wear proper PPE. High-vis vest/shirts must have company logo.
12. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
13. All bidders are required to review the General Conditions of the Contract located in the project manual.
14. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
15. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
16. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
17. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.
18. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from

project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.

19. Contractor shall have their Superintendent/Foreman attend a daily coordination meeting every morning. Participation is mandatory.
20. All pre-task plans must be reviewed and signed off by Barton Malow Builders prior to starting work.
21. Project daily working hours are Monday – Friday, Site Opens @ 7:00 a.m. and closes at 3:30 p.m. unless coordinated with Oakland Community College and Barton Malow Builders. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.
22. In the event contractor has to work weekends, they shall inform Barton Malow Builders and Oakland Community College by not later than Wednesday of that week.
23. Contractor is only to take direction from Barton Malow Builders.
24. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.
25. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.
26. Contractor will be required to perform after-hours and overtime work as necessary to minimize disruption to OCC for schedule shutdowns for MEP operations.
27. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
28. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
29. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and Box in section 013000-Administrative Requirements.
30. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
31. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
32. This project surrounded by OCC staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and OCC Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.

33. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.
34. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.
35. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, and landscaping during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
36. In the event a road closure is necessary, contractor to coordinate with Barton Malow Builders 30 days prior.
37. All materials are to be coordinated with Barton Malow Builders 1 day prior to delivery and all deliveries are just in time. Deliveries must be scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
38. All deliveries shall have a spotter to open and close gates. Contractor to guide trucks and flag traffic with proper signage.
39. All deliveries are to come off 7th street as directed by Barton Malow Builders.
40. Contractor is responsible for storage of all materials. Deliver materials to the site as needed. Storage in the building will be limited. Materials in building must be on pallets or material/pipe carts.
41. Stocking of material on floors will be limited to a three (3) day maximum in the area of work, if approved by Barton Malow Builders Superintendent. No other material storage will be allowed in the building.
42. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
43. Include all rigging and hoisting to deliver, install, and remove materials to / from all floor levels complete.
44. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
45. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
46. Scaffolding and staging as required. Engineered installation drawings, as required.
47. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
48. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
49. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.
50. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Minimum eight (8) hours per week shall be included for meetings and coordination with Barton Malow Builders. Representative must be able to make all decisions for their Company and Contractors.
51. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the "entire" scope of work

including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.

52. Contractor is to provide site Supervision and Foreman an Apple iPad with unlimited data/cellular plan service. It is required that Contractor download BluebeamRevu, Autodesk Build, and Box via the app store on each device. Contractor may access Owner guest Wi-Fi network if available.
53. Contractor must complete and submit electronic daily Flypaper reports and pre-task plans via Box to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day's specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor's monthly payments until satisfied with this Contractor's response.
54. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner's items are missing, it is this contractor's responsibility to purchase and replace with new materials.
55. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.
56. Locate all underground utilities (public and private) prior to any excavation and temporary road/staging area install. Note that Miss Dig will not locate private utilities on the Owner's property. It is the responsibility of this contractor to hire an outside firm and locate private utilities. Damage to existing utilities, public or private, including communication and parking/walkway lighting lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
57. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.
58. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
59. Provide all cutting/patching, coring, patching of penetrations, and block-outs for work of this bid category. This is to include but not limited to cutting and patching of all openings in deck (concrete or metal) if required. Patch walls where adjacent existing walls were removed. Patch and repair work is to be done professionally by trained, skilled craftsmen.
60. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be

removable sections and that they do not present a tripping hazard. If work is not performed to OSHA standard, then Barton Malow Builders will perform the work with a back charge to the contractor.

61. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
62. Contractor shall participate in the Composite Cleanup Crew as described in the project manual. These requirements are in addition to normal daily cleaning responsibilities and costs for this are included in the contract price.

F. Specific Scope:

1. Drawings for plumbing requirements.
2. Obtain and pay for all permits and inspection fees as required for work of this category.
3. Provide and install a complete, operational, and code compliant Plumbing System for all designated building areas per the Contract Documents.
4. Provide and install all Plumbing and HVAC materials and equipment noted on all Mechanical drawings, regardless if it is or is not in the schedule or specifications.
5. Pay, Coordinate, and Install domestic water meter.
 - a. Assist Owner in water meter application.
 - b. Coordinate install with local utility provider.
6. Drawings are diagrammatic. All materials, offsets, transitions, fittings, etc. required for means and methods are included.
7. Temporary Measures:
 - a. For any permanent equipment that will be used for temporary work during construction, include extended warranties to cover the time the equipment is in use prior to Substantial Completion.
 - b. Provide, maintain, and remove temporary systems upon completion and activation for use of the permanent systems.
 - c. Protect all materials from damage prior to installation.
8. Temporary Electricity:
 - a. Temporary electricity (120V/1PH/20A) may be available for use by this Contractor. This Contractor is responsible for all means to access power to the points of work.
9. Temporary Water:
 - a. Provide temporary water for use during construction. Connection will be provided by the site utility contractor. Provide one hose bib per floor. Temporary piping must be insulated and include booster pump. Provide heat trace to turn over to electrical contractor.
 - b. Provide and install a certified backflow device at the point of temporary water supply connection to the existing domestic system.
 - c. Temp in the existing irrigation line and keep active throughout the project.
 - d. Provide temporary hand wash station that shall remain active until restrooms are operational.
10. Coordination and Layout
 - a. Actively participate in Mechanical, Electrical and Plumbing (M/E/P) overhead coordination process per the Barton Malow Builders Project Manual, and coordinate the installation of this Contractor's work to allow installation and access to all other M/E/P and architectural/structural supports. Installed piping must be placed where determined in the overhead coordination process; deviations will not be acceptable and will be at the Contractors' expense to correct if found in the field.
 - b. Contractor will be responsible for the complete coordination of work of this bid category with all other trades to identify and resolve conflicts. Any and all financial implications emanating from this Contractor's lack of planning and coordination will

be borne by this Contractor. This shall include blocking, backing conduits, sleeves, penetrations, and any other appurtenances which may not be specifically identified by the contract documents but are required to complete this scope of work.

- c. This Contractor is responsible for all detailed layout required for proper location and coordination of work.
 - d. Contractor shall review the critical dimensions and elevations of all work and shall otherwise verify the conformity of existing work to the Contract Documents and to its suitability. Contractor shall promptly submit a written statement to Barton Malow Builders and Architect/Engineer noting any discrepancies or unacceptable conditions as they relate to its work
 - e. Contractor shall attend all meetings as required to properly coordinate its Work with that of Others. Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - f. Contractor shall visit the site and attend meetings as required to properly coordinate the Work.
 - 1) Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
11. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
12. Contractor shall include multiple mobilizations to complete the Work.
13. Coordinate tie-ins with Barton Malow Builders and Owner. Shutdown of the existing system will require a minimum forty-eight (48) hour notice. Systems will be required to be functional by the end of each work day.
14. Plumber to provide trenching inside building for new connections.
15. Plumbing New Work
- a. Stud and Masonry will be placed prior to mechanical and electrical work.
 - 1) Stud install will include installation of one side drywall topout to the corridor side.
 - b. Reroute any plumbing related items as needed to facilitate the new installation of this Contractor's work.
 - c. Provide and Install any earthwork and engineered fill required for work of this bid category. Excavations must be compacted and ready to accept concrete.
 - d. Contractor must coordinate equipment pads / curbs with concrete contractor prior to any concrete being poured.
 - e. Core through concrete as required for work of this bid category.
 - 1) Layout all core locations.
 - 2) X-ray scan all core locations prior to coring.
 - 3) Confirm cores/penetrations are coordinated with the appropriate structural details for proper support.
 - 4) Barricade with solid barriers or caution tape any areas that present a safety hazard during coring operations.
 - f. Core through masonry, concrete, and steel decking as required for work of this bid category.
 - (a) Layout all core locations.
 - (b) Barricade with solid barriers or caution tape any areas that present a safety hazard during coring operations.
 - g. Provide and install all required steel supports for work of this bid category.
 - h. Coordinate any cutting of structural members with the appropriate Contractor.
 - i. Blocking and backing required for work of this bid category is the responsibility of this Contractor.
 - j. Layout of any blocking and backing required for your work is the responsibility of this Contractor.
 - k. Piping passing thru walls, floors, or decks must be sleeved.
 - 1) Layout and set sleeves prior to concrete pouring.

- 2) Provide and install water stop sleeves in any foundation wall penetrations subject to moisture infiltration.
- l. Provide and Install all interior sealants for plumbing fixtures associated with work of this bid category.
- m. Floor penetrations that are associated with this scope of work is the responsibility of this contractor.
- n. Contractor to provide and install fire rated putty pads associated with their scope of work.
- o. All exterior wall, floor, and roof penetrations for equipment installed under this scope of work shall be flashed and made watertight. Coordinate roof penetrations with roofing Contractor and ensure that roof warranty is not voided due to equipment installed under this scope.
- p. Where this Contractor penetrates or disturbs an existing fire-rated, smoke rated, or sound rated penetrations or existing patches, this Contractor shall be responsible to provide and install sealing as required.
 - 1) Repair in its entirety all spray or trowel applied fireproofing disturbed by work of this bid category. Patching material shall match the material used by the Fireproofing Contractor.
- q. Minimize amount of access doors necessary, especially in public areas.
- r. Valves and other items requiring access panels should NOT be installed above hard lid ceilings if it can be avoided. If items are shown or required to be installed above hard lid ceilings, notify Barton Malow Builders and Architect/Engineer immediately prior to installation for possible relocation.
- s. The Contractor shall provide and locate all access doors for access to concealed Plumbing equipment valves as required by code, specifications, drawings and/or authority having jurisdiction for proper and reasonable access to equipment, piping, etc.
- t. Coordinate the locations and gain approval of locations from the design team prior to installation.
- u. This Contractor shall provide all access doors and frames for proper access to valves and devices for maintenance. Access panels required but not shown on the drawings will be provided by this Contractor and installed by Drywall Contractor. Minimum access door size shall be 12" x 12" unless otherwise approved by Barton Malow Builders, Owner, and Architect/Engineer. Include fire rating requirements if applicable.
- v. Provide water closet template to the Ceramic Tile installer.
- w. Layout countertops for cut-out by others for installation of plumbing related items.
- x. Provide and install all Equipment Connections including valves, traps, drain extensions, gas cocks, pressure regulating devices, water hammer arrestors, check valves and piping, etc. for equipment provided and installed by this Contractor or others.
- y. Provide backflow device and/or valve as required on water supply.
- z. Provide and install all meters, gages, and valves associated with work of this bid category.
- aa. Provide and install all hangers and supports for your work.
- bb. Provide and install all pipe identification and valve tags for your work.
- cc. Test plumbing piping as follows, required by code or specifications:
 - 1) Test water piping.
 - 2) Test and certify water supply backflow devices. Submit test reports to Barton Malow Builders, AHJ, and Commissioning Agent.
 - 3) Test and certify Fire Suppression backflow device. Submit test reports to Barton Malow Builders .
 - 4) Stack pressure test of drainage piping.
 - 5) Compressed air test gas piping.

- 6) Provide and install leak detection system where noted.
 - 7) All piping pressure test must be witnessed by Barton Malow Builders, Architect/Engineer, or AHJ prior to insulating. Submit all signed test reports to Barton Malow Builders and Commissioning Agent.
- 16. Pipe cleaning and flushing:
 - a. Contractor is responsible for cleaning and flushing their installed systems as specified.
- 17. Insulation:
 - a. Provide and install insulation on all water piping as indicated.
 - b. Insulation to be installed on suspended horizontal and in-wall water piping.
 - c. Provide and install insulation on storm piping as indicated.
 - d. Provide and install insulation on sanitary piping as indicated.
 - e. Provide and install insulation on roof conductor piping as indicated.
 - f. Provide and Install piping insulation on all existing elbows, flanges, hangers, and valves where tie-ins take place.
- 18. Water Distribution
 - a. Provide and install all domestic water piping per local code.
 - b. Clean all piping per the Contract Documents or required by code. Submit reports to Barton Malow Builders, Architect/Engineer, AHJ, and Commissioning Agent.
 - c. Provide and install all pumps related to your work.
 - d. Provide and install any storage tanks related to potable water system.
 - e. Provide the initial balance of the domestic water system to provide the required temperature and flow of water.
- 19. Facility Sanitary Sewerage
 - a. Provide and install all sanitary waste and vent piping per local code.
 - b. Provide and install acid waste and vent piping per local code.
 - c. Provide and install any floor drains, open-site drains, clean outs, and floor sinks as shown.
 - d. Provide and install any ejector pumps and basins as shown and tie into sanitary system.
 - e. Provide and install exterior grease interceptor(s) as shown.
 - f. Provide and install interior grease interceptor(s) as shown.
 - g. Provide and install any sand/oil separators as shown.
 - h. Provide and install any dilution basins or plaster traps as needed for the acid waste system.
- 20. Facility Storm Drainage
 - a. Provide and install all storm piping per local code.
 - b. Provide and install all roof drains, secondary drains, and downspout nozzles as shown.
 - c. Provide and install area drains as shown.
 - d. Provide and install trench drains as shown.
 - 1) Set drains in concrete as required.
 - e. Provide and install sump pumps as basins as shown and tie into storm system.
- 21. Plumbing Fixtures
 - a. Provide and install all plumbing fixtures as shown and specified.
 - b. Provide and install under-lavatory guards on waste and water piping.
- 22. Systems
 - a. Provide and Install drip pans for HVAC equipment.
 - b. Provide and install oil separator as specified
 - c. Provide and install refrigerated air dryer as specified
 - d. Provide and Install drain piping from drip pans to nearest open-site drain.
 - 1) Provide and Install condensate piping from HVAC equipment.

- e. Provide transformers for any sensor-operated fixtures and devices to the electrical Contractor. Install will be performed by the electrical Contractor.
- f. Perform all your own excavation, shoring, and backfill as required piping, grease traps, interceptors, etc.
- g. Dispose of all spoils (assume spoils to be contaminated and dispose as such).
- h. Exterior underground connections:
 - 1) Make connection 5' outside of building to sanitary piping provided by Utility Contractor.
 - 2) Make connection 5' outside of building to storm piping provided by Utility Contractor.
 - 3) Make connection 5' outside of building to water piping provided by Utility Contractor and bring into building.
- i. Provide and Install drain tile system as shown.
- j. Provide all final plumbing connections to Owner furnished equipment shown on the Contract Documents. Refer to the Contract Documents and Equipment Reference Drawings for equipment hook-ups and requirements.
- k. Provide and install all equipment and value tagging as required for the plumbing system. Provide framed valve and tag schedule in equipment rooms as well as an electronic copy in closeout documents.
- l. Provide pre-final inspection to ensure all systems are fully functional and operational. Includes checking of all penetrations for proper fire-stopping.
- m. Provide all sound caulking and fire stopping for plumbing penetrations.
- n. Provide and Install all piping insulation and labeling per the Contract Documents and per local codes.
- o. Insulate and label all piping immediately after passing pressure testing. Coordinate all in wall insulating of pipes with the Carpentry/Drywall Contractors.
- p. Provide and install a small blue dot on the ceiling grid showing location valves that are above ceiling.

23. HVAC

- a. Obtain and pay for all permits and inspection fees as required for work of this category.
- b. Provide and install a complete, operational, and code compliant Dry HVAC, and Mechanical for all building areas per the Contract Documents.
- c. Provide and install all Dry HVAC materials and equipment noted on all Mechanical drawings, regardless if it is or is not in the schedule or specifications.
- d. Coordinate location of equipment to ensure required electrical clearances are met.
- e. Drawings are diagrammatic. Provide and install all materials, offsets, transitions, fittings, etc. required for means and methods for work of this bid category.
- f. This Contractor is required to perform all preliminary air flow testing to verify CFM prior to any demolition of existing system required to be replaced.
- g. This Contractor shall verify and notify Barton Malow Builders and Architect/Engineer immediately for any discrepancies in the contract documents where noted to tie into existing utilities.
- h. Notification to Barton Malow Builders and Architect/Engineer of any non-code compliant items noticed during installation.

HVAC New Work

- a. Reroute any duct related items as needed to facilitate the new installation of this Contractor's work.
- b. Provide and install any HVAC related systems as outline in the bid documents, including, but not limited too, MAU, ECUH, ect. bac
- c. Provide and install roof curbs associated with this work.
- d. ductwork supports and flashing for mechanical work. Locate, layout, and set curbs. Cut roof deck as required for installation of new fans, stacks, etc. Coordinate

installation with the Architectural and Roofing Contractor. Roof is to be protected for work of this bid category.

- e. This Contractor shall include all saw cutting of openings in walls or floors required for this Contractor's installations, including removal and disposal of all debris. Assume all floor penetrations are to be cored. Floors will be boxed out by the Concrete Contractor for installation of the floor drain after concrete floors have been placed. Concrete infill around the drains will be by the Concrete Contractor.
- f. Contractor is responsible for all steel required to support all equipment for this work scope.
- g. This Contractor shall provide and install any structural steel work necessary to span between or extend from the base building structure in order to install ductwork hangers, anchors, or supports. Provide and install all channels required for equipment support complete. This Contractor shall verify details for building attachment and comply with all requirements and approvals prior to installation.
- h. This Contractor shall include all metal backing/supports required for in wall or overhead installation. Refer to specifications for required gauge.
- i. This Contractor shall provide and install any additional material required for curbs not specified and/or noted on the Contract Documents for equipment.
- j. Provide and Install all interior sealants associated with work of this bid category.
- k. Minimize amount of access doors necessary, especially in public areas.
- l. Valves (including balancing valves) and other items requiring access panels should NOT be installed above hard lid ceilings if it can be avoided. If items are shown or required to be installed above hard lid ceilings, notify Barton Malow Builders and Architect/Engineer immediately prior to installation for possible relocation.
- m. Coordinate the locations and gain approval of locations from the design team prior to installation.
- n. This Contractor shall provide all access doors and frames for proper access to valves and devices for maintenance. Access panels required but not shown on the drawings will be provided by this Contractor and installed by Drywall Contractor. Minimum access door size shall be 12" x 12" unless otherwise approved by Barton Malow Builders, Owner, and Architect/Engineer. Include fire rating requirements if applicable.
- o. Contractor shall unload, distribute, uncrate/dispose of, and install all Owner Provided/Contractor Installed Equipment as defined and indicated in the project documents. In certain instances, Contractor shall participate in and provide men for composite crews to perform the installation of equipment where multiple trades claim the Work.
- p. Provide and Install all interior sealants associated with work of this bid category.
- q. Floor penetrations that are associated with this scope of work is the responsibility of this contractor.
- r. Contractor to provide and install fire rated putty pads associated with their scope of work.
- s. All exterior wall, floor, and roof penetrations for equipment installed under this scope of work shall be flashed and made watertight. Coordinate roof penetrations with roofing Contractor and ensure that roof warranty is not voided due to equipment installed under this scope.
- t. Where this Contractor penetrates or disturbs an existing fire-rated, smoke rated, or sound rated penetrations or existing patches, this Contractor shall be responsible to provide and install sealing as required.
- u. Pressure test all ductwork per the schedule and specifications. Test must be performed by a certified testing agency and witnessed by Barton Malow Builders or Architect/Engineer.
- v. Provide and Install all duct insulation per the contract documents and per local codes.
- w. Insulate and label all ductwork immediately after passing pressure testing.

- x. Provide and install a small green dot on the ceiling grid showing location of VAV boxes, valves, damper, motors, etc. that are above ceiling.
 - y. Provide any unistrut support and misc. steel as required to mount equipment for work of this bid category.
 - z. Provide any blocking required for installation of equipment.
 - aa. Contractor shall coordinate with Masonry and Rough Carpentry Contractors for in wall rough in openings required. This is to include layout of duct/damper locations and elevations required to go through walls and are to be marked on the floor by this contractor.
 - bb. Coordinate motor requirements with Electrical Contractor.
 - cc. Coordinate duct wall penetrations with Stud/Drywall Contractor prior to fabrication and installation. This shall include layout of duct and smoke/fire dampers on the floor for metal stud opening requirements/ coordination.
 - dd. Provide and install labeling and valve/equipment identification as defined in the Contract Documents, including final clean-up of equipment prior to turn over to Owner. Contractor shall provide all identification, tagging of materials, equipment and systems required as a part of its Work.
 - ee. Provide and install all equipment and value tagging as required for the mechanical.
 - ff. All start-up and training is to be performed by a factory certified representative or manufacturer (as required per specification section) for that specific piece of equipment.
2. Dry Side Mechanical
- a. This Contractor shall include all general mechanical related to Dry Side Mechanical, including but not limited to the following: sheet metal materials, flexible connectors and ducts, hardware, sealant materials, hangers and supports, duct fabrication, equipment, fans, filtration, drain pans, Diffusers, Grilles, Registers, Exhaust Stacks, Fans, Supports, Guy Wires, supports not shown but required by equipment manufacturers, roof curbs, insulation, identification, start up, testing, owner training, close out documentation, support during testing and balancing and commissioning, filters construction, pre and final, dampers, etc. to provide and install a complete system.
 - b. Contractor shall provide all Ductwork and Ductwork Accessories as per the specifications. Refer to contract drawings, details, and sections of the various project areas to ensure that a complete and coordinated installation is provided which meets the applicable specified standards for ductwork. Duct work shall be installed with all of the specified accessories. Contractor shall pay special attention to ensure that proper damper assemblies are provided with the appropriate performance criteria.
 - c. Contractor shall provide all special engineering services, manufacturer start-ups, testing, and adjustments as may be required to certify that the systems comply with the AHJ. Contractor shall provide commissioning assistance for all equipment and systems that it installs. Contractor shall provide qualified/factory-trained personnel to perform start-up, testing, documentation, and re-commissioning as required.
 - d. Keep all ductwork free from moisture and dust while on site. Duct must have visqueen over ends of duct nightly. Contractor to maintain intermediate duct cleaning standards per SMACNA.
 - e. Protect, seal and maintain all equipment and ductwork as required throughout the duration of the project per SMACNA or best practices.
 - 1) Prior to occupancy, clean all ductwork in accordance with the standard.
 - 2) This trade will be responsible for any cleaning required if the above is not maintained throughout the project including delivery and storage.
 - f. Provide and install all flexible duct per the contract documents.
 - 1) Contractor shall provide and install flexible duct supports as shown or specified.
 - g. This Contractor shall include all sterilization and testing as specified.
 - h. Final Cleaning of all ductwork including main and branch duct for new and existing within the extent of work.

- i. Leak Testing as required per standard practice and specifications.
 - 1) All metal duct is to be leak tested prior to insulating.
 - j. Upon completion of the installation of each area, floor and/or riser test all ductwork as specified. Multiple tests shall be anticipated by this Contractor.
 - k. Participate in Fire Alarm Testing to verify operation for this categories scope of work that is connected to fire alarm monitoring or activation.
- 3. Fans:
 - a. Contractor shall Provide and Install all exhaust fans. Review applicable roof plans, schedules, and the specifications.
- 24.
- 25. Commissioning
 - a. Provide commissioning assistance as required.
- 26. Provide all louvers as specified in bid docs.

2.03 SPECIAL CONSIDERATIONS:

- A. Labor Rates/Unit Prices/Alternates: Provide the following information on the bid form:
 - 1. Labor/Equipment Rates:
 - a. This Contractor is to provide as a part of his proposal a fully detailed labor rates for Barton Malow Builders approval for work associated with this Contractor's and for each of their Subordinate Parties Trades. In addition, labor rates will be required for all equipment involved with the performance of the work required by this Bid Category.
 - 2. Unit Pricing:
 - 3. Allowances: This Contractor must obtain written authorization from Barton Malow Builders prior to performing the associated work below. Include in this Contractor's bid, allowances for work as follows.
 - a. Provide Allowance for the following:
 - 1) **\$20,000 misc. plumbing allowance at Barton Malow Builders discretion.**

END OF SECTION 002222.01

SECTION 002209.01
PAINT AND WALL COVERINGS - SCOPE OF WORK
BID CATEGORY – PAINTING

PART 1 GENERAL

1.01 THE WORK OF THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO PROVIDING ALL SUPERVISION, LABOR, EQUIPMENT, MATERIALS, TAXES, BONDS, INSURANCE, SCAFFOLDING, HOISTING AND INCIDENTALS TO COMPLETE THE WORK PER ALL CONTRACT DOCUMENTS FOR THE OCC SOUTHFIELD DRIVING PAD AS DEFINED BY THE BID PACKAGE NO. 1G BID/WORK SCOPE DOCUMENT INCLUDING ITS SUPPLEMENTARY DOCUMENTS AND IN ACCORDANCE WITH ANY APPLICABLE CODES. ALL WORK IS TO BE PERFORMED AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE FOLLOWING TECHNICAL SPECIFICATION SECTIONS:

- A. Division 0 - Procurement and Contracting Complete
- B. Division 01 – General Requirements - Complete
- C. Division 07 – Thermal and Moisture Protection
 - 1. 07 9200 - Joint Sealants - As Applicable
 - 2. 07 1900 – Water Repellents – As Applicable
- D. Division 09 – Finishes
 - 1. 09 9100 – Painting - Complete
 - 2. 09 9600 - High-Performance Coatings - Complete

IN ADDITION TO THE ABOVE, THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

PART 2 PRODUCTS – NOT USED**PART 3 EXECUTION**

THE SCOPE OF WORK WILL INCLUDED AND IS NOT LIMITED TO THE FOLLOWING ITEMS:

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:
 - 1. Additional Meetings & Quality Control Requirements:
 - a. Pre-Install Conferences
 - b. Mockups
 - c. Additional Photographic documentation, etc
- D. **Submittals/Close Out:**
 - 1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).
 - 2. Submit all shop drawings in accordance with the contract documents and all code

- requirements within four (4) weeks after Notice to Proceed (NTP).
3. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.
 4. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractors cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
 5. Contractor shall include all cost necessary for closeout documents (including O&M manuals, guarantees or warranties on materials) per the Contract Documents.
 6. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.
 7. Architect/Engineer's punch list will not start until all work has been completed.
 8. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.
 9. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
2. All bidders are required to review the General Conditions of the Contract located in the project manual.
3. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
4. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
5. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
6. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.

7. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.
8. Contractor shall have their Superintendent/Foreperson attend a daily coordination meeting every morning from 6:45am - 7:00am. Participation is mandatory.
9. Project daily working hours are Monday – Friday, Site Opens @ 5:30am and closes at 2:30pm. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.
10. Contractor is only to take direction from Barton Malow Builders.
11. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.
12. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.
13. Contractor will be required to perform after-hours and overtime work as necessary to minimize disruption to Oakland Community College.
14. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
15. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
16. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and AutoDesk Build in section 013000-Administrative Requirements.
17. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
18. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
19. This project surrounded by Oakland Community College staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and Oakland Community College Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.
20. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.

21. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.
22. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, and landscaping during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
23. Deliveries must occur after 7am and prior to 2pm and not between noon and 1pm, unless scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
24. Contractor is responsible for storage of all materials. Deliver materials to the site as needed. Storage in the building will be limited. Materials in building must be on pallets or material/pipe carts.
25. Stocking of material on floors will be limited to a three (3) day maximum in the area of work, if approved by Barton Malow Builders Superintendent. No other material storage will be allowed in the building.
26. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
27. All materials are to be coordinated with Barton Malow Builders 1 day prior to delivery and all deliveries are just in time. Deliveries must be scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
28. All deliveries shall have a spotter to open and close gates. Contractor to guide trucks and flag traffic with proper signage.
29. All deliveries are to come off 9 mile road. as directed by Barton Malow Builders.
30. Include all rigging and hoisting to deliver, install, and remove materials to / from all floor levels complete.
31. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
32. The use of the existing and/or new elevator will not be permitted.
33. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
34. Scaffolding and staging as required. Engineered installation drawings, as required.
35. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
36. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
37. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.

38. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Minimum eight (8) hours per week shall be included for meetings and coordination with Barton Malow Builders. Representative must be able to make all decisions for their Company and Contractors.
39. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the “entire” scope of work including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.
40. Contractor is to provide site Supervision and Foreman an Apple iPad with unlimited data/cellular plan service. It is required that Contractor download BluebeamRevu and Autodesk Build via the app store on each device. Contractor may access Owner guest Wi-Fi network if available.
41. Contractor must complete and submit electronic daily pre-task plans via Autodesk Build to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day’s specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor’s monthly payments until satisfied with this Contractor’s response.
42. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner’s items are missing, it is this contractor’s responsibility to purchase and replace with new materials.
43. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.
44. Provide Ground Penetrating Radar (GPR) to locate and mark existing gas, water, electrical site utilities, conduits, fiber, and mechanical piping prior to proceeding with any demo or excavation work.
 - a. Locate all underground utilities (public and private) prior to any demo or excavations. Note that Miss Dig will not locate private utilities on the Owner’s property. It is the responsibility of this contractor to hire an outside firm and locate private utilities.
 - 1) Damage to existing utilities, public or private, including but not limited to gas, water, electric, mechanical, communication, and irrigation lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
 - (a) Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
 - (b) Contractor will also be charged a minimum of \$1,500 for each occurrence for Barton Malow administrative costs.
 - (c) Contractor will be responsible for all Owner personnel, administrative costs, and damages for each occurrences.
45. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials

used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.

46. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
47. Provide all cutting/patching, coring, patching of penetrations, and block-outs for work of this bid category. This is to include but not limited to cutting and patching of all openings in deck (concrete or metal) if required. Patch walls where adjacent existing walls were removed. Patch and repair work is to be done professionally by trained, skilled craftsmen.
48. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be removable sections and that they do not present a tripping hazard.
49. Contractor is responsible for all dewatering and snow/ice removal necessary to complete this Scope of Work.
50. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
51. Contractor shall participate in the Composite Cleanup Crew as described in the project manual. These requirements are in addition to normal daily cleaning responsibilities and costs for this are included in the contract price.
52. Include all cost in base bid to comply with the latest Federal mandate, State of Michigan Executive Order, OSHA requirements, Local Jurisdiction Requirements, Owners Requirements, whichever is more stringent related to Covid-19: testing, PPE, social distancing, and all other requirements for your workers and subordinate parties. This shall include identifying your competent Covid 19 supervisor that will review, monitor, record, and enforce all requirements. In addition, each worker onsite is required to sign in each day prior to work using the Barton Malow QR Reader Questionnaire on a smart phone or tablet.

F. Specific Scope:

1. Temporary Measures:
 - a. Protect all materials from damage prior to installation. This includes installing protection measures needed to protect adjacent surfaces from any Overspray or dripping. Removal of protective measures is to occur upon completion of the Work.
2. Temporary Electricity:
 - a. Temporary electricity (120V/1PH/20A) will be available for use by this Contractor. This Contractor is responsible for all means to access power to the points of work.
3. Temporary Water:
 - a. Temporary water will be made available during this Contractor's Work.
4. Temporary Lighting:
 - a. Contractor shall provide task lighting and temporary light stands as necessary.
5. Temporary Ventilation Requirements:
 - a. Provide, install, maintain and remove any ventilation equipment required to maintain air quality due to fumes/odors generated by this work. OSHA approved ventilation is required to be provided by this Contractor when high VOC and epoxy paint is used.

6. Coordination and Layout
 - a. Contractor will be responsible for the complete coordination of work of this bid category with all other trades to identify and resolve conflicts. Any and all financial implications emanating from this Contractor's lack of planning and coordination will be borne by this Contractor. This shall include blocking, backing conduits, sleeves, penetrations, and any other appurtenances which may not be specifically identified by the contract documents but are required to complete this scope of work.
 - b. This Contractor is responsible for all detailed layout required for proper location and coordination of work.
 - c. Contractor shall review the critical dimensions and elevations of all work and shall otherwise verify the conformity of existing work to the Contract Documents and to its suitability. Contractor shall promptly submit a written statement to Barton Malow Builders and Architect/Engineer noting any discrepancies or unacceptable conditions as they relate to its work
 - d. Contractor shall attend all meetings as required to properly coordinate its Work with that of Others. Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - e. Contractor shall visit the site and attend meetings as required to properly coordinate the Work.
 - 1) Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
7. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
8. Contractor shall include multiple mobilizations to complete the Work.
9. Painting
 - a. Provide and install all interior and exterior painting, including the painting of all items as scheduled or shown within the Contract Documents. This includes, but is not limited to the surface preparation, priming, first coating, and finish coating of, all Hollow Metal Frames and Doors, drywall partitions, deck, CMU, Drywall Ceilings, Stucco, metal railings, metal pan stairs, roof access ladders, and exposed structural steel.
 - b. Properly prep all surfaces as specified and as required by the manufacturer's written instructions.
 - c. Include moisture and pH testing of both exterior and interior surfaces prior to painting.
 - d. Contractor shall review drywall surfaces and advise if the surface is not acceptable, prior to applying finish coats.
 - e. Where finish drawings, finish schedule, or specification discrepancies occur, notify Barton Malow Builders and issue an RFI and proceed when answered.
 - f. Provide all primers, block fillers, intermediate coat, and final finish coat as specified and per the schedule. Contractor will not be allowed to tint the primer.
 - g. Contractor is to provide multiple coats of block filler until all voids in block are filled.
 - h. Review items not to be painted listed on the project drawings and in the specification. Damage done by painting non specified items will be the responsibility of this Contractor and back charged accordingly for replacement.
 - 1) In addition to items not to be painted listed in the specifications, Contractor is not to paint low volt cabling including but not limited to Fire Alarm Cabling, Network Data Cabling, A/V Cabling, or Temperature Control Cabling. Cables painted by work of this bid category will be the responsibility of this Contractor and will be removed and replaced and back charged accordingly.
 - i. Review surfaces to be painted prior to start of work. Any and all surface preparation required for the proper installation. Ensure that surfaces are free from dust, dirt, oil, grease, grime, moisture, excess plaster, mortar, and related items as may be necessary to assume proper adhesion of paint. Miscellaneous preparatory work

- must include cleaning and acceptance of surfaces to receive finish applications. Report any corrective work that is required to Barton Malow Builders.
- j. Provide time for the Drywall Contractor to spot walls after the primer coat.
 - k. Primer will be sprayed and back rolled. First coat of finish to be sprayed and back rolled. Extend beyond grid line as needed for proper finish. Final coat to be rolled and cut-in as required, in a clean neat professional manner.
 - l. Properly ventilating work areas as required. Should odor become cause for concern due to ventilation with other Contractors working in the immediate area spray work may be required to occur after-hours. This after-hours work is to be coordinated with Barton Malow Builders and shall not result in additional cost to the project.
 - m. Protection of all U.L., N.O.A., fire rating label, other trade pipe markings is to be by this Contractor and strictly monitored.
 - n. Painting of hollow metal frames/doors, which may consist of two coats of paint.
 - o. Provide and install all caulking and joint sealants as follows:
 - 1) At the perimeter of all door frames and window frames, including the bottoms of the frames.
 - 2) Interior conditions where drywall intersects a dissimilar material.
 - 3) At ceiling access panels
 - 4) At the interior perimeter of aluminum window frames and curtain wall assemblies.
 - 5) At bottom of walls
 - p. Stencil fire and/or smoke rating above ceiling on walls. Refer to the Life Safety Plan for locations.
 - q. Prior to wall painting, the following is to occur:
 - 1) Drywall Contractor is to notify Barton Malow Builders and Painter that walls are finished and ready for prime paint.
 - 2) Painter is to prime walls after notification from Drywall Contractor.
 - 3) Drywall Contractor is to spot all walls after primer is applied.
 - 4) Painter is to review walls and indicate any areas which require re-work.
 - 5) Drywall Contractor to rework and notify Barton Malow Builders rework has been completed.
 - 6) Upon acceptance by Painter Contractor, Painting Contractor shall apply first coat of finish paint.
 - 7) Painting Contractor to review first final coated walls and spot between final coats.
 - 8) Installation of final coat is to occur only at the direction of the Barton Malow Builders.
 - r. Signage indicating wet paint is the responsibility of this Contractor.
 - s. Obtain permission from Barton Malow Builders to apply final coat of paint.
 - t. After Contractor has put the first coat of paint on surfaces, Contractor has at that point accepted the walls and will be responsible for any other wall repair/prep required by Barton Malow Builders, Architect/Engineer, or Owner.
 - u. All adjusting and cleaning shall be performed as specified at the end of each spec section.
 - v. Provide and install painting of any plywood backer boards in electrical rooms or IT/Telecom rooms. Tape over plywood fire rating stamp one per panel.
 - w. Provide and install all wall coverings as scheduled.
 - x. Provide and install electrostatic painting as shown.
 - y. Provide and install primer and paint on all exposed fire suppression lines including the riser. Lines are to be painted red.
 - 1) Paint exposed fire suppression lines in finished spaces by Architect/Engineer selected color.

- z. Provide and install primer and paint on all exposed interior and exterior gas lines. Lines are to be painted yellow.
 - aa. Provide and install paint on any exposed pipe, duct, hangers, or any other item as required by the Contract Documents.
 - bb. Provide and install dry-fall paint on any exposed ceiling areas as required by the Contract Documents.
 - cc. Provide and install any scheduled intumescent paint.
 - dd. Barton Malow Builders will endeavor to schedule the Work so that the installation of Device Trim Plates and other similar items occurs after painting has been installed. However in the event that that is not possible, Contractor shall include the removal and replacement of the covers to complete the Work.
10. Concrete Sealer
- a. Provide and install concrete sealer as described in the bid documents for exposed concrete inside building.
11. Resinous Flooring:
- a. Provide and install liquid & trowel-applied, Resinous Flooring Systems and integral base system with a waterproofing membrane per the Construction Documents, including but not limited to, primer, epoxy flooring, integral base, joint sealants, floor preparation, etc. as required for a complete system.
 - b. Inspect substrate prior to application of epoxy flooring per specifications to confirm compliance to manufacturers recommendations. Submit test result to Barton Malow Builders prior to installation.
 - c. Perform all necessary cleaning and preparation of floor to receive resinous flooring. Assume slab will be broom swept only prior to this Contractors work. Perform all abrasive blasting, etching, and sealing of cracks per the specifications or as recommended by the product manufacturer.
 - d. Provide measures for adequate ventilation and curing of applied product.
 - e. Contractor shall include all costs for phasing, overtime and second shifts as required to minimize the duration of installation within each area.
 - f. Perform all layout of flooring systems as required.
 - g. Install floor patterns as indicated on the interior design drawings.
 - h. Provide and install all epoxy or specialty floor coatings or sealers.
 - 1) Include caulking of perimeter walls and concrete pads for a complete water tight system.
 - 2) Include caulk of all floor penetrations for a complete water tight system.
 - 3) Prep floors to receive traffic coatings or sealers according to the specifications and manufactures written instructions.
 - i. Provide and install all floor priming for traffic coatings or sealers according to the manufactures written instructions.
 - 1) Traffic coating or sealer work shall be performed off hours on weekends.
 - j. Provide seamless integral base at all adjacent surfaces where the epoxy flooring is specified. Perform all preparation and provided accessories required at all locations and wall types for a complete installation.
 - k. Provide all slip resistant materials/coatings as shown or specified.
 - l. Protect and clean all flooring after installation. Cleaning and protection shall be performed as specified. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
 - m. Provide all extra materials to owner as specified.

Exclusions: Parking Lot Painting/Striping

1.02 SPECIAL CONSIDERATIONS:

- A. Labor Rates/Unit Prices/Alternates: Provide the following information on the bid form:
- B. Labor/Equipment Rates:
 - 1. This Contractor is to provide as a part of his proposal a fully detailed labor rates for Barton Malow Builders approval for work associated with this Contractor's and for each of their Subordinate Parties Trades. In addition, labor rates will be required for all equipment involved with the performance of the work required by this Bid Category.
- C. Unit Pricing:
 - 1. _____
- D. Allowances: This Contractor must obtain written authorization from Barton Malow Builders prior to performing the associated work below. Include in this Contractor's bid, allowances for work as follows.
 - a. General Allowance: \$5,000 (Used only at the direction of BMB)
- E. Alternates: None.

END OF SECTION 002209.01

SECTION 31 0000
SITE WORK - SCOPE OF WORK
BID PACKAGE 1A
BID CATEGORY – SITEWORK

PART 1 GENERAL

1.01 THE WORK OF THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO PROVIDING ALL SUPERVISION, LABOR, EQUIPMENT, MATERIALS, TAXES, BONDS, INSURANCE, SCAFFOLDING, HOISTING AND INCIDENTALS TO COMPLETE THE WORK PER ALL CONTRACT DOCUMENTS FOR THE OCC BP-1A AS DEFINED BY THE BID PACKAGE NO. 1A, BID SCOPE DOCUMENT INCLUDING ITS SUPPLEMENTARY DOCUMENTS AND IN ACCORDANCE WITH ANY APPLICABLE CODES. ALL WORK IS TO BE PERFORMED AS SHOWN ON THE PLANS AND AS SPECIFIED IN THE FOLLOWING TECHNICAL SPECIFICATION SECTIONS:

DIVISION 00 – PROJECT BIDDING REQUIREMENTS - Complete

DIVISION 01 - GENERAL REQUIREMENTS - Complete

DIVISION 02 – EXISTING CONDITIONS - Complete

<u>Section</u>	<u>Name</u>
02 4113.23	Utility Removal
02 4119.13	Miscellaneous Site Demolition

DIVISION 02 – EXISTING CONDITIONS - Complete

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

<u>Section</u>	<u>Name</u>
07 9200	Joint Sealants – As Applicable

DIVISION 31 – EARTHWORK – Complete

DIVISION 32 – EXTERIOR IMPROVEMENTS

<u>Section</u>	<u>Name</u>
32 0519	Geogrids
32 1100	Base Courses
32 1200	Flexible Paving
32 1300	Rigid Paving
32 1600	Curbs, Gutters, Sidewalks, and Driveways
32 1723	Pavement Markings

DIVISION 33 – UTILITIES – Complete

<u>Section</u>	<u>Name</u>
33 1400	Water Utility Transmission and Distribution

33 3100	Sanitary Sewerage Piping
33 4100	Subdrainage

IN ADDITION TO THE ABOVE, THIS BID CATEGORY INCLUDES BUT IS NOT LIMITED TO THE BIDDING DOCUMENTS, THE BIDDING AND CONTRACT REQUIREMENTS AND DIVISION 1 GENERAL REQUIREMENTS OF THE BARTON MALOW BUILDERS PROJECT MANUAL AND VARIOUS OTHER DOCUMENTS AND TECHNICAL SPECIFICATIONS INTERFACING WITH THIS WORK PROVIDED BY THE OWNER, ARCHITECT AND/OR ENGINEERS. THE BIDDER IS ADVISED TO REVIEW THE WORK DESCRIPTIONS OF THE OTHER CATEGORIES SO AS NOT TO MISUNDERSTAND SCOPE RESPONSIBILITIES.

1.02 PART 2 PRODUCTS – NOT USED

1.03 PART 3 EXECUTION

THE SCOPE OF WORK WILL INCLUDED AND IS NOT LIMITED TO THE FOLLOWING ITEMS:

- A. Performance of the Work shall be in accordance with all Division 01 – General Requirements.
- B. Refer to the Project Manual for additional bidding and project general requirements and conditions.
- C. In addition to the requirements set forth in Division 01 – General Requirements, the Work shall include the following:
 - 1. Additional Meetings & Quality Control Requirements:
 - a. Additional Photographic documentation, etc
 - b. As-builts
- D. **Submittals/Close Out:**
 - 1. Submit all start-up documents, and product submittals on materials & products within two (2) weeks after Notice to Proceed (NTP).
 - 2. Submit all shop drawings in accordance with the contract documents and all code requirements within four (4) weeks after Notice to Proceed (NTP).
 - 3. Contractor is to submit a long lead item log to Barton Malow Builders for materials and equipment with lead times of 6 weeks or more. The long lead item log shall include submitted date, submittal approval date, lead time, order date, & approximate delivery date. Contractor shall update and submit weekly to Barton Malow Builders.
 - 4. All equipment, products, & materials that are installed without submittal approval and not acceptable by the Architect/Engineer and Owner will be removed at the installing Contractors cost. Contractor will be held responsible for all back charges caused by the project delay to the Owner and Trades working onsite due to no specified material/equipment install and/or lack of or late submittal approvals.
 - 5. Provide shop drawings for reinforcing steel submittals.
 - 6. Provide pour/construction joint schedule and drawing indicating location of pour breaks, proposed joints for concrete slabs, curbs, and apron locations to be reviewed by Architect/Engineer.
 - 7. Contractor shall include all cost necessary for as-built, asset sheet data spreadsheet, closeout documents (including O&M manuals, valve charts, guarantees or warranties on equipment and/or materials, testing and system check-out or approval, and Owner's training as required) per the Contract Documents.
 - 8. Contractor to provide additional manpower dedicated to Barton Malow Builders to complete Barton Malow Builders punch list work for a minimum of ten (10) working days prior to the listed Architect/Engineer project punch list in the project schedule. This manpower will be under the direction of the Barton Malow Builders Superintendent to complete punch list work of their bid category and will report directly to the Barton Malow

Builders each day. Failure to provide required manpower may result in a delay in receiving the Contractor's progress payment from Barton Malow Builders.

9. Architect/Engineer's punch list will not start until all work has been completed.
10. Contractor may not drop retainage to 5% until work of this bid category is substantially complete according to the contract documents. In addition, all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have up to date partial and final waivers from all Contractors, suppliers, and other Subordinate Parties including a AIA G707a Consent of Surety to partial reduction in retainage form signed and sealed by the Surety.
11. To bill out the remainder of retainage (from 5% to 0%), the Contractor must set up a meeting with Barton Malow Builders to go over and/or collect the remaining closeout items for final payment as specified in the project manual and submit a AIA G707 Consent of Surety for final payment form signed and sealed by the Surety.

E. General Scope:

1. Contractor is to incorporate all project bidding documents into their subordinate party agreements.
2. All bidders are required to review the General Conditions of the Contract located in the project manual.
3. Contractor is to be licensed to perform work in the State of Michigan. This includes all Contractors and 2nd or 3rd (etc.) tiered Contractors.
4. Contractor shall maintain on site, a copy of all applicable code books specifically pertaining to this scope of work. These code books are to follow the city, state, and all other authorities having jurisdiction per the specific year each authority has designated for this particular project. This Contractor is responsible for all research and compliance with all applicable regulations.
5. This Contractor is responsible to coordinate with Barton Malow Builders to schedule inspections with the Local Governing Agency and/or the State of Michigan as well as the testing agency. Inspection results and records will be kept in the Barton Malow Builders jobsite office. During all inspections each Contractor is to have a Foreman/Superintendent on site.
6. Contractor must verify that work installed by others, complies in its entirety with the contract documents prior to commencing their work, which ties in, overlays and/or follows the installed work. Any non-conforming work shall be identified in writing to Barton Malow Builders immediately.
7. Anyone listed on the National Sex Offender List is not allowed to be a part of this project and anyone who is convicted of a listed offense will be immediately dismissed from project. Provide photo identification upon arriving to the site and badges are to be worn by Contractor's field personnel at all times.
8. Contractor shall have their Superintendent/Foreperson attend a daily coordination meeting every morning Participation is mandatory.
9. Project daily working hours are Monday – Friday, Site Opens @ 7:00am and closes at 3:30pm. There will be a 5-day minimum work week. Should scheduled workdays or production be lost due to inclement weather or this Contractor's delays, overtime during the work week and weekends will be required to maintain the project schedule at this Contractor's expense. Any work performed outside normal working hours requires approval from Barton Malow Builders.
10. Contractor is only to take direction from Barton Malow Builders.
11. Review all specifications and project drawings, drawing notes, schedules, and schedule notes for areas requiring work described by this bid category and coordinate work with the respective contractors, include all costs in base bid.
12. Include all manpower, overtime, composite crews and mobilizations in base bid to complete work per the project schedule. All mobilizations required to complete this Scope of Work have been included in the base contract price, unless specifically addressed

otherwise in this Contract Agreement. It is understood and agreed that this work may not be performed in a continuous operation and during normal business hours. This contractor has included the cost of the multiple mobilizations/remobilizations and cost to work during non-normal business hours.

13. If Contractor is behind schedule and is notified by Barton Malow Builders, the Contractor shall be required to accelerate the work at its own expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, and shall continue to do so until the progress of the work, in the opinion of Barton Malow Builders, is in conformance with the master project construction schedule.
14. Provide and install all materials per the construction documents. Bid proposals must be per plan and specs. Bids not conforming to plans and specifications will be rejected. Substitutions must be pre-approved in writing prior to bids or be submitted as voluntary alternates on the bid form.
15. Contractor must include costs and utilize Autodesk Build and Textura for this project. Information and cost for Textura can be found in section 012000-Price and Payment Procedures and AutoDesk Build in section 013000-Administrative Requirements.
16. All contractors are to field verify all existing conditions prior to submitting a bid. Submitting a bid is acceptance of all field conditions. Do NOT scale the drawings.
17. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
18. This project surrounded by Oakland Community College staff and students. Contractor is to take proper measures to ensure minimal disruptions to the roads and sidewalks around the project. Contractor is responsible for proper barricading and signage if his work activity interrupts the normal flow of operations around the facility. All Contractor employees and subordinate parties are to conduct themselves in a manner not to offend nor interfere with the staff, students, or any other public person. Barton Malow Builders and Oakland Community College Code of Conduct includes immediate termination for foul language/derogatory conversation. Those who are not in compliance will be asked to leave the project and not return.
19. Provide all temporary protection for work of this bid category. Removal of this protective material at the conclusion of the project is this contractor's responsibility.
20. Minimize disturbances to landscape areas. Excessive or malicious (as deemed by) Barton Malow Builders landscape disturbance will be the responsibility of this contractor to restore at own expense.
21. Protect equipment and finish items to remain during construction including roof, ceilings, walls, flooring, and landscaping during work of this bid category. In addition, all work being performed through ceilings, be it grid, ceiling pads, drywall or plaster, etc. must be protected from damage during work of this bid category. Correction of damage due to lack of adequate protection will be the responsibility of this contractor.
22. Deliveries must occur after 7am and prior to 2pm and not between noon and 1pm, unless scheduled with a Barton Malow Builders Superintendent or risk having the delivery turned away. Unloading, hoisting, transport of materials out of truck to staging location, and delivery acceptance is by the Contractor who is responsible for the material.
23. Contractor is responsible for storage of all materials. Deliver materials to the site as needed. Storage in the building will be limited. Materials in building must be on pallets or material/pipe carts.
24. Stocking of material on floors will be limited to a three (3) day maximum in the area of work, if approved by Barton Malow Builders Superintendent. No other material storage will be allowed in the building.
25. All materials used are to be new, unused and undamaged. Any damaged or questionable material is to be removed and replaced at no cost to the Owner or Barton Malow Builders.
26. Include all rigging and hoisting to deliver, install, and remove materials to / from all floor levels complete.

27. All crane and boom truck lifts must be properly barricaded to keep public at a safe distance. Provide ground spotters and barricading to keep public out of the swing radius of the crane or boom truck.
28. This contractor is responsible for all lifts and scaffolding, if required, for work of this bid category. Coordinate use of your lifts and scaffolding with other trades.
29. Scaffolding and staging as required. Engineered installation drawings, as required.
30. Include field layout for work of this bid category, also included is field time for this contract to survey existing conditions prior to beginning each phase of work. Any discrepancies between existing conditions and the contract drawings are to be reported to Barton Malow Builders immediately.
31. Before ground is broken, contractor is required to GPRS the whole site.
32. Coordination drawing meetings will be scheduled. Contractor understands that Barton Malow Builders is not issuing change orders for items not coordinated with other trades. Contractor also understands any conflicts of existing structure with their new work must be brought to Barton Malow Builders and Architect/Engineer attention in advance of start of work.
33. Contractor shall have no claims for additional cost because Contractor has failed to install work in proper sequence and not in accordance with Coordination drawings. Likewise, any cost for removal of materials or damage caused by Contractors who have failed to perform their Work in the proper sequence will be borne by that Contractor.
34. Participation in coordination meeting/s, weekly progress meetings, and drawings process is mandatory. Representative must be able to make all decisions for their Company and Contractors.
35. Contractor to have one (1) full time on-site superintendent, for the duration of the project. The assigned personnel will be responsible to manage the "entire" scope of work including their Subcontractors/Suppliers and will be the single point of contact for this scope of work. Contractor will be responsible to complete the daily report & JHA form each day including for their Subcontractors regardless if the Contractor has self-perform crews on site or not. Representative must be able to make all field & financial decisions. If full time supervision is not onsite by the Contractor, their Subcontractors will be told to leave the site until the next calendar working day. Contractor will be held responsible for delays and back charged due to lack of project supervision.
36. Contractor is to provide site Supervision and Foreman an Apple iPad with unlimited data/cellular plan service. It is required that Contractor download BluebeamRevu and Autodesk Build via the app store on each device. Contractor may access Owner guest Wi-Fi network if available.
37. Contractor must complete and submit electronic daily reports and pre-task plans via Autodesk Build to Barton Malow Builders on a daily basis. These reports must show total number of manpower, total number of hours, and each day's specific activities. If this is not done, Barton Malow Builders reserves the right to withhold this Contractor's monthly payments until satisfied with this Contractor's response.
38. Items shown to be turned over on the project documents and for closeout attic stock to Owner must be accompanied by a transmittal and copied with signature of receipt to Barton Malow Builders. If a transmittal is not provided and Owner's items are missing, it is this contractor's responsibility to purchase and replace with new materials.
39. Contractor is responsible for the quality control for work of this bid category (including for their subordinate parties). Contractor is to strictly observe tolerances and to maintain strict quality control throughout the execution of his work. All work is to be checked for compliance at each stage of completion per applicable codes, project drawings, specifications, and manufactures shop drawings/written instructions. Any work that is not within specified tolerances is to be removed and replaced.
40. Provide Ground Penetrating Radar (GPR) to locate and mark existing gas, water, electrical site utilities, conduits, fiber, and mechanical piping prior to proceeding with any demo or excavation work

- a. Locate all underground utilities (public and private) prior to any demo or excavations. Note that Miss Dig will not locate private utilities on the Owner's property. It is the responsibility of this contractor to hire an outside firm and locate private utilities.
 - 1) Damage to existing utilities, public or private, including but not limited to gas, water, electric, mechanical, communication, and irrigation lines caused by work of this bid category will be the responsibility of this contractor. Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
 - (a) Contractor will be responsible for all fees to restore the utilities and temporary measures needed until repairs are made.
 - (b) Contractor will also be charged a minimum of \$1,500 for each occurrence for Barton Malow administrative costs.
 - (c) Contractor will be responsible for all Owner personnel, administrative costs, and damages for each occurrence.
41. Ticket work is to be signed by Barton Malow Builders at the end of each workday. Tickets not reviewed or signed by the Barton Malow Builders Superintendent will not be accepted or processed. Pricing is to have detailed explanations of work performed. Barton Malow Builders directed ticket work shall NOT include foreman time, work/service truck, cartage, or overhead and profit mark-up. Tickets shall include only approved labor and materials used. Signature from Barton Malow Builders Superintendent does not necessarily equal additional funds. Barton Malow Builders Project Manager will decide if ticket work is added scope to the contract.
42. All change pricing is to be submitted within ten (10) days from receipt of the change vehicle, unless otherwise agreed by Barton Malow Builders or Owner. All change order pricing is to include a detailed breakdown of costs – Material, Labor, Equipment, etc. along with any signed work orders. No lump sum pricing allowed. Change order pricing will not be accepted without a detailed breakdown. Failure to submit change order pricing within ten (10) days will result in a \$0 change order.
43. Provide all cutting/patching, coring, patching of penetrations, and block-outs for work of this bid category. This is to include but not limited to cutting and patching of all openings in deck (concrete or metal) if required. Patch walls where adjacent existing walls were removed. Patch and repair work is to be done professionally by trained, skilled craftsmen.
44. Provide and install temporary protection for all excavations, floor, or roof openings created by work of this bid category. Temp protection shall be installed per OSHA standards with robust, securely fixed and clearly marked (e.g. 'Hole below - do not remove') covers to prevent the fall of materials or persons through them. Covers should be constructed to be removable sections and that they do not present a tripping hazard.
45. Contractor is responsible for all dewatering and snow/ice removal necessary to complete this Scope of Work.
46. Cleanup is to be performed continuously as work is progressing. This means cleaning up each and every hour. This includes the removal of debris, sweeping (Contractor to provide sweeping compound), wiping down of all finished surfaces, and the proper storage of unused equipment and materials. Cleanup not performed by the Contractor will be completed by a third party (chosen by Barton Malow Builders) and back charged accordingly. Written warnings will not be issued.
47. Contractor shall participate in the Composite Cleanup Crew as described in the project manual. These requirements are in addition to normal daily cleaning responsibilities and costs for this are included in the contract price.
48. Include all cost in base bid to comply with the latest Federal mandate, State of Michigan Executive Order, OSHA requirements, Local Jurisdiction Requirements, Owners Requirements, testing, PPE, and all other requirements for your workers and subordinate parties. In addition, each worker onsite is required to sign in each day prior to work using the Barton Malow QR Reader Questionnaire on a smart phone or tablet.
49. Contractor to install and maintain a gravel approach to enter the site, including rumble strips.

50. Contractor is responsible for balancing/grading site
51. Contractor is responsible for all retention ponds/site work associated with bid documents.
52. Contractor is responsible for all landscape berms as shown on drawings
53. Contractor is responsible for embedment's, baseplates, ect. Provided by other trades as necessary.

F. Specific Scope:

1. This contractor will be responsible for all work shown on the drawings related to this scope and detailed in the specifications including but not limited to: silt fencing where needed, site demolition, site clearing/grubbing/tree removal, rough and finish grading, aggregate base placement, all concrete work, asphalt pavement, pavement markings, topsoil, seeding, utility work, filter fabric, striping/painting, parking lot signage.
2. This category of work shall be an all-inclusive Contractor and will be responsible to furnish and coordinate all his subs and suppliers.
3. This contractor is responsible for supplying their own surveyor to complete this scope of work.
4. Include multiple mobilizations according to site phasing plan.
5. This contractor is responsible for all sealcoating and restriping as called for on the drawings.
6. Contractor is responsible for all work complete shown on Civil drawings including all demolition, grading, paving construction, utility, & soil erosion notes in accordance with drawings and specifications.
7. This contractor is responsible for all work associated with the installation of the stormwater management pond.
8. Contractor is to provide and install all signage as noted on the drawings.
9. Provide all earthmoving, excavation, filling, back filling, compaction, sheeting, shoring, bracing, grading and site balancing required for completion of this project.
10. Provide, maintain, and remove all soil erosion measures complete in accordance with the project drawings and specifications
11. This contractor is to remove and legally dispose of all materials removed from site not shown to remain. Provide own dumpsters if required.
12. Contractor is responsible for all silt bags in drains and up keep for each location for use as Barton Malow sees fit. (at least three bags per cover)
13. Provide weekly inspection reports for SESC as well as all other environmental paperwork to Barton Malow.
 - a. Provide weekly inspections of SESC measures by a certified storm water operator for the duration that SESC measures are in place.
 - i. Provide inspections of SESC measures by a certified storm water operator after each rain event.
14. Contractor MUST work with Owner's third party testing company.
15. Obtain and pay for all necessary permits to complete this work.
16. Contractor is responsible for contracting vac truck to clean out utility structures upon final completion of the job
1. Temporary Measures:
 - a. For any permanent paving that will be used for temporary work during construction, include extended warranties to cover the time the equipment is in use prior to Substantial Completion.
 - b. Provide, maintain, and remove temporary paving systems upon completion and activation for use of the permanent systems
 - c. Protect all materials from damage prior to installation.
 - d. Provide, install, maintain and remove after construction all silt fencing, siltsacks, SedCatch Sedcages as indicated on the project documents.
2. Temporary Electricity:
 - a. No temporary electricity will be available to this Contractor. Contractor to provide all gas or diesel operated generators required for their scope of work
3. Temporary Lighting:
 - a. Contractor shall provide task lighting and temporary light stands as necessary.

4. Coordination and Layout
 - a. Contractor will be responsible for the complete coordination of work of this bid category with all other trades to identify and resolve conflicts. Any and all financial implications emanating from this Contractor's lack of planning and coordination will be borne by this Contractor. This shall include blocking, backing conduits, sleeves, penetrations, and any other appurtenances which may not be specifically identified by the contract documents but are required to complete this scope of work.
 - b. This Contractor is responsible for all detailed layout required for proper location and coordination of work.
 - c. Contractor shall review the critical dimensions and elevations of all work and shall otherwise verify the conformity of existing work to the Contract Documents and to its suitability. Contractor shall promptly submit a written statement to Barton Malow Builders and Architect/Engineer noting any discrepancies or unacceptable conditions as they relate to its work
 - d. Contractor shall attend all meetings as required to properly coordinate its Work with that of Others. Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - e. Contractor shall visit the site and attend meetings as required to properly coordinate the Work.
 - 1) Coordination efforts should be focused on minimizing any post-installation damage and required patching operations.
 - f. Initial benchmarks are shown on the project drawings.
5. If there are discrepancies between any of the project drawings, project schedules, project notes/keynotes, specifications, work scopes, or project manual, the Contractor shall include the most stringent (expensive) cost in base bid.
6. This contractor is responsible for removal of ALL existing utilities to be demoed and removed, along with necessary backfill.
7. Contractor is responsible for all striping and painting according to drawings.
8. Contractor is responsible for all parking lot signage as required by drawings.
9. Contractor is responsible for all flatwork within and surrounding new building according to bid documents.
10. Contractor is responsible for all foundations for new building
11. Contractor must bring water main and sanitary line within 5 feet of new building.
12. Contractor shall include multiple mobilizations to complete the Work.
13. Contractor is responsible for all guardrails as shown according to drawings and spec.
14. Asphalt Paving
 - a. Provide and pay for all city, county, and MDOT permits, inspection fees, and maintenance bonds required for work of this bid category.
 - b. Provide and install all Asphalt Paving including subbase, base, binder material, final course, pavement markings, and other items as required by the Contract Documents and as clarified herein.
 - c. Contractor shall include multiple mobilizations to complete the Work.
 - d. All deliveries are to come off roads as directed by Barton Malow Builders.
 - 1) 9 mile road
 - e. All site barricading and fencing is to remain closed during work hours and is to be in proper place at the end of each work day.
 - f. Protect existing curbs during construction. Replace any curbs that are damaged or undermined. Identify any curb that is damaged prior to construction start. Document with Architect/Engineer and Barton Malow Builders.
 - g. Earthwork required for work of this bid category.
 - h. Owner and City/County roads must be cleaned and maintained and swept as needed to keep roadways clear for normal traffic.
 - i. Provide all rough grading and finish grading for work of this bid category.
 - j. Fine grade, compact, and proof roll subgrade and sub base.

- k. Contractor shall include final grading and placement of base/leveling course.
 - l. Contractor shall provide and install tack prior to placement of wearing course.
 - m. Base/leveling course and wearing course shall not be placed in the same day.
 - n. Pulverize and reshape grade as shown on drawing.
 - o. Do not install stone base until site lighting, working properly, and verified by Electrical Contractor.
 - p. Provide and install all stone base per the contract documents.
 - q. Provide additional engineered fill and stone base where grade is disturbed for installation of catch basins, storm lines, and pole bases. Remove contaminated base from the project site and take to a legal dump.
 - r. Provide and install any geo-tech fabric and geo-grid.
 - s. Provide and install any under drainage systems.
 - t. Coordinate the final elevation of all structures located in pavement and include the adjustment of any existing structures that are to be incorporated into the Work.
 - u. Provide and install any expansion, contraction and control joints and joint sealants within the Work.
 - v. Provide and install any trench drains that are located within the Asphalt Pavement. Tie-in of the drains to be by the Site Utility Contractor.
 - w. Provide and install all traffic signage, mirrors, and other items as required, including pavement striping, parking striping, parking signage, wheel stops, other pavement or curb markings and symbols as shown on the drawings and as specified. Include any additional "No Parking Fire Zones" which may be required by the Authority Having Jurisdiction.
 - x. Provide and install all signage as noted on the drawings.
 - y. Remove, salvage, and reinstall signage as shown. Provide and install new posts for salvaged reinstalled signs as necessary per bid documents.
 - z. Clean asphalt of oils prior to installing striping.
 - aa. Provide and install all striping as noted on the documents.
 - bb. Provide milled joints where new pavement meets existing.
 - cc. Thoroughly clean existing and new asphalt from oils, dirt, and other debris before applying new pavement striping.
 - dd. Provide and install all concrete gutters and curbs adjacent to the Asphalt Paving.
 - ee. Provide and install rebar, fiber mesh, and steel reinforcement for concrete work as shown or specified.
 - ff. Provide and install all items that are embedded within the Work.
 - gg. Provide and install all galvanized steel bollards as shown and paint yellow.
 - hh. Provide and install all backfill and compaction behind curbs, walks, and all areas disturbed by work of this bid category to a depth of 3" below existing grade and/or for new grade elevations shown for the installation of topsoil and seeding.
 - ii. Provide and install 3" depth of screened topsoil behind all curbs, walkways, and areas disturbed by construction. Seed all disturbed areas.
15. Concrete Paving
- a. Provide and pay for all city, county, and MDOT permits, inspection fees, and maintenance bonds required for work of this bid category.
 - b. Provide and install all Concrete Paving including subbase, base, pavement markings, embedded items, reinforcing, markings, and all other items as required by the Contract Documents and as clarified herein.
 - c. Provide and install all traffic signage, mirrors, and other items as required, including pavement striping, parking striping, parking signage, wheel stops, other pavement or curb markings and symbols as shown on the drawings and as specified. Include any additional "No Parking Fire Zones" which may be required by the Authority Having Jurisdiction.
 - d. Contractor shall include multiple mobilizations to complete the Work.
 - e. All deliveries are to come off roads as directed by Barton Malow Builders.

- f. The contractor shall have a minimum of two (2) flag men/women on site at all times directing truck/pedestrian traffic and keep barricades in place, and keeping the public out of the construction area.
 - g. All site barricading and fencing is to remain closed during work hours and is to be in proper place at the end of each work day.
 - h. Protect existing curbs during construction. Replace any curbs that are damaged or undermined. Identify any curb that is damaged prior to construction start. Document with Architect/Engineer and Barton Malow Builders.
 - i. Earthwork required for work of this bid category.
 - j. Owner and City/County roads must be cleaned and maintained by sweeping trucks that utilize water for dust control. As Barton Malow seems fit.
 - k. Provide all rough grading and finish grading for work of this bid category.
 - l. Fine grade, compact, and proof roll subgrade and sub base.
 - m. Provide additional engineered fill and stone base where grade is disturbed for installation of catch basins, storm lines, and pole bases. Remove contaminated base from the project site and take to a legal dump.
 - n. Provide and install any geo-tech fabric and geo-grid.
 - o. Provide and install any under drain systems.
 - p. Do not install stone base until site lighting are energized, working properly, and verified by Electrical Contractor.
 - q. Provide and install all stone base and concrete paving per the contract documents.
 - r. Provide and install rebar, fiber mesh, and steel reinforcement for concrete work as shown or specified.
 - s. Provide and install all concrete gutters and curbs.
 - t. Provide and install all concrete walks.
 - u. Coordinate the final elevation of all structures located in pavement and include the adjustment of any existing structures that are to be incorporated into the Work.
 - v. Provide and install any expansion, contraction and control joints and joint sealants within the Work.
 - w. Provide and install any trench drains that are located within the Concrete Pavement. Tie-in of the drains to be by the Site Utility Contractor.
 - x. Provide and install all signage as noted on the drawings.
 - y. Remove, salvage, and reinstall signage as shown. Provide and install new posts for salvaged reinstalled signs as directed on bid documents.
 - z. Provide and install all striping as noted on the documents.
 - aa. Provide and install all items that are embedded within the Work.
 - bb. Provide and install all galvanized steel bollards as shown.
 - cc. Provide and install all concrete aprons immediately adjacent to building structures.
 - dd. Provide and install any vehicle concrete ramps that are outside the footprint of the building structure.
 - ee. Provide and install all concrete filled metal bollards which are embedded into walks, curbs or concrete aprons which are part of this Work. Bollards to be provided by this Contractor.
 - ff. Comply with all ADA requirements on ramps and walks.
 - gg. Provide and Install all truncated domes as shown or required.
 - hh. Provide all concrete sealer as shown or specified.
 - ii. Provide and install all backfill and compaction behind curbs, walks, and all areas disturbed by work of this bid category to a depth of 3" below existing grade and/or for new grade elevations shown for the installation of topsoil and seeding.
 - jj. Provide and install 3" depth of screened topsoil behind all curbs, walkways, and areas disturbed by construction. Seed all disturbed areas.
 - kk. Provide and install any concrete aprons
16. Foundations
- a. Contractor is responsible for all foundations for new building.

G. EXCLUDED:

1. Landscaping, seeding, site furniture, precast concrete pavers, plants and shrubs, concrete planters, frost stoops.

1.04 SPECIAL CONSIDERATIONS:

- A. Labor Rates/Unit Prices/Alternates: Provide the following information on the bid form:
- B. Labor/Equipment Rates:
- C. This Contractor is to provide as a part of his proposal a fully detailed labor rates for Barton Malow Builders approval for work associated with this Contractor's and for each of their Subordinate Parties Trades. In addition, labor rates will be required for all equipment involved with the performance of the work required by this Bid Category.
- D. Unit Pricing: None
- E. Allowances: This Contractor must obtain written authorization from Barton Malow Builders prior to performing the associated work below. Include in this Contractor's bid, allowances for work as follows.
- F. Provide Allowance for the following
 1. General Allowance - \$100,000
- G. Alternates:
 1. Pricing to Eliminate the steep berm on the north and east sides of property. Maximum elevation of berm to be 674, creating a more flat/gentle slope. Please refer to document labeled "Alternate reduce size of berms." Areas highlighted in yellow.

END OF SECTION 31 0000

**SECTION 003100
AVAILABLE PROJECT INFORMATION**

PART 1 GENERAL

1.01 EXISTING CONDITIONS

- A. Data contained herein has been made available by the Owner for the Architect's use in designing the Project. Neither Owner, Architect nor Barton Malow Builders make any representation, guarantee or warranty as to the accuracy or completeness of the data, either express or implied. Bidders shall draw conclusions from the data entirely at their own risk and shall conduct all investigations and examinations of the Project site and existing conditions as necessary to verify the accuracy of the information.
- B. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of Contract Documents, as follows:
 - 1.
- C. Hazardous Material Survey:
 - 1. Original copy is available for inspection at OCC's offices during normal business hours.
- D. If not included in the attachment(s) prepared for each Bid Package, Bidders may obtain a copy of these documents by submitting a request in writing to Barton Malow Builders .

1.02 PERMITS

- A. Owner has obtained the following permits and/or approvals, that are required to be secured prior to commencement of construction work on this project:
 - 1. Building Permit.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

3.01 OBTAINMENT OF PERMITS

- A. Owner will obtain the following permits, at no cost to Barton Malow Builders or Contractor:
 - 1. Building Permit.
- B. Contractor Permit Procedures: When required to obtain permits for Work of your Bid Category:
 - 1. Complete and file permit application(s) with appropriate agency.
 - 2. Pay required fees.
 - 3. Do not commence execution of any item of work for which a permit has not been obtained.

END OF SECTION 00310

**SECTION 003200.01
SUB PREQUALIFICATION AND BIDDING**

THIS SECTION INCLUDES A BRIEF OVERVIEW OF BARTON MALOW BUILDERS REQUIREMENTS AND DETAILED INFORMATION ABOUT THE PREQUALIFICATION AND BIDDING PROCESSES ON BARTON MALOW BUILDERS PROJECTS. WHERE ELECTRONIC BIDDING IS NOT USED, SEPARATE STIPULATIONS FOR SUBMITTING A HARD COPY BID MAY APPLY. REFER TO OTHER SECTIONS FOR CLARITY.

1.01 DOCUMENT INCLUDES

- A. Prequalification General Requirements
- B. Prequalification Process
- C. BuildingConnected Overview

1.02 RELATED DOCUMENTS

- A. Instructions to Bidders Section 01 2113

2.01 PREQUALIFICATION GENERAL REQUIREMENTS

- A. Barton Malow Builders requires all prospective bidders to maintain their prequalification status throughout the entire Contract duration. This is required in order to process monthly payment applications, release payments, and bid on other projects. Prospective bidders should clearly communicate to their employees regarding their main point of contact and their respective role(s) in completing and maintaining the prequalification.

2.02 PREQUALIFICATION PROCESS

- A. Invitation to Qualify
 - 1. Prospective Bidders should submit a request to prequalify if they are not already prequalified. Click the following link to access the form:
<https://www.bartonmalow.com/Contractors/>. Completion of this linked form will generate an email invitation to prequalify with Barton Malow Builders.
 - 2. Bidders may also reach out to their Barton Malow Builders representative who can invite a Contractor to prequalify through BuildingConnected, Barton Malow Builders online bidding platform.
 - 3. If a Contractor is already prequalified with Barton Malow Builders, BuildingConnected automatically notifies the company's designated prequalification representative, as defined in their BuildingConnected profile, when their prequalification expires (annually) or previously submitted information needs to be updated.
- B. When Prospective Bidders are invited to prequalify, the bidder completes their application and uploads required documents through their BuildingConnected account on the Qualifications Page/TradeTapp Invites tab.
 - 1. The following documents must be uploaded to prequalify with Barton Malow Builders:
 - a. W9 Form – the company name must exactly match our contract and your BuildingConnected profile
 - b. Audited/Reviewed financials from the previous year
 - c. OSHA 300/300A Logs (past three years)
 - d. EMR Letter (past three years)
 - e. Safety Manual
 - f. Letter from Bonding Company
 - g. Current Insurance Certificate and Additional Insured forms CG2010 and CG2037. (Reference Instructions to Bidders Section 002113 for Insurance information).
 - 2. Resources:

- a. Prequalification Setup and Submission Guide (27 Pages)
<https://www.bartonmalow.com/wp-content/uploads/2020/11/sample-tradetapp-prequalification.pdf>
 - 1) This guide provides information for all new BuildingConnected users as well as users who previously used BuildingConnected and TradeTapp as separate software tools. These tools have been combined so that Contractors only need to have a BuildingConnected account.
3. The email contact used for the company profile will be the email contacted in subsequent years for pre-qualification renewal, so be sure to use the email address of the person who will be completing the renewal. Additionally, please ensure that your company is allowing emails from both the TradeTapp.com and BuildingConnected.com domains so you do not miss out on important notifications.

2.03 BUILDINGCONNECTED OVERVIEW

- A. This free, web-based software is used by Barton Malow Builders to successfully manage the bidding process and provide a streamlined process for the prospective bidders and the Owner.
- B. Bid Invitation: The Barton Malow Builders representative may invite a company to bid a particular Bid Package for a given project. If a company wishes to submit a bid for multiple work categories, notify Barton Malow Builders for an invitation for each scope of work.
- C. Prospective bidders shall take the steps to familiarize themselves with the BuildingConnected interface, bid form, and processes prior to submitting a bid. Enter all information requested, including breakout prices, unit prices, allowances, etc. Respond to each question on the Bid Form to be considered fully responsive.
- D. Upload requested documents as attachments (i.e. bid security, clarifications, labor rates, proposals, etc.).
- E. As BuildingConnected is a web-based interface, ensure a stable internet connection is available. Save your progress often as you complete the Bid Form.
- F. Bidding Multiple Categories
 1. When submitting bids for multiple categories, provide a bid separately for each Bid Package. When offering a combined bid discount, enter this information as a Voluntary Alternate.
- G. Bidders may revise their proposals right up until the Bid Due Date. After submission, this feature is not available.
- H. Resources :
 1. BuildingConnected Home Page: <https://www.buildingconnected.com/>
 2. [Completing your BuildingConnected Profile](#)
 3. [Contractor Bidding Guide](#)
 4. [BuildingConnected Help Desk](#)

END OF SECTION 003200.01

**SECTION 004100
BID FORM**

DELIVER [] COPIES OF THIS BID FORM TO THE FOLLOWING ADDRESS PRIOR TO THE BID DUE DATE AND TIME.

1.01 ATTN: []

THE PROJECT AND THE PARTIES

2.01 TO:

A. [] (Owner)

2.02 FOR:

- A. Project: OCC SF25-003 Driving Pad and Storage
- B. Owner's Project Number: SF25-003
22322 Rutland Dr
Southfield, Michigan 48075

2.03 DATE: _____

2.04 SUBMITTED BY:

- A. **Bidder's** Full Name _____
- B. **Company** Name
1. Address _____
2. City, State, Zip _____
3. E-mail Address _____
4. Phone Number _____

2.05 OFFER

- A. Bidder, in compliance with the Bidding Documents for Bid Package No.[] having carefully examined the Bidding Documents and the site of the proposed Project and the conditions affecting the proposed Work in the Bid Category(ies) including the condition of the Project site, any surface or subsurface obstructions, the actual levels, all excavating, filling in, removal and demolition, measurements and quantities involved in the Work, the availability of labor, materials and equipment, and the weather conditions that may possibly may be experienced in the Project vicinity, proposes to furnish all labor, materials, tools, equipment, machinery, equipment rental, transportation, superintendence, and services as are necessary to perform all Work in the Bid Category(ies) stated in accordance with the Contract Documents for the Base Bid and Alternate amounts stated below.
- B. If identified as one of the apparent lowest bidder(s) for a Bid Category, Bidder agrees to meet immediately with Barton Malow Builders and shall submit post bid information as described in Section 00 2113 Instructions to Bidders.
- C. Bidder, if awarded a contract, agrees to: (1) execute the Agreement within fifteen (15) days of receiving notice of the award; (2) provide performance/payment bonds and insurance certificates in full compliance with the Contract Documents, (3) submit the Project Safety Program as described in the Barton Malow Safety Manual, (4) commence Work upon execution of the Agreement or at such other time as directed in the notice of award, and (5) to complete its Work in accordance with the Contract Documents and within the milestone activity dates and durations set forth in the Bidding Documents and subsequent construction project master schedule established by Barton Malow Builders. In the event Bidder defaults in complying with any portion of this paragraph, Bidder specifically agrees that the entire bid security amount shall become the property of Owner as liquidated damages constituting the reasonable

estimate of the damages that the Owner would incur for delays and additional expenses in the event of such default, and not as a penalty.

2.06 BASE BID:

- A. The cost of the Performance Bond and Payment Bond shall be included in the bae bid and treated as a deduct Alternate should the Owner decide to waive the requirement for the successful Bidder providing same.
- B. Bidder agrees to perform all Work for Bid Category(ies) as described in the Contract Documents, for the Base Bid(s) stated below. The Base Bid(s) shall include the cost of Performance and Payment Bonds unless stipulated otherwise. For each Bid Category to be bid, include (a) the Base Bid, written and in figures, (b) the cost of the Performance Bond and Payment Bond which is included in the Base Bid, written and in figures, and (c) the Bid Category and description.
- C. All applicable taxes and bond costs are included in the below Base Bid and all listed alternates and Unit Prices.
- D. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by IDS and Barton Malow Builders for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

_____ dollars

(\$_____)

- E. We have included the required performance assurance bonds in the Bid Amount as required by the Instructions to Bidders. The included cost is:

_____ dollars

(\$_____)

- F. Bid Category and Description: _____

- G. If awarded a contract, Bidder's Surety will be _____

- H. A Bid Security in the form of a [] Bid Bond from a qualified surety, [] certified check, or [] cashier's check (check one) accompanies this proposal in the amount of five (5) percent of the Base Bid Amount(s).

- I. We have included the required performance assurance bonds in the Bid Amount as required by the Instructions to Bidders.

- J. All applicable federal taxes are included and State of Michigan taxes are included in the Bid Sum.

- K. All Cash and Contingency Allowances described in Section 012100 - Allowances are included in the Bid Sum.

- L. Bidder accepts Barton Malow Terms and Conditions (Section 00 5200 Agreement Form).

If no, please reference Addendum or Exceptions.

- M. Bidder is prequalified with Barton Malow _____.
- N. Bidder acknowledges required insurance coverage and limits and will be provided _____
- O. Bidder included all material handling equipment required for this scope of work _____
- P. Bidder has visited the site _____
- Q. Bidder has bid per the project documents without deviation _____.
- R. Bidder's site requirements: (i.e. site trailers, parking, laydown, hoisting etc.); _____
- S. _____

T. List any Long Lead Items (greater than 6 weeks) _____

U. Bidder understands the requirements for the payment process, preparation of the SOV, retention, and timely completion of closeout document preparation? _____.

V. Bidder understands allowable Markup on self-perform (10%) and sub-tier contractors (5%) _____.

W. List MBE, WBE, Veteran Owned, or Service Disabled Veteran Owned _____.

2.07 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for ninety (90) days from the bid due date.
- B. Bidder understands that the Owner reserves the right to reject any or all Bid Proposals and to waive any informalities or irregularities therein.

2.08 ALTERNATES

A. The following Alternate(s) to Base Bid(s) are required to be offered by the respective Bidders. In the event the Alternate is accepted, Bidder agrees to perform all Work necessary to complete the Work as modified by the Alternate in full accordance with the Contract Documents, for the following add or deduct from the Base Bid as indicated: (Enter written amount and in figures. In case of discrepancy, amount shown in words will govern. Enter a dollar amount in each, even if the amount is \$0.00. Terminology such as "No Bid", "Not Applicable", "No Change" or "Does Not Apply", shall not be used. If the Alternate does not apply to the Bidder, enter \$0.00.)

- B. See project drawings and/or specifications for alternate write-up descriptions.
- C. Alternate pricing shall include the cost of Performance and Payment Bonds and taxes.

D. Alternate 1: [_____]

1. _____ dollars
(\$_____)

E. Alternate 2: [_____]

1. _____ dollars
(\$_____)

2.09 VOLUNTARY ALTERNATES

- A. The following voluntary Alternates are offered by the Bidder. Bidder agrees that the amounts indicated below shall be added to or deducted from the Base Bid, as indicated, for each voluntary Alternate that is accepted.
- B. Voluntary Alternate pricing shall include the cost of Performance and Payment Bonds and taxes.
- C. Show amount(s) in both words and figures for voluntary alternates. In case of discrepancy, amount shown in words will govern.
- D. Bidder is required to submit sufficient detailed information to fully describe each voluntary Alternate(s) on a separate sheet(s) attached to this Bid Proposal form.

E. Voluntary Alternate 1: _____(enter description)

_____ dollars

(\$ _____)

F. Voluntary Alternate 2: _____(enter description)

_____ dollars

(\$ _____)

2.10 HOURLY LABOR RATES

- A. All bidders are required to provide their company's hourly labor rates as they apply to this project. The contract may be awarded based upon this information. Failure to quote the following hourly labor rates will result in an incomplete bid proposal form and may be disqualified by Owner. Include fringes and all benefits. A detailed breakdown of each labor rate that Bidder lists below is subject to review and acceptance by Barton Malow prior to contract award. Include the detailed breakdown of labor rates in the sealed envelope when submitting the bid for review and approval.

2.11 UNIT PRICES

- A. The following Unit Prices to Base Bid Categories are required to be offered by the respective Bidders. Bidder agrees that the following amounts will be used in determining contract changes from the Base Bid for authorized Changes in the Work. Bidder shall not include these unit costs in the Base Bid amount(s).
- B. All unit prices shall include Bidder's mark-up for overhead and profit.

2.12 COMBINED BID

- A. Bidder agrees to perform all Work necessary to complete the Work in Bid Categories _____, _____, _____, in full accordance with the Contract Documents, for the lump sum of:

_____ dollars

(\$_____)

2.13 ADDENDA

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
1. Addendum # _____ Dated _____.
 2. Addendum # _____ Dated _____.
 3. Addendum # _____ Dated _____.

2.14 SAFETY

- A. As of the date of submission of the Bid, Bidder's worker's compensation Experience Modification Rate (EMR) for the state in which the Work is performed is _____.
- B. Bidder has included the OSHA Form 200 and 200S indicating recordable incident rates for the prior calendar year per 200,000 man hours for the following categories:
1. Total Cases _____
 2. Lost Workday Cases _____
 3. Non-fatal Cases Without Lost Workdays _____
 4. Employee Hours Worked Last Year _____
 5. Fatalities in the last year (if any, please describe below) _____

6. Has Bidder been cited by state or federal OSHA for any serious or willful violation? If yes, please describe:

2.15 BID FORM SIGNATURE(S)

- A. Bidder accepts the provisions of the Bidding and Contract Documents and certifies that this Bid Proposal is submitted in good faith and without collusion with any other person or entity submitting a Bid Proposal for the Work. Bidder hereby affixes its authorized signature(s) representing (check one B-G):
- B. _____ An individual doing business as _____
- C. _____ A partnership
- D. _____ A limited liability company, organized in (enter state)
- E. _____ A corporation, organized in (enter state)
- F. _____ Joint venture formed between and (Signature from authorized representatives of each partner are required)
- G. _____ An Agent with a Current Power of Attorney (must be attached to this bid form).
- H. Signature(s):

- I. Title:

SF25-003 Driving Pad and Storage

J. Legal Name of Firm:

K. Business Address:

L. Telephone Number:

END OF SECTION 004100

**SECTION 00410
FAMILIAL RELATIONSHIP DISCLOSURE FORM**

AFFIDAVIT OF BIDDER

The undersigned, the owner or authorized officer of _____ (the "Bidder"),
pursuant to the familial disclosure requirement provided in the Advertisement for Bid, Section 00100 of the Project
Manual, hereby represents and warrants, except as provided below, that no familial relationships exist
between the owner(s) or any employee of _____
and any member of the Board of Education of the School District or the Superintendent of the School District.

List and describe any Familial Relationships:

BIDDER:

By: _____

Its: _____

STATE OF MICHIGAN
)ss
COUNTY OF _____)

Subscribed and sworn to before me on the _____ day of _____, 2004, by

Notary Public

County, Michigan

My Commission Expires _____

Acting in County of _____

END OF SECTION 00410

CERTIFICATE OF COMPLIANCE WITH MICHIGAN ACT NO. 517,
PUBLIC ACTS OF 2012

We, _____ (Company)
Certify that we are not an "Iran linked business" within the meaning of Michigan Act No. 517, Public Acts of 2012, and that in the event it is awarded Contract as a result of this Invitation to Bid, we will not become an "Iran linked business" during the course of performing our Work under the Contract.

NOTE: Whoever knowingly and willfully makes any false, fictitious or fraudulent representation may be liable for civil penalties of \$250,000 or two times the amount of the contract or proposed contract, whichever is more, as more fully set forth in Section 5 of Act No. 517, Public Acts of 2012.

(Name of Company)

By: _____

Date: _____

Title: _____

Acknowledged by _____ before me on the _____ day of _____,

Signature _____

Printed name _____

Notary public, State of Michigan, County of _____

My commission expires _____

***If performing a notarial act in a county other than the county of commission include: Acting in the County of _____**

**SECTION 005200
AGREEMENT FORM**

PART 1 GENERAL

1.01 FORM OF AGREEMENT

- A. The form of Agreement (AIA Document A132-2019 Standard Form of Agreement between Owner and Contractor, Construction Manager as Advisor Edition) that will be used for Work under this Bid Package and associated Terms and Conditions and AIA Document A232-2019 General Conditions of the Contract for Construction and Insurance Requirements. A copy of the AIA General Conditions is found immediately following this section. The Agreement further includes the Barton Malow Builders Project Manual (this document) and its Exhibits.

1.02 INSURANCE REQUIREMENTS

- A. Barton Malow Builders Document No. 2 Insurance Requirements shall govern this Project. A copy of Document No. 2 is included in this Section.
- B. Barton Malow Builders requires insurance on all contracts, as noted in the contract terms and conditions. All insurance coverage must be reviewed and deemed acceptable at prequalification.
- C. Contractors must create an account in TradeTapp and upload its renewal blanket certificate of insurance and all additional insured forms. Contractors will be required to manually enter the insurance coverage periods when uploading and at each renewal.
- D. Contractors must also have an account in www.buildingconnected.com. Contractor entity name and mailing address must be typed EXACTLY the same in both TradeTapp and BuildingConnected as the two systems sync with each other.
- E. In most cases, insurance approval in TradeTapp satisfies insurance approval for multiple contracts, if applicable.
- F. Please review the required insurance endorsement or contract language with your insured. We have confirmed that the requested insurance coverage is commercially available.
 - 1. The required additional insurance, as stated in our current contracts provides:
 - 2. Barton Malow Holdings ("BMH"), Contractor (if other than BMH), and their partners (if applicable), Owner, and all other entities as required in the Prime Contract, shall be endorsed as additional insureds on *Contractor's liability insurance policies (including general liability, excess liability, automobile liability and pollution liability, where applicable) for liability arising out of activities, operations or "work," performed by or on behalf of Contractor, including BMH and/or Contractor's general supervision of Contractor, products and completed operations hazard of Contractor, and automobiles owned, leased, hired or borrowed by Contractor. The coverage provided by the additional insured endorsement(s) shall be at least as broad as that provided in the Insurance Service Office, Inc.'s Additional Insured Endorsement Form CG 20 10 11 85. Forms that do not provide additional insurance for the "products and completed operations hazard," will not be accepted. In no case shall any additional insured endorsement exclude coverage for BMH or Contractor's own negligence, nor limit coverage for BMH or Contractor only to potential liability incurred solely as a result of Subcontractor's acts or omissions.
- G. Barton Malow Builders will accept the following additional insurance endorsements:
 - 1. CG 2010 11 85
 - 2. CG2010 10 01 coupled with the CG2037 10 01 forms.
 - 3. CG7048 10 15 (this is not an ISO form, but it is an example of an acceptable "scripted equivalent" form)
- H. We will accept any manuscript form or "scripted equivalent" form that provides the following coverage:
 - 1. Blanket additional insured form as required by written contract:
 - a. For liability arising out of your ongoing operations AND

- b. For liability arising out of “your work” performed for that insured and included in the “products-completed operations hazard”
- I. The description box on the ACORD certificate must be endorsed as follows:
 - 1. For OCC SF25-003 Driving Pad and Storage
 - 2. Ensure Barton Malow Builders and IDS are added as additional insureds on the Insured’s commercial general liability policy, excess liability policy, automobile liability policy, and contractor’s pollution liability policy, if applicable with respect to liabilities arising out of the operations or “work” performed by or on behalf of the Insured and in accordance with all Contract requirements for such coverage. Coverage for the additional insureds is primary and non-contributory with any other insurance available to the additional insureds, whether such other insurance is available on a primary or excess basis. Waivers of subrogation apply in accordance with Contract requirements.
- J. Barton Malow Builders also requires:
 - 1. The additional insurance coverage provided must be primary and non-contributory with any other insurance or self- insurance maintained by the additional insured, whether on a primary, umbrella or excess basis.
 - 2. Each insurer must carry AM Best’s Rating of A-VII or better
 - 3. Each policy must be endorsed so that the issuing insurer will provide thirty (30) days written notice of cancellation to the BHM, Contractor and/or any additional insureds.
 - 4. Waiver of subrogation required for all coverages.
- K. A sample of the Certificate of Insurance (ACORD) form is included at the end of this Section.

1.03 PERFORMANCE AND PAYMENT BOND REQUIREMENTS

- A. OCC will require the Contractor to furnish a Performance Bond and a Payment Bond, in amounts equal to the Agreement Contract Sum, by a qualified surety and naming both the Owner and Barton Malow Builders as Obligees. All sureties providing bonds on this Project must be listed in the Department of Treasury’s Circular 570, entitled “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” with the bond amounts less than or equal to the underwriting limitation indicated in the Circular, and/or must have an A.M. Best rating of A – VII or better. Bonds shall be duly executed by the Contractor, as principal, and by a surety that is licensed in the state in which the work is to be performed.
- B. The Contractor shall deliver the required bonds to Barton Malow Builders prior to the execution of the Agreement. If the work is to be commenced prior thereto in response to a letter of intent, the Bidder, at a minimum, shall submit evidence to the satisfaction of OCC and Barton Malow Builders that such bonds will be furnished prior to commencement of on-site Work. In no event may the Contractor commence on-site work without the required bonds properly issued and delivered.
- C. Performance Bond and Payment Bond AIA Document A311 (1970 Edition), AIA Modified A312, or A312 (2010 Edition) must be used for this Project.
- D. The Bidder’s proposed surety must be acceptable to the OCC and Barton Malow Builders. If, at any time, after acceptance of the Contractor’s bonds, the surety fails to meet the stated criteria the Contractor must replace the bonds with bonds from a surety that meets the stated criteria as a precondition to continuing Work and receiving further payments.
- E. The Performance and Payment Bond penal sums (i.e., the Agreement Contract Sum) must be listed as a separate line item in the schedule of values.
- F. In the event of a Change Order, the penal sum of any required Performance and Payment Bonds shall be adjusted to equal the adjusted Contract Price. OCC and Barton Malow Builders shall have the right to request submission of bond riders, issued by the original qualified surety, evidencing that such adjustments to the penal sum of the bonds have been accomplished. Notwithstanding the foregoing, in the next pay application after the Agreement price has been increased by twenty-five percent (25%) or more, as a condition precedent to

payment, the Contractor shall deliver a bond rider issued by the original qualified surety evidencing that the appropriate adjustment in penal sums has been accomplished.

1.04 SUPPLEMENTARY GENERAL CONDITIONS

- A. [_____]
- B. [_____]

1.05 RELATED REQUIREMENTS

- A. Section 007200 - General Conditions.
- B. Section 007300 - Supplementary Conditions.
- C. Section 002113 - Instructions to Bidders
- D. Section 014216 - Definitions.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 005200

DRAFT AIA® Document A232™ – 2019

General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

for the following PROJECT:

(Name, and location or address)

«Oakland Community College ~~Royal Oak Building - E~~ Southfield Driving Pad and Storage
22322 Rutland Dr.,
Southfield, MI 48075 »

THE CONSTRUCTION MANAGER:

(Name, legal status, and address)

«Barton Malow Builders LLC
26500 American Drive
Southfield, Michigan 48034 »

THE OWNER:

(Name, legal status, and address)

«Oakland Community College
2900 Featherstone Rd,
Auburn Hills, MI 48326»

THE ARCHITECT:

(Name, legal status, and address)

«Integrated Design solutions
1441 W Long Lake Rd. #200
Troy, MI 48098
French Associates, Inc.
236 Mill Street
Rochester, Michigan 48307»

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Documents A132™-2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™-2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™-2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.



ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

1	GENERAL PROVISIONS
2	OWNER
3	CONTRACTOR
4	ARCHITECT AND CONSTRUCTION MANAGER
5	SUBCONTRACTORS
6	CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
7	CHANGES IN THE WORK
8	TIME
9	PAYMENTS AND COMPLETION
10	PROTECTION OF PERSONS AND PROPERTY
11	INSURANCE AND BONDS
12	UNCOVERING AND CORRECTION OF WORK
13	MISCELLANEOUS PROVISIONS
14	TERMINATION OR SUSPENSION OF THE CONTRACT
15	CLAIMS AND DISPUTES



ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents. The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the “Agreement” or “Contract”) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect or the Owner. Unless specifically ~~enumerated-excluded~~ in the Agreement, the Contract Documents do ~~not~~ include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals including the Owner’s Request For Proposals, including the Project Manual (collectively the “RFP”), the Contractor’s bid or proposal (but only to the extent it does not conflict with Owner’s RFP) or portions of addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract. The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect’s consultants, (2) between the Owner and the Construction Manager or the Construction Manager’s consultants, (3) between the Owner and the Architect or the Architect’s consultants, (4) between the Contractor and the Construction Manager or the Construction Manager’s consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. The Construction Manager and Architect shall, however, be entitled to performance and enforcement of obligations under the Contract Documents intended to facilitate Contractor’s performance of ~~their-its~~ duties.

§ 1.1.3 The Work. The term “Work” consists of all goods and services, such as labor, transportation, materials, tools, and equipment (1) to be incorporated into the Project (or the Contractor’s portion of the Project if the Contractor is not responsible for the entire Project), (2) required of the Contractor under the Contract Documents, or (3) necessary or appropriate to fully construct, operate and maintain the Project (or the Contractor’s portion of the Project if the Contractor is not responsible for the entire Project). The Work shall be performed in accordance with the Contract Documents. The Work may constitute the whole or a part of the Project. The term “Work” shall also include labor, materials, equipment and services provided or to be provided by Subcontractors, Sub-subcontractors, suppliers or any other entity for whom the Contractor is responsible under or pursuant to the Contract Documents. The term “Work” means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor’s obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors, and by the Owner’s own forces and Separate Contractors.

§ 1.1.5 Contractors. Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

§ 1.1.6 Separate Contractors. Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

§ 1.1.7 The Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.8 The Specifications. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.9 Instruments of Service. Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.10 Initial Decision Maker. The Initial Decision Maker shall be the Architect, unless otherwise is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination under Article 14. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.1.11 The Project Manual

The Project Manual is a volume of documents and information assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract, Specifications, Drawings, the Contract and other information furnished by the Owner.

§ 1.1.12 Applicable Laws

Applicable Laws means all applicable federal, state and local codes, statutes, ordinances, laws including, but not limited to, the Americans with Disabilities Act ("ADA"), the Revised School Code, MCL 380.1 et seq., including but not limited to MCL 380.1264, as amended, the School Building Construction Act, MCL 388.851 et seq., the Stille-Derose-Hale Single State Construction Code Act, MCL 125.1501 et seq., the Michigan Building Code, federal, state and local environmental laws and regulations, and the rules and regulations, policies, guidelines and consent, administrative or other lawful orders of all public authorities having jurisdiction over the Project, the Work site, the Work or the prosecution of the Work.

§ 1.1.13 Construction Schedule

The Construction Schedule is the Critical Path Method ("CPM") schedule for construction of the Work submitted as part of the Contractor's Contract Sum prepared by the Contractor and approved by the Owner, in writing, in accordance with Section 3.10. The Construction Schedule can be modified only by Change Order. Following any such modification, the term "Construction Schedule" shall mean the most recent Owner-approved version. The initial agreed upon Construction Schedule is attached to the Contract as an Exhibit and is referred to as the Project Schedule.

§ 1.1.14 Milestone Dates

The Milestone Dates are those dates included in the Master Design and Construction Schedule and that are critical to ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents.

§ 1.1.15 Construction Team

The Construction Team includes the Contractor, Subcontractors, Sub-subcontractor at any tier and suppliers and (1) all other persons in privity of contract with any of them in connection with the Work (except the Owner), (2) anyone else providing labor, materials, supplies, equipment or services as part of or in connection with the Work (except those, if any, hired directly or indirectly by the Owner) and (3) all of their officers, employees, agents, and independent contractors.

§ 1.1.16 Contract Time

The Contract Time is the number of calendar days described in the Construction Schedule in which (or, alternatively, the date set forth in the Construction Schedule by which) Substantial Completion shall be achieved, subject to any extensions granted in executed Change Orders or otherwise specifically permitted by the Contract Documents.

§ 1.1.17 Extraordinary Measures

Extraordinary Measures are corrective measures necessary to expedite the progress of the Work, including (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, and facilities, (3) expediting the delivery of materials, and (4) other similar measures. Subject to the Contractor's rights under Section 7.5, the Owner shall have the right to order the Contractor to take Extraordinary Measures when it determines that the performance of the Work, as of a Milestone Date, has not progressed to or reached the level of completion required by the Contract Documents, at Contractor's sole cost and expense.

§ 1.1.18 Master Design and Construction Schedule

The Master Design and Construction Schedule is the preliminary schedule for the Work to be developed by the Owner or Contractor during the bidding process and which shall, at a minimum, provide for major elements such as preparation of the design, phasing of construction, the time of commencement and completion required for each anticipated Bid Package.

§ 1.1.19 Punchlist

Punchlist means a list of uncompleted or unacceptable items of Work which do not interfere with the use or occupancy of any part of the Work for its intended purpose and which, unless delayed by a need to order materials that could not reasonably have been anticipated by the Contractor, collectively are capable of being completed within sixty (60) days.

§ 1.1.20 The term “Product(s)” as used in the Contract Documents refers to the materials, systems and equipment provided by the Contractor for use in the Work of the Project.

§ 1.1.21 The terms “Warranty” and “Guarantee” as used in the Contract Documents shall have the same meaning and shall be defined as “legally enforceable assurance of satisfactory performance or quality of a product or “Work.”

§ 1.1.22 Where materials, systems and equipment items are referred to in the singular, such reference shall not serve to limit the quantity required. The Contractor shall furnish quantities as required by the Contract Documents to complete the Work.

§ 1.1.23 Unless specifically limited in the Contract, the words “furnish,” “install,” and “provide,” or any combination thereof mean to furnish and incorporate into the Work, including all necessary labor, materials, and equipment and other items required to perform the Work indicated.

§ 1.1.24 Value Engineering

Value Engineering means the detailed analysis of systems, equipment, materials, services, facilities, and supplies required by the Contract Documents for the purpose of achieving the desired and essential functions of the Owner’s program at the lowest cost consistent with required and necessary performance, reliability, quality and safety.

§ 1.1.25 The words “consent,” “approved,” “satisfactory,” “proper,” “as directed,” any derivatives of them, or similar terms, mean written approval by the Owner, and may include approval of the Architect if the Owner so directs. Except where a different standard is specifically established, the Owner has the right to grant or withhold such approval in its sole discretion.

§ 1.1.26 The word “provide” and any derivatives thereof, and similar terms, mean to properly fabricate, complete, transport, deliver, install, erect, construct, test and furnish all labor, materials, equipment, apparatus, appurtenances, and all items and expenses necessary to properly complete in place, ready for operation or use under the terms of the Contract Documents.

§ 1.1.27 The terms “known,” “knowledge,” “recognize,” “believe,” and “discover,” and any derivatives thereof and similar terms, when used in reference to the Contractor, shall mean that which the Contractor knows or should reasonably know, recognized or should reasonably recognize, and discovers or should reasonably discover in exercising the care, skill, and diligence required of the Contractor by the Contract. The expression “reasonably inferable” and similar terms mean reasonably inferable by a Contractor familiar with the Work an exercising the care, skill and diligence required of the Contractor by the Contract.

§ 1.1.28 The word “including” shall not be a word of limitation, but instead shall be construed as introducing one or more nonexclusive examples.

§ 1.1.29 Words or abbreviations that are not defined but have well-known technical, trade or construction industry meanings, shall have those meanings ascribed to them. The singular shall include the plural and vice versa. Pronouns are interchangeable. The word “person” includes human beings and recognized legal entities. Unless the context clearly requires otherwise, reference to a Section shall include all subsections beneath it bearing identical introductory numbers.

§ 1.1.30 Owner Delay. An Owner Delay means an actual delay to Contractor's completion of the Work to the extent caused by one or more of the following: (i) Modifications (excluding minor changes in the Work and Architect interpretations), (ii) the Owner's failure (or that of any other person for whom the Owner is responsible to the Contractor including, the Architect or a separate contractor hired by the Owner) to provide any data or information requested by the Contractor in writing that is reasonably necessary for Contractor to carry out its duties and is the Owner's obligation to provide (so long as the Owner and any other responsible person are given adequate time to respond); or (iii) unreasonable interference by the Owner or persons for whom it is responsible to the Contractor, including, the Architect or a separate contractor hired by the Owner, with the Contractor's performance of the Work, which is not cured within five (5) business days of written notice to the Owner.

§ 1.1.31 Extraordinary Measures. "Extraordinary Measures" means steps taken to expedite the progress of the Work, including, without limitation, (1) working additional shifts or overtime, (2) supplying additional manpower, equipment, and facilities, and (3) other similar measures.

§ 1.1.32 Hazardous Materials. Hazardous Materials means any solid, liquid or gaseous waste, regulated substance or material in any Applicable Law, and shall include, without limitation, any petroleum or petroleum products or by-products, Urea Formaldehyde, flammable explosives, radioactive materials, asbestos in any form, lead paint, polychlorinated biphenyls and any other substance or material which constitutes a threat to health, safety, property or the environment or which has been or is in the future determined by any governmental entity to be prohibited, limited or regulated by any applicable environmental law or regulation. It is the intent of the parties, for purposes of this Agreement, that the term Hazardous Material is broadly construed.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 ~~The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. Work called for on the Drawings and not mentioned in the Specifications, or vice versa, shall be performed as though fully set forth in both. Nothing in this Section 1.2, however, shall relieve the Contractor of any of its obligations under the Contract Documents. Whenever a provision of the Contract Documents conflicts with agreements or regulations in force among members of trade associations, unions or councils, which regulate or distinguish the portions of the Work which shall or shall not be performed by a particular trade, the Contractor shall make necessary arrangements to reconcile the conflict without delay, damage, cost or recourse to the Owner. Delays in the Work resulting from the failure of the Contractor to use its best efforts to reconcile any such conflicts shall not result in an extension of the Construction Time and shall not result in the increase of the Contract Sum.~~ The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Where responsibility for particular Work is required of the Contractor, the Contractor shall not be released from that responsibility by reason of the location of the Specification or Drawing information which establishes the responsibility. Thus, the Contractor shall be responsible for all Work required of it, even though that responsibility may be shown only in that portion of the documents typically pertaining to another contractor or trade. Similarly, the organization of the Contractor's duties into different phases or categories in the Agreement is for convenience only and shall not limit the generality of the Contractor's obligation to provide all of the Work whenever necessary.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. All standards referred to, except as modified in the Contract Documents, shall have the same force and effect as though printed therein. These standards will not be furnished to the Contractor, as the Contractor and all members of the Construction Team are required to be familiar with their requirements.

§ 1.2.4 All references in the Contract Documents to standards (such as commercial standards, federal specifications, trade association standards or similar standards), whether for materials, processes, assemblies, workmanship, performance or any other purpose, shall mean, unless otherwise noted, the most recent available published version of such standard as of the date of that part of the Contract Documents bearing the reference. All standards referred to, except as modified in the Contract Documents, shall have the same force and effect as though printed therein. These standards will not be furnished to the Contractor, as the Contractor and all members of the Construction Team are required to be familiar with their requirements.

§ 1.2.5 If there should be a conflict between two or more of the Contract Documents, the following order of interpretation shall apply:

§ 1.2.5.1 Where requirements specifically set forth in the Agreement are in conflict with other Contract Documents, the Agreement shall govern.

§ 1.2.5.2 Where there is conflict between the requirements of the General Conditions and the Agreement, the requirements of the Agreement shall govern, except where the requirements set forth in the Agreement are contrary to Applicable Laws, in which case the legal requirements shall govern.

§ 1.2.5.3 Where there is a conflict among Drawings and Specifications, or among any other Contract Documents not identified in Sections 1.2.5.1 or 1.2.5.2, the conflict shall be resolved by complying with the provision that requires the better quality or greater quantity of Work to the Owner.

§ 1.2.5.4 When a duplicate of material or equipment occurs in the Drawings, the Specifications or other Contract Documents, each Contractor shall be deemed to have bid on the basis of each furnishing such material or equipment. The Owner, Construction Manager and Architect will decide which Contractor(s) shall furnish the same and which Contract amount shall be adjusted for not incorporating such material or equipment into the Project.

§ 1.2.5.5 Documents of a later date shall always govern, except that if a conflict exists between the Owner's Bidding Documents and the Contractor's proposal/bid the Owner's Bidding Documents shall control unless expressly modified in the Agreement.

§ 1.2.5.6 The specific shall govern over the general.

§ 1.2.6 The Contractor acknowledges that there may be items of the Work, which the Contractor is responsible to provide under the Contract that are not drawn or specified in the Design but are necessary for the proper execution and completion of the Work and are consistent with and reasonably inferable from the Drawings and Specifications. All such items shall be provided as part of the Work without delay in its progress and without any increase in the Contract Sum.

§ 1.2.7 Delegated Design

§1.2.7.1 In the event the Contract Documents delegate the design of a portion of the Work to the Contractor or the Construction Team, or otherwise require the performance of professional services, the Contractor will provide all such services with the standard of care that would be followed on a comparable project by a reasonably skilled design professional in the same field working in the locality of the Project. The Contractor shall provide the services through a properly licensed design professional whose signature and seal shall appear on all drawings, specifications, submittals, and other deliverables. All Work designed by the Contractor or Construction Team shall be in accordance with Applicable Laws.

§ 1.2.7.2 The Contractor will cooperate with the Architect and the Owner's consultants in the performance of any design that has been delegated to it in order to ensure its design can be coordinated with the Architect's design for the other portions of the Project.

§ 1.2.7.3 The Contractor will promptly inform the Owner of information needed to meet the Contractor's obligations under this Section 1.2.7.

§ 1.2.7.4 The Contractor grants, or will cause to be granted, to the Owner a perpetual, nonexclusive license to use all designs prepared by or for the Construction Team for constructing, using, maintaining, altering, and adding to the Project in the future.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The construction plans, Drawings, Specifications, Project Manual and all other documents and like materials relating to the Project, including those in electronic form, prepared by the Architect and the Architect's consultants ("Instruments of Service" or "Project Documents"), electronic or otherwise, and all data used in compiling, and the results of, any tests, surveys or inspections at the Project Site, as well as all photographs, schedules, data processing output, building information modeling (BIM), computer-aided design/drafting (CADD) system disks/tapes, computations, studies, audits, reports, models and other items of like kind, and all intellectual property, prepared or created for or in connection with the Project, regardless of whether they were prepared by the Owner, the Architect, the Contractor, or a third party, shall constitute the Project Documents, and shall belong to the Owner. The Contractor may retain one set of the Project Documents. All copies of them, except Contractor's record set, shall be returned or suitably accounted for upon completion of the Work. They are for use solely with respect to the Project. The Contractor shall not, without the prior written consent of the Owner, use or permit anyone to use any Project Documents prepared for or in connection with the Project, or any concepts or ideas developed in connection with the Project, for any purpose other than the Project. The Owner shall at all times have access to and control over the disposition of any Project Documents pertaining to the Project. ~~The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights.~~ The Contractor, Subcontractors, sub-subcontractors, and suppliers shall not own or claim a copyright in the Contract Documents or Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Owner's Architect's or Owner's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service, or any other documents prepared for or in connection with the Project, or any concepts or ideas developed in connection with the Project, for any purpose other than the Project without the specific written consent of the Owner. The Owner shall at all times have access to and control over the disposition of any Drawings, Specifications, Instruments of Service, and other documents pertaining to the Project. ~~The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.~~

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is expressly permitted set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the other party and the Architect as set forth in Section 15.1.3 to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

If the parties transmit Project Documents or Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents. The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™ 2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model shall be in accordance with the protocols established by the parties, unless otherwise already provided in the Agreement or the Contract Documents and without having those protocols set forth in AIA Document E203™ 2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™ 2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 1.9 Confidentiality

§ 1.9.1 The Contractor shall not knowingly or negligently communicate or disclose at any time to any person any information concerning the Work or the Project, except: (1) with prior written consent of the Owner, (2) information which has become part of the public domain prior to the Date of the Contract, (3) information which becomes part of the public domain by means other than an unauthorized act or omission of the Contractor, (4) as may be required to perform the Work or by any Applicable Law or (5) to its professional advisors or lender (all of whom shall be required to maintain such information in confidence.)

§ 1.9.2 The Contractor shall promptly upon the request of the Owner return and surrender to the Owner the original or legible copies of any materials, records, notices, memoranda, recordings, Drawings, Specifications and mock-ups and any other Contract Documents furnished by the Owner to the Contractor.

§ 1.9.3 The Contractor shall maintain, and shall cause all members of the Construction Team, and its and their directors, officers, employees, and agents, to maintain during and after the term of the Contract, the confidentiality of all trade secrets, know-how, confidential data or other proprietary information of the Owner when designated as such and shall not use such information for any purpose whatsoever except for uses permitted by Section 1.9.1.

§ 1.9.4 The Contractor shall not identify, either expressly or by implication, the Owner, or its corporate affiliates, or use any of their trademarks, trade names, service marks, other proprietary marks, or reference the services performed under the Contract, in any advertising, press releases, publicity matters, or other promotional materials without the Owner's prior written approval.

§ 1.9.5 The Contractor shall not, without the express written consent of the Owner, discuss the Work or any part thereof with persons under circumstances in which such communications can reasonably be expected to be published in newspapers, magazines or trade journals or broadcast on radio or television. This restriction shall not apply to statements consistent with a crisis management plan development and agreed to by both parties with respect

to the Work. This restriction also shall not apply to any fair response by the Contractor to publicity released by the Owner that is detrimental to the reputation of the Contractor. Any such contact shall be referred to the Owner for response. Further, without the Owner's consent, the Contractor shall not participate in professional or trade seminars or publish or submit articles for publication, the subject of which is, in whole or in part, the Work. Any such proposed article or publication shall be submitted to the Owner for review and approval, which shall not be unreasonably withheld.

§ 1.9.6 The Contractor shall cause all members of the Construction Team to specifically acknowledge that the provisions of this Section 1.9 are binding upon them.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner may at any time and from time to time designate a third-party, such as an architect or engineer or other professional consultant, to perform any of its duties under the Contract. In the event of any such designation, the Owner shall provide written notice to the Contractor. The duties, responsibilities and limitations of authority of any third party designated by the Owner pursuant to Section 2.1.1, shall not be restricted, modified or extended without written consent of the Owner.
~~The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.~~

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work, and upon reasonable written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. ~~The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.~~

§ 2.2.2 Following commencement of the Work, ~~the Contractor may only request such evidence required under Section 2.2.1 if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; or (2) a change in the Work materially increases the Contract Sum. -and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.~~

§ 2.2.3 ~~After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.~~Reserved.

§ 2.2.4 ~~Where the Owner has designated information furnished under this Section 2.2 as "confidential," t~~The Contractor shall keep the information confidential in accordance with Section 1.9 and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' written notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose

“confidential” information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree in writing to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including, but not limited to, those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. Unless otherwise provided under the Contract Documents, the Owner, assisted by through the Construction Manager, shall secure and pay for the building permit. All permits, fees, licenses and approvals not specifically identified in the Contract or Contract Documents as the responsibility of the Owner shall be the responsibility of the Contractor.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 The Owner shall retain a construction manager adviser lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.4 If the employment of the Construction Manager or Architect terminates, the Owner shall employ a successor construction manager or architect ~~to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Construction Manager or Architect,~~ respectively.

§ 2.3.5 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work. The Contractor shall immediately notify Owner of any errors, inaccuracies or problems which Contractor becomes aware of in the course of its use of the survey(s).

§ 2.3.6 Upon written request by the Contractor, ~~The~~ the Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner’s control and relevant to the Contractor’s performance of the Work with reasonable promptness after receiving the Contractor’s written request for such information or services.

§ 2.3.7 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, pursuant to Section 1.5.2, copies of Drawings and Project Manuals as follows:~~the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.~~

§ 2.3.7.1 One reproducible set or an electronic file copy, and a maximum of four (4) sets of Drawings and Project Manuals, including revisions thereto. If additional copies are desired by the Contractor, copies will be furnished upon Contractor’s request for the actual cost of reproduction and handling.

§ 2.3.7.2 All instruments, Change Orders, Field Directives, and other like correspondence pertaining to the Work will be provided to the Contractor in the form of one (1) signed copy by the Owner.

§ 2.3.7.3 Change Proposal Documents, including Bulletins, revised drawings, etc. will be provided to the Contractor in the form of one reproducible set and four (4) printed sets.

§ 2.3.8 The Owner shall endeavor to forward all communications to the Contractor through the Construction Manager. Other communication shall be made as set forth in Section 4.2.6.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or ~~repeatedly~~ fails to carry out Work in accordance with the Contract Documents, or fails to meet any other obligation imposed by the Contract Documents, the Owner may issue a written order to the

Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. This right shall be in addition to and not in limitation of the Owner's rights under any provision of the Contract Documents and Owner's right to stop Work shall not relieve Contractor of any of its obligations under the Contract Documents.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults on any obligations imposed by the Contract Documents or fails or neglects to carry out the Work in accordance with the Contract Documents and fails within a ~~ten~~five-day period after receipt of written notice from the Owner or the Owner's designee to commence and continue correction of such failure, default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, including any claim against the Contractor's Performance Bond, correct such deficiencies; provided, however, that if such failure, default or neglect results in a threat to the safety of persons or property, the Contractor shall immediately correct such failure, default or neglect. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to review by the Construction Manager and prior approval of the Architect, and the Construction Manager or Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses, including any and all legal expenses incurred to effectuate and enforce this provision, and compensation for the Construction Manager's and Architect's and their respective consultants' additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall immediately pay the difference to the Owner. In the event the Owner directs another entity to perform Work pursuant to this Section that otherwise is the obligation of the Contractor, including correction of safety violations, either at the Contractor's request or as a result of the Contractor's failure to perform such Work, that other entity or Owner may charge the Contractor all costs for labor, material and equipment plus that other entity's administrative, profit and overhead costs. The Contractor shall pay that other entity or the Owner, at Owner's sole discretion, within ten (10) days of the date of invoice. If not paid within ten (10) days, the Contractor authorizes the Owner, without impacting its other rights and remedies, to withhold and deduct that amount from the Contractor and to pay the same to that other entity from the next payment due the Contractor. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall immediately pay the difference to the Owner.~~If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.~~

§ 2.5.1 Upon notification to the Contractor, the Owner shall have the right to place and install equipment and machinery during the progress of the Work before the completion of the various parts of the Work. Such placing and installing of equipment and machinery shall not in any way evidence the completion of the Work or any portion thereof by the Contractor, nor signify the Owner's acceptance of the Work or any portion thereof. If the Owner places or installs such equipment and machinery with its own forces, the Owner shall be responsible for any damage to Work of the Contractor caused by the Owner's workers. If the Owner engages another contractor for such placement or installation, the Owner shall require said contractor to be responsible for such damages caused by its work, its workers, or its subcontractor(s). Upon discovery of any such damage, Contractor shall immediately notify Owner in writing.

§2.6 Limitation on Owner's Responsibility

§2.6.1 The Owner and Architect will not, under any circumstances, have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. Owner will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Owner will not have control over or charge of and will not be responsible for acts or omissions of any member of the Construction Team.

§2.6.2 The Contractor shall only be entitled to rely upon instructions and directions provided in writing by the Owner's authorized representative(s).

§2.6.3 The Owner may, in addition to delivering them to the Architect and Construction Manager, from time to time review and approve or take other appropriate action upon the Contractor's submittals, such as Shop Drawings.

Product Data and Samples, but only for the limited purpose of checking for conformance with the Owner's objectives and goals. Review of such submittals will not be conducted for the purpose of determining their accuracy and completeness of details, such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor. The Owner's review and approval of or taking other appropriate action on the Contractor's submittals shall not relieve the Contractor, the Architect or the Construction Manager of any of their obligations. The Owner's approval of a specific item shall not indicate approval of an assembly of which the item is a component. The Owner's receipt of any informational submittals, of any submittals relating to equipment or system designed by the Contractor, or of any submittals relating to alternatives proposed by any member of the Construction Team shall not constitute approval of or action by the Owner on such submittals. All such submittals will be received by the Owner for record purposes only.

§2.6.4 The Owner may from time to time review or observe or take other appropriate action concerning the Work and any documents, and the selection of Subcontractors and Suppliers. The Owner's doing so shall be solely for the limited purpose of providing the Contractor with information as to how such items relate to the Owner's objectives and goals with respect to the Work and not for the purpose of determining their accuracy and completeness and shall in no way create any responsibility on the part of the Owner for or complicity by the Owner in errors, inconsistencies, or omissions, nor shall any such review, approval, other action or payment of the Contractor alter or in any way reduce the Contractor's obligations under the Contract.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Owner, Construction Manager or Architect in their administration of the Contract or Contract Documents, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.1.4 These General Conditions refer to the relationship between the Owner and Contractor. As to the contract between the Contractor and its Subcontractors, the General Conditions shall be read as the Contractor having the position of the Owner and the Subcontractors having the position of the Contractor. The Subcontractors are bound to the Contractor just as the Contractor is bound to the Owner. The Subcontractor shall have all the rights, duties and obligations to the Contractor as the Contractor has rights, duties and obligations to the Owner. The Subcontractors shall agree to and accept the same responsibility to the Owner as the Contractor. In the event any failure of a Subcontractor causes any type of injury or loss to the Owner, direct or indirect, the Contractor shall be jointly and severally liable to the Owner for such injury or damage in addition to any responsibility or liability of the Subcontractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the Project site, become generally familiar with local conditions (including weather conditions) under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.1.1 The Contractor shall perform all reasonable and customary non-destructive field investigation activities to the extent necessary to develop an informed understanding of the Project's existing conditions necessary to deliver the Project within the Owner's anticipated design and Construction Schedule and budget for the Cost of the Work. The Contractor's field investigation activities shall include, but not be limited to, meeting with the Owner's facility and maintenance staff to review the applicable systems and known conditions. The Contractor shall provide Owner prompt written notice should it become aware of any reason why additional investigation of the existing conditions is warranted to develop the necessary informed understanding of the Project's existing conditions.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.5, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the Project site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Construction Manager and Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information submitted to the Construction Manager in such form as the Construction Manager and Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. Failure by the Contractor to report to, or request clarification from, the Architect and Construction Manager of any errors, omissions or inconsistencies shall result in interpreting and resolving such errors, omissions or inconsistencies in favor of the Owner and with no additional compensation to the Contractor.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with ~~a~~Applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Construction Manager and Architect any nonconformity discovered by or made known to the Contractor as a request for information submitted to Construction Manager in such form as the Construction Manager and Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to ~~a~~Applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities. If the Contractor permits any construction activity to be performed that involves an error, inconsistency or omission in the Contract Documents or a physical condition at the Project site it recognized or should, employing the degree of diligence required of that Contractor under the Contract Documents, have recognized without providing notice to the Owner and receiving authorization to proceed, the Contractor shall assume responsibility for such performance and bear all costs attributable to correction, without recovery, whether under the Contract Sum or otherwise. The Contractor shall not be liable to the Owner or Construction Manager or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Construction Documents unless the Contractor recognized such errors, inconsistency, omission or difference and knowingly failed to report such to the Architect and Construction Manager.

§ 3.2.5 Prior to submitting its bid, the Contractor shall have studied and compared the Contract Documents and shall have reported to the Architect any error, inconsistency or omission in the Contract Documents. It will be presumed that the Contractor's bid and the Contract Sum include the cost of correcting any such error, inconsistency or omission, which should have been discovered by the exercise of reasonable diligence. Unless the Contractor establishes that such error, inconsistency or omission could not have been discovered by the exercise of reasonable diligence, the Contractor will make such corrections without additional compensation so that the Work is fully functional.

§ 3.2.6 If the Contractor encounters concealed or unknown conditions that differ materially from those anticipated or expected, the Contractor shall promptly notify the Owner, in writing of such conditions so that the Owner can determine if such conditions require design details, which differ from those design details shown in the Design or some other remedial action. The Contractor shall be liable to the Owner for any extra costs incurred as the result of the Contractor's failure to give such required notice.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques,

sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner, the Construction Manager, and the Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. The Construction Manager shall review the proposed alternative for sequencing, constructability, and coordination impacts on the other Contractors. Unless the Architect or the Construction Manager objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors (at any tier) and their respective agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors. References in the Contract Documents to the Work, obligations or acts or omissions of Contractor shall be interpreted to apply to the Subcontractors, Sub-subcontractors at any tier, suppliers, materialmen, and those employees and agents, irrespective if they are identified.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The Parties acknowledge and agree that Contractor accepts the risk of escalation in costs for material, equipment, and labor for the Project; that Owner shall not be responsible for escalations of any such costs; and that Contractor shall remain responsible for completing all Work in accordance with the Agreement despite any such escalation in costs. Such provision of labor and materials shall occur in sufficient time to satisfy the existing Construction Schedule. The Contractor bears the risk of any failure to timely provide such labor and materials for any reason. The Contractor agrees to execute the appropriate UCC forms to effectuate the Owner's ownership of the material and equipment furnished pursuant to the Contract.

§ 3.4.1.1 By making requests for substitutions based on Subsection 3.4.2 below, the Contractor:

- (1) Represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
- (2) Represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;
- (3) Certifies that the cost data presented is complete and includes all related costs, including but not limited to the Architect's redesign costs; and waives all claims for additional costs related to the substitution which subsequently became apparent; and
- (4) Will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be completed in all respects.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect with Owner's approval in accordance with Section 7.4, the Contractor may make substitutions only with the prior written consent of the Owner, after evaluation by the Architect, in consultation with the Construction Manager, and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly

skilled in tasks assigned to them. The Contractor shall only employ labor on the Project or in connection with the Work capable of working harmoniously with all trades, crafts and any other contractors and individuals associated with the Project. The Contractor shall also minimize the likelihood of any strike, work stoppage or other labor disturbance.

§ 3.4.3.1 The Contractor shall cause pre-purchased equipment and material to be delivered to the Project Site or temporarily stored to assure coordination with other trades. The Contractor shall be responsible to verify that such equipment is in accordance with the Specifications.

§ 3.4.3.2 To the extent practicable, materials and equipment will be delivered to the Project site in original containers or wrappings. Used materials or equipment will not be permitted to be incorporated into the Work without the written approval of the Architect and the Owner or unless specifically permitted or required by the Contract Documents. The Architect and the Owner shall have the right to have any such improperly used materials or equipment removed from the Project site or completed Work whenever detected. The Architect's or Owner's failure to detect such used materials or equipment shall not relieve the Contractor of its obligations under this section. Neither the Architect nor the Owner shall have any obligation to inspect for or improperly detect used materials or equipment.

§ 3.4.4 The Contractor agrees that neither it nor its Subcontractors, Sub-subcontractors, and their respective agents and employees, and other persons performing portions of the Work for, or on behalf of, the Contractor, will discriminate against any employee or applicant for employment, to be employed in the performance of the Work under the Contract, with respect to hire, tenure, conditions or privilege of employment, or any matter directly or indirectly related to employment, because of race, age, sex, color, religion, national origin, ancestry or physical disability. Breach of this covenant may be regarded as a material breach of the Contract.

§ 3.4.5 Asbestos, PCB, Lead, And Urea Formaldehyde-Free Product Installation

§ 3.4.5.1 It is hereby understood and agreed that no product, substance, or material containing or treated with asbestos, including chrysolite, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, asbestos in vermiculite, erionite, and taconite (hereinafter collectively "asbestos"), polychlorinated biphenyls (PCB), lead at or in excess of any limits imposed by Applicable Laws, or urea formaldehyde and any combination of these substances shall be installed or introduced into the Work by the Contractor, its employees, Subcontractors, Sub-subcontractors at any tier, and their respective agents and employees, and other persons performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors or Sub-subcontractors at any tier or other individuals or entities over whom the Contractor has control. The Contractor shall be required to provide a signed certification statement ensuring that all products or materials installed or introduced into the Work all be asbestos, PCB, lead (as stated above), and Urea Formaldehyde-free.

§3.4.5.2 The Contractor shall also be required to furnish certified statements from the manufacturers of supplied materials used during construction verifying their products or materials to be asbestos, PCB, lead, and Urea-Formaldehyde-free in accordance with the requirements of Section 3.4.5.1.

§3.4.5.3 The Contractor shall complete and submit to the Owner a certification evidencing asbestos, PCB, lead, and Urea Formaldehyde-free product and material installation prior to issuance of the final Certificate for Payment, in a form acceptable to the Owner.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner, Construction Manager, and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. In addition to any other warranties, guarantees or obligations set forth in the Contract Documents or applicable as a matter of a law and not in limitation of the terms of the Contract Documents, the Contractor warrants and guarantees that:

- .1 The Owner will have good title to the Work and all materials and equipment incorporated into the Work and, unless otherwise expressly provided in the Contract Documents, will be new;
- .2 The Work and all materials and equipment incorporated into the Work will be free from all defects, including any defects in workmanship or materials;
- .3 The Work and all equipment incorporated into the Work will be fit for the purpose for which they are intended;
- .4 The Work and all materials and equipment incorporated into the Work will be merchantable; and
- .5 The Work and all materials and equipment incorporated into the Work will conform in all respects to the Contract Documents.

Upon notice of the breach of any of the foregoing warranties or guarantees or any other warranties or guarantees under the Contract Documents, the Contractor, in addition to any other requirements in the Contract Documents, will commence to correct such breach within seventy-two (72) hours after written notice thereof and thereafter will use its best efforts to correct such breach to the satisfaction of the Owner; provided that if such notice is given after final payment hereunder, such seventy-two (72) hour period shall be extended to seven (7) days. The foregoing warranties and obligations of the Contractor shall survive the final payment and/or termination of the Contract.

§ 3.5.2 The Contractor shall assign and or pass-through to the Owner at the time of Substantial Completion, as set forth in accordance with Section 9.8.4, any and all manufacturer's warranties relating to materials and labor used in the Work. Contractor shall perform the Work in a manner that will preserve any and all manufacturer's warranties. The Contractor further warrants that the Work will conform with the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. All warranties shall be in the form and substance required by the Owner and/or Contract Documents. All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.5.3 If the Contractor uses any portion of the Work or the Owner's other property, such items will be restored to the condition they were in immediately prior to such use at or before the time of Substantial Completion, or as otherwise specified in the Contract Documents. The Contractor's warranty and agreement to correct defective Work includes the Contractor's obligations under this Section.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. The Contract Sum includes all applicable taxes and the Contract Sum shall not be modified as a result of Contractor's failure to include all such applicable taxes, or a change in Contractor's tax liability. The Contractor shall pay all state and federal taxes levied on its business, income or property and shall make all contributions for social security and other wage or payroll taxes. The Contractor shall be solely responsible for such payments and shall indemnify the Owner and hold it harmless from any assessment and payment of the same.

§ 3.7 Permits, Fees, Notices, and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Owner, ~~assisted by~~through the Construction Manager, shall secure and pay for the building permit. The Contractor shall secure and pay for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by ~~a~~Applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work ~~contrary to Applicable Laws knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities,~~ the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, liabilities, and expenses, including but not limited to professional and attorneys' fees, arising out of or resulting from its and the Construction Team's activities or performance of the Work in violation of Applicable Law. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the Project site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide written and dated notice to the Owner, Construction Manager, and the Architect before conditions are disturbed and in no event later than fourteen (14) days after first observance of the conditions. The Architect and Construction Manager will promptly investigate such conditions and, if the Owner and the Architect, in consultation with the Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the Project site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner, Construction Manager, and Contractor, in writing, stating the reasons. If the Owner or Contractor disputes the Architect's determination or recommendation, ~~either party may~~ the Contractor may submit a Claim as provided in Article 15. The Contractor shall be on alert to any indication or evidence of existing underground or concealed utilities or structures not shown on the Contract Documents and shall immediately notify the Owner of discovery of such evidence. If the Contractor encounters such utilities or structures, it shall cease operations immediately to minimize damage and shall notify the Owner, Architect and Construction Manager. The Contractor shall bear the cost of damage resulting from its failure to exercise reasonable care in its construction activity or from continuing operations without notifying the Owner.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall provide written and dated notification to ~~notify~~ the Owner, Construction Manager, and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made, as necessary, as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the Project site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the Project site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are ~~more than or~~ less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Superintendent shall be on site and provide adequate supervision over the Work covered under the Contract. The superintendent shall be satisfactory to the Owner in all respects, and the Owner shall have the right to require the Contractor to remove any superintendent from the Project whose performance is not satisfactory to the Owner and to replace such superintendent with a superintendent who is satisfactory to the Owner, and without additional cost or compensation to the Owner.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect in writing, through the Construction Manager, of the name and qualifications of a proposed superintendent. Within fourteen (14) days of receipt of the information, the Owner and/or Construction Manager may notify the Contractor, stating whether the Owner, the Construction Manager, or the Architect (1) has reasonable objection to the proposed superintendent or (2) require additional time for review. Failure of the Construction Manager to provide notice within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner, Construction Manager, or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's prior written consent, except with another superintendent who is satisfactory to the Owner ~~which shall not unreasonably be withheld or delayed.~~

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, or at other times requested by Owner or set forth in the Contract, shall prepare and submit for the Owner's and Architect's information, and the Construction Manager's use in developing the Project schedule approval, a Contractor's proposed eConstruction schedule Schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project schedule to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. In no event shall the Contractor's Construction Schedule be extended due to action or inaction of the Contractor, except with prior written approval of the Owner within the Owner's sole discretion. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Multiple Prime Contractors or the construction or operations of the Owner's own forces. The Construction Schedule shall be in a detailed format satisfactory to the Owner which shall also: (1) provide a graphic representation coordinating and sequencing all activities and events that will occur during performance of the Work; (2) identify each phase of construction and occupancy; (3) set forth Milestone Dates and manpower loading. Upon review and acceptance by the Owner, the Construction Schedule shall be deemed part of the Contract Documents and shall not be subject to change except in accordance with Section 8.3 and Article 7. If it is not approved, the Construction Schedule shall be promptly revised by the Contractor in accordance with the recommendations of the Owner and Architect and resubmitted for approval. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Contractors, or the construction or operations of the Owner's own forces or Separate Contractors.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Construction Manager's, Owner's and Architect's approval. The Owner, Architect and Construction Manager's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Construction Manager and Architect reasonable time to review submittals, and (3) shall provide for expeditious and practical execution of the Work. If the Contractor fails to submit a submittal schedule, or fails to provide

submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall participate with other ~~C~~contractors, the Construction Manager, and the Owner in reviewing and coordinating all schedules for incorporation into the Project Construction sSchedule that is prepared by the Construction Manager. The Contractor shall make revisions to the construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project Construction sSchedule.

§ 3.10.4 The Contractor shall proceed strictly (not substantially) in accordance with the Construction Schedule. The Contractor shall monitor the progress of the Work for conformance with the requirements of the Construction Schedule and shall promptly advise the Owner of any delay or potential delays. If any progress report indicates any delays, the Contractor shall, at no cost to the Owner, propose an affirmative plan to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any progress report constitute an adjustment of the Contract Time or any Milestone Date or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to a Change Order. The Contractor shall perform the Work in ~~general~~ accordance with the most recent schedules submitted to the Owner, Construction Manager, and Architect, and incorporated into the approved Project Construction sSchedule.

§ 3.10.5 The Contractor shall cooperate and coordinate with the Construction Manager in scheduling and performing its Work to avoid conflict or interference with the Work of others, including the Owner's Consultants and other Contractors, and shall be responsible for any such conflict or interferences caused. The Construction Manager and the Contractor acknowledge and understand that the Work schedule will be modified from time-to-time to work around the work of other Contractors, in an effort to avoid conflicts or interference in the work of the Construction Manager or other contractors, and that such schedule changes do not give rise to a claim for damages by the Contractor for delay or otherwise. If the Construction Manager's schedule for the Work is revised, the Contractor shall conform to the most recent schedule. The Contractor acknowledges that the Construction Manager's schedule may change during the duration of the Project and that fact was taken into account by the Contractor when it agreed to the Contract Sum and entered into this Contract under the terms of the conditions set forth herein. As a result, the Contractor shall not be entitled to any additional monies or damages as a result of such schedule changes and the Contractor agrees that the Project Schedule, as modified, shall be an accepted term and contractual requirement. The Contractor shall complete Work in accordance with the Construction Schedule and Milestone Date(s).

§ 3.10.6 The Contractor shall cooperate with the Construction Manager in working out the proper sequence of operations between the Work of the Contractor and that of other trades on the Project site. The Contractor acknowledges that the Construction Manager's schedule for the Work may change during the duration of the Project and the Contractor took that fact into account when it entered into the Contract. As a result, the Contractor shall not be entitled to any additional monies or damages as a result of such schedule changes.

§ 3.10.7 Contractor shall prosecute the Work undertaken in a prompt and diligent manner whenever such Work, or any part of it, becomes available, or at such other time or times as the Owner or Architect or Construction Manager may direct so as to promote the general progress of the entire construction. The Contractor shall not, by delay or otherwise, interfere with or hinder the Work or the work of the Construction Manager any other Contractor. Any materials that are to be furnished by the Contractor shall be furnished in sufficient time to enable the Contractor to perform and complete its Work within the time or times provided in the schedule. If the Contractor shall, through its action or inactions, including the actions or inactions of its Subcontractors or suppliers, fall behind in furnishing necessary labor and/or materials to meet the construction needs in accordance with the established schedule, then it shall increase its forces or work such overtime as may be required, at its own expense, to bring its part of the Work up to the proper schedule. In the event that Contractor does not take such action necessary to bring its part of the Work up to schedule, as determined by the Construction Manager, within twenty-four (24) hours of receiving notice from the Owner or Architect or Construction Manager, then, the Construction Manager as allowed by law and with the Owner's written consent may supplement Contractor's forces or remove Contractor from the Project and retain others to complete part or all of the remainder of Contractor's Work. Contractor shall be responsible for any and all costs of performing or completing the Work. Contractor shall pay any such sums within ten (10) days of date of invoice. If not paid within ten (10) days, the amount will be withheld from Contractor and paid to the relevant parties from next payment due Contractor.

§ 3.11 Documents and Samples at the Site

The Contractor shall ~~make available~~maintain, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These documents shall be in electronic form or paper copy, available to the Construction Manager, Architect, and Owner, and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed together with a certification that they are "as-built" documents.

§ 3.12 Shop Drawings, Product Data, and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work. All Work shall be furnished and installed in accordance with the Drawings, Specifications and as additionally required by the manufacturer's printed instructions. The Contractor shall review the manufacturer's instructions, and where conflict occurs between the Drawings or Specifications and the manufacturer's instructions, the Contractor shall request clarification from the Architect prior to commencing the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.10 through 4.2.12. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

§ 3.12.4.1 As part of the document control system, the Contractor shall develop and keep current a Submittal log, which is coordinated with the Construction Schedule.

§ 3.12.4.2 The Contractor shall monitor the time required for submission of Submittals to the Architect, as well as the time required for their review and approval by the Architect. The Contractor shall take corrective action as appropriate to insure the timely submission and review of Submittals.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the Project Construction Schedule and submittal schedule approved by the Owner, Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Contractors, Separate Contractors, or the Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Contractors.

§ 3.12.5.1 The Contractor shall check thoroughly all such submittals, including those it prepares itself, as to measurements, sizes of members, materials and all other details, to assure that they conform to the intent of the Contract Documents.

§ 3.12.5.2 The Contractor shall promptly return to the Subcontractors and/or Suppliers, for correction, any of the submittals that are found inaccurate or otherwise erroneous be corrected.

§ 3.12.5.3 After the Contractor has checked and approved such submittals, the Contractor shall place thereon the date of its approval and the legible signature of the individual who reviewed them and shall then submit them to the

Architect and Construction Manager for review. The Construction Manager and/or Architect may refuse to check or review any submittals, which are not submitted in compliance with these requirements.

§ 3.12.5.4 Submittals describing manufactured equipment must be "Project Specific." Every submission copy must be clearly marked to fully define the intended model number, configuration and other applicable product information.

§ 3.12.5.5 Among other things, the Contractor shall be responsible for the constructability, content, completeness and consistency of all submittals.

§ 3.12.5.6 The Contractor shall notify the Owner when submittals are received. It shall deliver copies to the Owner upon request.

§ 3.12.5.7 The Contractor shall notify the Owner, Construction Manager and the Architect in writing if any submittals appear to modify the requirements of the Contract Documents. This notice shall identify each and every change.

§ 3.12.5.8 The Contractor shall furnish to the Construction Manager and Architect for review when requested, or when required by the Contract Documents, samples of all materials and finishes to be used in the execution of the Work. Such samples shall be of sufficient size to be representative and the required number of them shall be submitted before the Work utilizing the materials they exemplify is commenced and in ample time to permit examination thereof. In all cases, samples shall be submitted at least three (3) weeks prior to when approval is needed to maintain the progress required by the Construction Schedule. All materials furnished and finishes applied to the Work shall be fully equal to the submitted samples.

- .1 Samples shall be forwarded to the Architect with all shipping charges prepaid. Unless otherwise directed, samples shall be submitted in triplicate, boxed or wrapped properly, each labeled with the name, type or brand of the materials, its place of origin, the names of its producer, Contractor and the Project.
- .2 The approval of Samples is generally directed towards establishing quality, color and finish criteria, and does not modify the requirements of the Contract Documents at to dimensions or design.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.6.1 The Architect will check and review the submittals with reasonable promptness and within any time limits agreed upon in writing and will return them as hereinafter described, indicating by notation, or by written instructions, or other directions, any corrections, which in the judgment of the Construction Manager and Architect, may be necessary to meet the requirements of the Contract Documents. The Contractor shall then review such notations, instructions, or directions, and if the Contractor concurs therein, shall make or have made such corrections, and shall, when so noted on the submittals or requested by the Construction Manager and Architect, resubmit corrected submittals to the Construction Manager and Architect as soon as possible, for final check and review. Such final check and review by the Construction Manager and Architect of submittals so corrected and resubmitted will be limited to the corrections only, and the Contractor, by such resubmission shall be held to have represented that such submittals contain no other alterations, additions, or deletions, unless the Contractor, in writing, directs the Construction Manager and Architect's specific attention to same. Should the Contractor question or disagree with such notations, instructions, or directions, the Contractor shall direct the Architect's attention to same for further clarification before resubmitting them. Corrections or changes indicated on submittals shall not be construed as an order for a change in the Work or to perform extra work.

§ 3.12.6.2 The Construction Manager and Architect's review of submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating

instructions for installation or performance of equipment of systems, all of which remain the responsibility of the Contractor. The Construction Manager and Architect do not assume responsibility for errors, omissions or deviations from the Contract Documents contained in such submittals. Any such errors, omissions or deviations from the Contract Documents must be corrected by the Contractor, irrespective of the receipt and review of the submittals by the Architect, and even through the Work is done in accordance with such submittals, unless such error, omission or deviation from the Contract Documents is specifically called to the Construction Manager and Architect's attention by the Contractor in a separate written letter of communication, at the time of submittal, and the Construction Manager and Architect has given written approval of such error, omission or deviation.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's review and approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Construction Manager and Architect in a detailed writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.8.1 Any proposed substitution which requires modification of any details on the Drawings, or which affects other work, to cause modification to that work, shall be accompanied by detailed Drawings from the proposer showing changes in the affected details. All cost for changes to the Contract Documents, and necessary changes in the work of others will be paid by the proposing Contractor.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect wish specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner, the Architect, and the Construction Manager shall be entitled to rely upon the adequacy, and accuracy and completeness of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Construction Manager shall review submittals for sequencing, constructability, and coordination impacts on other Contractors.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Owner and Architect.

§ 3.12.11 The Architect's review of shop drawings and samples does not constitute or imply final acceptance of materials, equipment, etc. actually furnished or installed if such should be defective or not as represented by reviewed shop drawings and/or samples.

§ 3.12.12 Owner will provide shop drawings to Contractor for all fabricated materials, specialty items, pre-purchased equipment, etc. which will be furnished by Owner for installation by Contractor. Contractor must give Owner at least three (3) days' notice prior to time drawings will be required.

§ 3.12.13 The Architect's Basic Services under its agreement with the Owner limits the review of the Contractor's submittals to an initial submittal and three (3) re-submittals. Services by the Architect for review of additional re-submittals shall be billed to and paid directly to the Architect by the Contractor; provided however, upon receipt of the Owner's written approval the Architect shall give notice to Contractor prior to the commencement of such services for which Contractor will be liable.

§ 3.13 Use of Site

§ 3.13.1 The Contractor shall confine operations at the Project site to areas permitted by ~~Applicable laws~~ Laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the Project site with materials or equipment. Only materials and equipment which are to be used for the Project or carry out the Work shall be stored at the Project site. Protection of such materials and equipment shall be the sole responsibility of the Contractor. No off-site storage is permitted without the Owner's prior written consent.

§ 3.13.2 The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager before using any portion of the Project site. No one except the Owner is permitted to connect to or activate any utility services in any building or facility owned or occupied by the Owner. When such connection or activation services are required, the Owner shall be contacted, and unless otherwise specifically provided in the Contract Documents. In all cases, the Contractor shall give notice of the need for such services, to the Owner, in a timely manner (at least seventy-two [72] hours in advance) in order to avoid delays to the Project's progress. The control of the use of the Project site will be through the Construction Manager. Contractors are responsible for cooperation in all matters involving the use of the Project site.

§ 3.13.3 No member of the Construction Team shall erect any sign on the Project Site without the Owner's prior written consent.

§ 3.13.4 The Contractor shall ensure that the Work is at all times performed in a manner that affords the Owner, the Construction Manager, the Architect, and the Owner's Separate Contractors reasonable access, both vehicular and pedestrian, to the Project Site and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the Project site shall be free from all debris, building materials and equipment. Without limiting any other provision of the Contract Documents, the Contractor shall use its best efforts to minimize any interference with the occupancy or beneficial use of (1) any areas and buildings adjacent to the Project site or (2) portions of the Project in which Work is not being carried out in the event of partial occupancy.

§ 3.13.5 The Contractor shall not, without the Owner's prior written approval, permit any workers to use any existing facilities at the Project site, including, without limitation, lavatories, toilets, entrances, and eating and parking areas, other than those designated by the Owner. Without limiting any other provision of the Contract, the Contractor shall enforce compliance with all policies, procedures, rules and regulations promulgated by the Owner in connection with the use and occupancy of the Project site and the surrounding area. The Contractor shall also cause all members of the Construction Team to comply with all insurance requirements and collective bargaining agreements applicable to use and occupancy of the Project site and the surrounding area. However, the Contractor shall not be responsible to regulate the workers' conduct outside of work hours except as may be permitted under Applicable Laws and collective bargaining agreements.

.1 Should any room or part of an existing building or facility be temporarily used by any member of the Construction Team as a shop, storeroom, locker room, an office, or for any other purpose, such room or part shall, prior to completion and when so directed, be thoroughly cleaned and returned to its original condition. All damage to any such room or part of an existing building or facility arising therefrom shall be corrected, and the whole left in a condition acceptable to the Owner by the Contractor. No room or part of an existing structure shall be so used without the prior written consent of the Owner.

§ 3.13.6 Anything contained in the Contract Documents to the contrary notwithstanding, no one except the Owner shall be permitted to disrupt the operation of any building system, utilities, or any other services without the Owner's prior written consent. Any request to perform such work shall be in writing, received by the Owner no less than five (5) days prior to the commencement of the requested disruption, and shall detail (1) the exact nature and duration of such interruption, (2) the area affected, and (3) any impact upon the Construction Schedule caused by such proposed temporary disruption. Except in the case of extraordinary measures, all Work shall be performed during the hours and on the days set forth in the Specifications. The Contractor's failure to comply with the notice provisions of this section shall constitute a waiver by the Contractor of any right it may have to an adjustment of its Contract Sum, or the Contract Time, on account of any postponement, rescheduling, or other delays ordered by the Owner in connection with any Work affecting a critical service for which appropriate notice was furnished.

§ 3.13.7 The Contractor will consult with the Owner concerning any necessary operations at the Project site, including staging area limits, office or storage trailer locations, dumpster operations, equipment and material deliveries, hoisting areas and any other construction impacts on the Owner's grounds.

§ 3.13.8 If required by the Owner, the Contractor shall provide suitable toilet facilities, at locations approved by the Owner, for the use of all its employees and those of the Construction Team and shall maintain same in proper sanitary condition acceptable to the Owner. All temporary toilet facilities shall be removed upon completion of the Work. The Contractor or any of its employees, agents or Subcontractors shall not use any toilet facilities of Owner's buildings without the Owner's prior written consent.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents. Only skilled tradespersons shall perform any cutting, fitting or patching work.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor, its employees, Subcontractors, Sub-subcontractors at any tier, and their respective agents and employees, and other persons performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors or Sub-subcontractors at any tier shall keep the premisesProject site and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to keep the Project site clean as required by the Owner or clean-up as provided in the Contract Documents or fails to clean up the Project site upon completion of the Project, the Owner, or Construction Manager with the Owner's approval, may do so and the Owner shall be entitled to reimbursement for all costs and expenses for clean-up from the Contractor.

§ 3.15.3 Any areas and/or concurrently occupied space both occupied by the Owner and used in the progress of the Work, both within the limits of the Project site and the adjacent areas leading to it shall be maintained, opened to travel and kept in a clean condition. Failure by the Contractor to maintain said areas will result in the Owner's cleaning of same, at the expense of the Contractor for all costs and expenses for clean-up from the Contractor.

§ 3.15.4 Unless the Contract Documents require a higher standard, the Contractor shall leave all Work installed or modified under the Agreement and all existing materials and surfaces affected by the Work and each area of the Project site clean to the satisfaction of the Owner. This shall include at a minimum: complete dusting, sweeping, vacuuming, mopping, polishing, and other activities as necessary to remove all dust, dirt and other construction residues, and removal of all tools and equipment, construction debris, rubbish, and surplus materials.

§ 3.16 Access to Work

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall indemnify, defend and hold the Owner, Construction Manager, and Architect harmless from any and all costs, damages and losses on account thereof, including, but not limited to, actual attorneys' fees-loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for such the loss unless the-such information is promptly furnished to the Architect through the Construction Manager. The review by the Owner or Architect or Construction Manager of any method of construction, invention, appliance, process, article, device or materials of any kind shall be for its adequacy in the Work and shall not be an approval for the use thereof by the Contractor in violation of any patent or other rights of any third person.

§ 3.18 Indemnification

§ 3.18.1 The Contractor shall indemnify, defend and hold harmless the Owner, its Board of Education, its Board Members, in their official and individual capacities, its administrators, employees, agents, contractors, successors and assignees (collectively "Indemnitees"), from and against any and all claims, counter claims, suits, debts, demands, actions, judgments, liens, costs, expenses, damages, injuries and liabilities, including actual attorney's fees and actual expert witness fees arising out of or in connection with the Work to the extent that the claims, counter claims, suits, debts, demands, actions, judgments, liens, costs, expenses, damages, injuries and/or liabilities are the fault of Contractor and/or its Subcontractors, suppliers, laborers, and consultants including, but not limited to: (i) the negligent acts or willful misconduct of the Contractor, its officers, directors, employees Subcontractors, Sub-subcontractors at any tier, and their respective agents and employees, and other persons performing portions of the Work for, or on behalf of, the Contractor; (ii) any breach of the terms of the Contract by the Contractor, its officers, directors, employees, Subcontractors, Sub-subcontractors at any tier, and their respective agents and employees, and other persons performing portions of the Work for, or on behalf of, the Contractor; (iii) any violation or breach of any Applicable Law and/or licensing and permitting requirements applicable to providing the Work; or (iv) any breach of any representation or warranty by the Contractor, its officers, directors, employees, Subcontractors, Sub-subcontractors at any tier, and their respective agents and employees, and other persons performing portions of the Work for, or on behalf of, the Contractor under this Contract. The Contractor shall notify School District by certified mail, return receipt requested, immediately upon actual knowledge of any claim, suit, action, or proceeding for which the Owner may be entitled to indemnification under the Contract. This section shall survive the expiration or earlier termination of the Contract and shall not be limited by the Contractor's insurance obligations contained in this Contract. To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Construction Manager, Architect, Construction Manager's and Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether

or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In addition to and not in limitation of the Contractor's other indemnity obligations, the Contractor hereby accepts and assumes exclusive liability for and shall indemnify, defend and hold harmless the Owner, Construction Manager and Architect from and against the payment of the following to the extent the fault of Contractor and/or its Subcontractors, suppliers, laborers, and consultants: (i) all contributions, taxes or premiums (including interest and penalties thereon) which may be payable under the unemployment insurance law of any state, the federal Social Security Act, federal, state, county and/or municipal tax withholding laws, or any other law, measured upon the payroll of or required to be withheld from employees by whomsoever employed, engaged in the Work to be performed and furnished under the Contract; (ii) all sales, use, personal property and other taxes (including interest and penalties thereon) required by any federal, state, county, municipal or other law to be paid or collected by the Contractor or any of its Subcontractors or vendors or any other person or persons acting for, through or under it or any of them, by reason of the performance of the Work or the acquisition, ownership, furnishing, or use of any materials, equipment, supplies, labor, services or other items for or in connection with the Work; and (iii) all pension, welfare, vacation, annuity and other benefit contributions payable under or in connection with respect to all persons by whomsoever employed, engaged in the Work to be performed and furnished under the Contract.

The Contractor shall indemnify, defend and hold the Owner harmless from any claim, damage, loss or expense, including but not limited to actual attorney fees, incurred by the Owner related to any Hazardous Materials or waste, toxic substance, pollution or contamination brought into the Project site or caused by the Contractor or used, handled, transported, stored, removed, remediated, disturbed or dispersed of by Contractor, including its Subcontractors, suppliers, laborers, and consultants, to the extent the fault of Contractor and/or its Subcontractors, suppliers, laborers, and consultants. In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§ 3.19 Record Documents

§ 3.19.1 The Contractor shall maintain at the Project site on a current basis for review by the Owner, the Architect, the Construction Manager and all members of the Construction Team, the Record Documents, which include: a record copy of all logs, reports, Contract Documents, and Record Drawings, in good order and marked to record all changes made during construction; all approved Shop Drawings, Product Data, Samples, and other submittals; applicable handbooks; maintenance and operating manuals and instructions; and other related documents and revisions which arise out of the Contract Documents or the Work. As part of the Record Documents, the Contractor shall maintain records of principal building layout lines, elevations of the bottoms of footings, project floor levels and key site elevations certified by a qualified surveyor. The Contractor shall at all times make all records (excluding internal memoranda or reports, privileged communications and documents with incidental references to the Work, or documents which discuss multiple projects) available to the Owner, Construction Manager and the Architect, and, at the completion of the Work, shall deliver all such Record Documents to the Owner neatly organized, bound and indexed. The Contractor shall monitor preparation of as-built Drawings by Subcontractors on a monthly basis and shall take corrective action as appropriate when as-builts are not being properly updated. The Contractor shall be permitted to retain a copy of the Record Documents for its own use after the Work is completed and, in any event, the Owner shall continue to provide access to the Record Documents, for the Contractor to inspect and copy.

§ 3.19.2 The Record Drawings shall be prepared and updated during the prosecution of the Work. The prints for Record Drawing use will be a set of blackline prints provided by the Architect to the Contractor at the start of construction. The Contractor shall maintain said set in good condition and shall use colored pencils or other methods reasonably acceptable to the Owner to mark-up said set with "record information" in a legible manner to show: (1) deviations from the Drawings made during construction; (2) details in the Work not previously shows; (3) changes to existing conditions or existing conditions found to differ from those shown on any existing drawings; (4) the actual installed position of equipment, piping, conduits, light switches, electric fixtures, circuiting, ducts, dampers, access panels, control valves, drains, openings and stub-outs; and (5) such other information as the Owner may reasonably request.

§ 3.19.3 The Contractor shall keep note of all the deviations and discrepancies in the underground, concealed conditions and other items of construction and the Work on field Drawings. At the completion of the Project the Contractor's notes on the record field Drawings shall be neatly transcribed onto a clean set of Drawings furnished by the Architect. The Contractor shall submit the final Record Drawings to the Architect for review.

§ 3.19.4 During construction, the Contractor shall maintain on the Project site, a separate, clean set of Drawings for the sole purpose of recording changes and actual 'as installed' information. This set shall be accessible for inspection by the Owner, the Construction Manager and the Architect at all times. The Contractor shall bring this set of Drawings to the scheduled construction progress meetings. The Contractor shall record all information as the Work progresses, clearly and neatly, in color and maintain it on a current basis as directed by the Owner and submit these Drawings to the Owner within thirty (30) days after Substantial Completion. As a general guide, the type of information to be recorded includes, but is not limited to: (1) revisions made except minor or non-critical dimensional changes, (2) omissions, including Work omitted by Change Order or accepted alternates, (3) exact dimensioned locations of concealed lines, (4) locations of all control devices, (5) any additions to Work, (6) changes in significant details, (7) and any other information of a similar nature.

§ 3.19.5 Upon Substantial Completion of the Project, the Contractor shall submit to the Owner the Contractor's mechanical and electrical coordination Record Drawings prepared during construction by the Contractor. Examples of such drawings include sheet metal ductwork drawings, piping drawings, fire protection piping drawings, electrical raceway drawings, and the like. When the Contractor produces drawings by computer aided drafting, the Contractor shall also submit their coordination drawings on electronic data files compatible with AutoCAD computer software. All such documents shall contain the Owner's Project Number for identification purposes.

§ 3.20 Warranties and Manuals

§ 3.20.1 Unless the Contract Documents require otherwise, the Contractor shall bind and turn over to the Owner, through the Construction Manager two (2) sets of manufacturers' warranties and operating and/or maintenance manuals, instructions, or schedules for all equipment and special materials requiring such. Such binders will clearly categorize and index each piece of equipment and material included, and shall be clearly marked noting "Project Specific" equipment, model numbers, and other applicable information. Such manuals will be collected and organized by the Contractor and submitted to the Owner at one time, prior to the issuance of the Certificate of Substantial Completion.

ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement. The term "Architect," "Architect/Engineer," "Engineer," or "Design Professional" as used herein means the Architect or the Architect's authorized representative.

§ 4.1.2 The Construction Manager is the person or entity retained by the Owner pursuant to Section 2.3.3 and identified as such in the Agreement.

§ 4.1.3 Duties, responsibilities, and limitations of authority of the Construction Manager and Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without the prior written consent of the Owner, and Construction Manager, or Architect, and Contractor respectively. Consent shall not be unreasonably withheld.

§ 4.1.4 If the employment of the Construction Manager or Architect is terminated, the Owner shall employ a successor construction manager or architect

§ 4.2 Administration of the Contract

§ 4.2.1 The Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment and, the Owner's and the Certificate for Payment is accepted by the Owner, during the correction period.. The Construction Manager and Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site as construction requires or as otherwise agreed to by the Owner or required by Applicable Law at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager in writing, known deviations from the Contract Documents and the most recent Construction Schedule prepared by the Construction Manager and defects and deficiencies observed in the Work.

§ 4.2.3 The Construction Manager shall provide a staffing plan to include one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. The Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect known deviations from the Contract Documents and the most recent Project Construction Schedule, and defects and deficiencies observed in the Work.

§ 4.2.4 The Construction Manager will schedule and coordinate the activities of the Contractor and other Contractors in accordance with the latest approved Project Construction Schedule.

§ 4.2.5 The Construction Manager, except to the extent required by Section 4.2.4, and Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of, or be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work. The Construction Manager will schedule and coordinate the work of all Contractors on the Project, including the Contractors' use of the Project site. The Construction Manager will keep the Contractors informed of the Project Construction Schedule to enable the Contractors to plan and perform the Work in a timely manner.

§ 4.2.6 **Communications.** Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and the Contractor shall endeavor to communicate with each other through the Construction Manager, and shall contemporaneously provide the same communications to the Architect. ~~shall communicate with the Contractor and the Construction Manager's consultants through the Construction Manager about matters arising out of or relating to the Contract Documents. The Owner and Construction Manager shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Construction Manager otherwise relating to the Project.~~ Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with other Contractors shall be through the Construction Manager and shall be contemporaneously provided to the Architect if those communications are about matters arising out of or related to the Contract Documents. Communications by and with the Owner's own forces and Separate Contractors shall be through the Owner. ~~The Contract Documents may specify other communication protocols.~~

§ 4.2.7 The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9.

§ 4.2.8 The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents, and will notify each other about the rejection. The Construction Manager shall determine in general whether the Work of the Contractor is being performed in accordance with the requirements of the Contract Documents and notify the Owner, Contractor and Architect of any and all known defects and deficiencies discovered through its inspections of the Work or which through reasonable care should have been discovered by the Construction Manager through its inspections of the Work. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require additional inspection or testing of

the Work in accordance with Sections 13.4.2 and 13.4.3, upon written authorization of the Owner, whether or not the Work is fabricated, installed or completed. The foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations ~~and decisions~~ of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons performing any of the Work.

§ 4.2.9 Utilizing the submittal schedule provided by the Contractor, the Construction Manager shall prepare, and revise as necessary, a Project submittal schedule incorporating information from other Contractors, the Owner, Owner's consultants, Owner's Separate Contractors and vendors, governmental agencies, and participants in the Project under the management of the Construction Manager. The Project submittal schedule and any revisions shall be submitted to the Architect for approval.

§ 4.2.10 The Construction Manager will receive and promptly review for conformance with the submittal requirements of the Contract Documents, all submittals from the Contractor such as Shop Drawings, Product Data, and Samples. Where there are other Contractors, the Construction Manager will also check and coordinate the information contained within each submittal received from the Contractor and other Contractors, and transmit to the Architect those recommended for approval. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Construction Manager represents to the Owner and Architect that the Construction Manager has reviewed and recommended them for approval. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

§ 4.2.11 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

§ 4.2.12 Review of the Contractor's submittals by the Construction Manager and Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Construction Manager and Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Construction Manager and Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component. However, should the Construction Manager or Architect discover during the course of such review any inaccuracies, incompleteness, or other irregularities, they shall immediately notify the Owner of the same to determine an appropriate corrective course of action or notify the Contractor of the same to correct the irregularities.

§ 4.2.13 The Construction Manager will prepare, with the assistance of the Architect, Change Orders and Construction Change Directives.

§ 4.2.14 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7, and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.15 ~~Utilizing the documents provided by the Contractor,~~ The Construction Manager will maintain at the Project site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples, and similar required submittals, in good order and marked currently to record all changes and selections made during

construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner in good condition and reasonably organized upon completion of the Project.

§ 4.2.16 The Construction Manager will assist the Architect in conducting inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

§ 4.2.17 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the Project site. ~~The Owner shall notify the Construction Manager of any change in the~~ duties, responsibilities and limitations of authority of the Project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.18 The Architect will interpret ~~and decide~~ matters concerning performance under, and requirements of, the Contract Documents on written request of the ~~Construction Manager, Owner, or Contractor~~ through the Construction Manager. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. The Contractor shall reimburse Owner for all costs and expenses for the Architect's time to interpret and decide matters it deems clear and unambiguous.

§ 4.2.19 Interpretations ~~and decisions~~ of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations ~~and decisions~~, the Architect will endeavor to secure faithful performance by ~~both Owner and the~~ Contractor, will not show partiality ~~to either~~, and will not be liable for results of interpretations rendered in good faith and without negligence. The Contractor shall, and shall cause all Subcontractors, Sub-subcontractors at any tier, and their respective agents and employees, and other persons performing portions of the Work for, or on behalf of, the Contractor to comply with an interpretation and decision of the Architect or decisions so rendered in good faith.

§ 4.2.20 The ~~Architect's-Owner's interpretations decisions~~ on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.21 The Construction Manager will receive and review requests for information from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing, through the Construction Manager, to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness given the particular circumstances. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the Project site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors. The term "Subcontractor" shall also include material and equipment suppliers. Each and every subcontract shall be understood to have the Owner as a third party beneficiary and the Owner shall enjoy all third-party beneficiary rights permitted by law.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the Project site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall ~~notify-furnish in writing to~~ the Construction Manager, for review by the Owner, Construction Manager and Architect, ~~of the~~ names of persons or entities proposed for each principal portion of the Work, including those who are to furnish supplies, materials or equipment, including those fabricated to a special design. Within fourteen (14) days of receipt of the information, the Construction Manager may notify the Contractor whether the Owner, the Construction Manager or the Architect (1) has reasonable objection to any such proposed person or entity or, (2) requires additional time for review All contractual agreements with additional persons or entities serving as a Subcontractor or Sub-subcontractor shall expressly identify the Owner as a third-party beneficiary, and the Owner shall enjoy all third-party beneficiary rights not prohibited by law. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner, Construction Manager or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner, Construction Manager or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Construction Manager or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner, Construction Manager or Architect makes reasonable objection to such substitution. The Contractor shall notify the Owner, the Architect and the Construction Manager of any proposed Subcontractor or Sub-subcontractor substitution a minimum of ten (10) days prior to such proposed change.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor and Sub-subcontractor, to the extent of the Work to be performed by the Subcontractor and Sub-subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's and Sub-subcontractor's Work, that the Contractor, by these Contract Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor and Sub-subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor and Sub-subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.3.1.1 Work performed for the Contractor by a Subcontractor shall be performed pursuant to a written subcontract, which shall (in addition to the requirements of Sections 5.3 and 5.4) contain provisions that:

- .1 Requires that such portion of the Work be performed in accordance with the requirements of the Contract Documents;
- .2 Requires timely submission of Subcontractor's applications for payment and ancillary materials in order to enable the Contractor to apply for payment in accordance with the provisions of Article 9;
- .3 Waives all rights the contracting parties may have against one another or that the Subcontractor may have against the Owner for damages caused by fire or other perils covered by the property insurance described in Article 11;

- .4 Recognizes the rights of the Owner pursuant to the Contingent Assignment of Subcontracts contained in these General Conditions and require the Subcontractor (upon notice by the Owner that the Owner has terminated the Contract with the Contractor pursuant to the terms of Article 14, and that the Owner has elected to retain the Subcontractor pursuant to the terms of its Subcontract with the Contractor) to complete the unperformed obligations under such Subcontract and, if requested by the Owner, to enter into an appropriate agreement evidencing the fact that the Subcontractor is bound to the Owner under its Subcontract in the manner in which it had been bound to the Contractor;
- .5 Requires the Subcontractor performing labor at the Project site to carry and maintain the insurance described in Article 11, unless otherwise approved by the Owner, and to deliver certificates of insurance to the Contractor prior to commencement of its portion of the Work;
- .6 Includes the following sentence: "Owner is an intended third-party beneficiary of this Subcontract.";
- .7 Requires each Subcontractor to make all claims for changes or extensions of time to the Contractor strictly (not substantially) in the manner provided in the Contract;
- .8 Limits claims and damages in the manner provided in the Contract;
- .9 Are in no way inconsistent with any provision of the Contract; and
- .10 Requires the Subcontractor to indemnify the Owner the same extent required under Sections 3.6, 3.7.3, 3.17, 3.18, 9.3.3.1, 9.3.3.2, 9.6.8, 9.10.2, 9.10.4, 10.1, 10.3.3, 10.3.4, 10.3.5, 10.3.8 and Article 11.

Sub-subcontracts and supply contracts shall be subject to identical conditions, except: (1) suppliers that are not performing any Work on the Project site are not subject to the insurance requirements described in Article 11; and (2) Subcontractors and Sub-subcontractors may satisfy the insurance requirements described in Article 11 by being named as an additional insured under the Contractor's insurance policies or, in the case of a Sub-subcontractor, by being named as an additional insured under a Subcontractor's insurance policies.

§ 5.3.1.2 Upon request, the Contractor shall deliver a copy of any Subcontract, Sub-subcontract or Supply Contract to the Owner.

§ 5.3.2 Coordination of Subcontractors

§ 5.3.2.1 The Contractor shall provide supervisory, administrative, management, inspection and related services as required to properly coordinate, schedule and sequence the Work of the Subcontractors with each other (to avoid both supplantation and omission of Work) and with the activities and responsibilities of the Contractor, the Owner, the Construction Manager and the Architect to complete the Work in accordance with the requirements of the Contract Documents with respect to cost, time and quality and to ensure that the other goals of the Work are otherwise met or exceeded.

§ 5.3.2.2 The Contractor shall schedule and conduct with the Subcontractors and Sub-subcontractors construction progress and any other meetings deemed necessary to discuss such matters as procedures, progress, problems, safety, inspections, sequencing, and scheduling, and shall prepare and promptly distribute minutes. Construction progress meetings will be conducted by the Contractor weekly unless otherwise directed by the Owner and attended by all Subcontractors and Sub-subcontractors whose Work has not been completed. All progress meetings minutes shall be provided to the Owner by the Contractor within five (5) days after the meeting and distributed to all attendees promptly after they have been approved by the Owner. The Owner will act promptly in providing its approval.

§ 5.3.2.3 Schedule of Subcontractors' Work. The Contractor shall require each Subcontractor to agree to be contractually bound to the requirements of the Construction Schedule. The Contractor shall require each Subcontractor to agree to cooperate with the Contractor in developing a detailed schedule applicable to its portion of the Work within forty-five (45) days after award of contract unless otherwise specified. The Contractor shall assist in the development of all Subcontractor schedules and shall prepare such schedules if any Subcontractor fails to do so. The Contractor shall require all Subcontractors to meet as often as necessary with the Contractor to complete their detailed schedules. However, the Construction Schedule will take precedence over any schedules prepared by Subcontractors with respect to time of completion for each bid package. If any such schedule indicates that additional time or effort will be required to maintain these schedules, the Contractor, Subcontractor shall agree to work additional time, including weekends if necessary, or to add manpower, all at no extra cost to the Owner. The Contractor will require all their Subcontractors to include the requirements in Sections 5.3.2.3 and 5.3.2.4 in their sub-subcontractor contracts.

§ 5.3.2.4 Subcontractors' Performance. The Contractor shall ensure satisfactory and timely (with reference to both Milestone and Substantial Completion Dates) performance from each of the Subcontractors. The Contractor shall take appropriate measures when any Subcontractor is not performing its obligations satisfactorily.

§ 5.3.2.5 Payments to Subcontractors. Upon award of the Subcontract, the Contractor shall have each Subcontractor prepare and submit a schedule of values allocating that portion of the Cost of the Work attributable to its Subcontract to the various portions of the Work. Each schedule of values shall be prepared in a form and substance acceptable to the Contractor (which form shall previously have been approved by the Owner) and supported by such data as may be necessary to substantiate its accuracy. The Contractor shall develop and implement procedures for the review and processing of applications by Subcontractors for progress and final payments. Payment packages shall include, but shall not be limited to, each of the following documents: schedule of values, sworn statements, and appropriate forms of full or partial construction lien waivers or other similar waivers and releases of claims.

§ 5.3.2.6 Safety Programs. The Contractor shall provide a general review of safety programs developed by each of the Subcontractors, including a verification that each Subcontractor has submitted its report of the recommended safety precautions and programs, as required by the Contract Documents. If the Contractor observes a safety violation, the Contractor shall require a Subcontractor to correct it. After written notification to the Subcontractor to correct the safety violation, if the Subcontractor does not correct the problem in a timely fashion, the Contractor shall cause the Work to be corrected by other means. The performance of such services by the Contractor shall not relieve the Subcontractors of their responsibilities for performance of the Work and for the safety of persons and property, and for compliance with all federal, state and local statute, rules, regulations and orders applicable to the conduct of the Work. The Contractor shall conduct regular safety meetings with Subcontractors' superintendents to ensure the Subcontractors' compliance with federal, state or local statutes, rules, and regulations relating to the Workers' safety or any other aspect of the Work.

§ 5.3.2.7 Work. The Contractor shall determine in general that the Work of each Subcontractor is being performed in accordance with the requirements of the Contract Documents, and shall guard the Owner against defects and deficiencies in the Work. As appropriate, the Contractor shall require special inspection or testing, or make recommendations to the Architect regarding special inspection or testing, of Work not in accordance with the provisions of the Contract Documents whether or not such Work has been then fabricated, installed or completed, and shall reject Work which does not conform to the requirements of the Contract Documents. The Contractor shall coordinate any inspections which may be required by any governmental agencies.

§ 5.3.2.8 Interpretation. The Contractor shall consult with the Architect, Construction Manager and the Owner if any Subcontractor requests interpretations of the meaning and intent of any of the Contract Documents, and shall assist in the resolution of questions, which may arise.

§ 5.3.2.9 Insurance Certificates. The Contractor shall receive certificates of insurance from the Subcontractors, and shall review such certificates for compliance with the requirements of the Contract Documents, and shall forward the original certificates to the Owner, through the Construction Manager. The Construction Manager shall be responsible for collecting, reviewing for compliance, and maintaining all insurance certificates required on behalf of the Owner and make them available upon the Owner's request. No member of the Construction Team shall be permitted to commence any portion of the Work or have a presence at the Project Site without complying with all insurance requirements of the Contract Documents. The Contractor shall monitor the same to ensure the certificates of insurance remain current, and shall advise the Subcontractors of the impending expiration of their respective certificates, but the failure of Contractor to give such advice shall not, as between the Contractor and any of the Subcontractors, excuse the obligation of the Subcontractors to maintain current, unexpired certificates.

§ 5.3.2.10 System Readiness. The Contractor shall, in the company of the Architect and the Owner's maintenance personnel, observe the Subcontractors' evaluation of utilities, operational systems and equipment for readiness, and shall assist in their initial start-up and testing.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than ~~30~~ 120 days, the Subcontractor's compensation ~~shall may~~ be equitably adjusted ~~for increases in cost resulting from the suspension as negotiated by the parties.~~

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity. ~~If the Owner assigns the subcontract to a successor Contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor Contractor's obligations under the subcontract.~~

§ 5.5 Contractor and Subcontractors' Warranty Acknowledgment.

§ 5.5.1 The Contractor shall execute and deliver to the Owner, and shall cause anyone giving warranties that is contractually bound to the Contractor to execute and deliver to the Owner, the following Warranty Acknowledgment before a Certificate of Final Completion is issued:

Warranty Acknowledgment

(Name of Subcontractor) ("Contractor") warrants that all of its Work complies with the requirements of the Contract Documents. If, within two (2) years after the date of Substantial Completion of the Work or designated portion of the Work, any of Contractor's Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct the Work at its sole expense promptly after receipt of written notice from the Owner. This two (2) year period shall be extended (i) with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of Contractor's Work, and (ii) with respect to warranty work for an additional two (2) year period following each correction. This obligation shall survive acceptance of the Work and termination of our Contract.

This warranty shall be in addition to the terms of any other warranty or longer period of obligation specified in the Contract Documents, any applicable special warranty required by the Contract Documents, or the terms of any general warranty and is not in lieu of any of them. This warranty shall not be construed to establish a period of limitation with respect to other obligations which Contractor might have under the Contract Documents and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced or to the time which any proceeding may be commenced.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 The Owner reserves the right, but assumes no obligation, to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance ~~and waiver of subrogation.~~ The Contractor shall be responsible for coordinating the Work with the work of other Contractors, including the Owner's own forces or Separate Contractors, so as to complete the Work in accordance with the Construction schedule.

§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces or Separate Contractors, the Owner shall provide for coordination of such forces and Separate Contractors with the Work of the Contractor, who shall cooperate with them.

§ 6.1.3 ~~Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate~~

~~Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12 Reserved.~~

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner's own forces, Separate Contractors, Construction Manager and other Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, Separate Contractors or other Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor or other Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's or other Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable. ~~The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractors or other Contractors that are not apparent.~~

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs, including costs that are payable to a Separate Contractors or to other Contractors, because of the Contractor's delays, improperly timed activities or defective construction. ~~The Owner shall be responsible to the Contractor for costs the Contractor incurs because of delays, improperly timed activities, damage to the Work or defective construction by the Owner's own forces, Separate Contractors, or other Contractors.~~

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor ~~wrongfully~~ causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner, Separate Contractors, and other Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.2.6 Subject to the provisions of, and rights to recover from, any property insurance that the Owner is responsible to maintain, the Contractor shall, at its expense, without recovery from the Owner, under the Contract Sum, any contingency or otherwise, promptly remedy damage caused by any member of the Construction Team to completed or partially completed construction or to property of the Owner or separate contractors.

§ 6.2.7 Costs caused by delays or by improperly timed activities or defective construction shall be borne by the party responsible therefor.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, other Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and ~~the Construction Manager, with notice to the Architect, will~~ allocate the cost among those responsible. The Owner's right to clean up shall in no event be deemed a duty, and should the Owner choose not to pursue this remedy, the Contractor necessitating such action shall remain fully responsible for the same.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, only by Change Order, Construction Change Directive, written contract amendment or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor. A Construction Change Directive requires agreement by the Owner, Construction Manager and

Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone with the Owner's prior written approval.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.1.4 There shall be no changes on the Contract Sum as a result of a Change Order unless the Change Order is in writing and issued prior to effectuating the Work under the Change Order. If notice of any extra Work or change in the Work affecting the general scope of the Work or the provisions of the Contract Documents is required by the provisions of any bond, to be given to any surety issuing such bonds, the giving of any such notice shall be the Contractor's sole responsibility. In any event, in computing any increase in the Contract Sum, fees allowable for overhead and profit shall not exceed the following percentages: 10% for materials purchased and for Work completed by a Contractor's own forces; and 5% for Work completed by a Subcontractor.

§ 7.1.5 In order to facilitate the timely submission and processing of proposed changes, the Construction Manager, Contractor and Architect shall establish an efficient process for their review and shall reserve for the Owner an appropriate amount of time for the review and approval of proposed changes in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 Written agreement by the Owner, Architect, Construction Manager and Contractor on any Change Order shall constitute a final settlement of and a waiver of and permanent bar to all claims by Architect, Construction Manager or Contractor relating to the change in the Work which is the subject to the Change Order, including all direct and indirect costs and consequential damages associated with such change and any and all adjustments to the Contract Sum and the Contract Time. The Contractor shall include the Work covered by such Change Orders in its Applications for Payment as if such Work were originally part of the Contract Documents. No blanket reservation by the Contractor of any right to bring further claims for the subject of the Change Order, whether or not included in the Change order, shall be given effect.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the ~~Construction Manager~~ Architect and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one or more of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

However, the Contract Time shall be adjusted only if the Contractor demonstrates to the Owner that the changes in the Work required by the Construction Change Directive adversely affect the critical path of the Work.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Construction Manager shall determine with the Owner's approval the method for adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, ~~an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement,~~ a reasonable amount for overhead and profit not to exceed ten percent (10%) on Work self-performed by the Contractor and five percent (5%) for Work performed by Subcontractors. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

1. ~~Actual~~ Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Owner, Construction Manager and Architect;
2. ~~Actual~~ Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
3. Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others; and
4. ~~Actual~~ Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change Work; and
5. ~~Costs of supervision and field office personnel directly attributable to the change.~~

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time. Contractor's agreement to a Construction Change Directive shall require a follow-up writing or signature as contemplated in Section 7.3.7.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Construction Manager and Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for undisputed Work completed under the Construction Change Directive in Applications for Payment. For those undisputed portions, ~~the~~ Construction Manager and Architect, in conjunction with the Owner, will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine, and that the Owner confirms to be reasonably justified. The interim determination of cost, if agreed to by the Owner in writing, shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of ~~either party~~ the Contractor to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree in writing with a determination made by the Construction Manager and Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments in writing, such agreement shall be effective immediately and the Construction Manager shall prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.3.11 In no event shall the Contractor be entitled to receive, and the Contractor hereby waives the right to receive any payment or any extension of time for additional or changed Work, whether partially or fully completed or simply proposed, unless such additional Work is authorized by a written Change Order or Construction Change Directive signed by the Owner, nor shall the Contractor be obligated to proceed with any such Work. Only the

Owner shall have the right to issue a written Change Order or Constructive Change Directive to the Contractor authorizing an addition, deletion or other revision in the scope of the Work and/or an adjustment in the Contract Sum or the Construction Schedule.

§ 7.4 Minor Changes in the Work

The Architect, with the Owner's approval, may have the authority to order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. Such changes shall be effected by written order issued through the Construction Manager and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. The Construction Manager or Architect shall not, without written approval of Owner, order changes in the Work under this Section 7.4 that (1) are inconsistent with the intent of the Contract Documents; (2) render the Drawings and Specifications not in material conformity with the Work; or (3) materially affect the quality, utility or general aesthetics of the Work or any component, or result in the use of materials or equipment which are not equivalent to or better than the materials and equipment set forth in the Drawings and Specifications prior to such change. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Construction Manager and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Construction Manager that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

§ 7.5 Contractor Change Requests

In addition to the Contractor's remedies under Article 8 in the case of delays (which shall be governed solely by Article 8 and to which this Section 7.5 shall not apply), if the Contractor believes any act, error or omission of the Owner or persons for whom Owner is responsible, including but not limited to the Architect and Owner's separate contractors, constitutes a change in the Work entitling it to additional compensation, it shall within twenty-one (21) days after the date the Contractor discovers, or should with the exercise of appropriate diligence have discovered, the pertinent act, error or omission of the Owner (provided that the necessity of extra cost and/or time is already determinable, even if such extra cost and/or time has not yet been incurred), submit a Contractor Change Order Request stating the amount of the additional compensation to which it is entitled and justifying the request. The Contractor shall submit such additional information as may reasonably be required by the Owner to evaluate the Contractor Change Order Request. The Owner shall evaluate the request within ten (10) days and advise the Contractor within such ten (10) day period whether to grant, grant in part, or deny the Contractor Change Order Request. Any additional compensation granted shall be recorded in the form of a Change Order. If the Contractor disagrees with the Owner's decision, the Contractor shall pursue the remedies it has under Article 15. Failure of the Contractor to timely submit a Contractor Change Order Request strictly (not substantially) in accordance with the requirements of this Section 7.5 shall constitute a waiver of and shall forever bar any recovery arising out of the pertinent act, error or omission of the Owner, even if the Owner was not prejudiced thereby."

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work. See Section 1.1 for Basic Definitions.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time and the Construction Schedule contain ~~is~~ a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work operations on the Project site or elsewhere prior to the effective date of insurance required by Article 11, or delivery of the performance and payment bonds required by law, to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall see to the diligent, expeditious performance of the Work, with adequate resources so that all the Work will be completed within the Contract Time. The Contractor shall require overtime, multiple shifts and any other action necessary to complete of the Work within the Contract Time, all without additional cost to the Owner except as otherwise specifically provided in Section 8.4 in a Change Order or Construction Change Directive. The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. All Work shall be completed in sufficient time to allow for clean-up and preparation for Owner move-in prior to the date of Substantial Completion.~~The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.~~

§ 8.2.4 Should the Contractor fail, refuse or neglect to supply sufficient workers or to cause the delivery of equipment and materials promptly to prevent delay, or fail in any material respect to commence and prosecute the Work diligently in accordance with the Contract Documents, or if the Work falls behind schedule, the Owner may require the Contractor to take Extraordinary Measures and to have the members of the Construction Team do likewise, all at no additional cost to or compensation from the Owner unless otherwise agreed to in writing by the Owner. Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the Construction Schedule.

- .1 The Contractor shall not be entitled to an adjustment in its compensation in connection with Extraordinary Measures required by the Owner under or pursuant to this Article 8 except as specifically provided in Section 8.4.2 or in a Change Order or Construction Change Directive.
- .2 The Owner may exercise the rights furnished it under or pursuant to this Article 8 as frequently as necessary to ensure that the Contractor's performance of the Work will comply with any Milestone Date or completion date set forth in the Contract Documents.
- .3 Subject to reasonable prior notice and opportunity to cure, and except to the extent caused by Owner delay, the Owner shall also have the right to offset against any amounts then or thereafter due to the Contractor, or to be reimbursed by the Contractor for, any costs incurred as a result of an increase in the Owner's own labor force or for overtime, Saturday, Sunday, and/or holiday work as a result of implementing Extraordinary Measures for which the Contractor is responsible to pay.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 Except as provided in this Section 8.3, the Contractor shall be fully responsible for the timely completion of the Work in accordance with the Construction Schedule. The Contractor shall cause all members of the Construction Team to meet all Milestone Dates in the Construction Schedule. The Contractor agrees to use its best efforts to avoid the occurrence of any cause for delay, to avoid any extension of performance dates, and to mitigate the effect of any delay that does occur. The Contract Time will be extended only under the exact circumstances described in this Section 8.3 and then if and only if the Contractor complies strictly (not substantially) with the requirements of this Section 8.3. Provided the Contractor submits a written request for an extension not more than fourteen (14) days after the occurrence that gives rise to the delay, if the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner, Owner's own forces, Construction Manager, Architect, any of the other Contractors or an employee of any of them, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration, litigation, mediation, or arbitration, as applicable, or by other causes that the Architect, based on the recommendation of the Construction Manager, determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine may be extended by Change Order. Failure of the Contractor to submit a timely request for an extension shall irrevocably waive the Contractor's right to such an extension of time. If the Contract Time is subject to extension pursuant to this subsection, such extension shall be the exclusive remedy of the Contractor and the Contractor shall not be entitled to recover damages from the Owner.~~If the Contractor is delayed~~

at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner, Architect, Construction Manager, or an employee of any of them, or of the Owner's own forces, Separate Contractors, or other Contractors; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts and the Architect, based on the recommendation of the Construction Manager, determines justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Notices in connection with delays shall be made by the Contractor to the Owner and Construction Manager in accordance with this Section 8.3.2. The Contractor shall use its best efforts to provide verbal notice to the Owner and Construction Manager within twenty-four (24) hours after the commencement of a delay. It must in any event do so as soon as possible and not later than three (3) days after commencement of the delay. Any verbal notice given shall be confirmed in writing within four (4) days. If the Contractor fails to deliver verbal notice within three (3) days after the commencement of a delay, it shall not be entitled to any relief pertaining to the period of time before it gave verbal notice. If the Contractor fails to confirm any verbal notice within four (4) days after the verbal notice was given, it shall not be entitled to any relief for the period of time beginning after the passage of such four (4) days and ending when the confirmation is actually received by the Owner. And, if the Contractor fails to provide verbal notice within ten (10) days after the commencement of a delay or to confirm any verbal notice in writing within ten (10) days after the verbal notice was given, the Contractor shall be barred from seeking any relief whatsoever relating to the delay. Immediately following the commencement of any such cause for delay, representatives of the Contractor, Construction Manager, Architect and Owner shall confer for the purpose of determining the probable length of the delay and a course of action which would end or eliminate the occurrence or event which is causing delay. The Contractor shall also within twenty-one (21) days after the cessation of such delay notify the Owner of the date of such cessation and the total amount of delay, if any, in performance dates which the Contractor is entitled to claim by reason of any such occurrence. If the Contractor intends to request an extension of time for any delay, it shall accompany the notice of cessation of delay with a Change Order Request stating the specific extension or adjustment requested and justifying the reason for the request. The Contractor shall thereafter submit such additional information as may be required by the Owner to evaluate the Change Order Request. The Owner, in consultation with the Construction Manager, shall decide whether to grant, grant in part or deny the Change Order Request. Any extension of time or adjustment granted shall be memorialized in the form of a Change Order. Acceptance and execution of any such Change Order by the parties shall constitute an accord and satisfaction that forever bars any and all claims arising out of or in connection with the delay giving rise to the Change Order. If the Contractor disagrees with the Owner's decision, it may pursue the remedies available to it under Article 15. However, failure of the Contractor to timely assert any alleged delay or claim for extension strictly (not substantially) in accordance with the provisions of this Section 8.3.2 shall constitute a waiver of and shall forever bar that claim, even if the Owner was not prejudiced thereby. Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 Except in the case of changes to the Work covered by Article 7, the Contractor shall not be entitled to an extension of time unless set forth in a Change Order. The Contractor acknowledges that in preparing the Construction Schedule and in agreeing to the times or dates of completion required by the Contract Documents it will make a reasonable allowance for commercially anticipated delays. Adjustments in the Contract Time will be permitted only to the extent such delay (1) is not caused or contributed to, and could not have been anticipated, by the Contractor using the degree of diligence required by the Contract Documents, (2) could not be limited or avoided by the Contractor's timely notice to the Owner of the delay, and (3) is of a duration of not less than one (1) day. This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

§ 8.3.4 The Owner's exercise of any of its rights under the Contract Documents or the Owner's good faith exercise of any of its remedies, including requirement of correction or re-execution of any defective Work, regardless of the extent, number or frequency of the Owner's good faith exercise of such rights or remedies, shall not under any circumstances be construed as unreasonable interference with the Contractor's performance of the Work or an event of default.

§ 8.3.5 The Contractor shall use its best efforts to mitigate the effects of any delay.

§ 8.3.6 This Section 8.3 does not preclude the recovery of other damages by the Owner for delay under other provisions of the Contract. However, the Contractor acknowledges that the Schedule for the Work may change during the duration of the Project and that fact was taken into account by the Contractor when it agreed to the Contract Sum and entered into this Contract under the terms and conditions set forth herein. As a result, the Contractor shall not be entitled to any additional monies as a result of such schedule changes.

§ 8.3.7 The Contract Sum includes all costs associated with known and current COVID-19 impacts, including impacts on materials, the supply chain, labor, productivity and schedule. To the extent the Contractor's performance of the Work under the Contract is impacted as a result of unknown events arising out of the COVID-19 pandemic after the date of Contract execution, any claims relating to delay and cost impacts associated with COVID-19 shall be made in accordance with the terms and conditions of the Contract Documents.

§ 8.4 No Damage for Delay

§ 8.4.1 If the Contractor fails to complete its Work on time resulting in loss or damage to the Owner, whether or not liquidated damages are called for in the Contract Documents, the Owner shall be entitled to recover any damages caused by the Contractor's breach, including overhead, profit, extended general conditions, actual attorney fees, etc.

§ 8.4.2 In the event of Owner delay, the Contractor shall be entitled to an equitable adjustment in the Contract Sum. This adjustment shall be based solely upon and limited to additional direct actual out-of-pocket expenses to the extent they are incurred directly as a result of the Owner delay. Without limiting the generality of the foregoing, such out-of-pocket expenses shall be calculated on an "actual cost" basis, and shall exclude home office expense and other overhead, profit and the value of lost opportunities. However, the Contractor shall use its best efforts to avoid or reduce delay damages to any member of the Construction Team caused by Owner delay. The Owner and Contractor shall mutually agree to the amount of this equitable adjustment in writing.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted, unless the Contractor provided such unit prices as a part of a competitive bid, in which case the unit price may not increase.

§ 9.2 Schedule of Values

~~Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Construction Manager, b~~Before the first Application for Payment, the Contractor shall submit a schedule of values allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Construction Manager and the Architect. The initial schedule of values shall be consistent with the Contract Sum prepared by Contractor and shall include actual Subcontractor bids. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Construction Manager shall forward to the Architect the Contractor's schedule of values. ~~Any changes to the schedule of values shall be submitted to the Construction Manager and supported by such data to substantiate its accuracy as the Construction Manager and the Architect may require, and unless objected to by the Construction Manager or the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.~~

§ 9.3 Applications for Payment

§ 9.3.1 At least fifteen (15) days before the date established for each progress payment, the Contractor shall submit to the Construction Manager an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner, Construction Manager or Architect require, such as copies of requisitions, and releases of waivers of lien from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents. The Construction Manager and

Contractor must provide copies of the insurance certificates, bonds, and the same for all of the Contractors and Subcontractors prior to commencing Work and prior to submitting the first Application for Payment.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Construction Manager and Architect, but not yet included in Change Orders. A request for payment of sums related to Work regarding Construction Change Directives shall, unless qualified in writing at the time of request, constitute full and complete consent to the Construction Change Directive(s) and to the issuance of a Change Order.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 The Contractor shall submit with each monthly Application for Payment (1) an Affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the previous application was submitted and the Owner might in any way be responsible have been paid or otherwise satisfied, (2) a release or waiver of liens arising out of the Contract from each Contractor and/or Subcontractor, materialmen, supplier and laborer or the Contractor addressing all previous Applications for Payment submitted for the Project, and (3) if applicable, an updated Schedule of Values incorporating changes in the Work.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the Project site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the Project site at a location agreed upon in writing. Payment for materials and equipment stored on or off the Project site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the Project site, for such materials and equipment stored off the site. Payment to Contractor for materials stored off site is discouraged. When circumstances indicate that the Owner's best interest is served by off-site storage, the Contractor shall make written request to the Owner and Construction Manager for approval to include such material costs in his next progress payment. The Contractor's request shall include the following information:

- .1 A list of the fabricated materials consigned to the Project site (which shall be clearly identified, giving the place of storage, together with copies of invoices and reasons why materials cannot be delivered to the site.
- .2 Certification that items have been tagged for delivery to the Project and that they will not be used for another purpose.
- .3 A letter from the Contractor's Surety indicating agreement to the arrangements and that payment to the Contractor shall not relieve either party of their responsibility to complete the Work.
- .4 Evidence of adequate insurance covering the material in storage, which shall name the Owner as additionally insured.
- .5 Costs incurred by the Owner, Construction Manager and Architect to inspect material in off-site storage shall be paid by the Contractor.
- .6 Subsequent pay requests shall itemize the materials and their cost which were approved on previous pay requests and remain in off-site storage.
- .7 When a partial payment is allowed on account of material delivered on the site of the Work or in the vicinity thereof or under possession and control of the Contractor, but not yet incorporated therein, such material shall become the property of the Owner, but if such material is stolen, destroyed or damaged by casualty before being used, the Contractor will be required to replace it at its own expense.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities making a Claim by reason of having that provided labor, materials and equipment relating to the Work.

§ 9.3.3.1 Except with respect to liens resulting from Owner's failure to make properly due payments to Contractor, the Contractor hereby expressly agrees to indemnify, defend and hold harmless the Indemnitees, at the Contractor's sole cost and expense, from and against any and all costs (including without limitation reasonable attorney fees), liabilities, actions, lawsuits, claims or proceedings brought against Indemnitees as a result of any lien or claim of lien filed against the Work, the site of any of the Work, the Project site or any improvements thereon, payments due the Contractor or any portion of the property of any of the Indemnitees. Notwithstanding the above, Contractor acknowledges that in accordance with Applicable Laws, public property cannot be liened.

§ 9.3.3.2 In the event of any lien or claim of lien, Owner may withhold from payments otherwise due Contractor, such amounts as Owner deems suitable to protect it from the adverse effect of such lien or claim of lien. The Owner shall release any payments or portions thereof withheld due to a lien or claim of lien if the Contractor obtains security acceptable to the Owner or a lien bond which is (1) issued by a surety acceptable to the Owner, (2) in form and substance satisfactory to the Owner, and (3) in an amount not less than Two Hundred Percent (200%) of such lien or lien claim. By posting such bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or obligations under this Section 9.3, including, without limitation, the duty to defend, hold harmless and indemnify the Indemnitees. Except with respect to liens resulting from Owner's failure to make properly due payments to Contractor, the cost of any premiums incurred in connection with such bonds and security shall be the responsibility of the Contractor and shall not cause any adjustment to the Contract Sum.

§ 9.3.3.3 Contractor's submission of an Application for Payment shall constitute a waiver by Contractor of any claims and damages in any way related to the Work performed through the date of the Application for Payment, including for delay, disruption, inefficiency, hindrance, acceleration, or cumulative impact, except for claims and damages identified in writing and submitted with the Application for Payment.

§ 9.3.4 Each Application for Payment shall be accompanied by the following, all in form and substance reasonably satisfactory to the Owner:

- .1 A duly executed and acknowledged sworn statement with all required information provided, together with properly notarized sworn statements, from the Contractor and all of the Subcontractors; and
- .2 Except as otherwise provided, duly executed unconditional releases in the form required by the Owner establishing payment or satisfaction of all obligations as reflected on the sworn statements referred to in Section 9.3.4.1, provided, however, that the Contractor may furnish with each Application for Payment applicable waivers of lien or releases and properly notarized sworn statements covering the immediately preceding Application for Payment, as opposed to the current Application for Payment, (i.e., 30 day lag), provided final payment shall not be forthcoming until final construction lien waivers or releases from all members of the Construction Team have been delivered.
- .3 In addition to the final construction lien waiver, the Owner will require the Contractor and Subcontractors to provide a signed and notarized affidavit that releases and discharges the Owner and Owner's agents from all liability to the Contractor and Subcontractor, which has arisen or which shall arise in connection with any work performed or materials delivered to the Project.
- .4 A written narrative summarizing the progress of the Project, including behind schedule Work that may adversely affect the critical path of the Work as established in the Construction Schedule or subsequent Subcontractor schedules that fall within the Construction Schedule. If such behind schedule Work would or could potentially affect the timely completion of the Work, the Contractor must also include a recovery plan describing in sufficient detail of overtime, multiple shifts and any other measures necessary to complete the Work within the Construction Time.
- .5 An updated schedule of values, which unless objected to by the Architect shall be used as a basis for reviewing the Contractor's Application for Payment.

§ 9.4 Certificates for Payment

§ 9.4.1 Where there is only one Contractor, the Construction Manager will, within seven days after the Construction Manager's receipt of the Contractor's Application for Payment, review the Application, certify the amount the Construction Manager determines is due the Contractor, and forward the Contractor's Application and Certificate for Payment to the Architect. Within seven days after the Architect receives the Contractor's Application for Payment from the Construction Manager, the Architect will either ~~(1) issue to the Owner a Certificate for Payment, in the full amount of the Application for Payment,~~ with a copy to the Construction Manager; ~~or (2) issue to the Owner a Certificate for Payment~~ for such amount as the Architect determines is properly due, ~~and or~~ notify the Construction Manager and Owner in writing of the Architect's reasons for withholding certification ~~in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification~~ in whole or in part as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the Architect's notice of withholding certification.

§ 9.4.2 Where there is more than one Contractor performing portions of the Project, the Construction Manager will, within seven (7) days after the Construction Manager receives all of the Contractors' Applications for Payment: (1) review the Applications and certify the amount the Construction Manager determines is due each of the Contractors; (2) prepare a Summary of Contractors' Applications for Payment by combining information from each Contractor's application with information from similar applications for progress payments from the other Contractors; (3) prepare a Project Application and Certificate for Payment; (4) certify the amount the Construction Manager determines is due all Contractors; and (5) forward the Summary of Contractors' Applications for Payment and Project Application and Certificate for Payment to the Architect.

§ 9.4.2.1 Within seven (7) days after the Architect receives the Project Application and Project Certificate for Payment and the Summary of Contractors' Applications for Payment from the Construction Manager, the Architect will either ~~(1) issue to the Owner a Project Certificate for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Project Certificate for Payment~~ for such amount as the Architect determines is properly due, ~~and or~~ notify the Construction Manager and Owner in writing of the Architect's reasons for withholding certification ~~in part as provided in Section 9.5.1; or (3) withhold certification of the entire Project Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification~~ in whole or in part as provided in Section 9.5.1. The Construction Manager will promptly forward the Architect's notice of withholding certification to the Contractors.

§ 9.4.3 The Construction Manager's certification of an Application for Payment or, in the case of more than one Contractor, a Project Application and Certificate for Payment, shall be based upon the Construction Manager's evaluation of the Work and the data in the Application or Applications for Payment. The Construction Manager's certification will constitute a representation that, to the best of the Construction Manager's knowledge, information, and belief, the Work has progressed to the point indicated and the quality of the Work is in accordance with the Contract Documents; ~~and that the Contractor is, or Contractors are, entitled to payment in the amount certified. The certification will also constitute a recommendation to the Architect and Owner that the Contractor be paid the amount certified.~~

§ 9.4.4 The Architect's issuance of a Certificate for Payment or, in the case of more than one Contractor, Project Application and Certificate for Payment, shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and data in the Application for Payment or Project Application for Payment. The Architect's certification will constitute a representation that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, that the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Construction Manager or Architect in writing, together with the Certification to which the qualification pertains.

§ 9.4.6 The issuance of a Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has, unless otherwise required by Contract or law, (1) made exhaustive

or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed the Contractor's construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment or Project Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.3 and 9.4.4 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1 and 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment or a Project Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, or subsequent observations, may nullify the whole or a part of a Certificate for Payment or Project Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- .1 defective Work not remedied or the Contractor is in default of the Agreement;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor or other Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; ~~or~~
- .7 ~~repeated~~ failure to carry out the Work in accordance with the Contract Documents;
- .8 failure to provide documentation, including operations and maintenance manuals, Record Documents, certified weekly payroll reports, as required, and/or other information that may be required by other sections of the Contract Documents, in a timely manner;
- .9 any failure by Contractor or a Subcontractor to fully perform any obligation under the Contract;
- .10 the Work not having progressed to the extent set forth in the Application for Payment; and
- .11 representations of the Contractor are untrue.

§ 9.5.2 ~~When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15 Reserved.~~

§ 9.5.3 When the reasons above for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager, and both will reflect such payment on the next Certificate for Payment.

§ 9.5.5 If the Contractor disputes any determination by the Owner, Construction Manager or Architect regarding any Certificate for Payment, the Contractor shall nevertheless continue to expeditiously perform the Work and such dispute shall provide no basis for any manner of delay or suspension of the Contractor's performance of the Work.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment or Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Construction Manager will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven (7) days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner, Construction Manager nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Owner may, in its sole discretion, after providing Contractor with ten (10) days prior written notice, make direct payments to the Contractor's Subcontractors, material men, laborers or claimants relating to labor or material provided to the Contractor for which the Contractor has not provided a waiver of lien, in the event the Subcontractors, material men, laborers or claimants threaten to or actually cease providing labor and/or materials for the Project such that, in the Owner's determination, progress of the Project and the Project's schedule are jeopardized. All payments made pursuant to this section shall be considered the same as if paid directly to the Contractor and shall constitute partial payment of the Contract Sum. Payment under this provision shall not jeopardize any other remedy available to the Owner. The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 ~~Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.~~

§ 9.6.9 Subject to Applicable Laws, if a petition in bankruptcy or any other arrangement or proceeding regarding insolvency, assignment for the benefit of creditors, trust, chattel mortgage, or similar state or federal proceeding, whether voluntary or involuntary, shall be filed with respect to the Contractor, the Owner may withhold the final balance, or any other payments, whether or not an application for progress payment has been properly filed, until expiration of the period of any guarantees or warranties required for the Contractor, and the Owner may pay out such funds the amount necessary to satisfy any claims or costs that otherwise would have been covered by such guarantees or warranties.

§ 9.6.10 Unless otherwise provided in the Agreement or Contract Document, the Owner may retain out of each progress payment a "Retainage" equal to ten percent (10%) of that payment, excluding any portion paid for the Contractor's General Conditions costs. Retainage on all individual Subcontractors which include both labor and

material shall be ten percent (10%). Retainage will be paid upon Final Completion and acceptance of the Work in accordance with Section 9.10. Upon mutual agreement of the Owner, the Architect and the Contractor, payment in full may be made to Subcontractors whose Work is fully completed during early stages of the Project. The Contractor acknowledges and agrees that payments by the Owner shall only be made in respect of Applications for Payments, or portions thereof, approved by the Owner. If the Contractor disputes any good faith determination by the Owner with regard to any Certificate of Payment, or amount paid by the Owner in respect thereof, the Contractor shall nevertheless expeditiously continue to prosecute the Work while such dispute is being resolved in accordance with the provisions of Article 15.

§ 9.7 Failure of Payment

If the Construction Manager and Architect do not issue a Certificate for Payment or a Project Certificate for Payment, through no fault of the Contractor and without justifiable basis under the Contract Document, within fourteen (14) days after the Construction Manager's receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven (7) days after the date established in the Contract Documents, the amount certified by the Construction Manager and Architect or awarded by binding dispute resolution, then the Contractor may, upon seventy-one (21) additional days' written notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents and when all required occupancy permits, if any, have been issued, so the Owner can occupy or utilize the Work for its intended use. The Work shall not be considered suitable for Substantial Completion review until all systems included in the Work are properly and operationally constructed in accordance with the Contract Documents, all required governmental inspections and certifications have been made and posted, training of Owner's personnel in the operation of systems has been completed, and all final finishes within the Contract Documents are in place. The only remaining Work shall be minor in nature, so that the Owner could occupy the building on the date of Substantial Completion and completion of the Work by the Contractor would not materially interfere or hamper the Owner's (or those claiming by, through or under Owner) normal operations. At Substantial Completion, the Contractor attests that all remaining Work is solely of a Punchlist nature and will be completed within forty-five (45) consecutive calendar days.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive Punchlist of items to be completed or corrected prior to final payment. Failure to include an item on such list Punchlist does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Punchlist, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list Punchlist, which is not sufficiently complete in accordance with the requirements of the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect immediately. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion.

§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work of all of the Contractors, or designated portion thereof, is substantially complete, the Construction Manager will prepare, and the Construction Manager and Architect shall execute, a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the Punchlist accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of final Substantial Completion acceptance of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion by Owner following final completion and final payment in

accordance with Section 9.10 or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.8.6 Notwithstanding Sections 9.8.1 and 9.8.2, as a condition precedent to establishing the date of Substantial Completion, the Contractor shall prepare and submit to the Architect and Construction Manager a comprehensive Punchlist of items to be completed or correct (a "Punchlist"). The Contractor shall respond immediately to correct Work deficiencies and/or Punchlist items. Should the Contractor fail to make corrections in a timely fashion, but not later than thirty (30) calendar days from the date of Substantial Completion or notification of the required corrections, whichever is earlier, such Work may be corrected by the Owner at the Contractor's sole expense, and the Contract Sum may be adjusted accordingly.

§ 9.8.7 The Contractor shall promptly notify the Construction Manager, in writing, when the Work deficiencies and/or Punchlist items are completed. Upon the review of the Work by the Construction Manager after such notification by the Contractor, if Work deficiencies and/or Punchlist items shall continue to exist, the Owner may correct such deficiencies and pay such costs out of retainage held by the Owner on the Contractor's Contract.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall proceed with the Work in such a manner as reasonably directed and shall cooperate with the Owner to limit interruptions and Construction Manager shall jointly prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect after consultation with the Construction Manager.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Construction Manager, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.9.4 Any agreement as to the acceptance of non-conforming Work not complying with the requirements of the Contract Documents, shall be in writing in the form of a Change Order, acceptable to the Owner's authorized representative and signed by all parties.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a written notice that the Work is ready for final inspection and acceptance, and shall also forward to the Construction Manager a final Contractor's Application for Payment. Upon receipt, the Construction Manager shall perform an inspection to confirm the completion of Work of the Contractor. The Construction Manager shall make recommendations to the Architect when the Work of all of the Contractors is ready for final inspection, and shall then forward the Contractors' notices and Application for Payment or Project Application for Payment, to the Architect, who will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment or Project Certificate for Payment stating that to the best of their knowledge, information and belief, and on

the basis of their on-site visits and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and Architect's final Certificate for Payment or Project Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) an affidavit that states the Work is fully completed and performed in accordance with the Contract Documents and is satisfactory to the Architect and the Owner, (7) in the event of Contractor bankruptcy, at the Owner's option, an order entered by the court having jurisdiction of the Contractor's insolvency proceeding authorizing such payment, (8) a general release executed by the Contractor on a form provided by the Construction Manager; and (9), if required by the Owner, other data establishing payment or satisfaction of obligations, such as close-out documentation, the other documentation required by the Contract Documents, receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable actual attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Construction Manager and Architect so confirm, the Owner shall, upon application by the Contractor and certification by the Construction Manager and Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect through the Construction Manager prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; ~~or~~
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment
- .5 Owner's Claims arising after final payment, including, but not limited to, any defect or condition which is latent or not reasonably discoverable at the time of final payment;
- .6 Owner's claims for indemnification; or
- .7 Claims about which the Owner has previously given notice to the Contractor.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of all claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment and specifically referenced as being an exception to the waiver contained in this Section.

§ 9.10.6 The amount of the final payment shall be the Contract Sum less the amount paid to date. If the aggregate of previous payments made by the Owner exceeds the amount due the Contractor, the Contractor shall immediately reimburse the difference to the Owner.

§ 9.10.7 Project Closeout. The requirements for Project Closeout begin at the start of a Project. This section outlines the integration of the closeout process into the Construction Phase. Project Closeout requirements generally comprise of the following:

- Certificate of Substantial Completion [by the Architect]
- Certificate of occupancy, including proof of all final/ [closed] inspection permits
- Operation & Maintenance Manuals
- As-Built (Record) Drawings
- Training of Owner's Personnel
- Attic Stock Materials
- Documents – Warranty, Asbestos free, Smoke & Flame Spread, etc.
- Punchlist Completion (signed by the Architect and the Owner)
- Copies of Shop Drawings, Product Data and Samples

§ 9.10.7.1 Operations and Maintenance Manuals and Training

.1 Upon reaching seventy-five percent (75%) completion according to the Subcontractor's Application for Payment, the Contractor shall cause its Subcontractors to submit to the Owner through the Contractor Operations and Maintenance Manuals and record copies of submittals.

.2 The Contractor shall cause its Subcontractors to schedule and conduct training for Owner personnel as specified. Training sessions shall include an agenda, video tape of the session, a sign-in sheet to document attendance, and documentation for the trainees. Each Subcontractor shall submit the video tape (labeled), attendance sign in sheet, and training documentation to the Contractor in the same quantities required for the Operations and Maintenance Manuals.

.3 Owner shall withhold an amount stipulated by the parties until receiving the Operations and Maintenance Manuals and training of Owner's operating personnel.

§ 9.10.7.2 As-Built (Record) Drawings

.1 The Contractor shall cause all of its Subcontractors to review As-Built Drawings with the Contractor on a weekly basis.

.2 Owner shall withhold an amount stipulated by the parties until receiving the final As-Built Drawings.

.3 Where the governmental and/or municipal agency/agencies having jurisdiction over the Project requires a certified (signed and sealed by a Registered Professional Engineer) set of civil and utilities As-Built Drawings of the Project, the Contractor shall deliver to the agency/agencies the necessary As-Built Drawings that is acceptable to the agency/agencies and provide one copy to the Owner.

§ 9.10.7.3 Attic Stock Materials

.1 Upon reaching ninety percent (90%) completion according to the Subcontractor's application for payment, the Contractor shall cause its Subcontractors to turn over to the Owner through the Contractor all stock parts and attic stock materials.

.2 Owner shall withhold an amount stipulated by the parties until receiving the required attic stock materials.

§ 9.10.7.4 Documents – Warranty, Asbestos Free, Smoke & Fire Spread, etc.

.1 Upon reaching ninety percent (90%) completion, according to the Subcontractor's Application for Payment, the Contractor shall cause its Subcontractors to submit to the Owner through the Contractor all required documents.

.2 Owner shall withhold an amount stipulated by the parties until receiving the required documents.

§ 9.10.7.5 Punchlist

.1 One (1) week before Substantial Completion, Subcontractors shall submit to the Contractor a complete Punchlist and a list of incomplete items. The list shall include room number, description of work, and date for completion.

.2 The Contractor shall review the Subcontractor's list and add items, if necessary. In the event that Contractor's list comprises 25% or more of the items then the Subcontractors list, then at the Contractor's sole discretion, a review fee of up to five hundred dollars (\$500) may be deducted from the Subcontractor's Contract Sum and paid to

the Contractor. For example, if a Subcontractor's list has 20 items, and after reviewing the Contractor finds an additional 6 items [(which exceeded 25% more items)], the Contractor shall be entitled to receive a review fee.

.3 Punchlists prepared by the Architect or Owner will be distributed to the Subcontractors. Subcontractors will be given the opportunity to complete the items within fourteen (14) days of receipt of lists. Upon completion, the Subcontractor shall conduct a walk-through with the Contractor, Architect, and Owner to confirm satisfactory completion.

.4 Payment in an amount no less than four (4) times the estimated value of Punchlist items, as determined by the Contractor, and Architect will be withheld until the Punchlist is complete.

.5 In the event the Punchlist is reported complete; but found not to be complete, at the Contractor's sole discretion, an amount of up to one thousand dollars (\$1,000) may be deducted from the Contract Sum owing to the Subcontractor and paid to the Contractor. If after fourteen (14) days, the Punchlist is still not complete or incomplete items are discovered during a walkthrough, the Owner and/or Contractor may immediately complete the items. The Owner and/or Contractor shall deduct the costs to complete the Punchlist from the amount owing the Subcontractor, including reasonable fee for supervision, plus up to two thousand five hundred dollars (\$2,500) administrative costs to be paid to the Owner.

.6 The final acceptance of all Punchlist and incomplete work items is subject to the approval of the Architect and Owner.

.7 Owner shall withhold an amount no less than stipulated by the parties until the Subcontractor satisfactorily completes all the required Punchlist items.

§ 9.11 Audits By The Owner

§ 9.11.1 The Contractor agrees that the Owner or any of its duly authorized representatives shall, until the expiration of the record retention period (as described in Section 9.11.2), have access to and the right to examine where pertinent to verifying the Cost of the Work or other items reimbursed to Contractor under the Agreement on the basis of costs, books, documents, records, contracts, correspondence, instructions, receipts, vouchers, purchase orders, memoranda, papers, and all other records of the Contractor related to the Agreement for any reason.

§ 9.11.2 The Contractor shall maintain in accordance with generally accepted accounting principles separate records and accounts of its services and transactions on behalf of the Owner in connection with the Work and shall make such records and accounts available to the Owner for inspection and audit during normal business hours and upon reasonable prior notice. Records shall be kept in such form and detail as the Owner may reasonably request. Such records shall include time sheets, invoices from the Contractor and its Subcontractors memoranda and analyses in support of management decisions, and such other primary records as necessary to support and justify all business conducted in connection with the Work, but shall not include internal memoranda or reports, communications or discussions with incidental references to the Work or documents which discuss multiple projects. Such records will be kept by the Contractor for a period not less than seven (7) years.

§ 9.11.3 The Contractor shall include in all its Subcontracts under the Agreement a provision to the effect that the Subcontractors agree that the Owner or any of its duly authorized representatives shall, until expiration of three (3) years after final payment under the Subcontracts and supply agreements, have access to and the right to examine where directly pertinent to verifying the cost of change orders or other items reimbursed to such Subcontractor on the basis of cost, books, documents, papers, and records of such consultants, involving transactions related to the Work.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall continuously maintain adequate protection of all Work from damage and shall protect the Owner's property from injury or loss. The Contractor shall repair any such damage, injury or loss at no cost to the Owner, except to the extent directly caused by agents or employees of the Owner. The Contractor shall adequately protect the Work and Owner's property as required by Applicable Laws, the Contract Documents, or as otherwise required, to cause no damage to the Work and Owner's property during the execution of the Work. This requirement shall also apply to structures above and below ground as conditions of the Project site require. The Contractor shall at all times observe and comply with all Applicable Laws which may in any manner affect the equipment and materials used in the proposed construction, those employed on the Work, and the conduct of the Work. The Contractor shall indemnify, defend and hold harmless the Owner and its Board of Education (in its individual and official capacities), employees and administrators, against any claim or liability arising from the violation of any Applicable Laws, whether the violations are by the Contractor or any Subcontractor, Sub-

subcontractor or any other person employed or engaged by the Contractor or Subcontractor. The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager.

§ 10.1.1 The Contractor is solely responsible to the Owner for health and safety at the Project site and, accordingly, shall be solely responsible for initiating, monitoring, maintaining and supervising all safety precautions and programs in connection with the performance of the Work. The foregoing does not relieve the Subcontractors of their responsibility to the Contractor for the safe performance of their Work in accordance with all Applicable Laws.

§ 10.1.2 The Contractor shall develop and implement a health and safety plan that complies with all Applicable Laws covering all activities on the Project site except those activities performed solely by the Owner. The Contractor shall provide to the Owner, through the Construction Manager, a copy of such health and safety plan prior to commencement of Work. The Owner shall have no duty to review the plan and shall assume no duty by doing so.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- .3 other property at the Project site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and
- .4 construction or operations by the Owner, Construction Manager, Separate Contractors, or other Contractors.

§ 10.2.2 The Contractor shall comply with, and give notices required by a~~Applicable laws~~Laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract~~Work~~, reasonable~~adequate~~ safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards. The Contractor shall also be responsible for all measures necessary to protect any property adjacent to the Project site and improvements thereon. Any damage to such property or improvements shall be promptly repaired by the Contractor.

§ 10.2.3.1 The various parts of the structure and adjoining structures that cannot be maintained in their final positions with stability until other connecting or abutting parts or members are constructed and permanently secured shall be substantially braced and held in place. The Contractor shall protect the Project against all damage from the elements, overloading of the structure, and undermining or displacement due to conditions of the Project site or due to any other methods of construction.

§ 10.2.3.2 The Work shall be executed in a manner which will cause as little inconvenience as possible to the Owner in the Owner's use of the property and existing facilities and structures. Where applicable the Contractor shall provide and maintain adequate, dust tight, protective coverings, enclosures and barricades about the Work and shall keep the same in repair throughout the entire Work. Enclosures of appropriate fire rated construction shall be installed by the Contractor where necessary to divide the Work area from the Owner's occupied areas.

§ 10.2.3.3 During the prosecution of the Work, the Owner will use and occupy the buildings and site adjacent to and surrounding the Project site. At all times during the construction period, safe and convenient access shall be

maintained to and from these buildings and any other portions of the Project site occupied by the Owner and/or Subcontractors.

§ 10.2.4 No use or storage of explosives or other Hazardous Materials or equipment or unusual methods shall be allowed at the Project site without the Owner's express written consent. If when use or storage of explosives or other Hazardous Materials or equipment or unusual methods are necessary-permitted by the Owner for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel and shall store and use in compliance with all Applicable Laws. When in the course of the Work use or storage of explosives or other Hazardous Materials or equipment or unusual construction methods are necessary, the Contractor shall give the Owner reasonable advance notice.

§ 10.2.4.1 No explosives will be permitted on the Owner's premises unless written permission is given by the Owner not less than seventy-two (72) hours in advance of the time of delivery of such explosives. All risks, regardless of the Owner's approval, associated with the storage, handling and use of explosives are solely borne by the Contractor, as are any costs associated with damages, injuries or losses arising out of the use of such explosives.

§ 10.2.4.2 The use of disposal or flammable liquids or other combustible materials shall be handled in accordance with Applicable Laws.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4, except -The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is damage or loss attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner, Construction Manager and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter. The Contractor shall take all necessary precautions for the safety of employees and visitors on the Project site and shall comply with Applicable Laws and provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the Project site where the Work is being performed. The Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for the protection of workers and the public. The Contractor shall post danger signs warning against the hazards created by such features of construction such as protruding nails, hoists, holes, elevator hatchways, scaffolding, window openings, stairways, falling material and other such features.

§ 10.2.9 When all or a portion of the Work is suspended for any reason, the Contractor shall be responsible for securely fastening down all coverings and protecting the Work from injury by any cause.

§ 10.2.10 The Contractor shall promptly report in writing to the Owner and Construction Manager all accidents arising out of or in connection with the Work which cause death, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages occur, the accident shall be reported immediately by telephone or messenger to the Owner and Construction

Manager. The obligations in this Section are in addition to the Contractor's reporting obligations under Applicable Laws.

§ 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding ~~h~~Hazardous ~~m~~Materials or substances. If the Contractor encounters a ~~h~~Hazardous ~~m~~Material or substance not addressed in the Contract Documents ~~and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor,~~ the Contractor shall, upon recognizing the condition, immediately stop work in the affected area and notify the Owner, Construction Manager and Architect of the condition. The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding Hazardous Materials and shall not, nor shall it permit any member of the Construction Team to bring on, keep, store, use, release or dispose of any Hazardous or potentially Hazardous Material on, in or about the Project site, without the prior written consent of the Owner, which consent may be unreasonably withheld.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify a presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor, Construction Manager and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor, the Construction Manager and the Architect will promptly reply to the Owner in writing stating whether or not any of them has reasonable objection to the persons or entities proposed by the Owner. If the Contractor, Construction Manager or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor, the Construction Manager and the Architect have no reasonable objection. When the material or substance has been rendered harmless, work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately, and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up. The Contractor shall cause the presence, use, storage and/or disposal of Permitted Materials by any member of the Construction Team to be in strict (not substantial) compliance in every respect with all Applicable Laws and shall promptly notify the Owner if any amount of Permitted Materials, Hazardous Materials or Potentially Hazardous Materials are released on the Project site at any time in a quantity that would have to be reported or remediated under any Applicable Laws.

§ 10.3.2.1 The Contractor shall at its expense, without recovery from the Owner, under the Contract Sum, any contingency or otherwise, fully and promptly remediate each and every release of Permitted Materials and any other Hazardous Materials in full compliance with all Applicable Laws to the most stringent standards, e.g., residential, available under all Applicable Laws, and in cooperation with the Owner, except to the extent the Hazardous Materials (i) existed uncontainerized, in or under the Project Site before Work began at the Project Site and neither the Contractor nor any other member of the Construction Team released or exacerbated such pre-existing contamination after recognizing the presence and general location of such contamination, or (ii) were caused directly by the Owner, the Architect, a contractor of the Owner who is not a member of the Construction Team, or any third party. Notwithstanding the foregoing limitations, the Contractor shall be responsible if and to the extent, after recognizing the presence and general location of Hazardous Materials that were pre-existing at the Site, or after it should have recognized such presence and general location, it exacerbates the condition or area impacted by the Hazardous Materials. Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor, Construction Manager and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor, the Construction Manager and the Architect will promptly reply to the Owner in writing stating whether or not any of them has reasonable objection to the persons or entities proposed by the Owner. If the Contractor, Construction Manager or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor, the Construction Manager and the Architect have no reasonable objection. When the material or substance has been rendered harmless, work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the

Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 The Contractor shall at its expense, without recovery from the Owner, the Contract or otherwise, be solely responsible to the Indemnitees for and shall indemnify, defend and hold harmless the Indemnitees and the Project site from and against all claims, suits, administrative proceedings, personal injury, investigations, damages, costs, fines, judgments and liabilities, including, but not limited to, attorneys' fees and costs, arising out of or in connection with the generation, release, transportation, storage, use, disposal or presence of Permitted Materials or Hazardous Materials at the Project site by or due to any member of the Construction Team or for any noncompliance with the Agreement. The indemnity in the previous sentence and in Section 10.3.4 does not include claims, fines, etc., to the extent they arise from (i) contamination that existed before Work began at the Project Site or (ii) contamination that was caused directly by the Owner, the Architect, a contractor of the Owner who is not a member of the Construction Team, or any third-party. In both (i) and (ii), the exclusion of Contractor obligations does not apply to circumstances in which the Contractor has exacerbated the presence of Hazardous Materials or triggered a response or removal requirement. In addition, the obligations of this section include, but are not limited to, Contractor's remediation and removal of any release of Hazardous Materials that it brought to the Project Site. Contractor's obligations herein are not limited by the extent of its insurance coverage. To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Construction Manager, Architect, their consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances. Contractor's defense, indemnity, and hold harmless obligations shall include, but not be limited to, any and all governmentally mandated investigation, remediation, removal and/or clean-up of any such Permitted Materials or Hazardous Materials, and all related fees and costs. The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence. If the Contractor shall receive any notice, whether oral or written, of any inquiry, test, investigation, enforcement proceeding, environmental audit or the like by or against the Contractor, any member of the Construction Team, or the Work with regard to any Hazardous Materials at or emanating from the Project site, the Contractor shall immediately notify the Owner, Construction Manager and Architect. The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a Hazardous Material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred. If any member of the Construction Team encounters on the Project site material, which it believes is a Hazardous Material in any form (other than Permitted Materials being used in an appropriate manner or asbestos, asbestos containing materials or polychlorinated biphenyl (PCBs) which have been rendered harmless), the Contractor shall (i) immediately stop work in the area affected, (ii) report the condition to the Owner, Construction Manager and Architect as expeditiously as possible, and (iii) clear all persons from the area of exposure. The Work

in the affected area shall not be resumed until the Hazardous Material has been removed or rendered harmless as evidenced by written agreement of the Owner and the Contractor. The term "rendered harmless" shall be interpreted to mean that the levels are less than any applicable exposure standards set forth in OSHA/MIOSHA regulations and all Applicable Laws or the Hazardous Material is containerized for purposes of removal from the Project Site, in compliance with Applicable Laws. In no event, however, shall the Owner have any responsibility for any substance or material that is brought to the Project Site by any member of the Construction Team. No member of the Construction Team shall bring any off-site materials or soil on the Project Site to use as fill that are not compliance with and accompanied by a Uncontaminated Soil Certification by a licensed professional engineer or geologist or, in the case of aggregate stone, a receipt from the originating quarry.

§ 10.3.7 The Contractor shall work with asbestos or PCB or other Hazardous Material, except as provided for under the Work and in compliance with all Applicable Laws, including, but not limited to, employee protection, licensing, and training. In such a circumstance, the Contractor shall comply with all Applicable Laws, shall be fully responsible for any non-compliance with all Applicable Laws, and decreasing obligations otherwise stated in Section 10.3, shall indemnify, defend and hold harmless the Owner for any and all claims arising from the Contractor's or Construction Team's failure to so comply with an Applicable Law.

§ 10.3.8 The Contractor shall take care to minimize the use of any Hazardous Materials to the extent consistent with the orderly conduct of the Work. To the maximum extent practical, the Contractor shall cause Permitted Materials which contain Hazardous Materials (and any explosive materials which are not Hazardous Materials) to be stored off the Project Site and off Owner's premises. Except for Permitted Materials, all Hazardous Materials used, stored or generated at the Project Site by the Construction Team shall be used, stored, transported and disposed of in strict (not substantial) conformity with Applicable Laws and the Contractor shall maintain -- and provide promptly to Owner upon demand -- appropriate and complete documentation evidencing the Contractor's compliance with all such laws, codes, rules, regulations, guidelines and orders. The term "Permitted Materials" as used in the Contract Documents shall mean materials that are general supplies and equipment that have a hazardous or potentially hazardous nature and are or will be used for their intended purpose and which do not pose any significant threat of contamination to the Project Site or neighboring properties). The Contractor shall not permit inclusion of asbestos, polychlorinated biphenyls or urea formaldehyde in any construction materials (www.epa.gov/iaq/schooldesign/construction.html) The Contractor shall be responsible for the removal and cleanup of all Hazardous Materials and wastes brought to the Project Site or generated at the Project site by any member of the Construction Team.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

§ 10.5 Security

§ 10.5.1 All members of the Construction Team shall cooperate with the Owner's security personnel and shall comply with all of the Owner's security requirements. Such requirements shall include, without limitation, if requested by the Owner, delivering to the Owner's security personnel, prior to the commencement of the Work on each day, a list of all personnel who will be permitted access to the Work. The foregoing, however, shall not relieve the Contractor of any obligation to provide a safe and secure workplace for all parties entering the Project site.

- .1 The Construction Manager and Contractors shall be responsible for providing Project site security to the extent necessary to safeguard the building, tools, materials, and completed Work. The Construction Manager and Contractor's written plan for Project Site security shall be submitted to the Owner for approval within twenty (20) days of the execution of the Agreement.
- .2 The entrances to the Project site will remain open during normal working hours for the use of all members of the Construction Team. Prior to and after normal working hours, all entrances and exits will be closed and secured by the Contractor. The Contractor shall provide to the Owner copies of keys (2 each) for all doors and gates secured.

§ 10.5.2 The Owner reserves the right to bar access to any individual for reasonable security reasons. Furthermore, the Owner reserves the right to limit the location of entries to the Work which may be used by members of the Construction Team.

§ 10.6 Dust; Smoke; Fume

§ 10.6.1 The Contractor shall cause each member of the Construction Team to conduct operations in such a manner, which will control blowing dust. The amount of dust resulting from the operations of each of the Construction Team shall be controlled to prevent the spread of dust to adjacent public and private properties, to avoid creation of a nuisance in the surrounding area, and to avoid violation of any Applicable Law. Temporary methods consisting of sprinkling or similar methods will be permitted to control dust. Use of water will not be permitted when it will result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution. Dust control shall be performed as the Work proceeds and whenever a dust or nuisance or hazard occurs.

§ 10.6.2 Smoke pipes, exhausts and fumes from boilers, engines, or other devices, shall in all cases be extended above roofs of buildings, or a substitute arrangement made subject to approval of the Architect and the Owner.

§ 10.6.3 The Contractor shall enforce the Architect's or the Owner's instructions regarding signs, advertisements, fires and smoking. No smoking will be permitted.

§ 10.7 Fire Precautions

§ 10.7.1 All members of the Construction Team shall take all necessary precautions to guard against and eliminate all possible fire hazards and to prevent fire damage to any construction Work, building materials, equipment, temporary field offices, storage sheds, and all other property, both public and private. The members of the Construction Team shall comply with all conditions and requirements set forth herein, and shall immediately correct any hazardous conditions resulting from their operations when brought to their attention.

- .1 Materials and/or equipment stored in cardboard cartons, wood crates, or other combustible containers, shall be stored in an orderly manner and shall be readily accessible.
- .2 Before starting Work, the Contractor shall consult with the Owner, Construction Manager and Architect regarding established rules and regulations relative to fire protection requirements and procedures governing any welding and cutting operations. The Contractor shall strictly (not substantially) conform and shall cause all members of the Construction Team to strictly (not substantially) conform with such rules and regulations in carrying out the Work. No such operations shall be carried out without proper safeguards for fire safety.
- .3 No open fires will be permitted. No tar or other melting kettles will be allowed within fifty (50) feet of any building.
- .4 All tarpaulins used during the course of the Work shall be of flameproof type and shall be secured in place against damage or flapping from wind.
- .5 All oil soaked rags, papers and other similar combustible material shall be removed from any building at the close of each day's Work, or more often if necessary, and placed in metal containers with self-closing lids.
- .6 Gasoline, benzene or like combustible material shall not be poured into sewers, manholes, or traps, but shall be containerized on-site and disposed of off-site, together with all flammable or waste material subject to spontaneous combustion, in compliance with Applicable Laws and in a manner to avoid hazard or damage to persons or property.
- .7 All heating devices in connection with temporary heating facilities shall be of the least hazardous type, shall have all proper safety provisions and shall be installed at such locations and in such manner as will minimize the hazard. Oil fired stoves, gas fired heaters and heating units shall be of types approved by Underwriters Laboratories and shall have proper safety combustion controls. Oil fired heaters shall have integral fuel tanks not to exceed fifteen (15) gallons capacity for each unit. No more than one (1) day's supply of fuel shall be permitted to each heater which are inside of any building or facility.
- .8 Temporary heating facilities shall be inspected regularly to assure that they are in a safe and proper operating condition at all times. The Contractor shall provide continuously during operation properly trained personnel for said inspections.
- .9 Temporary structures of combustible construction shall not be placed inside of any structure. Such temporary structures shall be detached at a sufficiently safe distance from any building. Totally non-combustible temporary structures may, if necessary and feasible, be located inside of the structure.
- .10 Heaters and/or stoves installed in field offices or storage structures shall have fire resistant material underneath and at all sides, partitions and walls. Pipe sleeves shall be used where stove pipes run through walls or roof.

§ 10.7.2 The Contractor shall provide necessary personnel and firefighting equipment to effectively control fires resulting from welding, flame cutting, or other operations involving the use of flame, sparks, or sparking devices.

During such operations, all highly combustible or flammable materials shall be removed from the immediate working area. If removal is impossible the same shall be protected with fire blankets or suitable non-combustible shields.

§ 10.7.3 Not more than one day's supply of flammable liquids or gases, such as oil, gasoline, solvent, propane, or roofing materials, shall be brought into any building at any one time. All flammable liquids having a flash point of 110 degrees F, or below, which must be brought into any building, shall be confined to Underwriters Laboratories labeled safety cans. The bulk supply of any flammable liquid shall be stored at a sufficiently safe distance from any building and from yard storage of building materials. Spigots on drums containing flammable liquids are prohibited on the Project site. Drums are to be equipped with approved vented pumps. The Contractor shall have a Spill Prevention, Control, and Countermeasure Plan ("SPCC"), all members of the Construction Team shall be trained with respect to the SPCC, and the SPCC shall provide for response materials to be available in all locations where Hazardous Materials that are brought to the Project Site by any member of the Construction Team are located, used, or stored.

§ 10.7.4 Only a reasonable working supply of flammable building materials shall be located inside of or on the roof of any building.

§ 10.8 Fire Protection

§ 10.8.1 The Contractor shall maintain free access to the building areas for firefighting equipment and shall at no time block off main roadways or fire aisles without providing adequate auxiliary roadways and means of entrance for firefighting equipment, including heavy fire department trucks, where applicable.

§ 10.8.2 The Contractor shall at all times cooperate with the Owner and keep the municipal fire department informed of the means of entrance and changes to roadways or fire aisles as needed to provide fire department access to or around to Project site.

§ 10.8.3 The Contractor shall, during the entire construction period and until the completion of the Work, provide and maintain all material, equipment and services necessary for adequate fire protection, which shall meet the approval of the Owner and/or the Architect. The system shall, at a minimum, meet the requirements set forth in the Contract Documents and of Applicable Laws. These requirements shall be augmented and/or the installations relocated, as may be necessary to meet, at all times, the demands of adequate protection in all areas and shall not be reduced prior to the completion of the Work without the written approval of the Owner and/or the Architect.

§ 10.8.4 The Contractor shall maintain during construction an appropriate number of fire extinguishers to meet Factory Mutual (FM) requirements. Fire extinguishers shall be in good working order, conveniently located, clearly visible and readily accessible for proper protection of the Work.

§ 10.8.5 Fire extinguishers shall be an approved type, equivalent to 2-1/2 gallon water pressurized, suitable for the hazards to be encountered. In areas of flammable liquid, asphalt, or electrical hazards, fire extinguishers shall be equivalent to the carbon dioxide type or dry chemical type. During freezing weather, extinguishers shall be enclosed in heated cabinets or be of an antifreeze type.

§ 10.8.6 All other parties with temporary structures on the Project site shall provide and maintain fire extinguishers in each of such structures.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain, at its sole cost and expense, insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain, at its sole cost and expense, the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located and which has/have an A.M. Best's Rating of "A" or better, such insurance as required by the Contractor under the Contract. Unless otherwise required by the Contract, said insurance shall protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by any member of the Construction Team or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations;
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18;
- .9 Liability insurance shall include all major divisions of coverage and e on a comprehensive basis including:
- Premises' Operations (deleting X, C, or U exclusions);
 - Owner's and Contractor's Protective;
 - Products and Completion Operations;
 - Contractual – including specific for the Contractor's obligations under Section 3.18;
 - Any auto; and
 - Broad Form Property Damage, including Completed Operations; and
- .10 All Bonds required by law, including bid bond, performance bond and payment bond. The Owner, Construction Manager and Construction Manager's consultants, and the Architect and Architect's consultants, shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.
- .11 The following insurance shall be maintained by each Contractor for the duration of this Agreement.
- .1 Comprehensive General Liability with policy limits of not less than One Million Dollars (\$1,000,000) for each occurrence and Two Million Dollars (\$2,000,000) in the aggregate for bodily injury and property damage.
 - .2 Automobile Liability covering owned and rented vehicles operated by the Contractor with policy limits of not less than One Million Dollars (\$1,000,000) combined single limit and One Million Dollars (\$1,000,000) aggregate for bodily injury and property damage.
 - .3 Umbrella or excess liability insurance to achieve the required coverage for Comprehensive General Liability and Automobile Liability, provided that such umbrella or excess insurance results in the same type of coverage as required for the individual policies. The Contractor shall provide umbrella coverage with a policy limit of not less than Two Million Dollars (\$2,000,000).
 - .4 Workers' Compensation at statutory limits and Employers Liability with a policy limit of not less than Five Hundred Thousand Dollars (\$500,000).
 - .5 A Pollution liability insurance policy providing One Million Dollars (\$1,000,000) per job site pollution event and One Million Dollars (\$1,000,000.00) policy aggregate. Coverage may be provided on a "Claims made" or "occurrence" basis. However, if "Claims made" Contractor must agree to keep coverage in force for five (5) years after Project completion or until the statute of limitation runs, whichever is longer. This requirement applies to the Contractors which have fueled equipment onsite for operations such as sitework, excavation, foundations, flatwork, masonry, steel erection, roofing, mechanical and electrical.

Contractors shall provide the insurance indicted above or an amount equal to 20% of the Contract Sum, whichever is greater, for General Liability and Excess Umbrella Liability

§ 11.1.2 ~~The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located~~Reserved.

§ 11.1.3 The Owner, the Owner's Consultants; the Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the

Contract Documents for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations. Such coverages shall be primary and non-contributory. Such Certificates of Insurance shall be endorsed to specifically name the additional insureds. Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Certificates of insurance acceptable to the Owner shall be submitted by Contractor to the Construction Manager for transmittal to the Owner with a copy to the Architect prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. Owner shall be named as an additional insured. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled, reduced or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.5. Information concerning reduction of coverage shall be furnished by the Contractor with reasonable promptness, but not less than thirty (30) days prior to any reduction in coverage. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice directly to the Owner, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.1.5 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract or other Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.6 The Contractor's liability and indemnification obligations to the Owner under the Agreement shall not be relieved or diminished by securing insurance coverage in accordance with the Owner's requirements or by the Owner's acceptance of certificates of insurance or policies. Any acceptance of insurance coverage by the Owner shall not be construed as accepting in any way deficiencies in the insurance.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance. The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform both the Contractor and the Construction Manager, separately and in writing, prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and

the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice directly to the Contractor, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Construction Manager and Construction Manager's consultants; (3) the Architect and Architect's consultants; (4) other Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (5) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Construction Manager, Construction Manager's consultants, Architect, Architect's consultants, other Contractors, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property. Reserved.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance. Reserved.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor, Architect, and Construction Manager for loss of use of the Owner's property, due to fire or other hazards however caused. If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the Contractor, Subcontractors and suppliers insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Construction Manager, Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Construction Manager, Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work Reserved.

§ 11.6 Performance Bond and Payment Bonds

§ 11.6.1 The Owner shall have the right to require the Contractor to furnish separate Performance and Labor and Material Payment Bonds covering faithful performance of the Agreement and payment of obligations arising thereunder each in the penal sum of 100% of the Contract Sum and in accordance with Applicable Laws as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.6.1.1 Bonds shall be executed by a responsible surety licensed in the state where the Work is located with a Best's rating of not less than A, XII or better and shall remain in effect for a period not less than two (2) years following the later of (1) the date of Substantial Completion or (2) the time required to resolve any items of incomplete Work and the payment of any disputed amount or expiration of the Warranty under the Contract.

§ 11.6.1.2 Bonds under this Section 11.6 must display the surety's bond number. A rider including substantially the following provisions shall be attached to each bond:

- .1 Surety hereby agrees that it consents to and waives notice of any addition, alteration, omission, change, or other modification of the Contract Documents, the Subcontracts and the Sub-Subcontracts, any addition, alteration, change, extension of time, or other modification of the Contract Documents, the Subcontractors and the Sub-Subcontracts. Any addition, alteration, change, extension of time, or other modification of the Contract Documents, the Subcontracts or the Sub-Subcontracts, or a forbearance on the part of either the Owner, the Contractor or one or more Subcontractors to one or more of the other, shall not release the surety of its obligations and notice to the surety of such matters is hereby waived.
- .2 Surety agrees that it is obligated under the bonds to any successor, grantee or assignee of the Owner or the Contractor.

§ 11.6.1.3 Each Subcontractor's surety shall also agree, in the form of a rider to each bond or via a separate agreement, that before it may seek exoneration, release or any kind of relief from its obligations under the bond as a result of any default by the Owner or the Contractor in the performance of any obligations to the Subcontractor under the Subcontract, the surety shall cause written notice of such default (specifying said default in detail) to be given to the Owner and the Contractor, and both of them shall have thirty (30) days from time after receipt of such notice within which to cure such default or cause it to be cured, or such additional reasonable period of time as may be required if the nature of such default is such that it cannot be cured immediately. Such Notice of Default shall be sent by certified or registered U.S. Mail, return receipt requested, first class postage prepaid, to the Owner and the Contractor.

§ 11.6.1.4 Each Subcontractor's Performance Bond and the Labor and Material Payment Bond shall each be "dual obligee" type bonds naming both the Owner and the Contractor as obligees.

§ 11.6.1.5 Each Subcontractor shall cause the attorney-in-fact who executes the required bonds on behalf of its surety to affix thereto a certified and current copy of his or her power of attorney indicating the monetary limit of such power.

§ 11.6.1.6 Upon the request of any person or entity appearing to be potential beneficiary of bonds covering payment of obligations arising under the Contract or any Subcontract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

§ 11.6.1.7 The Contractor shall keep the surety informed of the progress of the Work, and, without limiting the requirements of Section 11.6.1.2 (1) above, where necessary, obtain the surety's consent to, or waiver of: (1) notice of changes in the work; (2) request for reduction or release of retainage; (3) request for final payment; and (4) any other material required by the surety. The Owner shall be notified by the Contractor, in writing, of all communications with the surety requesting or pertaining to consents or waivers. The Owner may, in the Owner's sole discretion, inform sureties of the progress of the Work and obtain consents as necessary to protect the Owner's rights, interest, privileges and benefits pursuant to any bond issued in connection with the Work.

§ 11.6.1.8 The Contractor may, in its discretion, determine other members of the Construction Team who will be required to supply bonds. All such bonds shall be (1) purchased solely at the expense of the Contractor (or the persons supplying them), without reimbursement under the Contract Sum or otherwise, and (2) dual obligee bonds, naming the Owner as one of the Obligees.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Construction Manager's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their examination and be replaced at the Contractor's sole cost and expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Construction Manager or Architect has not specifically requested to examine prior to its being covered, the Construction Manager or Architect may request with the Owner's written consent to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at Owner's expense the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion, and whether or not fabricated, installed or completed, to be corrected without extension of the Contract Time or increase in the Contract Sum and without use of any contingency. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby the Contractor shall pay them promptly upon demand; shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within two (2) one years after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall without interfering with Owner's facilities, personnel or operations correct it promptly after receipt of written notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, Construction Manager or Architect, the Owner may correct it in accordance with Section 2.5. This obligation shall survive the termination of the Contract.

§ 12.2.2.2 The ~~one~~two-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The ~~one~~two-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the Project site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Separate Contractors, or other Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the ~~two~~one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.2.6 Each Contractor shall guarantee work for two (2) years, except where a longer guarantee period is stipulated in the Contract Documents, from the date of Substantial Completion of the Project. No provisions of the Contract Documents nor the Final Certificate for Payment shall relieve the Contractor of responsibility for satisfactory material or workmanship within the period described above. It shall be the Contractors responsibility to remedy any faulty material or workmanship and any damage to other work by removing and replacing same without any extra charge whatsoever.

§ 12.2.7 Unless the Owner authorizes otherwise, Substantial Completion shall not commence the Correction Period for any equipment or systems that:

- .1 Are not fully operational (equipment or systems shall not be considered fully operational if they are intended to provide service to any portion of the building which the Owner has not accepted as substantially complete); or
- .2 Are not accepted by the Owner.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents or otherwise defective, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced ~~as appropriate and by the~~ equitable amount which reflects the loss of value to the Owner caused by such Defective Work. Such adjustment shall be effected whether or not final payment has been made, but if it occurs after final payment is made, the Contractor shall pay the Owner whatever sum is owed upon demand. If, within one (2) years after the date of (i) Substantial Completion and acceptance of the Work or any designated portion thereof or (ii) the completion of Work not finished at Substantial Completion, or within the terms of an applicable special warranty required by the Contract Documents (the "Correction Period"), any of the Work is found by the Owner to be defective, the Contractor shall, without interfering with the Owner's facilities, personnel or operations, promptly cause it to be corrected, unless the Owner has previously specifically accepted such defect in writing. The Contractor shall bear all costs of correcting rejected Work, without increase in the Cost, including any additional testing and inspections made necessary thereby. These obligations shall apply regardless of whether such Work has been fabricated, installed, or completed and shall survive acceptance of the Work and termination of the Agreement.

§ 12.4 Owner's Right to Correct or Remove Defective Work

§ 12.4.1 If the Contractor fails to cause defective Work to be corrected within a reasonable time after receipt of notice from the Owner, the Owner may correct it and the Contractor shall pay the Owner all costs of correction (including the value of the Owner's staff time) upon demand. Alternatively, in the event of such failure, the Owner may (without being deemed a bailee) remove it and store the salvable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten (10) days after written notice,

the Owner may upon ten (10) additional days' written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting from the sale proceeds all costs, expenses and damages that should have been borne by the Contractor (including the value of the Owner's staff time and reasonable attorneys' fees). If the proceeds of sale do not cover costs which the Contractor should have borne, the Contract Sum shall be reduced by the deficiency, plus interest. If payments then or thereafter due the Contractor are not sufficient to cover the amount owed, the Contractor shall pay the difference to the Owner immediately upon demand.

§ 12.4.2 The Owner's right to store and sell such defective Work shall not give rise to a duty to do so. Instead, the Owner may upon ten (10) day's prior written notice simply dispose of such defective Work as it sees fit. All costs of disposal shall be borne by the Contractor, without recovery from the Owner, under the Contract Sum, any contingency or otherwise.

§ 12.4.3 Tests. If tests or inspections reveal that portions of the Work are Defective, any additional tests or inspections required to assure the Architect and the Owner that the defective Work has been remedied or is in an acceptable condition shall be conducted at the expense of the Contractor, without increase in the Contract Sum, and without use of any contingency. The Contractor shall pay all additional costs of the Architect and the Owner, which are associated with such additional tests or inspections.

§ 12.4.4 Periods of Limitation. Nothing contained in this Article 12 shall be construed to establish a period of limitation with respect to other obligations, which the Contractor might have under the Contract Documents or Applicable Laws. Establishment of the Correction Period relates only to the specific obligation of the Contractor to correct the Work under this Article 12 and has no relationship to the time within which the obligation to comply with the Contract may be sought to be enforced by the Owner, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to its obligations under the Contract.

§ 12.4.5 The Owner's Right to Stop the Work. If the Contractor fails to correct Work, which is not in accordance with the requirements of the Contract Documents as required by Section 12.2.2 or fails to carry out the Work in accordance with the Contract Documents, the Owner may, by written order, direct the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

§12.5 Damage

§ 12.5.1 If prior to the date of Final Completion any member of the Construction Team uses or damages any portion of the Work or other property, including, without limitation, mechanical, electrical, plumbing and other building systems, machinery, equipment or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner, without recovery from the Owner, under the Contract Sum, any contingency or otherwise.

§ 12.5.2 The Contractor shall bear the cost of correcting destroyed or damaged construction or other property, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

§ 12.5.3 Nothing in this Section 12.5 either limits the parties' rights to obtain recovery from any applicable property insurance or entitles the insurer to pursue a subrogation claim.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located excluding that jurisdiction's choice of law rules. ~~If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.~~

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.32 neither party to the Contract shall assign the Contract as a whole or in part without written

consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 ~~The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.~~Reserved.

§ 13.2.3 The Contractor shall not assign the whole or any part of the Agreement, or any monies due or to become due, without the express written consent of the Owner. If the Contractor, with the Owner's consent, assigns all or any part of the Agreement or any monies due or to become due, the instrument of assignment shall contain a clause satisfactory to the Owner and stating that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to the prior claims of all persons, firms and corporations for services rendered or materials supplied for the performance of the Work called for in the Agreement.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Construction Manager, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by ~~applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities.~~ Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Construction Manager and Architect timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Construction Manager, Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Construction Manager and Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents or Applicable Law, all costs made necessary by such failure, including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses, shall be at the Contractor's expense without increase in the Contract Sum and without use of any contingency.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.4.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid ~~unreasonable~~ delay in the Work.

§ 13.5 ~~Interest~~Reserved

~~Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.~~

§ 13.6 Written Notice

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by national overnight courier service providing a tracking system and proof of delivery to, the last business address known to the party giving notice. Wherever the Contract Documents require the Contractor to give "Notice" or "Timely Notice" to the Architect, Public Authority, and/or others, it shall be the Contractor's responsibility to furnish all such notices sufficiently in advance to allow the party receiving the notice reasonable time to react to such notice, including travel time on the job site as necessary, when such notices require the on-site presence of the Architect, Public Authority, their authorized representatives, or others for field observation of inspections, testing or approvals. Reasonable time shall be defined as no less than 24 hours plus normal travel time from the home office of the party being notified to the job site and must also accommodate known, standard, or reasonable processing periods.

§ 13.7 Surety Notice and Prior Approval

Except where otherwise expressly required by the terms of the Agreement, the Contract Documents or the General Conditions, exercise by the Owner of any contractual or legal right or remedy without prior notice to or approval by the Contractor's surety shall in no way bar or prohibit the Owner's ability to pursue such right or remedy. Further, pursuit of such a right or remedy without prior notice to or approval of surety shall in no way compromise, limit or bar any claim by the Owner against a surety bond of the Contractor.

§ 13.8 Owner Policies

The Contractor agrees to follow the Owner's policies and procedures in regards to working in and around school facilities. The policies are all available on the Owner's Website. The Owner reserves the right to remove individuals from the Project sites who do not strictly comply.

§ 13.9 The Contractor acknowledges that it has certified to the Owner that no owner, employee, agent, representative, contractor and/or other personnel of the Contractor will be on any School District premises if they are a registered criminal sexual offender under the Sex Offenders Registration Act, Public Act 295 of 1994, or have been convicted of "Listed Offense" as defined under Section 722 of the Sex Offenders Registration Act, MCL 28.722 (the "Certification"). The Contractor acknowledges and agrees that if it is found to have submitted a false Certification or otherwise breaches or fails to comply with the requirements of the Certification, the Owner may immediately terminate the Contract and notwithstanding any other provision of this Contract, the Contractor shall be liable to the Owner for any and all costs and expenses incurred by the Owner to secure a replacement contractor to complete the Work in accordance with the Contract Documents, including, but not limited to, any costs or expenses required to be paid by the Owner to the replacement contractor in addition to those required to be paid to the Contractor, all attorney and/or professional service fees, and any and all other actual and consequential damages incurred by the Owner.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of ~~30-120~~ consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped; ;
- .3 Because ~~the Construction Manager has not certified or the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in~~

~~Section 9.4, or because~~ the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents subject to justifiable withholding of payment as described herein or;
or

- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon ~~seven~~ 30 days' notice to the Owner, Construction Manager and Architect, terminate the Contract ~~and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.~~ Upon termination by the Contractor, the Owner will pay to the Contractor for Work properly executed as of the date of termination by the Contractor and subject to negotiation by both parties. Such payment will be the sole and exclusive remedy to which the Contractor is entitled in the event of termination of the Agreement by the Contractor pursuant to Section 14.1; and the Contractor will be entitled to no other compensation or damages whatsoever as a result of the termination of the Agreement and expressly waives any right to claim them.

§ 14.1.4 ~~If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees, or any other persons performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.~~ Reserved.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 ~~repeatedly~~ refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 ~~repeatedly~~ disregards ~~applicable~~ Applicable ~~laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or~~
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents; ~~or~~
- .5 the Contractor fails to prosecute the Work or any part thereof with promptness and diligence or fails to perform any provisions of this Contract, or goes into bankruptcy, liquidation, makes an assignment for the benefit of creditors, enters into a composition with its creditors, or becomes insolvent.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, ~~after consultation with the Construction Manager, and upon certification by the Architect that sufficient cause exists to justify such action,~~ the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven (7) days' written notice, terminate ~~employment of the Contractor's right to proceed with the Work, or such part of the Work as to which such defaults have occurred,~~ and may, subject to any prior rights of the surety take any one or more of the following actions:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

In the event the Contractor's surety bond requires notice of intent to declare a default of the Contractor and if such bond notice is provided by the Owner, such notice shall be adequate to satisfy the three (3) day written notice described above in this section.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, and other damages incurred by the Owner in pursuing termination and completion of the Work, including actual attorney and legal fees and costs and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall, upon application, be certified by the Initial Decision Maker after consultation with the Construction Manager, and this obligation for payment shall survive termination of the Contract.

§ 14.2.5 If the Owner erroneously or improperly terminates the Contractor for cause, then the Owner's action shall be deemed to be a termination for convenience, subject to the provisions of Section 14.4.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and the Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of this Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate, in whole or in part, the Contract for the Owner's convenience and without cause. Termination by the Owner under this Section shall be by a written notice of termination delivered to the Contractor specifying the extent of termination and the effective date.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall immediately, in accordance with instructions from the Owner, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Section:

- .1 cease operations as directed by the Owner in the notice and deliver to the Owner the originals or legible copies of all Drawings, Specifications, reports and other data, records and materials in the Construction Manager's custody and control pertaining to the portion of the Work for which the employment of the Contractor was terminated;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed as of the date of termination by the Owner and subject to negotiation by both parties; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 **Definition.** A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, including but not limited to, additional sums, additional time for performance, or damages for delay, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action, in accordance with Michigan law regardless of the timeframes identified herein, against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than ten (10) years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.2.1 Regardless of any provisions to the contrary, the statute of limitations with respect to any defective or nonconforming Work which is not discovered by the Owner shall not commence until the discovery of such defective or nonconforming Work by the Owner.

§ 15.1.3 Notice of Claims

~~§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Construction Manager and Architect, if the Architect is not serving as the Initial Decision Maker.~~ Claims by either party under this Section 15.1.3.1 shall be initiated within twenty-one (21) days after occurrence of the event giving rise to such Claim or within twenty-one (21) days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

~~§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.~~Reserved.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

~~§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15.~~ The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker Architect.

§ 15.1.5 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Failure to provide such notice shall serve as an absolute bar against a claim for such an increase in the Contract Sum. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude ~~assessment-an award~~ of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

~~§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker Architect for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation-litigation or any mutually agreed upon dispute resolution forum of any Claim. If an initial decision has not been rendered within thirty (30) days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.~~

§ 15.2.2 The Initial Decision Maker will review Claims and within ten (10) days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten (10) days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties, the Construction Manager, and the Architect, ~~if the Architect is not serving as the Initial Decision Maker~~, of any change in the Contract Sum or Contract Time or both. ~~The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.~~

~~§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1 Reserved.~~

~~§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days of receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision Reserved.~~

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 ~~If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines~~Reserved.

§ 15.3 ~~Mediation~~Alternative Dispute Resolution

§ 15.3.1 ~~Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in elsewhere herein shall be subject to non-binding Alternative Dispute Resolution as a condition precedent to binding dispute resolution. On those occasions when a dispute arises between the parties to this Agreement, the parties shall be compelled to seek an alternative means of resolving the dispute as a condition precedent to litigation. Therefore, the parties agree to the following terms and conditions of Sections 15.3.1.1 through 15.3.1.7 below~~Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.1.12 ~~The party bringing a claim shall give notice to the other party and, in writing, propose a meeting within seven (7) days after the claim arises in which to discuss and attempt to resolve the claim. The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.~~

§ 15.3.1.23 ~~In the event the meeting between the parties to resolve the claim does not resolve the dispute or does not take place within said seven (7) day period, the parties shall designate, by mutual agreement, an independent mediator who shall convene a meeting of the parties within a period of fourteen (14) days of the later of the initial meeting between the parties or the date notice was given pursuant to the Section above. The mediator shall render his/her decision within seven (7) days of said meeting. Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.~~

§ 15.3.1.34 ~~The purpose of the mediation is to attempt to resolve the dispute between the parties. The mediator shall not be empowered with the authority to render a binding opinion or award. The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.~~

§ 15.3.1.4 ~~In the event the independent mediator's attempt to resolve the dispute between the parties fails, then each party will be free to pursue recovery of claims at law.~~

§ 15.3.1.5 ~~During the pendency of this alternative dispute resolution process, the parties agree that the statute(s) of limitations applicable to all claims that are the subject of this process shall be tolled.~~

§ 15.3.1.6 ~~Should a party's claim also concern claims against or by Architect and/or Construction Manager, then Owner may include Architect and/or Construction Manager in the alternative dispute resolution process, including mediation.~~

§ 15.3.1.7 Contractor shall continue providing all Work during any dispute, including during the alternative dispute resolution process.

§ 15.4 Arbitration Reserved

~~§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.~~

~~§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.~~

~~§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.~~

~~§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.~~

§ 15.4.4 Consolidation or Joinder

~~§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).~~

~~§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.~~

~~§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.~~

[End of AIA A232-2019 General Conditions of the Contract for Construction]

**SECTION 007100
CONTRACTING DEFINITIONS**

PART 1 GENERAL

1.01 DEFINITIONS - TIME PERIODS AND MILESTONE DATES

- A. Construction: The time period from the beginning of work on the project site until substantial completion as defined by the Conditions of the Contract.
- B. Substantial Completion: The date as defined in the Conditions of the Contract. Date of Substantial Completion is the due date for the following:
 - 1. Barton Malow Builders Punch List items have been completed and accepted.
 - 2. Architect/Engineer Punch List and Commissioning items have been completed and accepted.
 - 3. Owner's punch list of items have been completed and accepted.
 - 4. Compliance with requirements of governing authorities, for submittals, inspections, and permit finals.
 - 5. Compliance with Owner's requirements for access to areas occupied by the Owner.
- C. Closeout: The time period during which all details of both construction and commissioning are completed.
 - 1. The Closeout period is the time from Date of Substantial Completion until final payment, both as defined by the Conditions of the Contract.
 - 2. Before and during the Closeout period, the Owner, Architect/Engineer, and Barton Malow Builders will ascertain whether the completed project complies with Contract Documents.
- D. Occupancy: The time period during which the project is occupied for its intended purpose.
 - 1. The Occupancy period begins at Date of Substantial Completion, as defined by the Conditions of the Contract.
- E. Correction Period: The time period defined by the Conditions of the Contract.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 007100

**SECTION 007200
GENERAL CONDITIONS**

FORM OF GENERAL CONDITIONS

1.01 RELATED DOCUMENTS

- A. All Bidders shall review all of the Bidding Documents, all Bid Category Work descriptions, and all Contract Documents, immediately advise Barton Malow Builders of any adverse factors, conflicts or ambiguities that might affect the execution of Work of this Bid Package. Each Bidder is responsible to review all Bid Category descriptions and Contract Documents and coordinate the Work accordingly. Each Bidder shall incorporate into its Bid Proposal the cost of coordination of the Work with the requirements of all related Contract Documents, as shown, specified, or required.
- B. A complete set of reference documents, geotechnical reports, hazard surveys, and separate bid package documents are available in the Barton Malow Builders cloud-based file storage system, Box.

1.02 PROVISIONS

- A. The following provisions form a part of each Bid Category Work Scope and apply to each Contractor's Scope of Work.
- B. Information pertaining to the existing building has been obtained through photographs and investigations and is indicated on the Project Drawings. This information is not warranted to be complete or accurate. Contractor shall verify all dimensions in the field prior to ordering materials or construction and any costs or expenses arising out of its failure to do so shall be borne solely by Contractor.
- C. All costs for agency permits, disposal, demurrage, freight charges, roadway escorts, and trucking or tipping fees associated with this Contractor's work shall be included.
- D. Contractor shall be responsible for any transport, handling, loading, unloading and conveying of all materials required by this Contractor.
- E. All Contractors must include all cutting, drilling, punching and reaming required for the completion of their scope of work. Contractors must perform rebar scanning for all slab cuts and core drilling larger than 3" for review by EOR.
- F. Contractor shall include penetrations and reinforcing of penetrations, identified and located on returned shop drawings in accordance with the Contract Documents.
- G. All work under Contractor's Scope of Work shall comply with proper trade jurisdictions, even if it is necessary to assemble composite crews or subcontract to appropriate trades.
- H. Special Safety provisions:
 - 1. Refer to the Barton Malow Builders Safety Manual or specific safety requirements for this project such as:
 - 2. Mandatory safety orientation (approximately 1 hour) & post-accident drug screens.
 - 3. Fall protection requirements - At or above six feet warrants tie-off.
 - 4. Daily pre-task documented safety meetings.
 - 5. OSHA 30 hour course required for designated safety representatives.

1.03 COORDINATION

- A. All Contractor's are to coordinate all Work with the work of other trades for proper function and sequence. Contractor must furnish approved copies of shop drawings, templates, mock-ups, and technical data to other contractors designated by Barton Malow Builders for the purposes of coordination of this Work.
- B. Each phase of the Work shall be coordinated, and the coordination plan approved by Barton Malow Builders prior to proceeding. Contractor shall keep informed as to Work of all trades engaged in the Project, and shall execute Work in such a manner as not to delay or interfere with the progress of other trades involved.

- C. Contractor is required to schedule its Work so that no other party is delayed in execution of its work.
- D. Contractor is required to employ competent supervision on the Project throughout the entire period of construction ensure proper coordination and supervision of subcontractors.

1.04 OWNER EQUIPMENT COORDINATION

- A. The Owner Furnished and Contractor Installed (OF/CI) equipment as listed in the contract documents and/or work scopes, shows the Contractor responsible to schedule delivery, receive the equipment and accessories F.O.B. to the jobsite, inspect, protect, store, handle and move into position, provide all coordination with applicable trades for rough-in requirements and final connections, marshal the appropriate trades as a composite installation crew, and assist in initial startup.
- B. Refer to the Drawings to determine quantities.
- C. Each piece of equipment provided by the Owner will include a cut sheet, reference information or drawing, indicating the specific rough-in, backing, sized and final connection information for use by the Contractors. Furthermore, the Owner will arrange with its vendor/manufacture of new equipment to have the piece of equipment delivered F.O.B. to the Loading Dock or Jobsite Entrance, clearly marked, identifying the item, location installed, complete itemized bill of shipped material and indicating which Contractor, by category number, it is to be received by.
- D. If indicated on the drawings and Contractors work scopes, some items may require relocation from adjacent locations for integration into the project. Relocation of these items require disconnect, packaging, moving, reinstallation, and reconnecting of equipment. If applicable, Contractor shall also start up relocated equipment.

1.05 OCCUPIED BUILDING COORDINATION

- A. Due to consistent occupancy of the existing building, each Contractor must approach their Work with the safety of the existing building occupants and visitors in mind.
- B. All noisy and vibratory activities which could affect building activities or occupants must be kept to a minimum and scheduled with Barton Malow Builders.
- C. Contractors which perform any noisy or vibratory activities are required to communicate with Barton Malow Builders.
- D. Material and equipment deliveries must also be scheduled as to minimize impacts to building occupants, passersby, and visitors. All deliveries to be coordinated and preapproved by Barton Malow Builders. Any deliveries crossing over active owner occupied areas will require proper safety flaggers. All pathways will be immediately cleaned and restored to existing conditions by the responsible Contractor.
- E. All work must be completely separated from the public access within the building with A.H.J. approved temporary walls or fencing. Contractors are responsible for their own separation walls or temporary fencing not shown on the phasing plan.

RELATED REQUIREMENTS

2.01 SECTION 007300 - SUPPLEMENTARY CONDITIONS.

2.02 SECTION 014216 - DEFINITIONS.

SUPPLEMENTARY CONDITIONS

3.01 REFER TO DOCUMENT 007300 - SUPPLEMENTARY CONDITIONS FOR AMENDMENTS TO THESE GENERAL CONDITIONS.

END OF SECTION 007200

**SECTION 007300
SUPPLEMENTARY CONDITIONS**

PART 1 GENERAL

1.01 SUMMARY

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 007200 - General Conditions and other provisions of Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

1.02 MODIFICATIONS TO GENERAL CONDITIONS

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 007300

**SECTION 011000
USE OF PREMISES**

PART 1 GENERAL

2.01 PROJECT

- A. Project Name: OCC SF25-003 Driving Pad and Storage
- B. Owner's Name: OCC
- C. Architect's Name: IDS
- D. Additional Project contact information is specified in Section 000103 - Project Directory.

2.02 CONTRACT DESCRIPTION

- A. Contract Type: Multiple prime contracts, each based on a Stipulated Price as described in Document 005000 - Contracting Forms and Supplements.

2.03 WORK BY OWNER

2.04 OWNER OCCUPANCY

- A. Owner intends to occupy the Project upon Substantial Completion.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

2.05 CONTRACTOR USE OF PREMISES AND DELIVERIES

- A. All visitors are to check in at Barton Malow Builders's office.
- B. All visitors, Contractors and it's Subordinate Parties must complete QR code self assessment survey prior to entering the project or office.
- C. Contractor and its Subordinate Parties shall be subject to such rules and regulations for conduct of the Work as the Owner or Barton Malow Builders may establish. All employees shall be properly and completely clothed while working. Bare torsos, legs and feet will not be allowed. Possession or consumption of alcoholic beverages or drugs, or other noxious behavior on the site is strictly prohibited. Violators shall be promptly removed from the site.
- D. Before starting the Work, Contractor shall ascertain from Barton Malow Builders what entrances, routes or roadways shall be used for access to the work, and use only those designated for movement of personnel, materials, and vehicles to and from the Project site. Close coordination will be required of Contractor with the Owner, Barton Malow Builders, other trades, the city and others having an interest in the Project to assure that Work on the site, access to and from the site and the general conduct of operations are maintained in a safe and efficient manner and that disruption and inconvenience to existing streets and property are minimized. Contractor is responsible to review the site and be familiar with all existing conditions within and around the Owner's property including local conditions and requirements.
- E. Contractors shall maintain free access to all buildings and areas of the site for designated vehicles, service vehicles, and fire fighting equipment and at no time shall block off or close roadways or fire lanes without providing auxiliary roadways and means of entrance acceptable to the Owner. Fire hydrants must remain accessible at all times. Subcontractors shall give the Owner and the local fire department at least seventy-two (72) hours notice of any such changes of routes.
- F. No staging of trucks on adjacent roads is allowed, unless it is explicitly approved by Barton Malow Builders.
- G. Contractors and their Subordinate Parties will not be allowed to use any Owner tools or equipment during the course of the Project.
- H. Each Contractor shall confine its Work to normal working hours; 7:00 am to 3:30 pm Monday through Friday, or as otherwise notified by Barton Malow Builders. Contractor may execute the

Work during the entire twenty-four (24) hours of any day of the week with the approval of Barton Malow Builders and the Owner, providing that they so conduct their operations as to not create a public nuisance or disturb the peace, and provided such operations are conducted so as to comply with all applicable laws, ordinances, and regulations. Compensation to Barton Malow Builders for supervisory staff due to abnormal working hours will be at the requesting Contractor's expense.

- I. Whenever Contractor intends to depart from normal work hours, it shall notify Barton Malow Builders in writing at least twenty-four (24) hours in advance. Failure of Contractor to give such timely notice may result in Barton Malow Builders directing the removal or uncovering of the Work performed during such abnormal hours and Contractor's expense. Special arrangements can be made for emergency work or shutdowns as may be required.
- J. Use of explosives is not permitted unless approved in advance by the Owner.
- K. Each Contractor on behalf of itself and its Subordinate Parties shall be responsible for all damage to the Project including the existing building and grounds arising or resulting from its operations under the Agreement. Repair or replacement of damaged items shall be to the satisfaction of the Owner and Barton Malow Builders.
- L. Each Contractor shall at all times maintain a clean and safe passageway for the Owner's operations and personnel in existing areas and maintain clearances adjacent to and in connection with the Work performed.
- M. Each Contractor shall effectively confine dust, dirt and noise to the actual construction area and in compliance with all applicable laws, rules and regulations.
- N. All Contractors and tier Subordinate Parties shall restrict all Work activities associated with an area undergoing renovation to within the boundaries indicated by the Contract Documents. Any means of access or egress from the stipulated boundaries shall be coordinated with Barton Malow Builders and the Owner.
- O. Work shall, if required, be constructed in phases to accommodate the Owner's use of the premises during construction and to accommodate installation of equipment. Refer to Section 013216 - Schedule and Phasing of the Project Manual.
- P. All Contractors shall limit their use of the premises for Work and for storage, to allow for:
 - 1. Work by other contractors
 - 2. Owner Occupancy
 - 3. Public use and safety
 - 4. Free use of corridors at all times
- Q. The Owner and Barton Malow Builders expect Contractors and their Subordinate Parties to exercise common sense and good judgment, and to conduct themselves in a manner which would be a credit to the Owner. Without limiting other applicable provisions of the Contract Documents, Contractor shall not engage in the following:
 - 1. Conduct that interferes with Work or work of others.
 - 2. Conduct that interferes with, or is detrimental to good safety and well-being.
 - 3. Unauthorized use of confidential information.
 - 4. Discourtesy toward Owner's staff, visitors, and the general public (including abusive, vulgar or other language).
 - 5. Soliciting
 - 6. Disregard of safety, sanitation, or security laws, rules, and regulations.
 - 7. Conduct detrimental to the Owner's operations and good reputation.
 - 8. Stealing.
 - 9. Gambling.
 - 10. Possession and/or use of narcotics or intoxicants.
 - 11. Threats or abuse of others.
 - 12. Disorderly conduct or fighting.
 - 13. Playing of loud music.

14. Falsification of information.
 15. Unauthorized travel of Contractor's employees outside the designated project Work areas.
 16. Discriminating Behavior.
 17. Sexual or Ethnic harassment.
- R. Willful disregard of the above will be grounds for requiring the offending person(s) to be removed from the Project, and may subject the Contractor to termination under the Agreement.
- S. Each Contractor on behalf of itself and its Subordinate Parties shall not load or permit any part of a structure to be loaded with a weight that will endanger its safety.
- T. Where new temporary partitions are established and located by any Contractor, all existing mechanical, fire protection, plumbing and electrical devices used for life safety purposes shall be relocated by the Contractor installing or relocating same to the new temporary partitions so as to be usable and visible to Owner personnel and activities. Items such as, but not limited to, exit lights, fire protection systems, fire alarm systems, and similar items shall be relocated. In the event that a passageway is blocked or barricaded, visible rerouting directions for traffic flow shall be posted.
1. The Project is under the jurisdiction of the State of Michigan Fire Marshall.
 2. Partition construction shall provide a fire-resistant classification approved by the State Fire Marshal. Openings in such partitions shall be protected by fire doors consistent with the rating of the partition.
- U. The Owner shall have the option to curtail or delay any activity that affects its operations. Should a Contractor be asked to stop its Work, the Contractor shall do so immediately and proceed with other activities with no additional cost to the Owner or Barton Malow Builders. The Owner may occupy the premises during the entire period of construction for the conduct of its normal operations. All Contractors are to cooperate with the Owner and Barton Malow Builders in all construction operations to minimize conflict, and to facilitate Owner usage.
- V. Contractors and their Subordinate Parties are prohibited from canvassing, soliciting, posting, or distributing literature or materials for any purpose while on the job site.
- W. Contractors and their Subordinate Parties shall be responsible for adhering to the smoking policies and regulations of the Owner and the Owner's facilities.
- X. The preservation of existing trees and other vegetation on the site to the maximum extent possible is extremely important. In many cases, trees in close proximity to the site work are to be preserved. Each Contractor must plan its Work and instruct its Subordinate Parties to conduct their operations to avoid damage to trees and vegetation (provide barriers as required). Indiscriminate driving about the site, disposing of waste, storage of materials upon or against trees, or any other activity which is harmful to trees or vegetation that are to be preserved will not be tolerated. Parking areas, storage areas, and access to the buildings will be confined to areas designated and approved by Owner and Barton Malow Builders. Any case of damage to any tree shall be reported to Barton Malow Builders immediately so that professional repairs can be made. The cost of such required repairs or treatment shall be charged to the responsible Contractor. Willful disregard of the above will be grounds for requiring the offending person(s) to be removed from the Project, and may subject the Contractor to termination under the Agreement.
1. Prohibited practices include breaking of branches, scraping of bark, or unauthorized cutting; nailing or bolting into trees or plants; use of trees or plants as temporary support (i.e. for cables); unauthorized filling, excavating, trenching or auguring within the root zone; compaction/driving over the root zone; storage of any material or vehicles within the root zone; dumping of construction waste or materials (including liquids); unauthorized removal or relocation of plants; removal of tree protection barricades or construction fencing prior to completion of project.

2. Compaction within the root zone is the increasing of the soil density caused by heavy equipment or concentrated foot traffic which significantly alters the soil conditions from that which was present prior to construction.
 3. The root zone of a tree is one and a half the distance of plant crown drip line outward from the stem, along undisturbed grade. Should placement of concrete be specified or authorized by the Owner within the root zone, a sulfur application will be applied by the Owner. The Contractor shall notify the Owner and Barton Malow Builders at least 48 hours prior to pouring concrete. Trees to receive sulfur shall be identified by the Owner.
- Y. Contractor is responsible to maintain and keep all site utilities/systems in working order that are within the work limits. Site utilities should be identified and marked by this Contractor to proactively prevent interruptions in service. It is the Contractors' responsibility to know the location of any and all utilities prior to commencement of work and to continually monitor the status of the utilities. Any utility disturbed by the Contractor shall be repaired and placed in service immediately by this Contractor, at the expense of the Contractor who disturbed it.

2.06 USE OF EXISTING FACILITIES

- A. Contractors shall limit their and their Subordinate Parties' usage of the occupied areas of the facility to that which is absolutely necessary for the installation of their Work. Parts of the facility not in the construction area are "off limits" unless a specific work task is being performed as designated by Barton Malow Builders.
- B. Contractors and their Subordinate Parties will not be allowed the use of the Owner's cafeteria, parking, telephones, toilet facilities, tools, equipment, or any other item or facility belonging to the Owner, unless specifically authorized by Owner and Barton Malow Builders. Contractor's Subordinate Parties shall not use the Owner's facilities for personal use such as lunchrooms and similar areas for coffee breaks, clothing changes, or similar uses. The Owner's complex shall be off-limits to all construction personnel without prior approval of Owner and Barton Malow Builders.

2.07 EXISTING ENTRANCES AND DRIVES

- A. Contractor and construction delivery access to the worksite shall be as designated by Barton Malow Builders. Selected entrances to the Project site will remain open during normal working hours for the use of all Contractors. Contractor shall utilize specific entrances for material deliveries, equipment deliveries, and worker access to the Project site as directed by Barton Malow Builders.
- B. At no time are ANY vehicles to be parked, whether attended or not, in the Owner's entrances or drives. Any material delivery which will tie up the Owner's entrances or drives in excess of one (1) hour shall be pre-scheduled with the Owner through Barton Malow Builders. In scheduling construction deliveries the Contractor agrees that the Owner's deliveries and operations will take precedence.
- C. All gates will be locked with multiple locks (daisy chain) for Owner access.

2.08 PROTECTION OF UNDERGROUND FACILITIES

- A. Each Contractor shall provide and maintain proper shoring and bracing for existing underground utilities, sewers, and building foundations, encountered during its Work, to protect the project, or any part thereof, and surrounding areas from collapse or movement, or any other type of damage until such time as they are to be removed, incorporated into the new Work or can be properly back filled upon completion of new Work. All such disruptions of services shall be limited to a maximum of four (4) hours unless otherwise coordinated and approved by Owner and Barton Malow Builders. Prior to beginning any Work that may affect underground facilities, Contractor shall contact Miss Dig, contract a Private Locator and utility companies for the location of all existing underground services and provide, if requested, documentation of such contact to Barton Malow Builders. Contractor shall pay for appropriate layout and locating of existing utilities per the work scopes.
- B. Provide plates to cover all trenches/holes as necessary to allow for Owner access.

- C. Utilities and/or other services which are shown, or not shown but encountered, shall be protected by the Contractor from any damage arising or resulting from Work, unless or until they are abandoned. If the utilities or services are damaged from Contractor's Work, Contractor shall immediately repair any damage and restore the utilities and services to an equal or better condition than that which existed prior to the damage. Contractor will be responsible for all liabilities, expenses, lawsuits, or claims arising or resulting from such damage and will defend, hold harmless and indemnify Owner and Barton Malow Builders from any claims or lawsuits or other expenses.
- D. Each Contractor on behalf of itself and its Subordinate Parties shall be responsible for all damage to the Project and surrounding areas including the existing building and grounds arising out of or resulting from their performance of the Work. Repair or replacement of damaged items shall be to the satisfaction of the Owner and Barton Malow Builders.

2.09 NO INTERRUPTION OF OCCUPANCY/SEQUENCING

- A. Each Contractor is responsible to plan, coordinate, and execute its Work in such a manner that there will be no disruption of the Owner's operations. If an interruption of operations is unavoidable, then this Work will be scheduled with the Owner through Barton Malow Builders prior to beginning such Work.
- B. Due to the nature of the Owner's existing areas, the sequence of Work must be scheduled and coordinated with the Owner's ongoing operations to minimize disruptions and/or disturbances to the Owner's Work and at all times remain as secondary to the Owner's operations. Each segment of the Work shall be coordinated with Barton Malow Builders and the Owner prior to proceeding.
- C. Work that interrupts the Owner's services will be accomplished during the time periods when it is least inconvenient to the Owner and completed in the shortest possible time frame. Contractors may be requested to work split shifts, weekends, off-peak Owner loading periods, etc., to accommodate Owner's utility and service requirements, such as, but not limited to, medical gas systems, electrical power, HVAC systems, storm, and sanitary/storm lines. The cost for premium time labor, which may be required, is the Contractor's responsibility and is to be included in the base bid.
- D. Contractors are responsible to provide any temporary alternate supply and/or return conditions to maintain services to the facility while Work is being performed for each Bid Category. Place safety stages or markers to indicate location of disconnected services.
- E. No interruptions to Owner's power, lighting, signal, or alarm circuits will be permitted without the express written permission of the Owner. Arrangements for interruptions shall be made with the Owner and Barton Malow Builders at least seventy-two (72) hours prior to the interruption and shall be made at such time and duration as authorized by them. Temporary feeders, transformer jumpers, connections, circuits, etc., shall be used as required to accomplish the above at no additional cost to the Owner and Barton Malow Builders .
- F. Contractors shall construct the Work in stages to provide for public convenience. Contractors shall not close off public use of facilities until completion of one stage of construction will provide alternative usage, or until other means have been provided.
- G. These provisions shall apply to all Contractors and are applicable whether a Contractor is either directly or indirectly affected.

2.10 MATERIAL STORAGE

- A. If allowed, each Contractor shall provide suitable storage trailers on-site as required. These are to be relocated and removed when directed by Barton Malow Builders.
- B. All Contractors may be required to provide on-site storage facilities. Temporary storage of materials on the site will be limited to the same areas immediately under construction for materials intended for that particular portion of the Work. Material, equipment, and tools shall not be stored on-site in excess of five (5) working days prior to installation or use without Barton Malow Builders's approval. Contractors shall stock the job with sufficient materials to maintain

progress and schedule and without interfering with the Work or storage of others. Each Contractor assumes full responsibility for the protection and safekeeping of products under its control which are stored on the site. All stored materials shall be on pallets or movable pipe/carts. Contractors must move any stored products, under their control, which interfere with operations of the Owner or separate contractors as directed by Barton Malow Builders. All Contractors are to cooperate with Barton Malow Builders and other contractors in this regard.

- C. Each Contractor shall provide sufficient protection for its materials and equipment from damages by weather or construction work or other hazards.
- D. During progress of Work and upon completion of the Work, Contractors shall remove all debris and leave the area in a clean and orderly condition.
- E. Each Contractor shall submit a receipt of shipment for all equipment stored on-site or off-site to Barton Malow Builders per 012000 - Price and Payment Procedures. No materials or equipment shall be removed from the site without the permission of Barton Malow Builders.
- F. Storage of combustible materials within or adjacent to the building is prohibited.

2.11 SPECIFICATION SECTIONS APPLICABLE TO ALL CONTRACTS

- A. Unless otherwise noted, all provisions of the sections listed below apply to all contracts. Specific items of work listed under individual contract descriptions constitute exceptions.
- B. Section 000103 - Project Directory.
- C. Section 012000 - Price and Payment Procedures.
- D. Section 012100 - Allowances.
- E. Section 012200 - Unit Prices.
- F. Section 012300 - Alternates.
- G. Section 013000 - Administrative Requirements.
- H. Section 013114 - Coordination Drawings (Not 3D).
- I. Section 013216 - Schedule and Phasing.
- J. Section 013553 - Security Procedures.
- K. Section 014000 - Quality Requirements.
- L. Section 014216 - Definitions.
- M. Section 014219 - Reference Standards.
- N. Section 015000 - Temporary Facilities and Controls.
- O. Section 015100 - Temporary Utilities.
- P. Section 015213 - Field Offices and Sheds.
- Q. Section 015500 - Vehicular Access and Parking.
- R. Section 016000 - Product Requirements.
- S. Section 017000 - Execution and Closeout Requirements.
- T. Section 017800 - Closeout Submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 011000

**SECTION 012000
PRICE AND PAYMENT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Schedule of Values
- B. Application for Payment Process
- C. Retention
- D. Stored Materials
- E. Waivers of Lien and Sworn Statements
- F. Change procedures
- G. Documentation of changes in Contract Sum and Contract Time.
- H. Procedures for preparation and submittal of application for final payment.
- I. This section does not include RFI's, ASI's, or other documentation that clarify the work but have no substantive cost or schedule impacts to the Work.

1.02 RELATED REQUIREMENTS

- A. Section 005200 - Agreement Form: Contract Sum, retainages, payment period, monetary values of unit prices.
- B. Section 007200 - General Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- C. Section 012100 - Allowances: Payment procedures relating to allowances.
- D. Section 012200 - Unit Prices: Monetary values of unit prices; Payment and modification procedures relating to unit prices.
- E. Section 017800 - Closeout Submittals: Project record documents.

1.03 SCHEDULE OF VALUES

- A. Use Textura for submission of Schedule of Values.
- B. Once the Agreement is awarded, each Contractor must submit a Schedule of Values and completed sworn statement listing all Subcontractors, Suppliers, & other Subordinate Parties for its entire Work to Barton Malow Builders in Textura for approval. This Schedule of Values and sworn statement must be submitted either within fifteen (15) days of award or fifteen (15) days prior to the first payment application deadline (per the Application for Payment Schedule), whichever comes first. The Schedule of Values must include labor and material line items for each portion of the Work and broken out as described below.
- C. The Schedule of Values will be submitted via Textura.
 - 1. Unless otherwise directed or authorized, in writing, by Contractor, all Applications for Payment and all supporting documents (including but not limited to lien waivers, sworn statements, and alike) for Contractor and its subcontractors and suppliers, shall be in electronic format and shall be submitted to Contractor using the Oracle Textura Payment Management (TPM) Textura system. Contractor shall be responsible for the fees and costs owed associated with Contractor's use of TPM. Contractor shall include a similar provision in its subcontracts and purchase orders. Fees to Contractors are calculated as 0.22% (22 basis points) of contract value (plus applicable taxes), with a maximum fee of \$3,750. Fees to Contractors' sub-subcontractors and suppliers are a fixed fee of \$100 per sub-subcontractor or supplier contract.
 - 2. The sum of the parts of the Schedule of Values shall equal the contract price.
 - 3. The minimum level of breakdown and order on the application for payment shall be:
 - a. Bond costs, if applicable
 - b. Submittals

- c. Closeout
 - d. General conditions line item(s) (ex. mobilization, safety, testing, ect.)
 - e. Cost of labor broken out by area and/or floor level
 - f. Cost of materials broken out by area and/or floor level
 - g. Major portions of the Work shall be broken down into labor and material line items for specific areas of the facility. Larger portion of work such as concrete, curtain wall, drywall, mechanical, and electrical shall be broken down by elevation, floor, and areas appropriate.
 - h. Allowances
 - i. Cleanup
 - j. A listing of approved and executed Change Orders to the Contract, if any, in sequential order.
- 4. Schedule of Values items shall have a direct and understandable relation to the master Project Schedule. Indicate Activity ID where requested or appropriate.
 - 5. Overhead and Profit shall be distributed into each item of work on a pro-rated basis.
- D. Textura Schedule of Values, unless objected to by Barton Malow Builders, Owner or Architect, shall be the basis for the Contractor's application for payments.
 - E. Barton Malow Builders shall have the right to require the Contractor to alter the value or add/delete categories listed on the Schedule of Values at any time for the following reasons:
 - 1. The Schedule of Values appears to be incorrect or unbalanced.
 - 2. A revision of the Schedule of Values is required due to the Contractor revising the sequence of construction or assembly of building components that in turn invalidates the Schedule of Values.
 - 3. Change Orders are issued to the Contractor and shall be incorporated into the Schedule of Values as a separate line item at the bottom of the Schedule of Values.
 - F. The Contractor is required to assemble and submit the documentation for payment of stored materials requested in the application for payment against the agreed upon breakdown of the Schedule of Values as described in Payment for Stored Materials. Barton Malow Builders reserves the right to not process the application for payment if this documentation has not been submitted in conjunction with the application.
 - G. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Barton Malow Builders for approval.
 - H. Forms filled out by hand will not be accepted.
 - I. Submit Schedule of Values in Textura within 15 days after date established in Notice to Proceed listing all Subcontractors and Suppliers including the Bonding Company.
 - J. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Pay applications must be submitted in Textura.
- C. Step 1: Jobsite Inspection - DRAFT Payment Request:
 - 1. Contractor shall have a representative walk the Project site with Barton Malow Builders's representative and submit the preliminary pay application in Textura on or before the 15th of the month for Barton Malow Builders approval.
 - 2. Enter pay application in Textura for Work from the 20th of the previous month to the 20th of the present month.
 - 3. Contractor's pay application shall only reflect Work completed through the date of submission. Forecasting of payments will not be authorized for work to end of the month. If the walk-through occurs before the last day of the payment cycle, Barton Malow Builders shall determine, in its sole discretion, the amount Contractor may invoice, if any, for Work scheduled to be in place by the last day of the payment cycle.

D. Step 2: Payment Request Preparation and SUBMISSION

1. With the information agreed upon in Step 1, the Contractor shall prepare a formal application for payment in Textura.
2. Sworn statement is to be fully completed and updated from the previous month in Textura.
3. All partial waivers for Subcontractors and Suppliers shown as previously paid on the sworn statement must be uploaded into Textura upon request in the "manage lien waiver" section in Textura.
 - a. Full unconditional waivers from all subcontractors and subordinate parties must be uploaded into Textura "manage lien waiver" section with the filan pay application.

E. Step 3: Check DISTRIBUTION

1. Barton Malow Builders will issue individual checks to each Contractor. The Contractor will fill out the waiver of lien in Textura . Contractor Lien waivers must be completed in Textura and expired insurance certificates updated in TradeTap to avoid payment delays.
2. The Contractor shall provide all supporting documentation substantiating the Contractor's right to payment as the Owner, Barton Malow Builders and the Architect may require.
3. All Contractors must maintain their prequalification status through the Project in order for Barton Malow Builders to process and distribute monthly and final payments. Submit all required updated financials, insurance, etc. as stipulated to maintain positive standing.

F. **Late or incomplete pay application submissions will not be accepted.**

- G. The Contractor must include with each request for progress payment a Contractor waiver of lien for all previous payments, Contractor's fully completed sworn statement with list of all subcontractors and suppliers, updated subcontractor and supplier partial and or unconditional final waivers and any necessary backup data as described. Individual waivers from Contractor and subordinate parties must be uploaded intoTextura under the "manage lien waiver" monthly with submission of pay application upon request.

- H. In requests for payment which follow the execution of a Change Order in excess of twenty-five percent (25%) of the Agreement price, Contractor must present a bond rider evidencing that the penal sum of any required payment and performance bonds have been increased to one hundred percent (100%) of the adjusted Agreement price. Submission of the required back-up data is a condition precedent to payment.

- I. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Barton Malow Builders for approval.

J. Include the following with the application:

1. Requested partial conditional waivers of liens from Subcontractors and Suppliers.
 - a. All partial conditional waivers from all subcontractors and subordinate parties must be uploaded into Textura "manage lien waiver" section upon request.
 - b. All full unconditional waivers from all subcontractors and subordinate parties must be uploaded into Textura "manage lien waiver" section with the filan pay application.
2. Affidavits attesting to off-site stored products along with location and insurance on stored materials.

1.05 RETENTION

- A. The Owner shall be entitled to withhold ten (10%) percent of each payment due to a Contractor. Contractors may not drop retainage to 5% until all warranties, o/m manuals, testing, commissioning, training, extra materials, and punch list items have been completed, turned over, accepted, and documented. Contractors must also have current partial and final waivers from subcontractors and suppliers. To bill out the remainder of retainage (from 5% to 0%), the contractor must set up a meeting with Barton Malow Builders to review and/or collect the remaining closeout items for final payment including all final unconditional waivers from subcontractors and suppliers.

- B. Contractor shall request in writing to Barton Malow Builders prior to filling out the pay application.
- C. When requesting a reduction of retention, the Contractor shall submit an AIA G707A, Consent of Surety to Reduction In or Partial Release of Retention form to Barton Malow Builders .
- D. When requesting a final payment, the Contractor shall submit an AIA G707, Consent of Surety to Final Payment form to Barton Malow Builders .
- E. Notwithstanding the foregoing, payment of retention shall be subject to all other conditions precedent that applies to payment as set forth in the Contract Documents.

1.06 STORED MATERIALS

- A. The Contractor, if intending to use an off-site storage area or facility for stored materials, shall submit a written request to the Owner and Construction Manager and obtain approval prior to submitting the first application for payment as described in Part 1.04.
- B. Payments will be made for materials properly stored off site.
 - 1. "Properly stored" shall mean in an insured warehouse with the OCC and Barton Malow Builders being named as insureds, and all material identified as property of the Owner using markings or signage.
 - 2. The Contractor is responsible for all associated off site storage costs, transportation, insurance, including insurance coverage for stored material, while in transit, unless Contractor obtains written documentation that the material is covered during transit under a Builder's Risk Policy applicable to the Project.
 - 3. Contractor shall provide OCC and Barton Malow Builders verification in writing for all material so stored. Such materials shall be protected from diversion, destruction, theft, and damage to the satisfaction of Barton Malow Builders, Owner and the Lender (if any), specifically marked for use on the Project, and segregated from other materials at the storage facility.
 - 4. The Contractor bears all risk of loss to materials and equipment stored off site.
- C. Contractor is to provide supporting documentation in the form of invoices, photographs, insurance policies, and any other pertinent documentation as requested by Barton Malow Builders or Owner for items stored off-site. Documentation shall include the following:
 - 1. Detailed description of the material, including quantities. This serves as a material description for the billing and as information to file a claim with an insurance company.
 - a. Stored Materials: Each item must be identified as to manufacturer, model number, and serial number, if applicable, or other identifiers should be listed for each item. Each listing must be accompanied by invoices, shipping tickets, consent of surety, and any other applicable supporting documentation.
 - b. Stored Manufactured Building Materials: Each item must be identified as to type, manufacturer's number or designation, and should also list the number of cartons and the contents therein storage. Each listing must also be accompanied by supporting documents including all invoices, shipping tickets and consent of surety.
 - c. Stored Fabricated Materials - A listing specifying the number of pieces, items, and marks as may be applicable to the particular type of items. Photographs should accompany the request.
 - 2. Individual itemized costs of materials and the total cost value, which shall not exceed the Contractor's material supplier cost. The total cost value shall be supported by the Contractor's material supplier invoices for the stored material.
 - 3. Estimated cost value for those materials that are fabricated by the Contractor's material supplier.
 - 4. The location where the material is physically stored, including the warehouse address and storage location within the warehouse, such as bin number, aisle number or other designation. All material shall be segregated and marked.
 - 5. Copies of the insurance policies that cover the stored materials and that name Barton Malow Builders and OCC the as insureds. The limit of the insurance policy shall be equal to or greater than the replacement value of the stored materials.

- D. When Applications for Payment include products stored off the Project Site or stored on the Project Site but not incorporated in the Project, for which no previous payment has been requested, a complete description of such product shall be attached to the application.
- E. Contractor shall submit a certificate of title listing OCC's ownership in the off-site stored materials equal to the amount paid effective at the time funds are delivered.
- F. All payment requests for off-site stored materials must be accompanied using the "Payment Request for Stored Materials." form obtained from your Barton Malow Builders representative. Payment requests for stored materials not complying with the foregoing requirements will not be approved. Contractors are to notify Barton Malow Builders in ample time to conduct verification procedures.
- G. Contractors may not apply the cost of materials stored off-site towards a reduction in the retention amount.
- H. Representatives of Barton Malow Builders and OCC , and the Lender (if applicable) shall have the right to make inspections of the storage areas at any time.

1.07 LIEN WAIVERS AND SWORN STATEMENTS

- A. Waivers of Lien
 - 1. The Contractor's first Application for Payment will be based upon 100 percent of the value of Work installed. The first payment, amounting up to 90 percent of application, will be made to the Contractor without supporting documentation. Subsequent Applications for Payment must be accompanied by lien waivers from the Contractor, its Subordinate Parties or receipted invoices covering payment to the Contractor for previous calendar month period. Lien waivers must be unconditional and must show the amount paid.
 - 2. An "Acknowledgment of Payment and Partial Unconditional Release" is to be completed in Textura for the previous month's application. Under no circumstances will payment be released until the completed "Acknowledgment of Payment and Partial Unconditional Release" has been submitted in Textura from the previous month.
 - a. All partial conditional waivers from all subcontractors and subordinate parties must be uploaded into Textura "manage lien waiver" section upon request.
 - 3. Final payment will not be made until an Conditional Final Release and Waiver Contractor/Material has been submitted. This form may be obtained and submitted in Textura. The Final Release must be signed by an authorized representative of the Contractor and must be notarized.
 - 4. Final unconditional waivers will be required for all of Contractor's Subordinate Parties listed on Contractor's sworn statement. These final waivers must be submitted along with the final release, before payment can be made.
 - a. All full unconditional waivers from all subcontractors and subordinate parties must be uploaded into Textura "manage lien waiver" section.
- B. Sworn Statements
 - 1. The Sworn Statements must be fully completed listing all subcontractors & suppliers updated and submitted in Textura to the satisfaction of Barton Malow Builders with each Contractor's Application for Payment.

1.08 MODIFICATION PROCEDURES

- A. All Contractors are required to notify Barton Malow Builders per the terms of the Agreement and in alignment with the Prime Contract. When changes to site conditions or scope are encountered, submit written notification in accordance with those requirements.
- B. Unless explicitly notified in writing within ten (10) calendar days of issuance, all RFIs, ASIs, or other forms of field communication issued to clarify the work, Barton Malow Builders and Owner will assume recipients agree the clarification is within the already established contract scope.
- C. Types of Change Documentation

Changes to the work which may involve a change in the contract price or schedule will be accompanied by the Barton Malow Builders form entitled "PCO - Quotation Only". In the

event that the timing does not allow the for Quote Only process, then Barton Malow Builders will issue its form entitled "PCO - Notice to Proceed."

1. PCO - Quotation Only

- a. The PCO - Quotation Only is a document used for processing Contractor's quotations and is **not** a Change Order. Therefore, completion of the PCO - Quotation Only does **not** release the Work to begin.
- b. Contractor shall prepare a detailed cost quotation for the PCO. This quotation shall include an itemized takeoff of labor, equipment and material with a unit cost for each item together with backup, material invoices and other breakdown documentations satisfactory to Barton Malow Builders. The PCO must be signed and returned as directed.
- c. If pricing is not received within ten (10) calendar days of issuance, Barton Malow Builders reserves the right to include the PCO in a zero-dollar change order, or quote the work on behalf of the Contractor. Circumstances may arise that require an expedited quote of less than ten (10) by Contractors. Contractors shall provide quotes within the requested timelines as directed by Barton Malow Builders.

2. PCO - Notice to Proceed

- a. A PCO - Notice to Proceed is used when Work must be performed with swiftness and authorization to proceed by Change Order is inappropriate due to time restrictions. In order for a PCO - Notice to Proceed to be valid, it must be signed by Barton Malow Builders. The terms for establishing the additional cost and processing of the PCO - Notice to Proceed into a Change Order shall be identified prior to its release by Barton Malow Builders.
- b. Contractor shall prepare a detailed cost quotation for the PCO. This quotation shall include an itemized takeoff of labor, equipment and material with a unit cost for each item together with material invoices, backup and detailed breakdown from suppliers and subcontractors. The PCO must be signed and returned as directed.
- c. Contractor shall sign and date the PCO and submit it with proper backup. The PCO will then be reviewed, evaluated, negotiated and then, when acceptable, processed.
- d. A PCO - Notice to Proceed may be issued with direction to track the Work on a Time and Material basis (T&M). In this case, Contractors are to supply daily time tickets to Barton Malow Builders for verification. In the event that proceeding on T&M is given a "Not to Exceed" amount, the Contractor is responsible to track daily costs and notify Barton Malow Builders promptly if costs are projected to be greater than the Not to Exceed amount. No additional compensation will be provided for T&M changes that are greater than the Not to Exceed amount if no notification is given to Barton Malow Builders prior to commencing the work causing the additional cost.
- e. If a change results in a change in cost, Barton Malow Builders will issue a PCO with the supporting change documents.
- f. PCO's may precede a Change Order. Contractors shall receive an approved PCO - Notice to Proceed or an executed Change Order before starting Work. Any changed Work performed by Contractor without a properly executed PCO - Notice to Proceed or a properly executed Change Order is at Contractor's sole risk and expense. BILLINGS AGAINST CHANGES WILL NOT BE ACCEPTED AFTER A PCO - NOTICE TO PROCEED OR FOR QUOTE ONLY IS ISSUED, BUT ONLY AFTER A CHANGE ORDER HAS BEEN PROCESSED AND FULLY EXECUTED BY ALL PARTIES.

D. Change Order

1. Change Orders will be issued by Barton Malow Builders. Barton Malow Builders will first issue the Change Order to the Contractor for signature. The Change Order will then be returned to Barton Malow Builders and sent to the Architect and Owner for signature. Once all appropriate signatures are secured, an executed copy will be sent to the Contractor.

2. Once the Change Order has been processed and signed by all parties, the Contractor may invoice for payment on the completed portion of Work.
 3. Agreement on a Change Order shall constitute a final settlement of all matters relating to the changed Work that is the subject of the Change Order.
- E. Contractor Overhead and Profit for Changes in the Work
1. For changes resulting in **increase** of cost:
 - a. Overhead and profit for the Contractor shall not exceed the following when change Work is performed by:
 - 1) Contractor itself: 10%
 - 2) Contractor subordinate party: 5%
 - b. Overhead and profit for the subordinate party shall not exceed the following when change Work is performed by
 - 1) Subordinate party itself: 10%
 - 2) Subcontractor to the subordinate party: 5%
 - c. For changes resulting in reduction of cost
 - 1) Deductive costs shall include commensurate deductive credits for overhead and profit based on the percentages stated above.
 - d. Contractor's and Subordinate Party's overhead and profit shall include cost (at the Project Site, home office and otherwise) of supervision, telephone, technology, travel, copying, administrative services, office, power, light, tools, cartage, jobsite vehicles, allowances, and all other general expenses. **In no event shall these items be charged as cost of the Changed Work.**
 - 1) For K-12 and Higher Ed projects in Michigan, Bond Premiums shall also be included within the Contractors overhead and profit.
 - 2) For K-12 and Higher Ed projects in Michigan, Box and Textura Premiums shall also be included within the Contractors overhead and profit.
 - e. Any allowances included in Contracts are to have Overhead and Profit accounted for in the bid **outside** of the allowance/work scope item value. No additional mark-up will be given for this work.
- F. Itemization of Cost of Changed Work
1. Correlation with Contractors Submittals

Contractors shall:

 - a. Revise the Schedule of Values and Request for Payment forms to record each Change Order as a separate item of Work, and to record the adjusted contract price.
 - b. Revise the Construction Schedule to reflect each change in Contract Time approved by a Change Order.
 - c. Revise schedules to show changes for other items of Work affected by the changes.
 - d. Enter and revise Record Documents to reflect changes
- G. COST OF THE CHANGED WORK
1. Submit costs on Contractor letterhead with the associated breakdown, or contact a Barton Malow Builders representative for the Contractor Change Order Template.
 2. The "Cost of the Changed Work" shall be approved by and shall mean the costs necessarily incurred by the Contractor in the proper performance of the Changed Work. The Cost of the Changed Work shall only include those items set forth below or those items for which Barton Malow Builders is entitled reimbursement under its agreement with Owner, the most restrictive provisions controlling.

WAGES OF LABOR	Wages of construction workers directly employed by Contractor to perform the construction of the changed Work at the site.
PAYROLL MARKUP	The amount approved by Barton Malow Builders and Owner which covers the costs paid by the Contractor for taxes, insurance, contributions, assessments, and benefits

	required by law or collective bargaining agreements and for personnel not covered by such agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, provided that such costs are based on the wages and salaries of labor performing the changed Work.
COST OF EQUIPMENT, MATERIALS, AND SUPPLIES	Costs of materials, equipment and supplies to be incorporated into the changed Work less all savings, discounts, rebates and credits accruing to the Contractor.
RENTAL CHARGES FOR EQUIPMENT NOT OWNED BY CONTRACTOR	Rental charges for equipment not owned by Contractor that is necessary for completion of the Changed Work. Rates and quantities rented must be approved in advance by Barton Malow Builders.
TAXES	Sales or use taxes imposed by a governmental authority which are directly attributable to the changed Work and for which the Contractor is liable.
SUBORDINATE PARTY COSTS	Payments made to the Contractors for proper execution of Changed Work, subject to the limits set forth above for overhead and profit.

- H. In no event shall the Cost of Changed Work include:
1. Salaries or wages of persons other than those directly performing the changed Work, including Contractor's personnel stationed at the principal office.
 2. Expenses of the Contractor's principal office and offices other than the site office, except as provided above.
 3. Overhead and general expenses of any nature, except as set forth above.
 4. Capital expenses of Contractor, including interest on the Contractor's capital employed for the Changed Work.
 5. Rental costs for machinery or equipment, except as allowed above, or tools of any kind, unless specifically identified and approved in advance in writing by Barton Malow Builders.
 6. Costs due to the negligence or failure to perform of the Contractor or its Subordinate Parties.
 7. Costs designated above as being included in Overhead and Profit.
 8. Any cost not specifically described above, or otherwise approved in advance and in writing by Barton Malow Builders and Owner.
- I. All Contractors shall meet with Barton Malow Builders to review and approve the quotation format immediately after contract award. The approved format shall be used consistently throughout the project.
1. Ensure the quotation has the PCO number at or near the top of each page.
- J. Labor Rates: Upon submission of bids prior to contract award, Contractor (and for their subordinate parties) shall submit their labor rates for all applicable trade categories for approval.
1. Provide breakdown of the rate, including the base wage, fringes, benefits, insurance, without any other markup included. This rate is subject to Barton Malow Builders and Owner approval as it is reflected in a PCO quotation.
- K. For changes for which advance pricing is desired, IDS will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid shall prepare and submit a fixed price quotation within ten (10) days.

- L. Substantiation of Costs: Provide full information required for evaluation.
 - 1. Provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds (if allowed above).
 - c. Overhead and profit.
 - d. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 - 3. For Time and Material work, submit itemized T&M tickets signed daily by Barton Malow Builders and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- M. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

1.09 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All warranty, start-up, as-builts, O/M manuals, training Contractor guarantee, and documentation specified in the project documents are completed and submitted to Barton Malow Builders.
 - a. A/E Field Report(s) items corrected and signed off.
 - b. Architects/Engineers punchlist items signed off and completed.
 - c. Test & Balance deficiencies corrected.
 - d. Commissioning items signed off and completed.
 - e. Barton Malow Builders punchlist items signed off and completed.
 - f. Owners punchlist items signed off and completed.
 - g. Contractor Permits Finished and Permits Closed out.

END OF SECTION 012000

**SECTION 012100
ALLOWANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Contingency allowance.
- B. Payment and modification procedures relating to allowances.

1.02 RELATED REQUIREMENTS

- A. Section 012000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 CONTINGENCY ALLOWANCE

- A. Contractor's costs for products, installation, labor, insurance, payroll, taxes, equipment rental will be included in authorizing expenditure of funds from this Contingency Allowance.
- B. Any allowances included in Contracts are to have Overhead and Profit accounted for in the bid outside of the allowance/work scope item value. No additional mark-up will be given for this work.
- C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 012100

**SECTION 012200
UNIT PRICES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General Requirements
- B. Unit Prices
- C. Measurement and payment criteria applicable to Work performed under a unit price payment method.

1.02 RELATED REQUIREMENTS

- A. Document 002113 - Instructions to Bidders: Instructions for preparation of pricing for Unit Prices.
- B. Section 012000 - Price and Payment Procedures: Additional payment and modification procedures.

1.03 GENERAL

- A. This Section specifies administrative and procedural requirements for unit prices.
- B. Refer to the Bid Proposal form and to individual work scopes, drawings and specification sections for the establishment of unit prices.
- C. Schedule: A "Unit Price Schedule" is included on each bid form and must be filled out completely by Contractor at time of bid. Specification Sections referenced in the Schedule contain requirements for materials and methods described under each unit price.
- D. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured by an independent surveyor at the Owner's expense.

1.04 UNIT PRICES

- A. A unit price is an amount proposed by bidders and stated on the Bid Proposal form as a price per unit of measurement for items of work or services that will be added to or deducted from the Contract Sum by change order in the event the estimated quantities of work required by the Contract Documents are increased or decreased.
 - 1. There shall be no more than 10% difference between the add and deduct amounts of the same unit price. Failure to provide a deduct price will result in the add price being used.
- B. Unit Prices Should Include Costs for:
 - 1. Labor, materials, tools, equipment, and overhead & profit.
 - 2. Contractor, their subcontractors, and/or manufacturer expediting, fabrication, warehousing, transportation and delivery, unloading, hoisting, scaffolding, installation, grouting, shimming, fasteners, and hangers.
- C. The calculations for determining the number of units of work, unless otherwise noted, shall be of actual surface, volume, length, hours or numbers of individual items listed for the class of work, complete in place and accepted or omitted. No allowance for waste, loss or damage will be made.

1.05 MEASUREMENT OF QUANTITIES

- A. Take all measurements and compute quantities. Measurements and quantities will be verified by Barton Malow Builders and Architect/Engineer.
- B. Testing Agency or Surveyor will take all sitework measurements and compute quantities accordingly.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.
- D. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.

- E. Measurement by Area: Measured by square dimension using mean length and width or radius.
- F. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- G. Stipulated Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.06 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by IDS and Barton Malow Builders, multiplied by the unit price.
- B. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected Products.

1.07 DEFECT ASSESSMENT

- A. Replace Work, or portions of the Work, not complying with specified requirements.
- B. If, in the opinion of either IDS and Barton Malow Builders, it is not practical to remove and replace the Work, IDS will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of IDS and Barton Malow Builders.
 - 2. The defective Work will be partially repaired to the instructions of the IDS and the unit price will be adjusted to a new unit price at the discretion of IDS and Barton Malow Builders .
- C. If, in the opinion of Owner, it is not practical to remove and replace the Work, Owner will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Owner.
 - 2. The defective Work will be partially repaired to the instructions of the Owner, and the unit price will be adjusted to a new unit price at the discretion of Owner.
- D. The authority IDS and Barton Malow Builders to assess the defect and identify payment adjustment is final.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 012200

**SECTION 012300
ALTERNATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for pricing Alternates
- B. Voluntary Alternates
- C. Description of Alternates.
- D. Procedures for pricing Alternates.
- E. Documentation of changes to Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

- A. Document 002113 - Instructions to Bidders: Instructions for preparation of pricing for Alternates.
- B. Document 005200 - Agreement Form: Incorporating monetary value of accepted Alternates.

1.03 ACCEPTANCE OF ALTERNATES

- A. Each Bidder must bid on all Alternates listed in the Bid Proposal that are applicable to its Bid Category. Alternates will be fully considered in awarding the Agreement.
- B. Each Alternate under consideration will be indicated below or be reflected within the Bid Form. When BuildingConnected is utilized for bid receipt, each Bidder shall fill in the requested Alternate prices as a separate price from the Bid Amount. If special considerations must be provided, Bidders shall provide a separate Clarifications page within their Bid Proposal.
- C. The Owner shall be allowed a period of ninety (90) days after date of receipt of the Bid Proposals to exercise the right to accept or reject any or all Alternates submitted on the Bid Proposal.
- D. Successful Bidders shall perform all Work required for complete execution of accepted Alternates, and the Bid Proposal shall include all overhead and profit for the Work required.
- E. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.

1.04 VOLUNTARY ALTERNATES

- A. All Bid Proposals must be based upon the Bidding Documents. In addition to a Base Bid Proposal, the submission of Voluntary Alternates is acceptable and encouraged. If a Voluntary Alternate is submitted for consideration, it shall be expressed on the Bid Form as an add or deduct amount from the Base Bid. The Owner or Owner and Barton Malow Builders reserve the right to unilaterally accept or reject Voluntary Alternates and to determine if the Voluntary Alternates will be considered in the awarding of the Agreement.
- B. Bidders shall indicate any associated trades or work categories, if any, that may be affected by the proposed voluntary alternate.
- C. Voluntary Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- D. Coordinate related work and modify surrounding work to integrate the Work of each Voluntary Alternates.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 012300

**SECTION 012500
SUBSTITUTION PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 002113 - Instructions to Bidders: Restrictions on timing of substitution requests.
- B. Section 012200 - Unit Prices, for additional unit price requirements.
- C. Section 012300 - Alternates, for product alternatives affecting this section.
- D. Section 013000 - Administrative Requirements: Submittal procedures, coordination.
- E. Section 016000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.
- F. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions: Restrictions on emissions of indoor substitute products.

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
 - a. Unavailability.
 - b. Regulatory changes.
 - c. [_____].
 - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
- B. Substitution requests offering advantages solely to the Contractor will not be considered.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Furnish and install Products specified, under options and conditions for substitutions stated in this Section.
- B. Any and all Substitution Requests must be accompanied with the appropriate form in the Project Specifications or Project Manual filled out to completion. This form must be submitted with all supporting documentation via Building Connected prior to bid and Box post award following all other submittal requirements/processes.
- C. Any product for which a substitution request is submitted must meet all specification requirements.
- D. Architect will determine acceptability of proposed substitution.
 - 1. Under no circumstances will the Architect be required to prove that a product proposed for substitution is or is not equal to the quality of the product specified.
- E. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranties or bonds for the substitution as for the specified product.
 - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.

4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 5. Waives claims for additional costs or time extension that may subsequently become apparent.
 6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
 7. Has confirmed cost data is complete and includes related costs under its Agreement, but does not include:
 - a. Costs under separate contracts.
 - b. Architect's costs for redesign or revision of Contract Documents.
 8. Cost data need not be submitted, if request is for inclusion in an addendum. Requests after the Agreement is awarded shall contain a complete cost comparison.
- F. A Substitution Request for specified installer constitutes a representation that the submitter:
1. Has acted in good faith to obtain services of specified installer, but was unable to come to commercial, or other terms.
- G. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
1. Note explicitly any non-compliant characteristics.
- H. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
1. Forms indicated in the Project Specifications or Project Manual are adequate for this purpose, and must be used.
- I. Each Substitution request should be accompanied by the following supporting documentation:
1. Product identification, including the manufacturer's name and address
 2. Manufacturer's literature; identifying:
 - a. Product description and technical information.
 - b. Reference standards.
 - c. Performance and test data
 - d. Installation instruction, operating procedures, and other like information. Indication of whether the substitution is for cause or convenience.
 - e. Samples, as applicable.
 - f. Names and addresses of similar projects on which product has been used, and date of each installation.
 - g. Itemized comparison of the proposed substitution with the product specified, listing all significant variations.
 - h. Data relating to changes in delivery or construction schedule.
 - i. A list of all effects of the proposed substitution on separate contracts.
 - j. Accurate cost data comparing the proposed substitution with the product specified.
 - 1) Amount of any net change to Contract Sum.
 - k. Designation of availability of maintenance services and sources of replacement materials.
 - l. Environmental Product Declaration (EPD) to compare the upfront embodied carbon emissions to those of the specified materials or products.
- J. Substitutions will not be considered for acceptance when:
1. They are indicated or implied on shop drawings or product data submittals without a formal request from Contractor.
 2. Acceptance will require substantial revision of Contract Documents.
 3. In judgment of Architect, do not include adequate information necessary for a complete evaluation.
 4. If requested after Contract Award directly by a subcontractor or supplier, except for special or unusual circumstances reviewed by the Contractor with Architect/Engineer, Construction Manager, and Owner.

- K. Warranties.
 - 1. Other salient features and requirements.
 - a. Include, as appropriate or requested, the following types of documentation:
 - 2. Product Data:
- L. Certificates, test, reports or similar qualification data.
- M. Drawings, when required to show impact on adjacent construction elements.
- N. Impact of Substitution:
 - 1. Savings to Owner for accepting substitution.
 - 2. Change to Contract Time due to accepting substitution.
- O. Limit each request to a single proposed substitution item.
 - 1. Submit an electronic document via Building Connected prior to bid and Box after award, combining the request form with supporting data into single document.
 - 1) Indication of whether the substitution is for cause or convenience.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Base Bid shall be in accordance with the Contract Documents.
- B. Bidder's Options
 - 1. For products that are specified only by reference standard, select product meeting that standard by any manufacturer.
 - 2. For products specified by naming several products or manufacturers, select any one of products and manufacturers named which complies with Specifications.
 - 3. For products specified by naming several products or manufacturers and stating "or equivalent", or "or equal", or "or Architect approved equivalent", or similar wording, submit a request as for substitutions, for any product or manufacturer which is not specifically named for review and approval by the Architect/Engineer.
 - 4. For Products specified by naming only one product and manufacturer, there is no option and no substitution will be allowed.
- C. Architect will consider requests from the Bidder for substitution of products in place of those specified as set forth in this section.
- D. Those submitted the specified calendar days prior to Bid Date will be included in an addendum if acceptable.
- E. After the end of the bidding period, requests will be considered only in case of product unavailability or other conditions beyond the control of Contractor.
- F. Bid Proposals shall not be based on assumed acceptance of any item which has not been approved by Architect/Engineer or Addendum.
- G. Bidders are required to submit a separate Substitution Request Form for each proposed substitution. Each submissions must meet all requirements as outlined in section above.
- H. Submittal Form (before award of contract):
 - 1. Submit substitution requests by completing the substitution request form located in Project Specifications or Project Manual. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- I. Owner will consider requests for substitutions only if submitted at least 10 days prior to the date for receipt of bids.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submittal Form (after award of contract):
 - 1. Submit substitution requests by completing the substitution request form in the Project Specifications or Project Manual. See this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Substitution requests must be submitted with enough time to allow for complete review by the Architect/Owner and not delay Project Schedule.

- C. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, lower upfront embodied carbon emissions, or in other specific ways.
 - 1. Any modifications necessary as a result of the use of an approved substitute shall be paid by the Subcontractor proposing the substitution.
 - 2. Bear the costs engendered by proposed substitution of:
 - a. Any additional engineering costs required to be performed by the Architect to approve, implement, or coordinate the substitution above reasonable review services, shall be paid by the Contractor proposing the substitution.
 - b. Other construction by Owner and Contractors.
 - c. Any modifications necessary as a result of the use of an approved substitute shall be paid by the Contractor proposing the substitution.
- D. Substitutions will not be considered under one or more of the following circumstances:
 - 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
 - 2. Without a separate written request.
 - 3. When acceptance will require revisions to Contract Documents.

3.04 RESOLUTION

- A. Architect/Owner may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect/Owner will determine acceptability of proposed substitution.
 - 1. Under no circumstances will the Architect be required to prove that a product proposed for substitution is or is not equal to the quality of the product specified.
- C. Architect/Owner will notify Barton Malow Builders in writing of decision to accept or reject request via approval of the substitution request form.
- D. Substitution requests that are not approved will be returned to the party submitting the request with an explanation for the rejection.

3.05 ACCEPTANCE

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.06 CLOSEOUT ACTIVITIES

- A. See Section 017800 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record. Include both approved and rejected Requests.

END OF SECTION 012500

**SECTION 013000
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electronic document service.
- B. Meetings.
- C. Construction Progress Schedule.
- D. Daily Construction Reports.
- E. Progress Photographs.
- F. Coordination Drawings.
- G. Requests for Information (RFIs).
- H. Submittals.
- I. Substitution Requests.
- J. Submittals for Project Closeout.
- K. Number of Copies of Submittals.
- L. Submittal Procedures.
- M. Submittal Review.

1.02 RELATED REQUIREMENTS

- A. Section 007200 - General Conditions: Dates for applications for payment.
- B. Section 013216 - Schedule and Phasing: Form, content, and administration of schedules.
- C. Section 016000 - Product Requirements: General product requirements.
- D. Section 017000 - Execution and Closeout Requirements: Additional coordination requirements.
- E. Section 017800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.
- F. Section 019113 - General Commissioning Requirements: Additional procedures for submittals relating to commissioning.
 - 1. Where submittals are indicated for review by both Architect and Owner and the Commissioning Authority, submit one extra and route to Owner first, for forwarding to the Commissioning Authority.
 - 2. Where submittals are not indicated to be reviewed by Architect and Owner, submit directly to the Commissioning Authority; otherwise, the procedures specified in this section apply to commissioning submittals.

1.03 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. All field and/or construction correspondence and/or communications must be directed through Barton Malow Builders , 22322 Rutland Dr, Southfield MI. All correspondence should list the following as appropriate:
 - 1. OCC SF25-003 Driving Pad and Storage
 - 2. Barton Malow Builders Project Number SF25-003
 - 3. Architect/Engineer Project Number 24140-1000
 - 4. Contractor contact information
 - 5. Subject: clearly indicate subject matter of correspondence
- B. Comply with requirements of Section 017000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- C. Make the following types of submittals to Barton Malow Builders.
 - 1. Requests for Information (RFI).

2. Requests for substitution.
3. Shop drawings, product data, and samples.
4. Test and inspection reports.
5. Design data.
6. Manufacturer's instructions and field reports.
7. Applications for payment and change order requests.
8. Progress schedules.
9. Coordination drawings.
10. Correction Punch List and Final Correction Punch List for Substantial Completion.
11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 ELECTRONIC DOCUMENT SERVICE

- A. Unless otherwise directed or authorized, in writing, by Barton Malow Builders, all RFI's, submittals, forms, and project documents, for the Contractor and its subordinate parties, shall be submitted to Barton Malow Builders using the Box application.
- B. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF, MS Word, or MS Excel) format, as appropriate to the document, and transmitted via Box, or via email to the appropriate Barton Malow Builders representative until the Box accounts have been set up.
 1. All PDF submissions must meet the below requirements:
 - a. Bookmarked – All PDFs shall have established bookmarks for ease of navigation
 - b. Hyperlinked – All PDFs which are large scale drawings shall utilize hyperlinks reference pages within the document or other PDFs within the file folder which are made reference through one of the following mechanisms: sections, elevations, details, etc.
 - c. Original PDF format – All PDF documents shall be natively printed to PDF from the original document i.e. scanned documents will not be accepted
 - d. Digital Signature – all contractors shall have the ability to digitally sign and certify PDF documents and shall do so where required by the specifications, where specifically instructed to by Barton Malow Builders , and when required by the AHJ.
 2. Excel (.XLS) – Native excel files will be required with all data for any form that is completed for the project (in addition to any executed copies). This is for verification and reporting purposes. This will include but not be limited to AIA703/AIA704 payment applications, MBE forms, sworn statements, LEED tracking, change proposals, etc.
 3. Besides submittals and closeout, this procedure applies to Requests for Information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), field reports and meeting minutes, IDS and Barton Malow Builders' correction punch list, and any other document of the project record.
 4. Users of the service need an iPad, internet access, email address and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com), unless such software capability is provided by the service provider.
 5. It is the Contractor's responsibility to submit documents in allowable format.
- C. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.
- D. The "Plans" folder within Box will automatically be updated to be the "latest and greatest" version of each sheet. Contractor is responsible to be working off the most up to date project drawings at all times – this is the location that those can always be found (including all RFIs posted in their respective locations). No compensation will be provided to Contractors needing to fix deficient work caused by building off an outdated set of project drawings.

- E. The Field Documents "Current Specs " folder within Box will automatically be updated to be the "latest and greatest" version of each project specification section. Contractor is responsible to be working off the most up to date specifications at all times – this is the location that those can always be found. No compensation will be provided to Contractors needing to fix deficient work caused by building off an outdated set of project specifications.
- F. Cost: Contractor shall be responsible for the fees and costs owed associated with Contractor's and it's subordinate parties use of Box. Fees to Contractors are calculated as 0.1% of contract value. Contractor shall include this cost in the base bid. Contractor will be invoiced directly by Barton Malow Builders at project start-up and payment must be submitted by the Contractor prior to the start of work.
- G. Contractor's site Supervision must have an iPad onsite with wireless internet access to view project documents, complete required daily forms, and review/submit RFI's in Box.
- H. Submittal Service: The selected service is:
 - 1. Box
- I. Box will be required for all Contractors to use for all document management on the project. This will include all RFI correspondence, submittal tracking, meeting minutes, contract information, and all other information deemed pertinent to this project.
- J. Training: Barton Malow Builders will host training sessions as needed that will be required for all Contractors and their appropriate staff and suppliers to attend via training link.
 - 1. Representatives of Architect, and Owner are scheduled and included in this training.
 - 2. All users are required to go through training via Skilljar. Users should take the courses curated for their role at academy.bartonmalow.com immediately after Contract Award.
- K. Project Closeout: Barton Malow Builders will determine when to terminate the service for the project and is responsible for obtaining archive copies of files for Owner.

3.02 MEETINGS

- A. Barton Malow Builders shall schedule, chair, and administer all periodic meetings throughout the progress of the work for the purpose of coordinating and expediting the Work. Such meetings shall be held at the Jobsite or Microsoft Teams, bringing together responsible representatives of active Contractors for the purpose of planning, assessing progress, and discussing problems of mutual concern. Each Contractor and its Subordinate Parties' representative attending the meetings shall be authorized to act on behalf of and make decisions/commitments for the entity each represents, the decisions made at the meetings and each Contractor who should be in attendance will be held responsible for information and directions given at the meeting.
- B. Barton Malow Builders will prepare and distribute the minutes of all meetings if Barton Malow Builders determines minutes are required. If the attendees do not object in writing to any part of the meetings within 2 days of distribution of the minutes, the minutes shall be accepted as written.
- C. Meeting Attendance - Contractors are expected to attend any and all meetings as noted in this section unless an absence is excused in advance. Failure to attend meetings will result in a reduction of supervision costs via deduct change order.
- D. The scope of meetings include but are not limited to:
 - 1. PRE-CONSTRUCTION MEETING (KICK-OFF)
 - a. A Pre-construction (kick-off) meeting will be conducted with representatives of all the Contractors within fifteen 15 days prior to the project start date at the jobsite or as designated by Barton Malow Builders .
 - b. The agenda may include:
 - 1) Discussion on major Contracts, suppliers, and schedule of values.
 - 2) Major and/or critical work sequencing regarding the project schedule.
 - 3) Project coordination and designation of personnel representing the parties to Contract and responsible personnel.

- 4) Procedures and processing of field instructions/decisions, submittals, substitutions, applications for payments, proposal requests, change orders and contract closeout procedures.
 - 5) Quality assurance/control issues
 - 6) Adequacy of distribution of contract documents.
 - 7) Procedure for maintaining record documents.
 - 8) Use of premises, office, work and storage areas, and other Barton Malow Builders requirements.
 - 9) Execution of Contract between Owner & Contractor
 - 10) Submission of executed bonds and insurance certificates.
 - 11) Construction facilities/temporary utilities
 - 12) Safety and Security procedures
 - 13) Submission of initial Submittal schedule.
 - 14) Other Administrative procedures
 - 15) Review of Owner expectations.
 - 16) On-site meeting requirements
2. PRE-INSTALLATION CONFERENCES
- a. Conduct a pre-installation conference at the project site before each construction activity/scope of work that requires coordination with other construction or required by the specifications.
 - b. Require attendance of entities directly affecting, or affected by, work of the section, including Construction Manager, Contractor, installers, manufacturers. Architect and Owner will be invited.
 - c. Review conditions of the installation, preparation and installation procedures, and coordination with related work. Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - 1) The Contract Documents
 - 2) Related requests for information (RFIs).
 - 3) Related Change Orders
 - 4) Purchases
 - 5) Deliveries
 - 6) Submittals.
 - 7) Review of mockups.
 - 8) Possible conflicts.
 - 9) Compatibility problems.
 - 10) Time Schedules.
 - 11) Weather limitations
 - 12) Manufacturers' written recommendations.
 - 13) Warranty requirements
 - 14) Acceptability of substrates
 - 15) Temporary facilities and controls.
 - 16) Space and access limitations.
 - 17) Regulations of authorities having jurisdiction.
 - 18) Testing and inspection requirements.
 - 19) Installation procedures.
 - 20) Coordination with other work.
 - 21) Required performance results.
 - 22) Protection of adjacent work.
 - 23) Protection of construction and personnel.
 - d. Require attendance of entities directly affecting, or affected by, work of the section, including Construction Manager, Contractor, installers, manufacturers. Architect and Owner will be invited.

- e. Review conditions of the installation, preparation and installation procedures, and coordination with related work. Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - 1) The Contract Documents
 - 2) Related requests for information (RFIs).
 - 3) Related Change Orders
 - 4) Purchases
 - 5) Deliveries
 - 6) Submittals.
 - 7) Review of mockups.
 - 8) Possible conflicts.
 - 9) Compatibility problems.
 - 10) Time Schedules.
 - 11) Weather limitations
 - 12) Manufacturers' written recommendations.
 - 13) Warranty requirements
 - 14) Acceptability of substrates
 - 15) Temporary facilities and controls.
 - 16) Space and access limitations.
 - 17) Regulations of authorities having jurisdiction.
 - 18) Testing and inspection requirements.
 - 19) Installation procedures.
 - 20) Coordination with other work.
 - 21) Required performance results.
 - 22) Protection of adjacent work.
 - 23) Protection of construction and personnel.
- 3. SITE MOBILIZATION MEETING
 - a. Barton Malow Builders Project Superintendent will schedule meeting at the Project site prior to Barton Malow Builders Construction start date.
 - b. Attendance Required:
 - 1) Barton Malow Builders
 - 2) Contractor
 - 3) Owner
 - 4) Architect/Engineer
 - 5) Barton Malow Builders's Superintendent
 - 6) Major subcontractors
 - c. Agenda:
 - 1) Use of premises by Contractor, Owner and Barton Malow Builders.
 - 2) Project cleanup requirements.
 - 3) Owner's requirements.
 - 4) Construction facilities and controls provided by Owner.
 - 5) Temporary utilities provided by Contractor and Owner.
 - 6) Survey and building layout.
 - 7) Security and housekeeping procedures.
 - 8) Schedules.
 - 9) Application for payment procedures.
 - 10) Procedures for testing.
 - 11) Procedures for maintaining record documents.
 - 12) Requirements for start-up of equipment.
 - 13) Inspection and acceptance of equipment put into service during construction period.

- d. Record minutes and distribute copies within 3 days after meeting to participants, with one electronic copy(s) to Architect/Engineer, Owner, participants, and those affected by decisions made.
- 4. PROGRESS MEETINGS
 - a. Onsite project coordination/progress meetings will be held on a weekly basis or as appropriate throughout the life of the Project. Barton Malow Builders will set the agenda for the Project progress meeting.
 - b. Barton Malow Builders will set the agenda and preside at the meetings with copies for participants, preside at meetings.
 - c. At a minimum, each Contractor shall be prepared to discuss the following:
 - 1) Review minutes of previous meetings.
 - 2) Actual vs. scheduled progress for the prior two-week period.
 - 3) Planned construction activities for the next four weeks.
 - 4) Problems with, revisions to, and corrective measures and procedures to regain the construction schedule, if required.
 - 5) Review of off-site fabrication and delivery schedules.
 - 6) Document clarification requests.
 - 7) Coordination items with other Contractors.
 - 8) Changes in the work affecting cost and/or time.
 - 9) Review of submittals schedule and status of submittals.
 - 10) Field observations, problems, conflicts, and decisions.
 - 11) LEED requirements and status.
 - 12) Quality control issues and non-conformance resolutions.
 - 13) Safety issues.
 - 14) Review of RFIs log and status of responses.
 - 15) Maintenance of progress schedule.
 - 16) MOT and road closure planning.
- 5. FOREMAN MEETINGS
 - a. Mandatory Foreman's meetings will be held on a daily basis at the start of the work day, time 7 am by Barton Malow Builders. At a minimum, each Contractors' foreman shall be in attendance and be prepared to discuss the following:
 - 1) Daily coordination of work
 - 2) Identification of field issues
 - 3) Safety issues
- 6. OTHER MEETINGS
 - a. Quality Assurance Meetings
 - b. Barton Malow Builders may conduct quality assurance/quality control meetings as necessary during the progress of the Work. Barton Malow Builders will set the agenda for the quality meeting. At a minimum, Contractor shall be prepared to discuss the following:
 - 1) Testing and inspection procedures
 - 2) Tolerance requirements
 - 3) Quality samples
 - 4) Reporting of non-conformance items
 - 5) Corrective actions assigned
 - 6) Disposal of non-conforming items
 - 7) Job procedures
 - c. Safety Meetings
 - 1) Refer to Section 017120 On-Site Project Safety for more information.
 - d. Inspection Tours
 - 1) Formal inspections/tours may be made of the Project progress by the Owner, Architect, local, state or federal officials, insurance representatives, or others as the occasion warrants and as scheduled by Barton Malow Builders. If requested

by Barton Malow Builders, each Contractor shall be prepared to show and explain Work throughout the building to the inspecting parties, in addition to providing Work in compliance with these inspections.

- e. Change Request Meetings
 - 1) Upon issuance of a major Proposal Request (a.k.a. bulletin), Barton Malow Builders may conduct a meeting as necessary with all significant Contractors to review its contents and determine cost, delivery, and schedule impacts. At a minimum, Contractor shall be prepared to discuss the following:
 - (a) Impact of out-of-sequence work
 - (b) Identification of pertinent long-lead material and system impact
 - (c) Alternative recommendations
 - (d) Evaluation of approximate cost magnitude
 - (e) Evaluation of impact on completion
 - (f) Alternate sequencing
 - (g) Due date for Contractor pricing and scheduling impact

3.03 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 013216

- A. Within 10 days after Notice to Proceed (NTP) and review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.

3.04 DAILY CONSTRUCTION REPORTS

- A. Each Contractor will prepare and distribute a daily report to Barton Malow Builders using the specified system below. Contractors shall provide a comprehensive report on a daily basis to include pre-task planning and maintain it during the entire duration of the project and for any day not worked between mobilization and demobilization. Training can be provided as necessary. Each Contractor is responsible for specifically alerting to items which could result in claims or delays.
- B. Include only factual information. Do not include personal remarks or opinions regarding operations and/or personnel.
- C. Daily reports are to be transmitted electronically to Barton Malow Builders by the end of the day for that day's work. The daily report shall include the following as a minimum:
 - 1. Submit using Flypaper to Box.
 - 2. Prepare a daily construction report recording the following information concerning events at Project site and project progress:
 - a. Date.
 - b. High and low temperatures, and general weather conditions.
 - c. List of Contractors at Project site.
 - d. List of separate subcontractors at Project site.
 - e. List of visitors at Project site.
 - f. Approximate count of personnel at Project site.
 - 1) Include a breakdown for supervisors, laborers, journeymen, equipment operators, and helpers.
 - g. Detailed description of work being performed with specific location, floor, and all other pertinent information.
 - h. Major equipment at Project site.
 - i. Material deliveries.
 - j. Safety, environmental, or industrial relations incidents. Including any accidents and injuries.
 - k. Meetings and significant decisions.
 - l. Unusual events (submit a separate special report).
 - m. Stoppages, delays, shortages, and losses. Include comparison between scheduled work activities (in Barton Malow Builders's most recently updated and published

- schedule) and actual activities. Explain differences, if any. Note days or periods when no work was in progress and explain the reasons why.
 - n. Situations or circumstances which could delay work or give causes for delays or claims for extension or added costs.
 - o. Directives and requests of Authority(s) Having Jurisdiction (AHJ).
 - p. Testing and/or inspections performed.
 - q. Signature of Contractor's authorized representative.
- D. Daily reports shall be completed at the end of each day or by 6 am the next morning. Contractors failure to complete daily reports as required will result in payments not being processed or released.

3.05 COORDINATION DRAWINGS

- A. Provide information required by project manual, work scopes and specifications for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect/Engineer and Barton Malow Builders.

3.06 REQUESTS FOR INFORMATION (RFIS)

- A. Definition: A request seeking one of the following:
 - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI via Box in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with Contractors, subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between Contractors.
 - 2. Prepare in a format and with content acceptable to Barton Malow Builders .
 - a. Use Box for all RFI submissions.
 - 3. Attach any and all additional information required for clarification in the RFI via PDF attachment in Box .
 - 4. Ensure RFI is linked to the appropriate sheet(s).
- C. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included. If an RFI is directly impacting work in the field or will do so before the RFI due date, mark as top priority in Box and email Barton Malow Builders team to inform them of the urgency of the item.
 - 1. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section - 016000 - Product Requirements)
 - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
 - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
 - 2. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned rejected without a response.
 - 3. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned rejected without a response.

- a. Barton Malow Builders or the Owner reserves the right to back charge the Contractor for the costs due to processing excessive frivolous RFIs.
- D. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
 - 1. Fully complete the RFI form in Box including uploading any supporting documentation and photos.
 - 2. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 - 3. Annotations: Field dimensions and/or description of conditions which have engendered the request.
 - 4. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- E. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- F. Review Time: Architect/Engineer and/or OCC will respond and return RFIs to Barton Malow Builders within 14 calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
 - 1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- G. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Barton Malow Builders .
 - 1. Response may include a request for additional information, in which case the Contractor is responsible to promptly respond to the request. If an additional RFI is written after the original RFI is closed, it will be identified with a.1 suffix to the original number.
 - 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 - 3. Upon receipt of a response, promptly review and distribute it to all affected parties.
 - 4. Notify Barton Malow Builders within three calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.
- H. Any RFI that is directly impacting work in the field or will do so before the RFI due date, must be marked as high priority in Box and an email must be sent to the Barton Malow Builders team to inform and alert us to escalate the item to the design team. In addition, when the response to an RFI results in a price change (deduct or credit), the Contractor is required to notify the Barton Malow Builders team within 3 days of the return of the RFI.

3.07 SUBMITTALS

- A. SUBMITTAL SCOPE
 - 1. Where requirements of this section vary from the requirements of the General Conditions, the most stringent requirement shall take precedence.
 - 2. Following the issuance of the contract or Notice to Proceed (NTP), Construction Manager will prepare and provide a submittal register/schedule including close-out documentation for the Contractor's use in preparing submittals required for the Project.
 - 3. The Contractor shall complete the submittal schedule/register (provided by Construction Manager) showing the dates for submission, lead times required, and their expected delivery dates to maintain and follow the construction schedule, within 14 days of receipt.

4. When the Contractor completes the above-mentioned submittal schedule, the Contractor must clearly identify any items related to the scope of work that have a lead time of greater than 4 weeks. These items will be tracked on a material schedule for scheduling and quality control purposes.
5. Dates for submission noted by the Contractor must assume re-submittals will be required.
6. Account for time required for preparation, review, manufacturing, fabrication, and delivery when establishing submittal delivery and review deadline dates. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.
7. Deliver each submittal by date noted in submittal schedule, unless another date has been agreed to by all affected parties, and is of the benefit to the project.
 - a. Upload submittals in electronic form via Box and submit to Barton Malow Builders.
 - b. Deliver submittals such as samples and draw downs to Barton Malow Builders at 22322 Rutland Dr, Southfield, MI, 48075.
8. Barton Malow Builders will not be held responsible for delays to the overall Project or other Contractors due to receiving submittals after the date indicated in the Barton Malow Builders bid category work scopes, submittal log, and per sections below.
9. Submittals shall be packaged based on each technical specification section. Include all submittals for review and submittals for information, when submitting a package. Submittals containing information about more than one specification section will be returned for re-submittal.
10. Contractor is responsible to submit all submittals as required per the Contract Documents and Specifications, as well as any additional items that are standard to the Contractor's respective scope(s) of work, whether or not listed in the submittal log/register.
11. Any submittal deviation from the contract documents must be clouded out and noted on the submittal by the Contractor for Barton Malow Builders and Architect/Engineer review.
12. Contractor is responsible for completing all submittals (less final warranties, training, and attic stock) within 14 days of contract award, this includes sample warranties if required by the specifications.
13. After review, Contractor shall furnish approved copies of shop drawings, diagrams, templates, catalog cuts, technical data, etc. to other Contractors for the purposes of coordination of this work.
14. Coordination: Each Contractor shall coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - a. By providing the submittal, Contractor assures the product or system submitted is available and deliverable in accordance with the schedule requirements.
 - b. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 - c. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - d. Barton Malow Builders and Architect/Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 - e. Coordinate each submittal as required with all trades and with all public agencies involved.
 - f. Secure all necessary approvals from public agencies and others; signify by stamp or other means that all required approvals have been obtained.

B. SUBMITTAL REQUIREMENTS

1. Each submittal shall show Contractor's review stamp signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction

work, and coordination of information are in accordance with the requirements of the work and Contract Documents.

2. Identify: Project, Barton Malow Builders, Contractor or supplier, pertinent drawing and detail number, and specification section number and article/paragraph, as appropriate, on each copy.
3. If a submittal register item is missing, notify Barton Malow Builders so it can be added to the system for your team to attach appropriate PDFs for submission.
4. In general, all submittals, except color, physical samples, or mockups, are to be created in a PDF document form and uploaded to their respective register number in Box so it can be electronically reviewed by all parties necessary. Scanned copies of submittals will not be accepted.
5. All submittals will be reviewed electronically, and the Contractor will be notified in Box when the review is complete. The status will be noted both on the PDF and in the Box system assigned to the item.
6. Samples will be reviewed for aesthetic, color, or finish selection. Contractor to submit 1 sample more than the specification requirement.
7. Any and all Substitution Requests must be accompanied with a filled out Substitution Request form as found in the Architects specifications. This form must be submitted with all accompanying information via Box following all other submittal requirements/processes.

C. TYPES OF SUBMITTALS

1. Shop Drawings
 - a. Provide Shop Drawings as complete submittals (no partial sets) on original drawings or information prepared solely by the fabricator or supplier. In no instance shall the Contract Drawings be reproduced for Shop Drawing Submittals.
2. Product Data
 - a. Modify product data sheets to delete information that is not applicable to the project and/or highlight specific items applicable to this project. Provide additional information if necessary to supplement standard information
 - b. Product data sheets that are submitted with extraneous information not deleted and/or modified will be returned without review to the Contractor for resubmittal.
3. Samples/Mock-ups
 - a. Provide physical samples to illustrate materials, equipment or workmanship, and to establish standards by which completed work may be judged as required by the technical section.
 - b. Provide office samples in sufficient size or as defined in the technical specifications and quantity to clearly illustrate full range of colors, textures, etc. available and the functional characteristics of the product material.
 - c. Contractor to submit 1 additional sample above what is required in the Contract Documents and Specifications.
 - d. Erect Field Samples or mock-ups as required by the technical sections and/or Barton Malow Builders, at the Project site in a location designated by Barton Malow Builders. Construct field samples to be complete, including Work of all trades required in finishing the Work. Provide Field Samples at the request of the Owner, Architect and/or Barton Malow Builders where construction materials and/or methods deviate from the requirements of the intent of the Contract Documents or conventional construction practice.
 - e. Reference Section 014000 - Quality Requirements for additional mock-up requirements.
4. Certifications
 - a. Certifications shall clearly identify the materials in reference and shall state that the material and the intended installation methods, where applicable, are in compliance with the Contract Documents for this project. Attach manufacturer's affidavits where applicable.

5. Closeout Submittals

- a. Refer to Section 017800 - Closeout Submittals for close-out information and requirements including the standard Contractor's Guarantee Form that must be signed, without modification, in order to receive final payment. A copy of this form is either found in [] or is available upon request.

D. SUBMITTAL PROCESS AND RESPONSIBILITIES

1. Contractor's Responsibilities

- a. After Barton Malow Builders', Architect's, and Owner's review, Contractor is responsible to distribute copies of the reviewed submittal to any supplier/fabricators, second or lower tier Subcontractors, or other Contractors that must coordinate with this work. Contractor must ensure that all of their respective field staff/foreman have the reviewed information.
- b. Do not begin Work which requires submittals until return of submittals with Barton Malow Builders', Architect's, and Owner's stamp and initials indicating status of review being either Approved, or Approved as Noted.
- c. Contractor's responsibility for errors and omissions in submittals is not relieved by Barton Malow Builders', Architect's, and Owner's review of submittals.
- d. Contractor's responsibility for deviations in submittals from requirements of Contract Documents is not relieved by Barton Malow Builders', Architect's, and Owner's review of submittals unless Barton Malow Builders', Architect's, and Owner's give written acceptance of specific deviations. Contractor must note and cloud any deviations from the contract documents on their submittals prior to submission.

2. Barton Malow Builders' Responsibilities

- a. Barton Malow Builders' review is for general administrative purposes only and neither this review, nor any subsequent approval by Barton Malow Builders of a submittal, shall relieve Contractor from its obligations to comply fully with the Contract Documents.
- b. Barton Malow Builders will make changes or notations directly on the submittals, identify such review with its review stamp, sign, and forward acceptable submittals to the Architect and/or Owner.
- c. After the Architect and/or Owner's review, Barton Malow Builders will forward submittals to the Contractor.

3. Architect's Responsibilities

- a. Architect will review submittals within 14 days after receipt, checking only for conformance with the design compliance of the Project, and compliance with information given in the Contract Documents. If the submission is large and/or requires detailed or lengthy review by the Architect, additional time may be required.
- b. Architect will return to Barton Malow Builders without review any submittals not bearing the Contractor's or Barton Malow Builders' review stamp or not showing that it has been reviewed by the Contractor and Barton Malow Builders.
- c. Architect will make changes or notations directly on the submittal, identify such review with its review stamp, obtain and record Architect file copy and return the submittal to Barton Malow Builders.

4. Re-Submission Requirements

- a. For Shop Drawings: Review returned Barton Malow Builders and/or Architect drawings and resubmit as specified. All changes made must be identified through bubbling or other approved methods.
- b. For Product Data and Samples Resubmit new data and samples as required.

3.08 SUBSTITUTION REQUESTS

- A. Any and all Substitution Requests must be accompanied with a filled out Substitution Request form as found in the Architects specifications. This form must be submitted with all supporting documentation via Box following all other submittal requirements/processes.

- B. Any product for which a substitution request is submitted must meet all specification requirements.
- C. Substitution requests must be submitted with enough time to allow for complete review by the Architect/Owner and not delay Project Schedule.
- D. Each Substitution request should be accompanied by the following supporting documentation:
 - 1. Product identification, including the manufacturer's name and address
 - 2. Manufacturer's literature; identifying:
 - a. Product description and technical information.
 - b. Reference standards.
 - c. Performance and test data
 - d. Installation instruction, operating procedures, and other like information.
 - 3. Samples, as applicable.
 - 4. Names and addresses of similar projects on which product has been used, and date of each installation.
 - 5. Itemized comparison of the proposed substitution with the product specified, listing all significant variations.
 - 6. Data relating to changes in delivery or construction schedule.
 - 7. A list of all effects of the proposed substitution on separate contracts.
 - 8. Accurate cost data comparing the proposed substitution with the product specified.
 - a. Amount of any net change to Contract Sum.
 - 9. Designation of availability of maintenance services and sources of replacement materials.
 - 10. Substitute products shall not be ordered or installed without written acceptance via approval of the Substitution Request Form.
- E. In making formal request for substitution the Contractor represents that:
 - 1. It has investigated the proposed product and has determined it is equivalent to or superior in all respects to the product specified.
 - 2. It will provide same warranties or bonds for the proposed substitution as required for the product specified.
 - 3. It will coordinate installation of the accepted substitution into the Work, and will make such changes as may be required for the Work to be complete in all respects.
 - 4. It waives all claims for additional costs caused by or arising from the substitution which may subsequently become apparent.
 - 5. Cost data is complete and includes related costs under its Agreement.
 - 6. Any modifications necessary as a result of the use of an approved substitute shall be paid by the Contractor proposing the substitution.
 - 7. Any additional engineering costs required to be performed by the Architect to approve, implement, or coordinate the substitution above reasonable review services, shall be paid by the Contractor proposing the substitution.
 - 8. Under no circumstances will the Architect be required to prove that a product proposed for substitution is or is not equal to the quality of the product specified.
- F. Substitution requests that are not approved will be returned to the party submitting the request with an explanation for the rejection.
- G. Substitutions will be considered only when the required form is completed and included with the submittal containing all required backup data. This form can be found in the Architects specifications.

3.09 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit all closeout submittals as required via the Contract Documents and Specifications as well as any additional items that are standard to the Contractor's respective scope(s) of work.
- B. Contractor is responsible for recording and transmitting any trainings and/or demonstrations required in the Contract Documents and Specifications.
- C. Submit Final Contractor signed off Correction Punch List for Substantial Completion.

- D. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 017800 - Closeout Submittals:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Demonstration and Training.
 - 5. Attic Stock.
 - 6. Other types as indicated.
- E. All additional information can be found in Section 017800 - Closeout Submittals

3.10 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Extra Copies at Project Closeout: See Section 017800.
- C. Samples: Submit four samples as specified in individual specification sections and for materials shown on the finish schedule; two of which will be retained by Architect/Engineer and Owner.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.11 SUBMITTAL REVIEW

- A. Submittals: Architect/Engineer will review each submittal, and approve, or take other appropriate action.
- B. Substitution Requests: Architect/Engineer will acknowledge receipt and review. See below for actions to be taken.
- C. Architect/Engineer's actions will be reflected by marking each returned submittal using a virtual stamp on electronic submittals.
 - 1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- D. Architect/Engineer's and consultants' actions on items submitted for review:
 - 1. "Approved", or language with same legal meaning.
 - 2. "Approved as Noted, Resubmission not required", or language with same legal meaning.
 - a. At Barton Malow Builders' option, submit corrected item, with review notations acknowledged and incorporated.
 - 3. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
 - a. Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
 - 4. "Revise and Resubmit".
 - a. Resubmit revised item, with review notations acknowledged and incorporated.
 - 5. "Rejected".
 - a. Submit item complying with requirements of Contract Documents.
- E. Architect/Engineer's and consultants' actions on items submitted for information:
 - 1. Items for which no action was taken:
 - a. "Received" - to notify the Contractor that the submittal has been received for record only.
 - 2. Items for which action was taken:
 - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION 013000

**SECTION 013114
COORDINATION DRAWINGS (NOT 3D)**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Services of a coordinator for facility services construction.
- B. Coordination documents.

1.02 RELATED REQUIREMENTS

- A. Section 013000 - Administrative Requirements: Additional requirements for coordination.

1.03 MECHANICAL AND ELECTRICAL COORDINATOR

- A. Employ and pay for services of a person, technically qualified and administratively experienced in field coordination of the type of work required to be coordinated, for the duration of the Work.

1.04 SUBMITTALS

- A. All Contractors with coordination work listed below shall submit coordination drawings to the Mechanical Contractor in Revit file format.
- B. Mechanical Contractor shall incorporate coordination required sections below from Revit files provided and coordinated with other Trades into one Revit file coordination drawing and submit to the Barton Malow Builders for approval.
- C. Submit coordination drawings and schedules prior to submitting shop drawings, product data, and samples.
- D. Submit shop drawings after approved coordination drawings are sent back from the Architect and Engineer of record.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 COORDINATION REQUIRED

- A. Coordinate the work listed below:
 - 1. Architectural: Division 3-13.
- B. Fire Suppression: Division 21.
 - 1. Plumbing: Division 22.
 - 2. Heating, Ventilating, and Air Conditioning: Division 23.
 - 3. Electrical: Division 26.
- C. The following work is to be coordinated:
 - Above Ceiling Equipment
 - Above Ceiling Structural Supports
 - Hydronic Piping & Valves
 - Domestic Water Piping & Valves
 - Storm, Sanitary, & Vent Piping
 - Compressed Air Piping & Valves
 - Med Gas Piping & Valves
 - Fire Sprinkler Piping & Valves
 - Sprinkler Heads
 - Ductwork & Dampers
 - Air Terminal Devices
 - Diffusers
 - Light Fixtures
 - Conduit & Junction Boxes
 - Access Panels
 - [_____]

[]

- D. Conduct meetings among separate Contractors and others concerned, to establish and maintain coordination and schedules, and to resolve coordination matters in dispute.

3.02 COORDINATION DOCUMENTS

- A. Prepare coordination drawings to organize installation of products for efficient use of available space, proper code access spacing for proper sequence of installation, and to identify potential conflicts.
- B. Maintain documents for the duration of the work, recording changes due to site instructions, modifications or adjustments.
- C. After Architect and Engineer of record review of original and revised documents, reproduce and distribute copies to concerned parties.

3.03 COORDINATION OF SUBMITTALS

- A. Check field dimensions and required clearances and relationship to available space and anchors.
- B. When changes in the work are made, review their effect on other work and note on the coordination drawing.
- C. Conflicts that cannot be resolved are to be clouded out for Architect/Engineer review.

3.04 COORDINATION OF SUBSTITUTIONS AND MODIFICATIONS

- A. Verify compliance with Contract Documents and for compatibility with work of other sections.
- B. Submit with recommendation for action.

3.05 OBSERVATION OF WORK

- A. Observe work for compliance with Contract Documents.

END OF SECTION 013114

**SECTION 013216
SCHEDULE AND PHASING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 RELATED SECTIONS

- A. Contract Document
- B. Section 011000 - Use of Premises: Work sequence.

1.03 GENERAL REQUIREMENTS

- A. Refer to the Contract Documents for requirements related to Contract Time, Commencement of Work, Milestones, Substantial Completion and Final Completion of the Project Schedule.
- B. The Work shall proceed at such rate as will ensure meeting the specified Milestone Dates & Durations and dates for Substantial Completion and Final Completion. By execution of the Contract, the Contractor represents he/she has analyzed the Work, the materials and methods involved, the systems of the building, availability of qualified mechanics and unskilled labor, restrictions of the site, constraints imposed, his own workload and capacity to perform the work and agrees that the specified durations and milestone dates are reasonable considering the existing conditions prevailing in the locality of the work, including weather conditions, and other factors, with reasonable allowance for variations from average or ideal conditions.
- C. The Preliminary Schedule Date for completion of all contract start-up activities shall be established by Barton Malow Builders.
- D. A Preliminary Project Schedule is provided at the end of this section and is part of the Contract Documents. A Schedule will be prepared by Barton Malow Builders based on the Contractor's input including all product and equipment lead times after Contract Award. Barton Malow Builders will compile all Contractors' input and develop a schedule (Note: durations identified in the preliminary schedule will not change unless approved by Barton Malow Builders). Once the individual Contractors' input on sequencing are agreed upon by Barton Malow Builders, this schedule will become the project plan for construction.
- E. Barton Malow Builders reserves the right to revise the schedule as deemed necessary.
- F. Reasonable changes in sequencing, durations, and phasing are to be expected with each schedule update. These changes will be made by Contractor at no additional cost.
- G. Contractors shall bring to the attention of Barton Malow Builders any special requirements needed within 7 days.
- H. While rearrangement of activity sequences may occur after contract award, all Preliminary Schedule Bid Durations shall remain in effect and all bidders shall accept the milestone dates established in the Schedule.
- I. Each Contractor agrees to commence work in the field within 3 calendar days after being notified to do so by Barton Malow Builders. The Contractor shall timely and diligently perform and fully complete all of the work to the satisfaction of Barton Malow Builders, Architect/Engineer and Owner. The work shall begin at such points as Barton Malow Builders may designate and shall be carried to completion with the utmost speed.
- J. If a Contractor delays progress for any reason other than those allowed by the General Conditions, said Contractor will take all necessary steps to expedite their contract work to maintain activity durations and milestone dates as depicted in the Schedule at no expense or additional cost to Barton Malow Builders and Owner.
- K. If, in the opinion of Barton Malow Builders, a Contractor is behind schedule and is so notified by Barton Malow Builders in writing, said Contractor will be required to furnish to Barton Malow

Builders a short interval schedule of their work showing location, number of men and crew required to get back on the agreed-upon schedule. If the Contractor fails to maintain and meet the short interval schedule submitted to Barton Malow Builders, Barton Malow Builders reserves the right to take whatever steps necessary to put the work back on schedule at the Contractor's expense. The Contractor shall employ such means as overtime work, multiple work shifts, and additional equipment, without additional compensation and shall continue to do so until the progress of the work is, in the opinion of Barton Malow Builders, in conformance with the Schedule.

- L. Each Contractor agrees that it shall have no claim against the Owner, Architect, or Barton Malow Builders for an increase neither in the contract price nor for a payment or allowance of any kind for damage, loss, or expense resulting from delays regardless of whether the delay is the basis for an extension of time. Each Contractor shall have no claim for damage, loss, or expense resulting from reasonable interruptions to, or necessary suspension of, their work to enable other Contractors to perform their work.
- M. Adverse/Severe Weather
 - 1. Activity and sequence adjustments may be made when there is adverse weather. The weather experienced at the project site during the contract period must be found to be unusually severe, and for a period greater than typically anticipated for the project location during any given month before a schedule adjustment is made.
 - 2. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.
 - 3. Upon issue Letter of Intent (LOI) or Notice to Proceed (NTP) and continuing throughout the Contract, the Contractor will record on their daily report, the occurrence of the adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for fifty percent (50%) or more of the Contractor's scheduled workday.
 - 4. Weather days lost during the week must be made up the following weekend with required notice to Barton Malow Builders.
- N. Bidders are aware that by signing the Contract they are certifying that they have reviewed and accepted the initial durations in the preliminary project schedule at the end of this section. Contractor shall note that they shall allow for a possible start or end date within 90 days of those dates shown in the schedule.
- O. Contractors are required to abide by all iterations of the Schedule, Phasing and Logistics plans, and as directed by Barton Malow Builders.

1.04 SUBMITTALS

- A. The technical submittal requirements are identified in the various Specification Sections assigned to each bid category, and they shall be submitted in accordance with the Submittal Register specified in Section 013000 - Administrative Requirements.
- B. Within 14 days after date Letter of Intent (LOI) or Notice to Proceed (NTP), submit proposed schedule for respective scope of work in form and substance satisfactory to Barton Malow Builders of all activities contained in the Contractor's scope of Work, including activity descriptions and durations in working days, for shop drawings, fabrication, delivery, and installation of products, materials, and equipment. This schedule shall identify precedent relationships between Contractor's activities and those of other Contractors, necessary manpower loadings, and precedent activities for other Contractors. The activities on the schedule must be at a level of detail approved by Barton Malow Builders and should agree with the terminology and building sequencing established by Barton Malow Builders.
- C. If the proposed schedule requires revision after review, submit a revised schedule within 10 days after review.
- D. Submit in PDF format or in requested format by Barton Malow Builders.

- E. Administrative submittals shall be submitted in accordance with the following durations unless otherwise noted in other sections of this Project Manual:
1. Signed contract agreement: 7 days after receipt
 2. Performance and payment bonds: 7 days after Receipt of Contract.
 3. Partially executed Waiver of Liens: 1 days after Receipt of Contractor payment .
 4. Material handling plan: 7 days after Receipt of Contract.
 5. Permits/licenses: Prior to start of construction.
 6. Certificates of insurance: 7 days after Receipt of Contract.
 7. Contractor safety program: Prior to start of construction.
 8. Contractor's initial construction schedule input and completed work item listing: 10 days after Letter of Intent (LOI) or Notice to Proceed (NTP).
 9. List of Subcontractors, suppliers and fabricators: 3 days after Post-bid review.
 10. List of Contractor's staff assignments and phone number: 3 days after Post-bid review.
 11. Schedule of values: 7 days after Post-bid review.
 12. Initial product list schedule: 7 days after Post-bid review.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 BID PACKAGE PRE-BID CONSTRUCTION SCHEDULE

- A. A Preliminary project schedule indicating activity durations is included at the end of this section to communicate how activities are sequenced, to established durations for activities, and to provide the general time frame for the work to commence for each bid category.
- B. Each Contractor is responsible for construction sequencing and means and methods for their bid category. Therefore, Contractor may propose sequencing which differs from the Preliminary Schedule providing that achieves the Milestone Dates listed.
- C. Note that the Schedule is preliminary and that the project start and/or substantial completion date may be moved at the direction of Barton Malow Builders and/or the Owner.
- D. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, products identified under Allowances, and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.

3.02 CRITICAL PATH METHOD SCHEDULE

- A. This Project's schedule shall be monitored using the Critical Path Method (CPM). The purpose is to assist the Contractor in completing the Work on time and as a means for Barton Malow Builders to monitor progress of the Contractors.
- B. The Contractor shall meet with Barton Malow Builders after award to review the schedules attached to this Specification Section. Following the review, the Contractor shall meet with each subcontractor and supplier to prepare detailed plans for performing the Work.
- C. Following these meetings and within 14 days after Letter of Intent (LOI) or Notice to Proceed (NTP), the Contractor shall prepare and submit the following material for Barton Malow Builders's approval:
1. A bar chart of all activities included in the Contractor's Scope of Work. This bar chart is to indicate durations for all activities in working days (as opposed to calendar days). Activities must have a single source of responsibility and must depict a single geographical area (e.g floor or areas within a floor). Third-party dependent activities, such as inspections or owner furnished equipment, shall be identified by Contractor. The activities on the bar chart must be at a level of detail approved by Barton Malow Builders and agree with the terminology and building zoning established by Barton Malow Builders.
 2. If specifically requested by Barton Malow Builders, the bar chart shall be cost and manpower loaded.

3. Precedent relationships between the Contractor's activities and those of other Contractors based on a thorough review of the Contract Drawings details showing interface between contracts shall be identified.
 4. Graphic diagrams indicating the proposed direction of work whenever applicable or if requested by Barton Malow Builders.
 5. Planned crew sizes, equipment, production rates and similar data used to arrive at adequate durations and sequences.
 6. The Contractor's bar chart shall include activity descriptions and durations for shop drawings preparation and review, fabrication, delivery and installation of products, materials and equipment. Activities shall depict the Contractor's planned work, and not as-built.
 7. If the Contractor cannot provide a complete bar chart of all of its activities within 14 days after issuance of Letter of Intent (LOI) or Notice to Proceed (NTP), the Contractor may, with Barton Malow Builders' written approval, provide a work plan for the first 60 days after Letter of Intent (LOI) or Notice to Proceed (NTP). The Contractor's final bar chart shall be complete and submitted to Barton Malow Builders prior to the 10th day after Receipt of Contract.
 8. The Contractor is to provide a list with corresponding lead times of all materials with longer than a 4 week lead time within 10 days after issuance of Letter of Intent (LOI) or Notice to Proceed (NTP).
- D. The Contractor's agreed upon bar chart and schedule information will be incorporated into a Schedule prepared by Barton Malow Builders. The Contractor shall be required to send both field and office representatives knowledgeable of the items, to the Schedule Coordination Meetings conducted by Barton Malow Builders with the various Contractors. The purpose of these meetings is to coordinate the various Contractors schedules.
- E. After the Coordination Meeting, Barton Malow Builders will prepare and issue a Schedule for review and comment by the Contractors. Contractors shall submit comments within 7 days after receipt of Barton Malow Builders' Schedule. Review of Barton Malow Builders' schedule to identify missing activities or relationships with other Contractors relevant to the scope of the Contractor's work is the responsibility of the Contractor. As such, the Contractor will not be granted time extensions to complete activities not initially included in the Contractor's bar chart and the subsequent Barton Malow Builders' Schedule.
- F. Upon receipt of Contractor's review comments, or after the 14 day review period has expired, whichever occurs first, Barton Malow Builders will prepare and issue the Schedule. The schedule may be issued as a network or bar chart and will include a print-out of scheduled activities and their associated start and finish dates. Barton Malow Builders will incorporate the Contractor's comments provided they do not affect milestone dates or dates of Substantial and Final Completion and provided they are consistent with the coordination requirements of other Contractors.
- G. Barton Malow Builders shall issue the Schedule for acceptance by each Contractor. This acceptance shall be provided in writing within 7 days of receipt of the Schedule. Failure to respond within the 7 day period shall be deemed as acceptance by the Contractor of the Schedule.
- H. Barton Malow Builders will utilize the Schedule to plan and coordinate all construction activities of the Contractors. All Contractors are to complete all work in accordance with the detailed Schedule issued by Barton Malow Builders.
- I. The float in the project schedule is intended to be utilized and consumed by the project as needed, and is not solely available for the exclusive use of any party.

3.03 UPDATES AND MODIFICATIONS TO THE CONSTRUCTION SCHEDULE

- A. Before the start of construction, all parties performing work will be required to attend and participate in a schedule meeting. Contractors are expected to come prepared to the meeting with a knowledge of the bid schedule and work activities required to complete the project. The meeting(s) will be several hours and all contractors performing work are expected to attend.

- B. Each Contractor will be required to submit a 6 week look-ahead schedule every Friday to Barton Malow Builders or at an alternate time determined by the CM. The look-ahead schedule should address all work activities occurring within the six week schedule window, including deliveries and releases of materials. The look-ahead schedule shall be manpower loaded (i.e. the number of craft personnel working on each specific activity each day). The look-ahead schedules will be reviewed and discussed at the weekly Contractor meeting.
- C. If during the progress of the work, the Contractor determines he will not be able to complete his work in the time allotted, he must notify Barton Malow Builders within 3 days after publication of Barton Malow Builders' updated Project Schedule. Adjustments may be made to accommodate the Contractor if written notification is given to Barton Malow Builders, the adjustment is within the stated milestone dates, and Barton Malow Builders approved the adjustment after reviewing its impact on other Contractor. Otherwise, Barton Malow Builders' Schedule shall be deemed accepted by all parties and becomes a contractual requirement for the Contractor.
- D. Weekly progress meetings will be held at the job site. Field Supervisors from all Contractors are to attend all progress meetings. The Contractor shall prepare a short interval schedule, generally covering 6 week periods, to coordinate the detailed activities of Subcontractors, Suppliers, and delivery of equipment/materials. The short interval schedules shall be prepared in bar chart form and submitted 24 hours prior to the job progress meetings, or as required by Barton Malow Builders.

3.04 ADJUSTMENT OF CONTRACTOR'S EFFORT

- A. Whenever it becomes apparent that any activity duration, activity completion date, and/or milestone date may not be met, the responsible Contractor shall take the actions specified in the, Terms & Conditions, Standard General Conditions and Supplementary General Conditions.
- B. If the Contractor fails to take action, Barton Malow Builders may proceed in accordance with the Terms & Conditions, Standard General Conditions and Supplementary General Conditions.
- C. If Contractor is requesting a time extension to its original contract duration as a result of Owner or Architect/Engineer requested change or an impact caused by the actions of another Contractor or Barton Malow Builders, the Contractor must submit a time impact analysis of their schedule with each change, which demonstrates how the critical path of the Contractor's schedule was impacted and the justification of the additional time requested.

3.05 DISTRIBUTION OF SCHEDULE

- A. Contractor is responsible to distribute copies of updated Barton Malow Builders schedules to subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION 013216

**SECTION 013553
SECURITY PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Security measures including entry control, personnel identification, and miscellaneous restrictions.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Use of Premises: use of premises and occupancy.
- B. Section 015000 - Temporary Facilities and Controls: Temporary power/ lighting and Temporary heat.

1.03 SECURITY PROGRAM

- A. The services of security guards will not be provided by Barton Malow Builders or Owner.
- B. Each Contractor, at its own cost and expense, may provide security guard, protective service or other means of site security as it deems necessary. Contractors are expected to protect Work , existing premises and Owner's operations from theft, vandalism, and unauthorized entry.
- C. Contractors shall advise Barton Malow Builders of any theft or damage which might delay the execution of the Work and furnish the Owner and Barton Malow Builders with a copy of any theft report filed with local, county or state agencies.
- D. Neither Barton Malow Builders nor the Owner assumes any responsibility for loss, theft or damage to the Contractor's materials or for damage to Work in place before the completion of the construction. In the instance of any such loss, theft or damage, the Contractor shall be responsible to renew, restore or remedy the Work, tools, equipment and construction in accordance with requirements of the Contract Documents without additional cost to Barton Malow Builders or Owner.
- E. Barton Malow Builders or Owner is not responsible for damage, liability, theft, casualty or other hazard to the automobiles or other vehicles, nor to injury, including death, to occupants of automobiles or other vehicles on the Owner's property.
- F. Barton Malow Builders or Owner may establish additional security policies and procedures. All Contractors will be required to cooperate with implementing these procedures.
- G. Site parked equipment, operable machinery and hazardous parts of the new construction subject to mischief and accidental operation shall be inaccessible, locked or otherwise made inoperable when left unattended.
- H. Initiate program at project mobilization.
- I. Maintain program throughout construction period, or as directed by Barton Malow Builders.

1.04 ENTRY CONTROL

- A. Restrict entrance of persons and vehicles into Project site and existing facilities.
- B. Allow entrance only to authorized persons with proper identification.
- C. Maintain log of workers and visitors via Barton Malow QR code and Contractor daily reports, make available to Owner on request.
- D. Barton Malow Builders shall control entrance of persons and vehicles related to Owner's operations.

1.05 PERSONNEL IDENTIFICATION

- A. Contractor will be required to sign out a Contractor Badge from Owner when working in an unoccupied and occupied building or any building off hours with Barton Malow Builders and Owner approval. Badges will be required for every onsite employee, worker, supplier, and visitor. The badges are to be worn at all times while on the project.

- B. Badge to Include: Personal photograph, name, assigned number , expiration date and employer.
- C. Require return of badges at the end of each day to Barton Malow Builders and Owner.

1.06 RESTRICTIONS

- A. Owner does not allow cameras on site or photographs taken except by written approval of Owner.
- B. Contractor shall have a written Substance Abuse Policy. The use or possession of illegal drugs or the use of alcohol while performing Work on the Project are strictly prohibited and may lead to immediate removal from the Project.
- C. The construction site will be tobacco free, which includes but is not limited to smoking, chewing tobacco and e-cigarettes.
- D. Personal cell phones are not to be used on construction sites except to report an emergency or on approved break time. Use of business cell phones must not interfere with jobsite safety. The use of camera features on cell phones is strictly prohibited.
- E. Personal radios or music players with earphones are not permitted.
- F. Do no work on Sundays.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 013553

**SECTION 014000
QUALITY REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Contractor's construction-related professional design services.
- F. Contractor's design-related professional design services.
- G. Quality Control
- H. Mock-ups.
- I. Tolerances.
- J. Manufacturers' field services.
- K. Defect Assessment.

1.02 RELATED REQUIREMENTS

- A. Document 007200 - General Conditions: Inspections and approvals required by public authorities.
- B. Section 013000 - Administrative Requirements: Submittal procedures.
- C. Section 014216 - Definitions.
- D. Section 016000 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants 2008 (Reapproved 2019).
- B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation 2017.
- C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry 2022.
- D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction 2019.
- E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection 2021.
- F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing 2021.
- G. ASTM E699 - Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components 2016.
- H. IAS AC89 - Accreditation Criteria for Testing Laboratories 2021.

1.04 DEFINITIONS

- A. Contractor's Quality Control Plan: Contractor's management plan for executing the Contract for Construction.
- B. Contractor's Professional Design Services: Design of some aspect or portion of the project by party other than the design professional of record. Provide these services as part of the Contract for Construction.
 - 1. Design Services Types Required:

- a. Construction-Related: Services Contractor needs to provide in order to carry out the Contractor's sole responsibilities for construction means, methods, techniques, sequences, and procedures.
- b. Design-Related: Design services explicitly required to be performed by another design professional due to highly-technical and/or specialized nature of a portion of the project. Services primarily involve engineering analysis, calculations, and design, and are not intended to alter the aesthetic aspects of the design.
- C. Design Data: Design-related, signed and sealed drawings, calculations, specifications, certifications, shop drawings and other submittals provided by Contractor, and prepared directly by, or under direct supervision of, appropriately licensed design professional.

1.05 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:
 - 1. Temporary scaffolding.
 - 2. Temporary bracing.
 - 3. Temporary foundation underpinning.
 - 4. Excavation & Trench bracing

1.06 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES

- A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.
- B. Base design on performance and/or design criteria indicated in individual specification sections.
 - 1. Submit a Request for Information to Architect/Engineer if the criteria indicated are not sufficient to perform required design services.

1.07 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Designer's Qualification Statement: Submit for Architect/Engineer's knowledge or for Owner's information.
 - 1. Include information for each individual professional responsible for producing, or supervising production of, design-related professional services provided by Contractor.
 - a. Full name.
 - b. Professional licensure information.
 - c. Statement addressing extent and depth of experience specifically relevant to design of items assigned to Contractor.
- C. Design Data: Submit for Architect/Engineer's knowledge for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- D. Test Reports: After each test/inspection, promptly submit one copies of report to Architect/Engineer and to Barton Malow Builders.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.

- j. Compliance with Contract Documents.
 - k. When requested by Architect/Engineer, Barton Malow Builders, or Owner provide interpretation of results.
- 2. Test report submittals are for Architect/Engineer's knowledge for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- E. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Barton Malow Builders and Architect/Engineer, in quantities specified for Product Data.
 - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- F. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Barton Malow Builders and Architect/Engineer's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- G. Manufacturer's Field Reports: Submit reports for Barton Malow Builders and Architect/Engineer's benefit or for Owner information.
 - 1. Submit report in duplicate within 14 days of observation to Barton Malow Builders and Architect/Engineer for information.
 - 2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
- H. Erection Drawings: Submit drawings for Architect/Engineer's benefit or for Owner information.
 - 1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

1.08 QUALITY ASSURANCE

- A. Testing Agency Qualifications:
 - 1. Prior to start of work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
 - 2. Qualification Statement: Provide documentation showing testing laboratory is accredited under IAS AC89.
- B. Designer Qualifications: Where professional engineering design services and design data submittals are specifically required of Contractor by Contract Documents, provide services of a Professional Engineer experienced in design of this type of work and licensed in Michigan.

1.09 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

1.10 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. As indicated in individual specification sections, Contractor shall employ and pay for services of an independent testing agency to perform specified testing.

- B. Owner or Barton Malow Builders may employ and pay for services of an independent testing agency to perform quality testing and inspection on the following:
 - Structural Steel
 - Masonry
 - Concrete Placement
 - Subgrade & Subbase
 - Asphalt Placement
 - Testing & Balancing
- C. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- D. Contractor Employed Agency:
 - 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, and ASTM D3740.
 - 2. Inspection agency: Comply with requirements of ASTM D3740 and ASTM E329.
 - 3. Laboratory Qualifications: Accredited by IAS according to IAS AC89.
 - 4. Laboratory: Authorized to operate in Michigan.
 - 5. Laboratory Staff: Maintain a full time registered Engineer on staff to review services.
 - 6. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 QUALITY CONTROL

- A. Each Contractor is responsible to provide the Owner with a completed quality product for its Work. Each Contractor shall be responsible for any costs associated with re-testing and re-performing the Work as a result of the Contractor's poor performance or workmanship or other failure to comply with the Contract Documents.
- B. All Work shall be done by persons qualified in their respective trades, and the workmanship shall be first-class in every respect. Each Contractor is responsible for ensuring employees are appropriately trained. All materials and equipment furnished shall be the best of their respective kinds for the intended use and unless otherwise specified, same shall be new and of the latest design.
- C. The Contractor shall provide Barton Malow Builders, Owner, Architect and their Testing Agency access to the Work in preparation and progress wherever the Work is located at all reasonable times.
- D. Barton Malow Builders and the Architect will have the authority to reject Work that does not conform to the Contract Documents or may require special inspection or testing, whether or not such Work is to be then fabricated, installed or completed. The Architect shall make all decisions with respect to questions concerning the quality or fitness of materials, equipment and workmanship.
- E. Failure by a Contractor to conduct its operations, means and methods and coordinate proper sequencing of the Work may cause Barton Malow Builders or Owner to withhold payment or any other means deemed necessary to correct non-conforming Work.
- F. The Owner will employ without cost to the Contractors, a testing firm to perform such engineering laboratory services and on-site inspection as deemed necessary by the Owner, Barton Malow Builders and/or the Architect to determine compliance with the requirements of the Contract Documents. This Work will not be a service to the Contractors for the performing of tests and checking of materials required of the Contractors.

- G. The testing firm will report directly to Barton Malow Builders. Copies of test and inspection reports will be furnished to the appropriate Contractors. The laboratory and its representatives will be instructed to promptly call to the attention of the Contractor, any instance of non-compliance with the requirements of the Contract Documents. Failure to so notify the Contractor shall not relieve the Contractor of any of its responsibilities for compliance or making good workmanship or materials which are not in compliance with the requirements of the Contract Documents.
- H. Each Contractor shall cooperate with the testing firm and provide labor to assist with sample preparations where applicable.

3.02 MOCK-UPS

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Owner/Architect will use to judge the Work.
- C. Integrated Exterior Mock-ups: Construct integrated exterior mock-up as indicated on drawings. Coordinate installation of exterior envelope materials and products as required in individual Specification Sections. Provide adequate supporting structure for mock-up materials as necessary.
- D. Room Mock-ups: Construct room mock-ups as indicated on drawings. Coordinate installation of materials, products, and assemblies as required in specification sections; finish according to requirements. Provide required lighting and any supplemental lighting where required to enable Owner/Architect to evaluate quality of the mock-up.
- E. Notify Barton Malow Builders seven (7) working days in advance of dates and times when mock-ups will be constructed.
- F. Provide supervisory personnel who will oversee mock-up construction. Provide workers that will be employed during the construction at Project.
- G. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- H. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- I. Obtain Owner/Architect's approval of mock-ups before starting work, fabrication, or construction.
 - 1. Each mock-up should be submitted per the submittal requirements outlined in 013000 - Administrative Requirements
 - 2. Make corrections as necessary until submittal approval is issued.
- J. Accepted mock-ups shall be a comparison standard for the remaining Work.
- K. Where mock-up has been accepted by Owner/Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Barton Malow Builders.
- L. Where possible salvage and recycle the demolished mock-up materials.
- M. When mock-up is indicated to remain as part of work, ensure mock-up is protected after final approval.

3.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

- C. Adjust products to appropriate dimensions; position before securing products in place.

3.04 TESTING AND INSPECTION

- A. See individual specification sections for testing and inspection required.
- B. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Owner, Architect, and Barton Malow Builders in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Owner, Architect, and Barton Malow Builders of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Owner, Architect, and Barton Malow Builders.
 - 6. Attend pre-construction meetings (as required).
 - 7. Submit reports of all tests/inspections specified.
 - 8. Testing Agency has authority to stop the nonconforming work.
- C. Limits on Testing/Inspection Agency Authority:
 - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Agency may not approve or accept any portion of the Work.
- D. Contractor's Responsibilities:
 - 1. The testing firm will report directly to Owner and/or Barton Malow Builders. Copies of test and inspection reports will be furnished to the appropriate Contractors. The laboratory and its representatives will be instructed to promptly call to the attention of the Contractor any instance of non-compliance with the requirements of the Contract Documents. Failure to so notify the Contractor shall not relieve the Contractor of any of its responsibilities for compliance or making good workmanship or materials which are not in compliance with the requirements of the Contract Documents.
 - 2. Each Contractor shall cooperate with the testing firm and provide labor to assist and lifts, ladders or other means to permit full access for testing firm and to assist with sample preparations where applicable.
 - 3. CONTRACTOR SHALL:
 - a. Notify Barton Malow Builders sufficiently in advance of operations (24-hours minimum) to allow for laboratory assignment of personnel and scheduling of tests.
 - 1) When tests or inspections cannot be performed after such notice, reimburse Owner for all expenses incurred arising out of or resulting from Contractor's negligence.
 - b. When the Contractor is providing the testing and prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full time registered engineer and responsible officer.
- E. RE-TEST RESPONSIBILITY:
- F. Where the results of required inspections, tests, or similar services prove unsatisfactory and do not indicate compliance with the requirements of the Contract Documents, the re-tests shall be the responsibility of the Contractor regardless of whether the original test was the Contractor's responsibility.
 - 1. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Barton Malow Builders, Architect/Engineer, or Owner beyond specified requirements.
- G. Re-testing of Work revised or replaced by the Contractor is the Contractor's responsibility where required tests were performed on original Work. All costs and fees for re-testing shall be paid by the Contractor.

- H. Schedule delays and costs which are the result of non-conforming work or remedy will be the responsibility of the offending Contractor.
- I. The Contractor is responsible to pay the cost of additional testing in the event that additional testing of the Contractor's materials, installation, and other Work is required by the independent testing laboratory because of test results not in compliance with the Contract Documents and/or additional testing required as a result of Contractor's negligence or poor workmanship.

3.05 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations.
 - 1. Observer subject to approval of Architect/Engineer.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 NOTICE OF NON-CONFORMANCE

- A. Barton Malow Builders, IDS, and Owner may conduct observations/evaluations of the Contractor's Work. Barton Malow Builders, IDS, and /or Owners reviews do not relieve the Contractor from compliance with the Contract Documents or necessary corrections for deficiencies thereof. Contractors whose Work does not meet the standards set by the Contract Documents will be notified by representatives of Barton Malow Builders using Box forms or issues. The Contractor, upon receipt of the Notice of Non-Conformance, shall complete the corrective actions necessary within 7 days of issuance and indicate completion (with proper photo proof) using Box.
 - 1. A copy of the Notice of Non-conformance may be obtained from Barton Malow Builders.
- B. Control of nonconforming product: The Contractor shall establish and maintain documented procedures to ensure that product that does not conform to specified requirements is prevented from unintended use or installation. This control shall provide for identification documentation, evaluation, segregation (when practical), disposition of nonconforming product, and for notification to the functions concerned.
- C. Review and disposition of nonconforming Work: Nonconforming product shall be reviewed in accordance with documented procedures. It may be:
 - 1. reworked to meet the specified requirements,
 - 2. accepted with or without repair by concession,
 - 3. regraded products for alternative applications, or
 - 4. rejected or scrapped and disposed of nonconforming work and replace

END OF SECTION 014000

**SECTION 014100
REGULATORY REQUIREMENTS**

PART 1 GENERAL

1.01 SUMMARY OF REFERENCE STANDARDS

- A. Regulatory requirements applicable to this project are the following:
- B. 29 CFR 1910 - Occupational Safety and Health Standards current edition.

1.02 RELATED REQUIREMENTS

- A. Section 014000 - Quality Requirements.

1.03 QUALITY ASSURANCE

- A. Contractor's Designer Qualifications: Refer to Section - 014000 - Quality Requirements.

1.04 GENERAL REQUIREMENTS

- A. All Work is to comply with the rules and regulations of governing bodies having jurisdiction.
- B. Standards, codes and regulations published by Manufacturer's associations, governmental agencies and other regulatory authorities form a part of these Specifications as minimum requirements. Such references include the latest issue and legal requirements in force.
- C. Where differences occur between the Contract Documents and such standards, the strictest requirements shall take precedence.
- D. Supply all materials and perform all Work in accordance with the Manufacturer's specifications and installation procedures, and in conformance with published Trade and Manufacturers' association standards, unless specifically noted otherwise in the Contract Documents.

1.05 PERMITS AND FEES

- A. The Owner will obtain and pay for the General Building Permit.
- B. Other than the general building permit, Contractors shall provide and pay for all other permits, assessments, governmental fees, bonds, connection charges, licenses and inspection fees and any other charges necessary for the proper execution and completion of the Contractor's Work with the Authority Having Jurisdiction (JHA).
- C. Contractor is to provide, pay for and coordinate all other permits, fees, bonds, inspections, and city, county, state, federal and governing authority approvals required for the successful completion of the Work contained within its respective Bid Category and deliver required certificates of inspection and approvals to Barton Malow Builders.
- D. This Project is under but not limited to the jurisdiction of the:
 - 1. State of Michigan Building Division (LARA)
 - 2. State of Michigan Division (LARA) for Mechanical, Electrical, Low Voltage
 - 3. State of Michigan Fire Marshal Division (BFS) & State of Michigan Fire Department
 - 4. State of Michigan Boiler Division (LARA)
 - 5. State of Michigan Elevator Division (LARA)
 - 6. State of Michigan and/or Oakland County County Department of Public Health
 - 7. Oakland County County Road Commission
 - 8. [_____]

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 014100

**SECTION 014216
DEFINITIONS**

PART 1 GENERAL

1.01 SUMMARY

- A. This section supplements the definitions contained in the General Conditions.
- B. Other definitions are included in individual specification sections.

1.02 DEFINITIONS

- A. Furnish: To supply, deliver, unload, and inspect for damage.
- B. Provide: To supply, deliver, unload, and inspect for damage.
- C. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.
- D. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result. Products may be new, never before used, or re-used materials or equipment.
- E. Project Manual: The book-sized volume that includes the procurement requirements (if any), the contracting requirements, and the specifications.
- F. Provide: To furnish and install.
- G. Supply: Same as Furnish.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 014216

**SECTION 015000
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Water Control & Environmental Protection
- B. Temporary utilities.
- C. Temporary telecommunications services.
- D. Temporary sanitary facilities.
- E. Temporary Controls: Barriers, enclosures, and fencing.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Project identification sign.
- I. Field offices.

1.02 RELATED REQUIREMENTS

- A. Section 013553 - Security Procedures
- B. Section 015100 - Temporary Utilities.
- C. Section 015213 - Field Offices and Sheds.
- D. Section 015500 - Vehicular Access and Parking.
- E. Section 015813 - Temporary Project Signage.

1.03 WATER CONTROL & ENVIRONMENTAL PROTECTION

- A. Comply with requirements in applicable Division 33 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.
 - 2. Before connection and operation of permanent drainage piping system, provide temporary drainage where roofing or similar waterproof deck construction is completed.
 - 3. Remove snow and ice as required to minimize accumulations.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near Project site.
- C. Stormwater Control: Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of stormwater from heavy rains.
- D. Moisture & Mold Control
 - 1. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
 - 2. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 - a. Protect porous materials from water damage.
 - b. Protect stored and installed material from flowing or standing water.
 - c. Keep porous and organic materials from coming into prolonged contact with concrete.

- d. Remove standing water from decks.
 - e. Keep deck openings covered or dammed.
- 3. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 - a. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 - b. Keep interior spaces reasonably clean and protected from water damage.
 - c. Periodically collect and remove waste containing cellulose or other organic matter.
 - d. Discard or replace water-damaged material.
 - e. Do not install material that is wet.
 - f. Discard, replace or clean stored or installed material that begins to grow mold.
 - g. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- 4. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 - a. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 - b. Use permanent HVAC system to control humidity.
 - c. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - 1) Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
 - 2) Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record daily readings over a forty-eight hour period. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - 3) Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.
- 5. All pumping or bailing necessary to keep excavations and trenches free from the accumulation of water during the entire excavating and back filling progress of the Work shall be the responsibility of the Contractor performing said excavations and trenches due to its scope of Work.
- 6. All Contractors are responsible for the dewatering to complete their scope of work.
- 7. Dispose of water in such a manner as will not endanger public health or cause damage or expense to public or private property. Abide by the requirements of the site dewatering plan and any public agencies having jurisdiction.
- E. Snow Removal
 - 1. Contractor performing Work under exposed conditions shall remove snow and ice for the protection and execution of their Work. Keeping public traffic areas and circulation routes free of snow shall be the responsibility of Owner.
- F. Maintain temporary facilities in operable condition.

1.04 TEMPORARY UTILITIES - SEE SECTION 015100

- A. Owner will provide the following:
 - 1. Electrical power, consisting of connection to existing facilities.
 - 2. Water supply, consisting of connection to existing facilities.
- B. Existing facilities may not be used.

1.05 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services to field staff and/or site field office at time of project mobilization.

- B. Telecommunications services shall include:
 - 1. Windows-based ipad and/or personal computer dedicated to project telecommunications, with necessary software and laser printer.
 - 2. Internet Connections: Minimum of one; DSL modem or faster.

1.06 TEMPORARY SANITARY FACILITIES

- A. Barton Malow Builders to provide and maintain required temporary toilets. Provide at time of project mobilization.
- B. Use of existing facilities is not permitted.
- C. Maintain daily in clean and sanitary condition.

1.07 BARRIERS AND COVERED WALKWAYS

- A. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- B. Covered Walkway: Erect structurally adequate, protective, covered walkway for passage of individuals along adjacent public street(s). Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction. Comply with special requirements by Owner.
 - 1. Provide wood-plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage.
- C. Furnish and install all necessary shoring, bracing, flashers, safety barricades and other safety equipment in accordance with MIOSHA/OSHA rules and regulations. Provide covers for holes per MIOSHA/OSHA rules and regulations.

1.08 FENCING

- A. Barton Malow Builders may provide temporary fencing with gates for required access and remove same at the completion of the Project.
- B. The Contractors shall repair or replace all fencing including but not limited to Erosion and Sediment Control, Perimeter, Tree, and Safety fencing damaged as a result of its operation. Contractors shall remove and replace fencing and gates required to provide access for oversized items.
- C. Contractor's personnel are not allowed to work outside of the construction fence without permission of Barton Malow Builders.

1.09 ENCLOSURES AND ROOFS

- A. Roofing Contractor shall provide temporary roofing as required to provide and maintain a watertight enclosure during construction.
- B. All Contractor(s) shall provide temporary enclosures for protection of construction per bid category work scopes, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior where compromised by Contractor Work.
- C. Horizontal Openings: Close openings in floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
- D. Install tarpaulins securely using fire-retardant-treated wood framing and other materials.
- E. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use fire retardant-treated material for framing and main sheathing.
- F. Contractors and their subordinate parties shall be responsible for damages to roofing, sheet metal and roof structure while performing Work. The roofing Contractor will perform the repair Work at the expense of the Contractor(s) responsible for the damage.

- G. All Contractors will protect adjacent existing roof surfaces while performing their Work. No construction materials will be allowed to be placed on existing roof surfaces without prior approval of the Owner through Barton Malow Builders.

1.10 TEMPORARY PARTITIONS

- A. Architectural Contractor shall provide temporary partitions and ceilings per bid category work scopes as required to separate Work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas and to prevent damage to Owner's facilities and equipment.
- B. Each Contractor shall erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.
 - 1. Construct dustproof partitions of not less than nominal 4-inch studs, 5/8 inch gypsum wallboard with joints taped on occupied side, and 1/2 inch fire-retardant plywood on construction side.
 - 2. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 - 3. Protect air-handling equipment.
 - 4. Weatherstrip openings.

1.11 TEMPORARY STAIRS, LADDERS, RAMPS, RUNWAYS, SCAFFOLDING, HOISTING AND ELEVATORS

- A. Each Contractor is to provide and maintain all necessary temporary stairs, ladders, ramps, and runways to facilitate conveyance of workers, materials, tools, and equipment for proper execution of its Work. All protection and safety barricades, devices, covers, and all other necessary items shall be provided by each Contractor as it relates to the safe conduct of its Work and protection of people and property in its Work area in accordance with applicable law.
- B. Any Contractor or Subordinate Party performing excavation Work shall be responsible to furnish, install and maintain temporary barricades and/or fencing of all open excavations until such time as the back filling is complete. Flasher lights shall be provided on barricades and fencing by the Contractor as requested by Barton Malow Builders and in accordance with applicable law. As a minimum, all barricades across roads and walks shall have lights on them in working condition.
- C. Each Contractor and its Subordinate Parties shall provide and maintain in good repair barricades, overhead protection, guard rails, etc., as required by law or necessary for the protection of the public and personnel engaged in the Work from hazards incidental to performance of the Work. Contractor shall do everything necessary to protect the Owner's employees, the public and workers from injuries and to protect vehicles and other property from damage.
- D. Scaffolding:
 - 1. Each Contractor is responsible for providing, maintaining and inspecting any and all ladders, scaffolds and other staging as required to complete its Work. All such ladders, scaffolds and staging equipment shall be erected, maintained, inspected and subsequently removed by each Contractor in accordance with all applicable safety laws, rules and regulations.
- E. Hoisting:
 - 1. Each Contractor is responsible for its own hoisting and material/equipment movement costs as required to complete the Work under its Agreement.
 - 2. Hoisting of material or equipment above occupied areas will NOT be permitted unless the existing structure has been properly verified by a licensed professional Engineer to be able to bear the load of the material or equipment being hoisted if accidentally released. It is the responsibility of the Contractor performing such hoisting to properly and adequately reinforce existing structure.
 - 3. Transportation of construction materials through the Owner's facility shall be accomplished in accordance with the requirements described in Section 017000 - Execution and Closeout Requirements in such a manner so as to:

- a. Not damage any of the existing facility, or Campus.
 - b. Not impair the Owner's use of the facility, or Campus.
 - c. Not create any type of mess or additional cleaning requirements in Owner occupied areas, or Campus.
4. The Owner's lifting equipment is not available for the unloading conveying or installation of Contractor's materials, unless coordinated otherwise with Barton Malow Builders.
5. Prior to the removal of all shoring and forms, the Contractor shall be responsible for temporary protection at the building floor perimeters and openings. Immediately after the removal of all shoring and forms, the Contractor shall furnish, install, and maintain all necessary temporary protections at the building floor perimeters and openings. Protection shall be OSHA 29 CFR Part 1926.502 (B) "Guardrail Systems" and shall include but not be limited to two-line rails and toe boards. Each Contractor that disturbs any temporary protection for its Work is responsible to reinstall to its original condition the guardrail or barricade system for the protection of the workers and others until final construction of perimeter exterior wall and/or shaft openings is completed. All other protection and safety barricades, devices, covers, etc., including those at all roof areas, shall be provided by the Contractor as it relates to the safe conduct of its Work in accordance with all local, state and federal law, rules and regulations and the requirements of the Contract Documents and shall be in accordance with the most stringent requirements.
6. The Contractor shall provide temporary guardrails at the building floor perimeters, interior shafts, all roof areas, or other openings, immediately after the erection of the steel frame and with the installation of steel decking. Protection shall be OSHA 29 CFR Part 1926.502 (B) "Guardrail Systems" and shall include but not be limited to two-line rails and toe boards. This temporary protector shall be left in place after completion of the steel frame for the use of all other Contractors. The Contractor shall maintain and remove said guardrails and patch concrete. Each Contractor that disturbs any temporary protection for its Work is responsible to protect the area during its Work and to reinstall to its original condition the guardrail or barricade system for the protection of the workers and others until final construction of perimeter exterior wall and/or shaft openings is completed. All other protection and safety barricades, devices, covers, etc. shall be provided by this Contractor as it relates to the safe conduct of its Work in accordance with all local, state and federal regulations and the requirements of the Contract Documents, and shall be in accordance with the most stringent requirements.

1.12 FIRE PRECAUTIONS AND PROTECTION

- A. All Contractors and their Subordinate Parties shall:
 1. Assume full responsibility and take all necessary precautions to guard against and eliminate all possible fire hazards and to prevent damage to any construction work, building materials, equipment, temporary field offices, storage sheds, and all other property, both public and private.
 2. Conspicuously post the location of the nearest fire alarm pull box and the telephone number of the local fire department within the field offices and on the construction site adjacent to its Work.
 3. Take precautions to prevent fire hazards in accordance with all fire protection and prevention laws and codes. No open fires shall be permitted.
 4. Shall not be permitted to perform welding, flame cutting, or other operations involving the use of flame, arcs, or sparking devices without submitting a Hot Work Permit to Barton Malow Builders a minimum of 24 hours prior or without adequate protection and shielding. Hot Work Permits can be obtained through Box. All combustible and flammable material shall be removed from the immediate area of the hot work. Material shall be protected with a fire-resistant tarpaulin to prevent sparks, flames, or hot metal from reaching materials.
 - a. Only fire-resistant tarpaulins shall be used on this Project.
 5. Provide the necessary personnel and fire fighting equipment to effectively control incipient fires resulting from the hot work.
 6. Provide its own fire extinguishers in the immediate area of the Work.

7. Review the entire Project at least once a week to make certain it has adhered to the conditions and requirements set forth herein.
 8. Shall not bring into building at any one time more than a one day supply of flammable liquids such as oil, gasoline, paint or paint solvent
 - a. All flammable liquids having a flash point of 110 degrees F or below, which must be brought into any building, shall be confined to Underwriter's Laboratories' labeled safety cans.
 - b. The bulk supply of all flammable liquids shall be detached at least 75 feet from the building and from yard storage of building materials.
 - c. Spigots on drums containing flammable liquids are prohibited on the project site. Drums are to be equipped with approved vent pumps.
 9. Shall not store or leave overnight within the confines of the permanent building any combustible materials.
 - a. This includes all internal combustion engines using gas or fuel oil.
 - b. Hoisting of flammable or combustible materials to the roof shall only be in quantities as needed for immediate use
 10. Agree that, in the event of fire, all its workers anywhere on site will assist in extinguishing the fire
 11. Not place shanties of combustible construction inside of any structure.
 - a. Such shanties shall be detached at least seventy-five (75) feet from the building or as directed by Barton Malow Builders with approval of the Owner.
 - b. Totally incombustible shanties may be, if approved in writing by Barton Malow Builders, located inside of the structure.
 - c. Use of only Underwriter's Laboratory approved heaters and/or stoves are permitted in field offices or storage sheds and they shall have fire-resistive material underneath and at the sides near partitions and walls. Pipe sleeves and covering shall be used where stove pipe runs through walls or roof.
- B. Fire Extinguishers
1. Fire extinguishers shall be "all-purpose", and not a water type, to meet the approval of the Fire Underwriter's Laboratory, and will be inspected at regular intervals and recharged if necessary.
 2. In areas of flammable liquids, asphalt or electrical hazards, extinguishers of the 15 lb. carbon dioxide type or 20 lb. dry chemical type shall be provided
 3. Barton Malow Builders will provide and maintain in working order at all times during construction not less than a fire extinguisher for each 3000 sq feet with travel distance not to exceed 100 feet.
 4. All other required extinguishers shall be provided by the Contractor creating such hazard.
- C. Noxious Odors and Fumes
1. Combustion engine equipment, tar kettles, and any other items causing noxious odors or fumes, including diesel-powered equipment, will NOT be allowed in the building or near air intake louvers or building entrances and exits. If intake louver locations are in doubt, consult with Barton Malow Builders.

1.13 VEHICULAR ACCESS AND PARKING - SEE SECTION 015500

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Designated existing on-site roads may be used for construction traffic.
- F. Existing parking areas located in lot(s) [____] are to be used for construction parking.

1.14 WASTE REMOVAL

- A. See Section 017419 - Construction Waste Management and Disposal, for additional requirements.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- C. Provide trash containers inside working area. Remove trash from building daily.
- D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.15 PROJECT IDENTIFICATION

- A. Provide project identification sign of design, construction, and location approved by Owner.
- B. No other signs or advertising shall be displayed on premises without the approval of the Architect, Owner, and Barton Malow Builders. This does not exclude the posting of required trade notice and cautionary signage by Contractors.

1.16 FIELD OFFICES - SEE SECTION 015213

- A. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures at the direction of Barton Malow Builders.

1.17 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, at the direction of Barton Malow Builders.
- B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.
- B. Lumber and Plywood: Comply with requirements in Division 06 Section "Miscellaneous Rough Carpentry."
- C. Roofing: Standard-weight, mineral-surfaced, asphalt shingles or asphalt-impregnated and -coated, mineral-surfaced, roll-roofing sheet.
- D. Gypsum Board: Minimum 1/2 inch thick by 48 inches wide by maximum available lengths; regular-type panels with tapered edges. Comply with ASTM C 36.
- E. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indices of 25 and 50, respectively.
- F. Paint: Comply with requirements in Division 09 Sections "Exterior Painting" and "Interior Painting."
- G. Tarpaulins: Fire-resistive labeled with flame-spread rating of 15 or less.
- H. Water: Potable.

PART 3 EXECUTION

3.01 TURNOVER

- A. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

END OF SECTION 015000

**SECTION 015100
TEMPORARY UTILITIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities include, but are not limited to, the following:
 - 1. Sewers and drainage.
 - 2. Water service and distribution.
 - 3. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
 - 4. Heating and cooling facilities.
 - 5. Ventilation.
 - 6. Electric power service.
 - 7. Lighting.

1.02 RELATED REQUIREMENTS

- A. Section 015000 - Temporary Facilities and Controls:

1.03 REFERENCE STANDARDS

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to the following:
 - 1. Building Code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, Fire Department and Rescue Squad rules.
 - 5. Regulations for air space over adjacent properties.
- B. 29 CFR 1926 - Safety and Health Regulations for Construction Current Edition.
- C. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations 2022.
- D. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 GENERAL REQUIREMENTS FOR TEMPORARY UTILITIES

- A. At earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of permanent service.
 - 1. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permit.
- C. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work.
- D. When it is necessary to modify or tie into existing utility services, Contractor shall notify Barton Malow Builders in writing a minimum of 72 hours prior to the planned disruption. All disruptions shall be scheduled with Barton Malow Builders and OCC and shall be kept to a minimum time. Tie-ins and shutdowns of existing utilities may have to be performed during off hours. Contractor's are to include any required premium time int he Base bid.

1.05 TEMPORARY ELECTRICITY

- A. Electrical Energy Costs:
- B. By Owner.

1. The Owner will pay for electrical energy to operate temporary electrical power and lighting for the duration of the project at designated locations. Temporary power will be provided free of charge.
- C. Connect to Owner's existing power service.
Provide temporary electric feeder from existing building electrical service at location as directed.
- D. Power Source
 1. The Electrical Contractor shall include in the Bid Category Electrical provisions to install, and pay for labor, equipment and materials required to make connections to the Owner's Power Source and to provide temporary electrical power and light distribution. The Electrical Contractor shall coordinate the location of the electrical power and lighting as directed by Barton Malow Builders. All equipment to be left in place during the entire project and removed at the direction of Barton Malow Builders.
 2. Protection shall be provided for the power supply source complete with disconnect switch and other required electrical devices.
- E. Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnecting means, automatic ground-fault interrupters, and main distribution switchgear.
 1. Install electric power service underground, unless overhead service must be used.
 2. Install power distribution wiring overhead and rise vertically where least exposed to damage.
 3. Connect temporary service to Owner's existing power source, as directed by electric company officials.
 4. Provide temporary electric feeder from existing building electrical service at location as directed by Barton Malow Builders.
- F. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- G. Temporary Power Distribution:
 1. The Electrical Contractor shall include in the Bid Category Electrical provisions to provide and maintain temporary power distribution on the entire project , as follows:
 - a. Construction power shall be 120/208 volts, 60 hertz, 3 phase, 4 wire plus ground, alternating current. Provide the following outlets together with feeders, grounding, protective devices and ground fault interrupting devices.
 - b. Provide the following outlets together with feeders, grounding, protective devices and ground fault interrupting devices:
 - 1) Power centers - on each floor of the new building, provide a minimum of 2 power centers, or not less than one (1) per 10,000 s.f. rated not less than 100 amperes at 120/208 volt, 3 phase, 4 wire plus ground. Locate the power centers such that each will serve approximately equal areas and as far as possible, each shall be in the center of the respective area served.
 - (a) Renovation Work: Within the remodeled areas, provide at least one (1) additional similarly rated power center
 - 2) 120/208 volt duplex outlets - Provide weatherproof, G.F.I. protected, 20 ampere grounded outlets at a minimum rate equal to 1 - duplex outlet per 400 square feet. Outlets may be grouped in clusters of up to six duplex types with corresponding pro-rated increase in area served, provided that every portion of the construction and remodeled premises can be reached from the nearest outlet using a flexible cord no more than 50 feet in length.
 2. As partitions are erected, locations of power distribution points shall be added or relocated at the direction of Barton Malow Builders.

3. Ground Fault Circuit Interrupter (GFCI) protection will be provided on all temporary power receptacles and, where possible, directly on the circuit breaker supplying temporary power as referenced in NEC 305-6(a).
 4. The assured equipment grounding conductor program is only to be used on circuits greater than 20 amps as referenced in NEC 305-6(b).
- H. Rules and Regulations:
1. All temporary equipment and wiring for power, lighting and distribution requirements shall conform to OSHA requirements and be in accordance with applicable provisions of governing laws, codes, and ordinances.
 2. All temporary wiring and distribution equipment shall be maintained so as not to constitute a hazard to persons or property.
 3. Each Contractor is responsible to provide an assured grounding program in accordance with OSHA regulations for their own electrical power requirements.
- I. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.
1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
 2. for temporary electric service. Install service to comply with NFPA 70.

1.06 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. The Electrical Contractor shall include in the Bid Category Electrical provisions to provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions, as well as the following:
1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 2. Install exterior-yard site lighting that will provide adequate illumination for construction operations, traffic conditions, and signage visibility when the Work is being performed.
 3. Install and maintain 120/208 volt temporary lighting as required in interior work areas. In addition to these minimum requirements provide adequate security lighting at guarded entrances outside storage areas, parking areas, and in areas of Contractor's and Architect's field offices and sheds.
- B. Lighting shall be achieved using LED, or other suitable fixture types, to Federal or State OSHA required minimum levels of illumination. Lighting shall be suitable for the application for construction operations in accordance with requirements of 29 CFR 1926 and authorities having jurisdiction.
- C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required by Barton Malow Builders.
- D. As partitions are erected or other interferences which hamper achieving the minimum levels of illumination, locations of lighting distribution points shall be added or relocated at the direction of Barton Malow Builders.
- E. Servicing of Temporary Power and Lighting
1. The Electrical Contractor shall be responsible for the following via Bid Category Electrical:
 - a. Servicing, repairing and rearrangement of service equipment, temporary power, temporary lighting , and relamping.
 - b. Removal and disposal of temporary electrical power and lighting at completion of the Project or when so directed by Barton Malow Builders and repair of damage caused by installation or removal.
- F. Permanent building lighting may be utilized during construction.
- G. Task lighting in addition to OSHA required lighting shall be provided by each Contractor.

1.07 TEMPORARY POWER AND LIGHT FOR SPECIAL CONDITIONS:

- A. Special conditions for temporary electrical power and lighting required by others shall be provided as follows:

1. Each Contractor requiring service of capacity or characteristics other than specified must make arrangements with the Electrical Contractor and pay for their own installation, removal, and service.
2. The necessary grounded portable cords, lamps, light-stands, and fuses from the distribution outlets to points of use shall be provided by each Contractor to suit its own requirements.
3. Temporary power cannot be used for welding operations

1.08 PERMANENT ELECTRICAL POWER AND LIGHTING

- A. When permanent electrical power and lighting systems are in operating condition, they may be used for temporary power and lighting for construction purposes provided the Electrical Contractor performs the following:
 1. Obtains the approval of the Architect and/or Owner through Barton Malow Builders.
 2. Assumes full responsibility for operation of the entire power and lighting systems.
 3. Verifies that warranty dates are established prior to usage of equipment and lamps.
- B. As permanent power and lighting becomes available, these systems will generally supplant the appropriate portions of the temporary installation.

1.09 TEMPORARY HEATING, COOLING & WEATHER PROTECTION

- A. Temporary heating/cooling requirements during the course of construction shall be divided into two categories as follows:
 1. Cold weather protection.
 2. Temporary heating.
- B. Cold Weather Protection:
 1. Heating required during the construction period prior to enclosure of the building shall be classified as "cold weather protection."
 2. Each Contractor shall provide temporary heating and protection, necessary to allow its Work to continue during cold weather to meet the project milestone dates prior to building enclosure, including:
 - a. The heating of materials (such as water and aggregate) as well as space heating for protection of newly placed or built construction at required temperatures (but not lower than 50 degrees F) and for the time specified.
 - b. Fire retardant tarpaulins and other materials used for temporary enclosures.
 3. Heat shall be provided by smokeless UL approved portable unit heaters, using fuel of types and kinds approved by Underwriter's Laboratories, Factory Mutual, and the Fire Marshal.
 - a. The Contractor shall provide fuel, power, maintenance, and attendance required for operation of portable heaters.
 - b. Interior or exterior surfaces damaged by the use of portable heating units shall be replaced with new materials at the responsible Contractor's expense.
 4. It shall be the responsibility of each Contractor to protect its own Work.
 5. All Contractors are responsible for snow, ice, and frost removal as necessary to complete the work.
 6. Contractor shall include all provisions for frost laws, including diminished load capabilities to an from the jobsite.
- C. All Exterior Contractors shall provide a plan to allow Work to continue without regard to temperature.
- D. Temporary Heating:
 1. Daily construction heat required after the building is enclosed shall be classified as "temporary heating" and will be the responsibility of the Mechanical Contractor to install and maintain.
 2. The building or buildings or any portions thereof shall be considered enclosed when in the opinion of Barton Malow Builders it meets the following:
 - a. The exterior wall system and temporary interior wall enclosures are in place.

- b. Openings in exterior walls are covered to provide reasonable heat retention.
3. The Exterior Contractors shall provide and maintain the temporary interior wall enclosures. If the exterior wall system is not complete in time to provide building enclosure of a portion of the new structure as scheduled, the Contractor responsible shall provide and maintain temporary exterior wall enclosures of polyethylene and, in addition to exercising all other rights and remedies under the Contract Documents and law, Barton Malow Builders shall be entitled to deduct the cost of such enclosures from the money due or to become due the Contractor(s)'s responsible for failure to meet said schedule.
4. In areas of the building or buildings where Work is being conducted, the temperature shall be maintained as specified in the various sections of the specifications, but not less than 50 degrees F for interior rough-in and not less than 65 degrees F during finishes installation. The temperature shall not be allowed to reach a level that will cause damage to any portion of the Work, including materials stored in the building, which may be subject to damage by low temperatures.
5. Until the permanent heating system, or suitable portion thereof, is in operating condition, provide sufficient and UL approved space heaters of suitable capacity to maintain required temperatures in areas where work is being conducted and materials are stored. Include all necessary maintenance, venting and attendance for this temporary heating to meet all applicable laws, rules and regulations.
6. When the permanent heating system, or a suitable portion thereof, is in operating condition, the system may be used for temporary heating, provided the Mechanical Contractor performs the following:
 - a. Obtains approval from the Owner, through Barton Malow Builders, in writing for its use and any special provisions required for its temporary operation.
 - b. Assumes full responsibility for the entire heating system until final acceptance of the system by the Owner.
 - c. Uses supply only, not return if temporary heating utilizes the building's ductwork system.
 - d. Pays all costs for maintenance, attendance and restoration to "like new" condition of the system including final cleaning of equipment and ductwork and all necessary touch-up painting.
 - e. Turns over satisfactory evidence to Barton Malow Builders showing the extended warranties from manufacturers and proper maintenance procedures.
 - f. Provides and maintains temporary filters, boxes and other parts used for the temporary condition and replaces same with the new permanent filters at time of occupancy consistent with the warranty provisions. The Mechanical Contractor shall pay the cost of extending warranty and guarantee periods on any permanent equipment used prior to substantial completion.
7. Electrical power required for temporary heating will be furnished free of charge. The installation and service of the necessary temporary electrical feeders will also be the responsibility of the Mechanical Contractor.

1.10 TEMPORARY VENTILATION/HUMIDITY CONTROL

- A. Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment from that specified that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

1.11 TEMPORARY WATER SERVICE

- A. The Owner will pay for water used on this Project and Mechanical Contractor shall provide a source for drinking water. Each Contractor shall be responsible to provide containers, paper cups, ice, hoses, etc. for its needs.
- B. Cost of Water Used: By the Owner.

SF25-003 Driving Pad and Storage

- C. Provide and maintain suitable quality water service for construction operations at time of project mobilization.
- D. Connect to existing water source.
- E. Immediately after award of the Agreement, the Mechanical Contractor shall furnish, install, maintain and subsequently remove a temporary hookup to the Owner's potable water system where directed by Barton Malow Builders for construction purposes. The Contractor shall provide all temporary piping and approved backflow prevention as necessary for distribution from the source. A minimum of 2 hose bibs shall be provided by the Mechanical Contractor as directed by Barton Malow Builders .
- F. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing.

1.12 TEMPORARY SEWER, DRAINAGE, SANITATION

- A. Sewers and Drainage:
 - 1. If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.
 - a. Filter out excessive soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 - 2. Toilet Facilities/Sanitary Requirements:
 - a. Barton Malow Builders shall provide and maintain temporary toilet facilities for the construction of the Project.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 015100

**SECTION 015213
FIELD OFFICES AND SHEDS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary field offices for use of Contractors & Subordinate Parties.
- B. Maintenance and removal.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Use of Premises: use of premises and responsibility for providing field offices.
- B. Section 015000 - Temporary Facilities and Controls:
 - 1. Temporary telecommunications services for administrative purposes.
 - 2. Temporary sanitary facilities required by law.

1.03 USE OF EXISTING FACILITIES

- A. Existing facilities shall not be used for field offices.

1.04 USE OF PERMANENT FACILITIES

- A. When permanent facilities are enclosed with operable utilities, relocate offices into building, with written agreement of Owner, and remove temporary buildings.
- B. Contractors will not be allowed to utilize spaces within the building for storage and other purposes unless they receive written approval from Barton Malow Builders. If a temporary office is allowed in the building for storage and other purposes unless they receive written approval from Barton Malow Builders. If a temporary office is allowed in the building, it must be fire treated in accordance with Section 0015100 Interim Life Safety Plan. Contractors shall vacate these spaces when and as directed by Barton Malow Builders.

PART 2 PRODUCTS

2.01 MATERIALS, EQUIPMENT, FURNISHINGS

- A. Materials, Equipment, Furnishings: Serviceable, new or used, adequate for required purpose.

2.02 CONSTRUCTION

- A. Field Offices: Mobile Units with lockable entrances, operable windows, and serviceable finishes; heated and air-conditioned; on foundations adequate for normal loading with steps and landings at entrance doors.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
- C. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

2.03 ENVIRONMENTAL CONTROL

- A. Heating, Cooling, and Ventilating: Automatic equipment to maintain comfort conditions.

2.04 CONTRACTOR & SUBORDINATE PARTIES OFFICE AND FACILITIES

- A. The Owner or Barton Malow Builders will designate an area for construction trailers. Placement and scheduled duration shall be coordinated with Owner or Barton Malow Builders. Each Contractor is responsible to verify that all field offices, trailers, and storage sheds shall be in accordance with local codes and ordinances and the local Fire Marshal having jurisdiction. Each Contractor shall arrange and pay for its own telephone hookup and use. Sub-metering for use of utilities is mandatory. Each Contractor shall arrange and pay for its own temporary electrical hookup, water, and toilets. The Contractor shall pay for all power used for the Contractor's temporary field office and temporary electrical service.

- B. Contractors shall maintain the use of designated space for offices and sheds. This includes removal of weeds, debris, trash, and cleanup of the area after removal of such temporary structures.
- C. Construction personnel shall park in the designated trade parking area. Limited parking will be available onsite as designated and coordinated with Owner or Barton Malow Builders. Temporary field offices and sheds shall not be used for living quarters.
- D. Temporary field offices and sheds shall not be used for living quarters.
- E. Storage trailers will be allowed on a case by case basis and must get the approval of Owner or Barton Malow Builders. Storage trailers shall be of suitable design, maintenance and appearance, and meet the approval of Owner or Barton Malow Builders and all applicable local codes and ordinances. All trailers must be visibly inspected by Barton Malow Builders before delivery.
- F. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work.

PART 3 EXECUTION

3.01 GENERAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

3.02 INSTALLATION

- A. General: Comply with the following:
 - 1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access. Locate facilities at the direction of Barton Malow Builders, where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required at the direction of Barton Malow Builders.
 - 2. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required.
 - 3. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility services. Sheds may be open shelters or fully enclosed spaces within building or elsewhere onsite.
 - 1. Construct framing, sheathing, and siding using fire-retardant-treated lumber and plywood.
 - 2. Paint exposed lumber and plywood with exterior-grade acrylic-latex emulsion over exterior primer.

3.03 MAINTENANCE AND CLEANING

- A. Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

3.04 REMOVAL

- A. Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, at the direction of Barton Malow Builders, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility.

Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are the property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities
 3. At the direction of Barton Malow Builders or Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 01 Section "Contract Closeout."
- B. All temporary offices and sheds including foundation, must be removed with ten (10) days of written notice from Barton Malow Builders including restoration of grade. Structures not removed in a timely manner will be removed by Barton Malow Builders at the Contractor's expense.

END OF SECTION 015213

**SECTION 015500
VEHICULAR ACCESS AND PARKING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary Roads and Paved Areas
- B. Parking.
- C. Existing pavements and parking areas.
- D. Permanent pavements and parking facilities.
- E. Construction parking controls.
- F. Flag persons.
- G. Haul routes.
- H. Maintenance.
- I. Mud from site vehicles.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Use of Premises: For access to site, work sequence, and occupancy.

PART 3 EXECUTION

2.01 TEMPORARY ROADS AND PAVED AREAS

- A. Use of designated existing on-site streets and driveways for construction traffic is permitted.
- B. Tracked vehicles not allowed on paved areas.
- C. Provide and maintain access to fire hydrants free of obstructions.

2.02 PARKING

- A. Use of designated areas of existing parking facilities by construction personnel is permitted.
- B. There will be on-site parking for Contractors and their Subordinate Parties' employees.
- C. Contractors are directed to park in designated areas only. Each Contractor is responsible for providing transportation to and from the site. Any additional arrangement is the responsibility of the Contractor. Contractor, subordinate parties and their personnel will not be allowed to park in the Owner's parking area nor in the adjacent neighborhoods. Parking locations are subject to change.
- D. All parking for all trades is the responsibility of each Contractor. Barton Malow Builders will not reimburse parking tickets or pay for parking passes.

2.03 PERMANENT PAVEMENTS AND PARKING FACILITIES

- A. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.

2.04 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations.
- B. Prevent parking on or adjacent to access roads or in non-designated areas.

2.05 FLAG PERSONS

- A. Contractors must provide two flag persons while moving equipment through public areas or while receiving deliveries of materials and equipment.

2.06 HAUL ROUTES

- A. Consult with authority having jurisdiction, establish public thoroughfares to be used for haul routes and site access.
- B. Confine construction traffic to designated haul routes.

SF25-003 Driving Pad and Storage

- C. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

2.07 MUD FROM SITE VEHICLES

- A. Contractor shall remove mud from vehicle wheels before entering streets.

END OF SECTION 015500

**SECTION 015813
TEMPORARY PROJECT SIGNAGE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project identification sign.
- B. Project informational signs.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Use of Premises: Responsibility to provide signs.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Shop Drawing: Show content, layout, lettering, color, foundation, structure, sizes and grades of members.

PART 2 PRODUCTS

2.01 SIGN MATERIALS

- A. Structure and Framing: New, wood, structurally adequate.
- B. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4 inch (19 mm) thick, standard large sizes to minimize joints.
- C. Rough Hardware: Galvanized.
- D. Paint and Primers: Exterior quality, two coats; sign background of color as selected.
- E. Lettering: Exterior quality paint, colors as selected.
- F. Lettering: Pre-cut vinyl self-adhesive products, colors as selected .

2.02 PROJECT IDENTIFICATION SIGN

- A. One painted sign of construction, design, and content indicated on drawings, location designated.
- B. Content:
 - 1. Project number, title, logo and name of Owner as indicated on Contract Documents.
 - 2. Names and titles of authorities.
 - 3. Names and titles of Architect/Engineer and Consultants.
 - 4. Name of Construction Manager.
- C. Graphic Design, Colors, Style of Lettering: Designated by IDS.

2.03 PROJECT INFORMATIONAL SIGNS

- A. Painted informational signs of same colors and lettering as Project Identification sign, or standard products; size lettering to provide legibility at 100 foot (30 m) distance.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install project identification sign within 30 days after date fixed by Notice to Proceed.
- B. Erect at designated location.
- C. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
- D. Install sign surface plumb and level, with butt joints. Anchor securely.
- E. Paint exposed surfaces of sign, supports, and framing.

3.02 MAINTENANCE

- A. Maintain signs and supports clean, repair deterioration and damage.

3.03 REMOVAL

- A. Remove signs, framing, supports, and foundations at completion of Project and restore the area.

END OF SECTION 015813

**SECTION 017000
EXECUTION AND CLOSEOUT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Surveying for laying out the work.
- F. Cleaning and protection.
- G. Starting of systems and equipment.
- H. Demonstration and instruction of Owner personnel.
- I. Closeout procedures, including 's IDS's and Barton Malow Builders Correction Punch List, except payment procedures.
- J. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Use of Premises: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 013000 - Administrative Requirements: Submittals procedures, Electronic document submittal service.
- C. Section 014000 - Quality Requirements: Testing and inspection procedures.
- D. Section 017123 - Field Engineering and Layout: Additional requirements for field engineering and surveying work.
- E. Section 017419 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.
- F. Section 017610 - Temporary Protective Coverings: Materials for protection of installed work.
- G. Section 017800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- H. Section 017900 - Demonstration and Training: Demonstration of products and systems to be commissioned and where indicated in specific specification sections
- I. Section 019113 - General Commissioning Requirements: Barton Malow Builders's responsibilities in regard to commissioning.
- J. Section 078400 - Firestopping.

1.03 DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.
- C. Close-out is the process of organizing the general project requirements near the end of contract time to evidence the completion of the Work. The time of close-out directly relates to completion of the project. It can either be a single time period for the entire Work, or a series of time periods for individual parts of the Work, which have been certified as Complete at different dates.
- D. **Substantial completion** means that all applicable work:
 - 1. Is sufficiently complete and fully usable in accordance with Owner's master agreement.

2. Can be fully utilized and/or operated by Owner for its intended use, and
 3. Complies with the applicable scope of work except for the applicable punch list.
- E. **Final Acceptance** shall mean that date upon which all close-out documentation and work, including, without limitation, all punch list items and closeout submittals, have been fully completed in accordance with the applicable scope of work.

1.04 REFERENCE STANDARDS

- A. AIA G702 - Application and Certificate for Payment 1992.
- B. AIA G703 - Continuation Sheet 1992.
- C. AIA G704 - Certificate of Substantial Completion 2017.
- D. AIA G707 - Consent of Surety to Final Payment 1994.
- E. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations 2022.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 1. On request, submit documentation verifying accuracy of survey work.
 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
 3. Submit surveys and survey logs for the project record.
- C. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Include design drawings and calculations for bracing and shoring.
 2. Identify demolition firm and submit qualifications.
 3. Include a summary of safety procedures.
- D. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 2. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 3. Products: List products to be used and firms or entities that will perform the Work.
 4. Dates: Indicate when cutting and patching will be performed.
 5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
 6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
 7. Effect on work of Owner, Barton Malow Builders or separate Contractors.
 - a. Written permission of affected separate Contractor.
 - b. Date and time work will be executed.
- E. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.06 QUALIFICATIONS

- A. For demolition work, employ a firm specializing in the type of work required.
- B. For surveying work, employ a land surveyor registered in Michigan and acceptable to IDS. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an

Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

- C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in Michigan. Employ only individual(s) trained and experienced in establishing and maintaining horizontal and vertical control points necessary for laying out construction work on project of similar size, scope and/or complexity.
- D. For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in Michigan.

1.07 PROJECT CONDITIONS

- A. Use of explosives is not permitted.
- B. The use of gasoline powered equipment is prohibited in enclosed spaces on this Project.
- C. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- D. Perform dewatering activities, as required, for the duration of the project.
- E. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- F. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property. Activities that require dust control include but are not limited to the following: demolition, cutting, grinding, and pre-preparation operations.
- G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
 - 1. At All Times: Excessively noisy tools and operations will may be tolerated in or adjacent to occupied buildings at any time of day; excessively noisy includes jackhammers. Include premium time to complete work off hours.
- H. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.08 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
 - 1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Foundation construction.
 - b. Bearing and retaining walls.
 - c. Structural concrete.
 - d. Structural steel.
 - e. Lintels.
 - f. Stair systems.
 - g. Miscellaneous structural metals.
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 - a. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - 1) Primary operational systems and equipment.
 - 2) Air or smoke barriers.
 - 3) Fire-protection systems.
 - 4) Mechanical systems piping and ducts.
 - 5) Control systems.

- 6) Communication systems.
 - 7) Conveying systems.
 - 8) Electrical wiring systems.
 - 9) Operating systems of special construction in Division 13 Sections.
 - 10) Electronic security systems.
3. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
 - a. Obtain approval of the cutting and patching proposal before cutting and patching the following elements:
 - 1) Water, moisture, or vapor barriers.
 - 2) Membranes and flashings.
 - 3) Exterior windows, entrances, and storefronts.
 - 4) Equipment supports.
 - 5) Piping, ductwork, vessels, and equipment.
 - 6) Noise- and vibration-control elements and systems.
4. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
5. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades as well as Barton Malow Builders. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.09 COORDINATION

- A. All Contractors are required to review, discuss and coordinate their Work with the Work of other Contractors, Subordinate Parties, Owner and Barton Malow Builders with regard to sequence, timing, built-in Work and equipment, layout, location, compatibility of materials and sizes and required clearances prior to beginning the work to avoid construction delays which impact the Owner's occupancy of the facility.
- B. Each Contractor must:
 1. Coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
 2. Make provisions to accommodate items scheduled for later installation..
 3. Layout and install its Work at such time and in such manner as not to delay or interfere with the carrying forward of the Work of others.
 4. Verify and Accept previous work
 - a. As Work under each Agreement commences, the condition of preceding Work under other agreements shall be verified and accepted by each subsequent Contractor when appropriate.
 - b. Report in a prompt manner any interferences, discrepancies or incompatibilities discovered to Barton Malow Builders and Architect/Engineer, whose decision as to the Contractor at fault and as to the manner in which the matter may be resolved, shall be binding and conclusive on Contractors involved. Barton Malow Builders and Architect/Engineer may direct layout/ location changes as required to make the entire work fit together. Reasonable changes of this nature will not entitle any Contractor to an increase in contract price.
 - c. Verification may, at Barton Malow Builders and Architect/Engineer 's discretion, include a joint review by the subsequent Contractor, previous contractor(s), and Architect/Engineer to note any corrective Work required, similar items affecting the

Work and particularly items which prevent acceptance by the subsequent contractors.

- d. The verification review procedures and findings shall be submitted in writing by subsequent Contractors to Barton Malow Builders.
 - e. Any corrective work necessary to satisfy requirements of the Contract Documents shall be performed promptly by the previous Contractor to prevent delay to the work under the subsequent Contracts.
 - f. After corrective work is accomplished the subsequent Contractor shall furnish written acceptance of the work as noted above.
- C. Observation of the Work by others shall not relieve Contractor from its responsibility for coordination, supervision, or scheduling and direction of the Work.
- D. Failure of a Contractor to notify others and Barton Malow Builders and Architect/Engineer of a potential interference, incompatibility, or discrepancy and any failure to coordinate Work with that of others prior to installation and/or fabrication shall be at the Contractor's risk.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials. For any proposed change in materials, submit request for substitution described in Section 012500 - Substitution Procedures.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or incorrect fabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed. Report any unsatisfactory or questionable conditions to Barton Malow Builders in writing.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.
- G. When working in and around existing buildings, if any hazardous material is encountered or is suspected to be present, immediately notify Barton Malow Builders and stop work in this area until further direction is given by Barton Malow Builders or the Owner.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.
- D. Provide adequate temporary support to assure the structural value and integrity of the affected portion of the work. Where specified or required, submit temporary support methodologies for approval.
- E. Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- F. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas during cutting & patching activities.
- G. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.
- H. Maintain excavations free of water.

3.03 PRE-INSTALLATION MEETINGS

- A. When required in individual specification sections, convene a pre-installation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect/Engineer and Barton Malow Builders 7 days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- E. Record minutes and distribute copies within 2 days after meeting to participants, with 1 copies to Architect/Engineer, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Architect/Engineer Barton Malow Builders and Architect/Engineer of any discrepancies discovered.
- C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- D. Promptly report to Architect/Engineer and Barton Malow Builders the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect/Engineer and Barton Malow Builders.
- F. Utilize recognized engineering survey practices.
- G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, ground floor elevations.
- H. Periodically verify layouts by same means.
- I. Maintain a complete and accurate log of control and survey work as it progresses.
- J. On completion of foundation walls and major site improvements, prepare a certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.

3.05 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect/Engineer and Barton Malow Builders before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 - 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- C. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
 - 2. Relocate items indicated on drawings.
 - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to): Remove, relocate, and extend existing systems to accommodate new construction.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switch overs and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 - 4. Verify that abandoned services serve only abandoned facilities.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment , including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.

3. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Each Contractor shall:
 1. On behalf of itself and its Subordinate Parties be responsible for the cutting of all holes and openings through existing walls, partitions, ceilings, floors and roofs as necessary for the installation of its Work. Holes and openings shall be neatly cut and of minimum size to allow the Work to be installed. Execute cutting and demolition by methods which will prevent damage to other Work, and will provide proper surfaces to receive installation of repairs.
 2. Execute work in such a manner as to minimize disruptions to or interference with the Owner's normal operations or functioning in the existing buildings and provide all means necessary to provide safety and convenience of those employed in and about the premises.
 3. Be responsible for patching of all holes and openings it makes. Fit work should be airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces. Patching is to match adjacent surfaces in materials and finish.
 4. Utilize only tradesmen skilled in the specific finish and material involved in making the patches. All patching is to be done in a neat and workmanlike manner to the satisfaction of Barton Malow Builders. Defective Work shall be corrected at no cost to the Owner and Barton Malow Builders.
 5. Do all necessary cutting and fitting required to make a satisfactory connection where new Work connects with existing so as to leave the entire Work in finished and workmanlike condition. Furnish all labor and materials to this end, whether or not shown or specified. All measurements must be verified at the site.
 6. Employ the original installer and fabricator, when possible, to perform cutting and patching for, weather-exposed or moisture-resistant elements, sight-exposed finished surfaces.
 7. Execute fitting and adjustment of products to provide a finished installation to comply with the specified products, functions, tolerances and finishes.
 8. Restore Work which has been cut or removed and shall install new products to provide completed Work in accordance with the Contract Documents. Each Contractor will be responsible to pay the appropriate Contractor as designated by Barton Malow Builders for restoring any portion of the Project that is disturbed, including but not limited to, landscaping, slabs, walls, ceilings, fire-rated partitions, spray-on fireproofing, and finishes, to their original state as a result of Contractor's action.

9. Be held responsible for reckless cutting of holes in slabs, walls or other finishes, or for scraping off areas of fireproofing larger or greater than that which is necessary for installation of its Work.
- D. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- E. Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
- F. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with all required codes and Contract Documents.
 4. Concrete or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 5. Excavating and Back filling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 6. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 7. Proceed with patching after construction operations requiring cutting are complete.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken
 4. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- H. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

- I. Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

3.08 SITE CLEAN-UP/RUBBISH REMOVAL PROCEDURE

- A. An effective and efficient clean-up procedure on the Project site contributes to both the productivity and safety of all those involved. The following requirements are intended to provide a satisfactory and equitable method to manage and accomplish project clean up.
- B. General:
 1. Each Contractor shall be responsible for daily, weekly and final clean-up of its Work and the work of its Subordinate Parties. The cost of this requirement shall be included in the Contractor's Bid Proposal. Contractor is required to comply with applicable labor agreements and jurisdictional rules in the hiring of laborers to perform its clean up obligations under the Contract Documents. Each Contractor will be responsible for control of dust generated by its operations on a daily basis. Roadways must be maintained clear of all debris at all times. Contractors shall only use cleaning materials which will not create hazards to health or property and which will not damage surfaces. Only those cleaning materials and methods recommended by the manufacturer of the surface material to be cleaned shall be used. Any sweeping compounds used in cleaning operations shall not leave residue on concrete floor surfaces that may affect installation of finish flooring materials
- C. Daily Clean Up:
 1. Each Contractor shall be responsible, DAILY for the clean -up, transport and removal from the site of identifiable debris including but not limited to, bulky debris, packaging, containers, unused materials and equipment, (i.e., masonry and concrete materials, drywall, steel, crates, carton, demolition debris, other packaging, and combustible items). No piles of debris shall be left in the building overnight. The cost of any overtime premium required to remove debris immediately at the end of each workday shall be included in the Contractor's Base Bid.
 2. Each Contractor must handle materials in a controlled manner during clean-up and all other operations so that dust and other contaminants resulting from the cleaning or disposal process will not affect the Owner's operations or equipment or the work or equipment of any other Contractor on the site. Each Contractor is responsible to leave its Work and work area in a clean condition. This includes, but is not limited to, removal of all grease, dust, dirt, stains, labels, fingerprints and other foreign matter.
- D. Weekly Clean Up:
 1. Each Contractor, while on-site, shall provide to Barton Malow Builders one (1) person for each five tradesmen (or portion thereof) employed at the site, one day per week, for up to eight (8) hours, for the exclusive purpose of performing overall project weekly clean-up of unidentifiable debris. The cost of this (these) person(s) shall be included in Contractor's bid. The weekly clean-up Work shall include sweeping, loading and disposal of miscellaneous debris such as mud tracked through the building, drinking cups, bottles, lunch wrappers, and other unidentifiable debris. Trash and debris from this operation shall be placed in the dumpster(s) provided by Barton Malow Builders.
 2. Each Contractor shall furnish sweeping compound to hold down dust during the weekly clean up.
- E. Use of Owner's Facilities
 1. The Owner's facilities are not to be used by Contractor for the disposal of trash or debris from its Work.
- F. Failure to perform Clean Up:
 1. If any Contractor or its Subordinate Parties fails to maintain a satisfactory clean-up program, Barton Malow Builders will issue written notice, to the responsible Contractor, that the necessary clean-up must be performed within 24 hours after the notice is given. The establishment of a definite deadline for the removal of debris and rubbish will supersede the necessity for any formal notification that such work must be done. If

Contractor(s) fail to perform the clean-up, by the deadline, Barton Malow Builders may perform clean-up on the Project and back charge the responsible Contractor(s) for the costs. If necessary in order to remove unidentifiable debris beyond what is removed during weekly clean up, Barton Malow Builders will perform such clean-up and shall prorate the cost among the Contractors in its discretion, based on Contractor(s) type of work and manpower on site. Back charges may be deducted from the monthly invoices of the Contractor(s) and/or final payment.

3.09 PROTECTION OF INSTALLED WORK

- A. See Section 017610 for temporary protective covering materials.
- B. Protect installed work from damage by construction operations.
- C. Provide special protection where specified in individual specification sections.
- D. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- E. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- F. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- G. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.
- H. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- I. Prohibit traffic from landscaped areas.
- J. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.
- K. Removal and replacement of ceilings not scheduled to be replaced shall be the responsibility of the Contractor requiring access.

3.10 SYSTEM STARTUP

- A. Coordinate with requirements of Section 019113 - General Commissioning Requirements.
- B. Coordinate schedule for start-up of various equipment and systems.
- C. Notify Architect, Barton Malow Builders and Owner seven days prior to start-up of each item.
- D. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- E. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- F. Verify that wiring and support components for equipment are complete and tested.
- G. Execute start-up under supervision of applicable OCC, Barton Malow Builders personnel and manufacturer's representative in accordance with manufacturers' instructions.
- H. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- I. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.11 DEMONSTRATION AND INSTRUCTION

- A. See Section 017900 - Demonstration and Training.
- B. Demonstrate operation and maintenance of products to Owner's personnel 2 weeks prior to date of Substantial Completion.

- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- D. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- E. Utilize approved operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

3.12 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.13 FINAL CLEANING

- A. Owner will provide comprehensive cleaning after final acceptance.
- B. All Contractors shall be responsible for the following final cleaning operations at a time designated by Barton Malow Builders. Normally, Final Clean Up will occur before punch list inspection or prior Owner Occupancy turnover. Final Cleaning consists of the following Work:
 - 1. Removal of grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and all other foreign materials from sight-exposed interior and exterior surfaces.
 - 2. Temporary labels, stickers and similar items shall be removed from fixtures and equipment. Unless otherwise directed in the technical specifications, Subcontractors shall not remove permanent nameplates, equipment model numbers, ratings, or other items intended to be permanently affixed to the fixture or equipment.
 - 3. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
 - 4. Clean filters of operating equipment.
 - 5. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, drainage systems, and landscape areas.
 - 6. Broom cleaning exterior paved surfaces and raking clean other surfaces of the grounds.
 - 7. Tunnels and closed off spaces shall be cleaned of packing boxes, wood frame members and other waste materials used in the construction.
 - 8. Prior to final completion or Owner occupancy, whichever occurs first, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all Work areas, to verify that the entire Work is left in a broom clean condition and that all Final Cleaning as set forth above has been performed.

3.14 CLOSEOUT PROCEDURES

- A. The following procedure and forms will be used to sequentially progress through the contract close-out stage in a productive and timely manner.
 - 1. Step 1: Preparation for Contract Close-Out
 - a. During the course of the Project, the Contractor will thoroughly review the Contract Documents as it relates to the requirements and obligations and gather and submit to Barton Malow Builders the proper submittals, shop drawings, material certifications, waivers, certificates of insurance, bonds, and other contractual requirements impacting contract close-out as outlined in 017800 - Closeout Submittals.
 - b. Evidence of compliance with requirements of governing authorities (state, local or federal).
 - c. Evidence of Payment and Release of Liens: Refer to requirements of Section 012000 - Price and Payment Procedures.
 - 2. Step 2: Initiating the Final Close-Out Process
 - a. When nearing 75% completion of the Work, the Contractor will review the status of the Close-Out process with Barton Malow Builders. The Contractor's contractual

responsibilities will be reviewed and outstanding close-out and other submittals identified.

3. Step 3: Obtaining the Certificate of Substantial Completion
 - a. As the Contractor is nearing the completion of the Work and after concurrence with Barton Malow Builders, it shall submit a written request for Substantial Completion, all required documentation as outlined, and a listing of all minor deficiencies yet to be completed.
 - b. The following documents are the minimum required at the time of request for Substantial Completion. Contractor shall also submit all additional documentation as required in the Contract Documents:
 - 1) AIA G704 Certificate of Substantial Completion
 - 2) As-built records (see Section 017800 - Closeout Submittals)
 - 3) Architect/Engineer approved Operation and Maintenance Manuals (see Section 017800 - Closeout Submittals). Typically, all O&M manuals will be submitted to the Owner at 75% completion of the project prior to acceptance of equipment systems or building occupancy.
 - 4) Keys, Maintenance Stock, and Spare Parts - quantities as required in the specifications
 - 5) Test and Start-up/Owner Training Sessions (see Section 017900 - Demonstration and Training)
 - 6) Submission of Permits and Approvals (i.e., Fire Marshal, Department of Public Health Approvals, etc.)
 - 7) Guarantee and Warranties (see Section 017800 - Closeout Submittals)
 - 8) Punch list (list of work to be completed or corrected). Contractors should account for multiple work to complete lists and punch lists.
 - c. Once Barton Malow Builders has received all required documents they will be forwarded to the Architect and Owner. Barton Malow Builders will review the Contractor's request for Substantial Completion; all above documentation, and list of deficiencies, add appropriate comments, and forward to the Architect and/or Owner for review. In conjunction with the Contractor, Barton Malow Builders will establish a schedule for the completion of all listed items, which in no event shall exceed any time periods established in the Contract Documents for Final Completion.
 - d. When the Architect and/or Owner determine(s) that the Work is substantially complete, the Certificate of Substantial Completion shall be issued to the Contractor.
4. Step 4: Contractor Completes Punch list Work
 - a. Each Contractor shall submit a signed off punchlist by item and letter certifying all punch list items are completed, in a manner acceptable to the Owner, Barton Malow Builders and the Architect.
 - b. All punch list items must be completed within 14 days of issuing, unless otherwise approved by Barton Malow.
 - c. Process and steps that need to be taken by Contractor in order to have items reviewed/completed in Box can be found in - Box Manual. The punch list/work to complete list can be found under the "Issues" category.
5. Step 5: Final Inspection Notice
 - a. Each Contractor is to forward **(written notice and accompanying documentation)** to Barton Malow Builders that Work is ready for final inspection and acceptance. Barton Malow Builders will forward written notice to the Architect if Barton Malow Builders is in agreement that Work is complete. The Architect will perform a final inspection and sign off on the punch list form if Work is in fact completed. If punch list work is not found complete, the Contractor shall take action to remedy any insufficiencies and then shall re-submit the written notice and accompanying documentation that Work is ready for **final** inspection and acceptance. If Barton Malow Builders and/or Architect are required to perform more than 2 site visits to determine Substantial or Final Completion of Contractor's Work, the costs for such additional inspections shall be back charged to Contractor.

- b. The following documents are the minimum required to complete final payment. Contractor shall also submit all additional documentation as required in the Contract Documents:
 - 1) Final Payment Request (AIA G702 & AIA G703).
 - 2) Guarantees/Warranties (including subs and suppliers).
 - 3) Final Sworn Statements (including subs and suppliers).
 - 4) Acknowledgment of Payment and Partial Unconditional Release
 - 5) Final Unconditional Waiver Release Subcontractor/Material
 - 6) Certified Payroll Report
 - 7) MBE participation with final accounting and compliance.
 - 8) Consent of Surety Company to Final Payment (AIA G707)
 - 9) Consent of Surety to Reduction or Partial Release of Retainage (AIA G707 A)
 - 10) Certificate of Substantial Completion (AIA G704).
 - 11) Completion of all closeout.
 - 12) Completion and acceptance of all punch list work and commissioning items .
 - 13) Contact Information.
 - 14) Proof of transmission of all spare parts, attic stock, and O&M Manuals.
 - 15) Items 2 through 8 must always be submitted with the final request for payment.
- 6. Step 6: Review of Final Payment
 - a. Barton Malow Builders and the Architect will review the Contractor's final payment request and Close-Out file. Barton Malow Builders reserves the right to withhold 20% of the estimated cost for each punch list item not completed until complete. If all administrative documents are attached or have been submitted (i.e. guarantee, warranty, waiver of lien, etc.), all Work is complete, and all other responsibilities are met, the Project Team will forward the Contractor's Application for Final Payment to the Owner and payment shall be processed according to the Owner's regular procedures.

3.15 MAINTENANCE

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION 017000

**SECTION 017120
ON-SITE PROJECT SAFETY**

PART 1 – GENERAL

1.01 SECTION INCLUDES:

- A. Contractor's Safety Requirements
- B. Contractor's Safety Submittals
- C. Barton Malow Builders Rights
- D. Safety Related Forms
- E. Hazardous Materials
- F. Infection Control
- G. Other Safety Requirements
- H. Substance Abuse Testing Program
- I. Interim Life Safety Plan

1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding, Contract and General Requirements, which are hereby made a part of this Section.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION

3.01 CONTRACTOR'S SAFETY REQUIREMENTS

- A. General
 - 1. Contractor is responsible for its own Safety Program for Work on this Project that is at least as stringent as the requirements set forth in this section of the Project Manual and/or Barton Malow Builders safety manual.
 - 2. Contractor shall provide a safe workplace and shall otherwise take all precautions for the safety of Subordinate Parties and persons and property in or near the premises where Work is being performed.
 - 3. Contractor shall comply with all applicable federal, state and local laws, rules and regulations, including, but not limited to, applicable provisions of the Occupational Safety and Health Act ("OSHA") and/or the governing state law.
 - 4. Contractor shall comply with all requirements stated in the Site Specific Safety Instructions (SSSI), form or elsewhere in the Contract Documents.
 - 5. Contractor shall ensure that its employees understand and comply with applicable safety and health programs, rules, and regulations.
 - 6. In addition to the requirements set forth in this Section, the Contractor shall comply with all terms, conditions and provisions of all applicable laws.
 - 7. The Contractor shall assign an individual to act as Safety Representative who will have the responsibility of resolving safety matters, and acting as a liaison among Contractor, Barton Malow Builders and the Owner. The Safety Representative must be a person who is capable of identifying existing and predictable hazards in surroundings that are unsanitary, hazardous or dangerous to employees, and has the authority to take prompt corrective measures to eliminate them. The Safety Representative must meet the standards for a Competent Person under applicable law when required (scaffolding, confined spaces, etc.) and be on site full time. The Safety Representative or an alternate must attend periodic safety meetings as directed by Barton Malow Builders and; as a minimum, possess an OSHA 500 certificate.
 - 8. Contractor, through its site supervisors and/or Safety Representative, shall attend a pre-construction meeting where planning for safe execution of the project will be addressed.
 - 9. Contractor is fully responsible for all Hazardous Materials it creates or releases in connection with, or brings to, the Project. Contractor shall immediately report to Barton

Malow Builders any Hazardous Materials that it discovers or which are released at the Project.

10. Minimum training for on-site employees shall include basic safety orientation, site specific orientation, task-specific safety instruction, weekly Tool Box Talks, and other periodic safety meetings. Contractor shall document all such training. Onsite Contractor supervision shall have completed OSHA-30 training.
 11. Contractor shall self-inspect its areas of control to assure compliance with the safety requirements.
 12. All on-site employees of either Contractor or its Subordinate Parties are required to report any unsafe act or condition and any work-related injuries or illness immediately to a supervisor. If the act or condition can be safely and easily corrected, the employee or supervisor shall make the correction. All on-site employees have the obligation to stop any or all work in the event it may lead to injury or incident.
 13. Contractor shall notify the Barton Malow Builders project leadership immediately of all injuries or incidents. Contractor will also be required to fill out a safety incident report along with witness reports available in the Barton Malow Builders Safety Manual or BIM 360 Templates.
 14. Contractor shall have emergency procedures to deal with the immediate removal and treatment, if necessary, of any employee who may be injured or become ill. Contractor shall keep on the Project site a first-aid kit supplied according to current regulations, and shall have on-site a person trained to administer first aid.
 15. Contractor shall inform Barton Malow Builders of the arrival of any federal or state inspector or compliance officer prior to touring the site. Any reports, citations, or other documents related to the inspection shall be provided promptly to Barton Malow Builders.
 16. Contractor shall have a written Substance Abuse Policy. The use or possession of illegal drugs or the use of alcohol while performing Work on the Project are strictly prohibited and may lead to immediate removal from the Project.
 17. Contractor shall be responsible for payment of all safety-related citations, fines and/or claims arising out of or relating to its Work levied against the Owner, Architect/Engineer, Barton Malow Builders, or their employees or affiliates.
 18. Barton Malow Builders has the right to require that Contractor submit monthly its hours worked and incident rates for the Project.
- B. Additional Barton Malow Builders Requirements
1. Work crews shall conduct a Job Hazard Analysis (JHA) discussion to plan for safe performance before beginning any work task. Contractor shall prepare a written record of each JHA.
 2. All workers, management, and visitors shall check into prior to entering the jobsite using the QR code and adhere to the site mask requirements.
 3. All workers, management, and visitors shall wear approved hard hats, safety glasses, safety vest or High Visibility clothing 100% while on site, outside the trailers. All workers will wear gloves specific to work tasks being performed unless they will add additional hazard and potential for injury. All workers, management and visitors will have gloves on their person in the event they are required to use their hands to touch, grasp or move any type of construction material or equipment while onsite. All workers, management, and visitors shall check into the jobsite using the qr code and adhere to the site mask mandate. Cowboy-style hard hats are prohibited. Hardhats must not be removed to use welding shields. Welding shields must attach to hardhats or be hand held.
 4. Sleeved shirts (minimum of four inches), long pants (not sweat pants), and durable work boots are required minimum clothing.
 5. Personal radios or music players with earphones are not permitted.
 6. All persons working at elevations of six feet or greater must have 100% continuous fall protection. Engineering controls are preferred, but personal fall arrest systems are also permissible. An exception is permitted for safe use of ladders up to 24 feet long.

7. Prior to removing or modifying any barricade or handrail, Contractor shall request permission from Barton Malow Builders project leadership. Contractor is responsible to repair or restore any barricade that it modifies or removes.
8. Class III (household) stepladders are prohibited; metal ladders are not allowed.
9. All scaffolds must be tagged and checked daily before each use for safety compliance. A green tag will be used for a successfully inspected scaffold and a red tag will be used for any scaffold found to be in an unsafe condition. Scaffolds shall never be left in an unsafe condition and must be removed, disabled or properly assembled immediately.
10. All persons operating cranes must be certified as crane operators by one of 4 testing agencies, NCCCO, NCCER, CIC or OSCP. Daily crane inspection reports must be prepared by the operator and kept with the crane, available for inspection.
11. Riding the headache ball is prohibited.
12. All dozers, loaders, tractors and end loader backhoes must have functioning backup alarms.
13. Keep equipment at least 15 feet from energized power lines.
14. Electrical, pneumatic, and other energy systems that could be accidentally energized or started up while work is in process must be locked out (not merely tagged out).
15. Only fire retardant materials may be used to build shanties or other temporary enclosures inside of buildings finished or under construction. Shanties shall be continually policed by their occupants to prevent the accumulation of waste or other combustibles.
16. Engineering controls must be used to restrain silica dust per applicable law.
17. Any cost incurred by corrections made by Barton Malow Builders due to safety violations caused by Contractor shall be back charged to the offending Contractor.

3.02 CONTRACTOR'S SAFETY SUBMITTALS

- A. Contractor shall provide copies of the following written safety submittals to Barton Malow Builders at the times indicated:

Contractor Safety Certificate

Contractor Safety Plan

Site-Specific Safety Information

Contractor Safety Orientation Completion List

Employee CPR Certificates

Employee OSHA-30 Certificates

Employee Aerial Lift Training Certificates

SDS Sheets

[_____]

- B. Barton Malow Builders' receipt of the Safety Program or other submittals from Contractor does not constitute approval of the Program or submittal or permission to deviate from the requirements of the Contract Documents and applicable law.
- C. Contractor will allow inspection of, and Barton Malow Builders may request copies of, any and all safety-related documents and records in its possession relating to the Project.

3.03 BARTON MALOW BUILDERS RIGHTS

- A. Safety Hazard Notifications may be issued to the Contractor when an unsafe act or condition is reported or observed. Barton Malow Builders shall not be required to supervise the abatement or associated reprimand of unsafe acts or conditions within a Contractor's scope of work as this is solely the responsibility of Contractor. Nevertheless, Barton Malow Builders has the right, but not the obligation, to require Contractor to cease or abate any unsafe practice or activity it notices, at Contractor's sole expense.

- B. Contractor's failure to comply with the contract safety requirements will be considered a default of the Agreement, and may result in remedial action including, but not limited to, withholding of payment of any sums due or termination.
- C. Barton Malow Builders failure to require the submission of any form, documentation, or any other act required under this Section of the Project Manual shall not relieve the Contractor from any of its safety obligations.
- D. Nothing in this Section or in this Agreement makes Barton Malow Builders responsible or liable for protecting Contractor's employees and other Subordinate Parties or assuring or providing for their safety or preventing accidents or property damage.
- E. All requirements referenced in this Section 017120 are binding on Contractor and all of its Subordinate Parties, even where such requirements may exceed the standards of applicable law.

3.04 SAFETY RELATED FORMS

- A. The following safety related forms are in Section 0016001 Forms and Box:
 - 1. Contractor Safety Certificate
 - 2. Site-Specific Safety Information

3.05 HAZARDOUS MATERIALS

- A. This Section describes the following requirements including:
 - 1. Definition of Hazardous Materials
 - 2. Awareness of Hazardous Materials
 - 3. Contractor Hazardous Materials Responsibilities
- B. Definition of Hazardous Materials:
 - 1. A "Hazardous Material", as used in this Project Manual means asbestos; asbestos containing material; lead (including lead-based paint); PCB; molds; any other chemical, material, or substance subject to regulation as a hazardous material, hazardous substance, toxic substance, or otherwise, under applicable federal, state, or local law; and any other chemical, material, or substance that may have adverse effects on human health or the environment.
- C. Awareness of Hazardous Materials:
 - 1. Each Contractor shall be constantly aware of the possible discovery of Hazardous Materials. Should Contractor encounter any Hazardous Material or suspected Hazardous Material, the Contractor shall immediately stop Work in the area affected and report the condition to Barton Malow Builders.
- D. If the Contractor encounters any Hazardous Material or suspected Hazardous Material, the Contractor agrees to immediately initiate the required procedures of the Environmental Protection Agency (EPA), and/or state or local agencies having jurisdiction to protect any and all persons exposed to the affected areas or adjacent areas affected thereby.
- E. Contractor is fully responsible for all Hazardous Materials it creates or releases in connection with, or brings to, the Project.
- F. See the General and Supplementary Conditions of the Agreement for further instructions and obligations related to Hazardous Materials.
- G. Each Contractor shall be responsible to bind ALL of its personnel and its Subordinate Parties to the provisions in these paragraphs and to instruct each employee of the of its duty to report any and all suspected Hazardous Materials and to comply with all applicable laws.
- H. No material shall be brought on or to the project site that does not have a manufacturer's label stating contents.
- I. The Contractor shall comply with all applicable federal and state laws, rules, ordinances and regulations regarding transportation, storage, spills, releases and disposal of Hazardous Materials.

- J. No asbestos or asbestos-containing material will be brought to the jobsite or incorporated into the Work by Contractor or its Subordinate Parties.

3.06 OTHER SAFETY REQUIREMENTS

- A. In addition to the requirements listed above, special attention is required to the following for all Contractors:
 - 1. Noise and Vibration – each Contractor shall review the type of equipment or methods of operation in consideration of adjacent occupied areas that could be adversely affected by noise or vibration, and shall use best efforts to minimize any noise or vibration affecting such areas. Coordinate the scheduling of any work causing excessive noise and/or vibration with Barton Malow Builders prior to beginning work.
 - 2. Water Damage / Leaks Prevention – all Contractors shall pay special attention to any possibility of leaks or water damage due to construction Work and its impact on surrounding occupied areas.
 - 3. Exhaust & Fumes - for Work involving hazardous fumes including, but not limited to, adhesives, paints/primers, grinding, saw cutting, equipment exhaust, or welding, each Contractor shall review alternate materials or methods of Work that may be required depending on adjacent occupied areas. Construction activity is not permitted within area of existing fresh air intakes.
 - 4. All of Owner 's security measures must be strictly followed by all Contractors and their Subordinate Parties including, but not limited to, rules about limited construction access at specified doors/entry points, wearing proper identification, and emergency procedures.
 - 5. All shut-downs for electrical, plumbing, mechanical, fire protection or any other service shall be scheduled with the Owner through Barton Malow Builders at least 72 hours prior to the shut down, and affected occupied areas must be reviewed with the Owner at that time. Should an unscheduled shut-down or interruption of services take place, Barton Malow Builders shall be notified immediately and the Contractor shall be required to remedy the situation immediately and shall review the situation with the Owner and Barton Malow Builders after service is restored.
 - 6. If modifications to the existing ventilation system are necessary, Contractor shall verify that existing systems as modified can produce the proper air exchange rates and pressure required in critical areas, and that air is not being directly circulated from construction areas into other occupied/patient care areas and shall document such verification to the Owner through Barton Malow Builders.
 - 7. Contractors are required to review its proposed cleaning techniques for exterior facade of existing buildings, ramps and walks with Barton Malow Builders and the Owner . Water blasting techniques shall be used (instead of sandblasting) near air intakes, mechanical rooms or patient care areas.
 - 8. Each Contractor shall provide for its Subordinate Parties protective apparel as required (coveralls, foot gear head gear, eye protection and face masks) suitable for use by construction personnel and authorized visitors when leaving Work areas and passing through adjacent occupied areas.
 - 9. When finished Work is installed, each Contractor shall cover and protect its own absorbent materials (carpets, fabrics, etc.) to assure that such materials do not absorb excessive dust and/or debris before an area is finally cleaned and turned over to the Owner for occupancy.

3.07 SUBSTANCE ABUSE AWARENESS

- A. The requirements of this section apply to Contractor employees and the employees of Subcontractors and other Subordinate Parties who provide services for construction on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.
- B. Covered Employees: This policy applies to all full-time, part-time, temporary, intern, contract and non-bargaining trade employees of Contractor. Bargaining trade employees will be subject to the collective bargaining agreement in effect during the relevant time period.

- C. All Contractors, Subcontractors and other Subordinate Parties that work on projects managed by Barton Malow Builders will be required to have a substance abuse policy in place for their employees that is comparable to Barton Malow Builders 's policy. In the event of a conflict between policies, Barton Malow Builders 's policy will govern. This requirement will be included in all Barton Malow Builders contracts and purchase orders.
- D. Definitions:
 - 1. Illegal Drugs: in this policy means: (a) inhalants and controlled substances; (b) any drug which is not legally obtainable; and (c) medications containing a controlled substance, which are used for a purpose or by a person for which they were not prescribed or intended or in amounts which exceed the prescribed dosage.
 - 2. Legal Drugs: are defined as prescribed drugs and over-the-counter drugs which have been legally obtained, are being used only for the purpose for which they were prescribed and/or manufactured and in the prescribed amounts, and are being used by the person for whom they were prescribed.
 - 3. Under the Influence: means appearance, speech, behavior, or bodily odor which causes a superior to reasonably suspect the employee to be impaired by alcohol, illegal drugs or legal drugs.
 - 4. Impaired: " is defined as: (a) the deterioration of an individual's judgment and a decrease in his/her physical ability due to alcohol, illegal drugs or legal drugs; (b) and/or the inability of a person to perform the essential functions of his/her job duties due to alcohol, illegal drugs or legal drugs; (c) and/or having a blood alcohol level exceeding .04%; (d) and/or testing positive for a legal or illegal drug that exceeds the following cut-of concentration level:
 - a. Amphetamines, including Methamphetamine, Ritalin, Ecstasy – 1,000 ng/ml;
 - b. Barbiturates – 300 ng/ml;
 - c. Benzodiazepines – 300 ng/ml;
 - d. Cannabinoid – 50 ng/ml;
 - e. Cocaine – 300 ng/ml;
 - f. Methadone – 300 ng/ml;
 - g. Opiates – 2,000 ng/ml;
 - h. Phencyclidine – 25 ng/ml
- E. Prohibited Activities:
 - 1. Possessing or consuming any alcoholic beverage while: (a) on the job; (b) on Company property (except during a Company-sanctioned social function in which the Company provides or permits alcoholic beverages); (c) on client property (except during a client-sanctioned social function in which the client provides or permits alcoholic beverages); (d) in vehicles during work hours.
 - 2. Engaging in the unlawful or unauthorized manufacture, distribution, dispensation, possession, sale, transfer, storage, concealment, transportation, promotion, or use of a controlled substance, illegal drug, alcoholic beverage or drug related paraphernalia.
 - 3. Reporting for work or working while under the influence of alcohol or with illegal drugs in the employee's system.
 - 4. Using a legal drug or medication: (a) without a prescription in the employee's name written by a physician; and/or (b) in amounts that exceed the dosage identified on the prescription; and/or (c) in amounts that impair the employee's ability to perform his or her job.
- F. Such conduct is also prohibited during non-working hours to the extent that, in the opinion of the management of the Company, it:
 - 1. Impairs the employee's ability to perform his or her job.
 - 2. Affects the Company's reputation, threatens its integrity or interferes with a client relationship.
 - 3. Is considered illegal and/or unlawful conduct as defined by local, state or federal law.
- G. Authorized Testing:

1. Reasonable Suspicion Testing: A Contractor, Subcontractor, or other Subordinate Party shall submit to a drug test and/or alcohol test if there is reasonable suspicion or cause to suspect (including but not limited to based on the employee's appearance, speech or behavior) that the employee is under the influence of alcohol, illegal drugs or legal drugs.
2. POST-ACCIDENT TESTING: A Contractor, Subcontractor, or other Subordinate Party shall submit to a drug and/or alcohol test if such Contractor, Subcontractor, or Subordinate Party: (1) suffers an occupational on-the-job injury; (2) is suspected of causing or contributing to a serious work accident; and/or (3) is involved in a reportable accident while operating equipment or driving a motor vehicle.
 - a. On-the-job injuries are defined as injuries occurring during a serious or potentially serious accident or incident where: (a) safety precautions were violated; (b) negligent or careless acts were performed; (c) the employee(s) failed to wear prescribed personal protection equipment; and/or (4) the employee failed to follow prescribed safety rules.
 - b. A reportable accident is defined as: any accident which results in the death of a human being or bodily injury to a person who, as a result of the injury, immediately receives medical treatment away from the scene of the accident; or total damages to all property aggregating \$1000.00 or more, based upon actual costs or reliable estimates.
 - c. In all cases of post-accident testing, testing should be taken within eight (8) hours of the accident. It is the employee's responsibility to notify his/her Supervisor of all incidents.

3.08 INTERIM LIFE SAFETY PLAN

- A. This Section describes the following requirements including:
 1. Fire Precautions and Protection
 2. Temporary Fire Standpipe System
 3. Noxious Odors and Fumes
- B. Fire Precautions and Protection
 1. All Contractors and their Subordinate Parties shall assume full responsibility and take all necessary precautions to guard against and eliminate all possible fire hazards and to prevent damage to any construction work, building materials, equipment, temporary field offices, storage sheds, and all other property, both public and private. The location of the nearest corporation or public fire alarm box and the telephone number of the local fire department shall be conspicuously posted by Contractor throughout the field offices and in the building structure adjacent to its Work and it shall take precautions to prevent fire hazards in accordance with all fire protection and prevention laws and codes.
 2. Each Contractor's superintendent in charge at the Project shall review the entire Project at least once a week to make certain the Contractor has adhered to the conditions and requirements set forth herein.
 3. No open fires shall be permitted. Contractors and their Subordinate Parties shall not be allowed to start fires with gasoline, kerosene or other highly flammable materials.
 4. Welding, flame cutting, or other operations involving the use of flame, arcs, or sparking devices will not be allowed without adequate protection and shielding without prior permission of the Owner through Barton Malow Builders /Commercial Construction/JLN. All combustible and flammable material shall be removed from the immediate area. Material shall be protected with a fire resistant tarpaulin to prevent sparks, flames, or hot metal from reaching materials. Contractor shall provide the necessary personnel and firefighting equipment to effectively control incipient fires resulting from welding, flame cutting, or other operations involving the use of flame, arcs or sparking devices. Each Contractor performing Work involving welding or open flame shall provide its own fire extinguishers in the immediate area of the Work.
 5. Not more than a one day supply of flammable liquids such as oil, gasoline, paint or paint solvent shall be brought into any building at any one time. All flammable liquids having a flash point of 110 degrees F or below, which must be brought into any building, shall be

- confined to Underwriter's Laboratories' labeled safety cans. The bulk supply of all flammable liquids shall be detached at least 75 feet from the building and from yard storage of building materials. Spigots on drums containing flammable liquids are prohibited on the project site. Drums are to be equipped with approved vent pumps.
6. Combustible materials shall not be stored or left overnight within the confines of the permanent building. This includes all internal combustion engines using gas or fuel oil. Hoisting of flammable or combustible materials to the roof shall only be in quantities as needed for immediate use.
 7. Only fire resistant tarpaulins shall be used on this Project.
 8. Each Contractor will provide and maintain in working order at all times during construction fire extinguishers conveniently located on each floor area in accordance with OSHA regulations. A floor stand shall be provided with appropriate signage. A representative of this contract shall walk the project on a weekly basis and document the status of the extinguishers. Any extinguisher requiring service shall be serviced that same day. Documentation shall be submitted to Barton Malow Builders each week. Contractor responsible for maintaining monthly signoff tags on fire extinguishers.
 9. Fire extinguishers provided by Contractors shall be "all purpose", and not a water type, to meet the approval of the Fire Underwriter's Laboratory, and will be inspected at regular intervals and recharged if necessary.
 10. In areas of flammable liquids, asphalt or electrical hazards, extinguishers of the 15 lb. carbon dioxide type or 20 lb. dry chemical type shall be provided by the Contractor creating such hazard.
 11. Each Contractor agrees that, in the event of fire, all its workers and all Subordinate Parties workers anywhere on site will assist in extinguishing the fire
 12. Contractor's and their Subordinate Parties' shanties of combustible construction shall not be placed inside of any structure. Such shanties shall be detached at least seventy-five (75) feet from the building or as directed by Barton Malow Builders /Commercial Construction/JLN with approval of the Owner . Totally incombustible shanties may be, if approved in writing by Barton Malow Builders /Commercial Construction/JLN, located inside of the structure.
 13. Use of only Underwriter's Laboratory approved heaters and/or stoves is permitted in field offices or storage sheds and they shall have fire resistive material underneath and at the sides near partitions and walls. Pipe sleeves and covering shall be used where stove pipe runs through walls or roof.
 14. Flammable portions of construction shanties inside the structure must be painted inside and outside with "ALBI" fire retardant paint or other fire retardant paint of equal quality as approved by the Owner .
- C. (Temporary) Fire Standpipe System
1. The Fire Protection Contractor shall furnish, install and maintain a temporary fire standpipe system in all parts of building for use of fire department during construction.
 2. Permanent risers shall be installed as floor slabs are cast, with capped 2 1/2 inch hose valves on each floor and temporary cap or plug on top. One riser at a time shall be extended up so that remainder are available for use at all times.
 3. Provide permanent cross connections or provide temporary cross connections.
- D. Noxious Odors and Fumes
1. All Contractors are notified that combustion engine equipment, tar kettles and any other items causing noxious odors or fumes will NOT be allowed in the building or near air intake louvers. If intake louver locations are in doubt, consult with Barton Malow Builders Company/Commercial Construction/JLN.

END OF SECTION 017120



Barton Malow
BUILDERS

SAFETY MANUAL

CONTENTS

REVISION TABLE	4
ACRONYMS	5
MESSAGE FROM THE PRESIDENT	6
USE OF MANUAL	7
DEFINITIONS + RESPONSIBILITIES	8
SAFETY PROGRAM REQUIREMENTS	10
RETURN TO WORK POLICY	16
DISCIPLINARY REQUIREMENTS	20
SUBSTANCE ABUSE AWARENESS	22
VISITORS	26
VIOLENCE + WEAPONS	27
CONTRACTOR SAFETY REPRESENTATION REQUIREMENTS	28
EMERGENCY ACTION PLAN	30
CONSTRUCTION HAZARD IDENTIFICATION + CONTROL PROCESS	32
ORIENTATIONS, MEETINGS, + INSPECTIONS	34
CONTROL OF HAZARDOUS ENERGY, LOCKOUT / TAGOUT (LOTO)	38
ELECTRICAL SAFETY	44
EQUIPMENT + TOOLS	46
EXCAVATIONS	48
FIRE PROTECTION + PREVENTION	50
HOISTING + RIGGING	54
CRANE INSPECTIONS, MAINTENANCE, + TESTING	58
STEEL ERECTION	62
FALL PROTECTION PROGRAM	64
HEARING CONSERVATION	68
INDUSTRIAL HYGIENE	70
EYE AND FACE PROGRAM	74
PERSONAL PROTECTIVE EQUIPMENT (PPE)	76
HAZARD COMMUNICATION	78
CONFINED SPACES	82
CONCRETE + RESTEEL	86
AERIAL LIFTS	87
SCAFFOLDS	88
ENVIRONMENTAL REQUIREMENTS	90
DEMOLITION	92
BLASTING PROGRAM	93
REMOVAL/RELOCATION PLANNING	94
RESPIRATORY PROTECTION PROGRAM	96
SILICA PROTECTION + EXPOSURE CONTROL PROGRAM	102
HEAT STRESS PREVENTION PROGRAM	110
COLD STRESS PREVENTION PROGRAM	116
TOOL TETHERING PROGRAM	120
MOBILE ELEVATED WORK PLATFORMS	122
ATTACHMENTS	127

ATTACHMENTS

Attachment A - Contractor Site-Specific Requirements Review Form (2 pages)
Attachment B - Job Hazard Analysis (1 page)
Attachment B1 - Job Hazard Analysis Example Only (6 pages)
Attachment C - Lightning Policy (3 pages)
Attachment D - Contractor Site-Specific Information Form (3 pages)
Attachment E - On-Site Project Safety and Loss Control Program (4 pages)
Attachment F - Emergency Action Plan (7 pages)
Attachment G - Hazard Communication Program (3 pages)
Attachment H - Emergency Evacuation Map (1 page)
Attachment I - Hurricane Preparedness Plan (9 pages)
Attachment J - Traffic Control Plan (3 pages)
Attachment K - Contractor Monthly Incident Summary Report (1 page)
Attachment L - Incident Investigation Report (2 pages)
Attachment L1 - Witness Report (1 page)
Attachment M - Safety Training Roster (1 page)
Attachment N - Daily Pre-Task Plan (3 pages)
Attachment N1 - Daily Pre-Task Plan Trifold (2 pages)
Attachment N2 - Daily Pre-Task Plan 11x17 (2 pages)
Attachment O - Chemical and Substance Inventory List (1 page)
Attachment P - Permit Request Form (1 page)
Attachment Q - Confined Spaces Entry Permit (2 pages)
Attachment R - Excavation Zone Checklist (2 pages)
Attachment S - Lockout/Tagout Program (27 pages)
Attachment T - Guard Rail Removal Permit (1 page)
Attachment U - Hot Work Permit (1 page)
Attachment V - Notice to Commence Steel Erection (1 page)
Attachment W - Dust Mask Request (1 page)
Attachment X - Lockout/Tagout Checklist (2 pages)
Attachment Y - Energized Electrical Equipment Permit (2 pages)
Attachment Z - Energized Panel and Equipment Permit (1 page)
Attachment AA - Lattice Boom Crane - Annual Inspection Form (4 pages)
Attachment AB - Lattice Boom Crane - Monthly Inspection Form (3 pages)
Attachment AC - Lattice Boom Crane - Daily Inspection Form (2 pages)
Attachment AD - Telescoping Boom Crane - Annual Inspection Form (4 pages)
Attachment AE - Telescoping Boom Crane - Monthly Inspection Form (3 pages)
Attachment AF - Telescoping Boom Crane - Daily Inspection Form (2 pages)
Attachment AG - Crane Maintenance Checklist (1 page)
Attachment AH - Critical Lift Plan (3 pages)
Attachment AI - Soil Bearing Chart (1 page)
Attachment AJ - Pre-Demolition Survey (2 pages)
Attachment AK - Daily Equipment Inspection Checklist (1 page)
Attachment AL - Daily Aerial Lift Checklist (1 page)
Attachment AM - Daily Scaffold Safety Inspection Report (1 page)
Attachment AN - Safety Hazard Notification (1 page)
Attachment AO - Hazard Communication Program (5 pages)
Attachment AP - Stretch & Flex Program (12 pages)
Attachment AQ2 - Barton Malow Builders Crisis/Incident Management (1 page)
Attachment AR - Removal/Relocation Planning Form
Attachment AS - Respirator Medical Evaluation Questionnaire (7 pages)
Attachment AT - Respirator User Authorization and Training Record (1 page)
Attachment AU - Supervisors Risk Assessment Form
Attachment AV - Return to Work Confidentiality
Attachment AW - Healthcare Provider's Letter and Statement
Attachment AX - Barton Malow Transitional Duty Return to Work

REVISION TABLE

CHANGE #	DATE OF CHANGE	CHANGES MADE
18.1	2018-01-31	2018 Document Revision: Add Respiratory Protection Program Add Silica Protection & Exposure Control Program Add Respiratory Protection Program Forms Add Revision Table Edit Table of Contents Edit Attachment Table of Contents Edit cover picture
18.2	2018-08-06	Updated: Attachment N – Daily Pre-Task Plan Attachment AK – Daily Equipment Inspection Checklist Attachment AL – Daily Aerial Lift Checklist Updated & Added: Attachment N1 – Daily Pre-Task Plan Trifold Attachment N2 – Daily Pre-Task Plan 11x17 Hoisting & Rigging Section, Added Table A
19.1	2019-05-23	Re-design of manual Re-order of manual sections Terminology changes for consistency Updated: Safety Program Requirements Section: Incident Response, Notification, and Investigation Added: Acronym Section: additional acronyms added Crane Inspections, Maintenance, and Testing Section: requirement for crane operator evaluation PPE Section: eye protection for overhead work requirement, minimum requirement for A4 gloves to be worn by Barton Malow employees. Hazard Communication Section: pictograms added Safety Program Requirements Section: Mobile Technology Use
19.2	2019-07-01	Added: Heat Stress Prevention Program
19.3	2019-10-16	Added: Cold Stress Prevention Program
19.4	2019-12-19	Added: Mobile Elevated Work Platform Program
20.1	2020-02-04	Manual rebrand to reflect new company brand
20.2	2020-07-02	Added: Return to Work policy Updated: Safety Program Requirements - Incident Response

ACRONYMS

ACGIH – American Conference of Governmental Industrial Hygienists	NFPA – National Fire Protection Association
ACM – Asbestos-Containing Material	NIST – National Institute of Science and Technology
AHJ – Authority Having Jurisdiction	NPDES – National Pollutant Discharge Elimination System
AL – Action Level	OEL – Occupational Exposure Limit
ALARA – As Low As Reasonably Achievable	OEM – Original Equipment Manufacturer
ANSI – American National Standards Institute	OSHA – Occupational Safety and Health Administration
APF – Assigned Protection Factor	PEL – Permissible Exposure Limit
ASME – American Society of Mechanical Engineers	PFAS – Personal Fall Arrest System
ASTM – American Society for Testing and Materials	PLHCP – Physician or other Licensed Health Care Professional
BBP – Blood Borne Pathogen	POC – Point of Contact
BMPs – Best Management Practices	POD – Plan of the Day
CEHSP – Construction Environmental, Health and Safety Plan	PPE – Personal Protective Equipment
CFR – Code of Federal Regulations	PtD – Prevention Through Design
CHA – Contract Hazards Analysis	RCRA – Resource Conservation and Recovery Act
CPR – Cardiopulmonary Resuscitation	RFP – Request for Proposal
CSE – Confined Space Entry	RMEQ – Respirator Medical Evaluation Questionnaire
CWA – Clean Water Act	RSO – Radiation Safety Officer
dB – decibels	SDS – Safety Data Sheet
dBA – decibels, A-weighted scale	SLM – Sound Level Meter
DOP – Di-Octyl Phthalate	SSSP – Site-Specific Safety Plan
FM – Factory Mutual	SWPPP – Storm Water Pollution Prevention Plan
ECT – Equivalent Chill Temperature	TLV – Threshold Limit Value
EHS – Environmental, Health and Safety	PTP – Pre-Task Safety Plan
EPA – Environmental Protection Agency	TWA – Time Weighted Average
ESWP – Electrical Safe Work Permit	UL – Underwriter's Laboratory
FHA – Fall Hazard Analysis	USC – United States Code
FPP – Fall Protection Plan	WLL – Working Load Limit
GFCI – Ground Fault Circuit Interrupter	
GHS – Globally Harmonized System	
HAZCOM – Hazard Communication	
HCP – Hazard Communication Program	
HEPA – High Efficiency Particulate Absolute	
HPD – Hearing Protection Device	
H+R – Hoisting and Rigging	
IDLH – Immediately Dangerous to Life or Health	
IH – Industrial Hygiene	
IPT – Integrated Project Team	
JHA – Job Hazard Analysis	
LEED – Leadership in Energy and Environmental Design	
LO/TO – Lockout / Tagout	
mA – milliamps	
SDS – Safety Data Sheet	
MEWPs – Mobile Elevated Work Platform	
NEPA – National Environmental Policy Act	



MESSAGE FROM THE PRESIDENT

Each day Barton Malow builds people, projects and communities with the goal of sending every worker home unharmed and satisfied with a job well done. Building safe without exception is our commitment and it's embedded in our values of Integrity, Partnership and Empowerment. Together we work each day to provide a safer work environment through pre-task planning, workforce engagement, and standards that go above and beyond OSHA requirements. I urge every individual on a Barton Malow jobsite to be vigilant when it comes to safe work practices. Together we will deliver results through safe practices without exception.

Thank you for your commitment to zero lost time incidents, zero recordables, and zero first-aid incidents.



USE OF MANUAL

SCOPE

This manual contains excerpts from, and references to, numerous regulations, codes, and standards which are not presented in their entirety. Similarly, not all Environmental, Safety and Health subject matter is covered in this manual. Each employer is responsible for ensuring compliance with “all applicable requirements” that govern their work on Barton Malow projects, including any consensus standards incorporated therein by reference. If the manual does not contain information relative to a particular Environmental, Health or Safety topic, the employer must ensure that the governing regulatory provisions or national consensus standards as applicable are implemented as part of their Construction Environmental, Health and Safety Plan (CEHSP). If there is a conflict between requirements, the most stringent should be used. Employers are always encouraged to apply best management practices in all of their endeavors. Nothing in this manual relieves Barton Malow or its Contractors of their own safety responsibilities.

DEFINITIONS + RESPONSIBILITIES

COMPETENT PERSON

One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt, corrective measures to eliminate hazards. A Competent Person is also one who has extensive training, knowledge and experience in a particular activity or job function. A Competent Person must be capable of demonstrating the knowledge and skill-sets that match their Competent Person designation.

CONSTRUCTION ACTIVITY

Is any combination of erection, installation, assembly, demolition, or fabrication activities involved to create new construction or to alter, add to, rehabilitate, dismantle, or remove an existing building or facility. It also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction, demolition, and excavation activities conducted as part of environmental restoration or remediation efforts.

CONSTRUCTION ENVIRONMENTAL, HEALTH, & SAFETY PLAN (CEHSP)

A document prepared by the Construction Subcontractor and submitted to Barton Malow for review and concurrence. The CEHSP describes the Construction Subcontractor's environment, safety and health plan for a particular construction project and the activity hazard analysis(s) for each definable activity/feature of work.

CONSTRUCTION REPRESENTATIVE

Building area engineer, technical monitor, or Owner-delegated Representative authorized to approve and accept work, provide technical liaison, and interpret plans and specifications.

CONSTRUCTION SUBCONTRACTOR

A person, corporation, or other entity, other than Barton Malow, who furnishes labor, supplies, materials, equipment, or services under a construction or similar contract including a task order agreement. A Construction Subcontractor's site tenure may vary depending on the nature of the project, and its employees are not considered a permanent construction force.

CONSTRUCTION SAFETY ORIENTATION CHECKLIST

A form used to document the project relevant Environmental, Health and Safety (EHS) information at the pre-construction meeting. Construction Subcontractors have the responsibility to ensure that the content covered in the checklist/orientation is effectively flowed down to all of their employees and their Subcontractors prior to the start of any work.

ENTRY EMPLOYER

Any employer who decides that an employee it directs will enter a permit space.

GRADED APPROACH

A Graded Approach is recommended to be used for implementing the work, planning and control (i.e. – the CEHSP and accompanying Job Hazard Analysis (JHA)). The level of detail within each CEHSP and corresponding JHA should be based on the size, complexity and risk level of the construction work.

HOLD POINT

A point of defined circumstances (i.e. Excavation Zone Checklist) beyond which a construction activity must not proceed without the approval of a designated authority.

HOST EMPLOYER

The employer that owns or manages the property where the construction work is taking place.

IMMINENT DANGER

A condition or practice that could reasonably be expected to cause death or serious injury, severe property damage, or environmental impairment unless immediate actions are taken to mitigate the effects of the hazard created.

JOB HAZARD ANALYSIS (JHA)

A work control document that identifies the work tasks, hazards and controls of the overall project and provides the basis for the development of the Site-Specific CEHSP.

PREVENTION THROUGH DESIGN (PTD)

The concept of Prevention Through Design (PTD) can be defined as: Addressing occupational safety and health needs in the design process to prevent or minimize the work-related hazards and risks associated with the construction, manufacture, use, maintenance, and disposal of construction materials and equipment.

PRE-TASK SAFETY PLAN (PTP)

A detailed review of the day's work tasks to identify job steps, hazards and controls (See also Safety Huddle).

PROJECT SAFETY OFFICER

An employee of Barton Malow and/or the Construction Subcontractor at the work site who is responsible for assisting in the implementation of the Project Safety Plan and compliance with applicable laws and regulations. The qualifications of the Project Safety Officer must be listed in the CEHSP.

QUALIFIED PERSON

One who by possession of a recognized degree, certificate or professional standing or who by extensive knowledge, training and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work or the construction project.

SAFETY HUDDLE

Interactive meeting between a worker's direct Supervisor and workers to discuss the JHA for the next work task or activity period.

SAFETY STAND DOWN

A site-wide safety meeting to address safety issues.

WORKER

A union tradesman, leased worker, Subcontractor, independent Contractor/Consultant, volunteer, or other individual providing construction services onsite.

SAFETY PROGRAM REQUIREMENTS

APPLICABILITY

These requirements apply to Barton Malow, Contractors, Subcontractors, Sub-Subcontractors, and Suppliers who provide services or materials for construction.

REGULATORY REQUIREMENTS

All Barton Malow projects are subject to regulatory requirements of Federal OSHA and/or State and Local requirements. The enforcement provisions of the Federal Occupational Safety and Health Act (OSHA) apply.

CONSTRUCTION ENVIRONMENTAL, HEALTH AND SAFETY PLAN

Each Contractor on site must ensure that the requirements in this Manual are incorporated into their CEHSP and the Job Hazard Analysis (JHA) developed for this contract. The CEHSP must be submitted in accordance with the contract requirements document and undergo a review and concurrence by the Regional Safety Leader prior to being allowed to start work.

A new CEHSP must be submitted for each construction project, regardless of whether the Contractor has performed prior work onsite. The level of detail within each CEHSP and corresponding JHA should be commensurate with the size, complexity and risk level of the construction project. All affected personnel involved in the work being performed must review the CEHSP and any subsequent changes. The updated CEHSP must be made available for review and concurrence by the Regional Safety Leader prior to work being conducted on the project. The CEHSP must be kept at the worksite and available for review.

TRAINING AND DOCUMENTATION

For all workers on this project, site-specific Environmental, Health and Safety (EHS) orientation training will be required. In addition to Barton Malow's project orientation, each Contractor will conduct an additional Safety Orientation for their employees to ensure they understand the project safety requirements as well as their company's requirements. This training will take place before any work operations take place (i.e. before work). Safety orientation decals will be provided and must be visible while working on the project. An orientation record will be maintained.

For work activities in which specific training is required by safety regulations (e.g., OSHA mandated), the Contractor must maintain records on-site, showing proof of current training records for any particular qualified individual(s). Designated Competent Person(s) are expected to have a higher level of experience, training and qualification. Contractors must have in place a mechanism to verify that the Competent Person(s) knowledge and skillsets match their Competent Person designation (i.e., written test).

Photocopies of training certificates, certification cards, wallet IDs, etc. identifying the individual, the specific training, who conducted the training and the date completed (and/or expiration date) are accepted in lieu of originals. Copies of all training should be provided to the Barton Malow Project Team for review. A company training directory will be stored in the Barton Malow Safety office for review and continual updating. Additionally, Supervisors including Superintendents and Foremen will be required to show proof that they have taken an OSHA 30 Hour construction course.

SAFETY BULLETIN BOARDS

The Project Team will install and maintain a safety bulletin board at the location where the majority of employees report to work. Workers must be advised of the location of the nearest bulletin board. Employees must be responsible for reviewing the bulletin board to keep informed of safety-related information. Safety bulletin boards must be of sufficient size to display and post safety bulletins, newsletters, posters, accident statistics, and other safety educational material.

At a minimum, the safety bulletin board must display:

- OSHA Safety and Health Poster (Your Rights as a Worker)
- OSHA Safety and Health Complaint Form
- Requirements, provisions and number of the Employee Concern Program Hotline (Whistleblower Protection)
- Citations and notices as appropriate
- OSHA 300A form (when required)
- Barton Malow-furnished safety bulletins and publications
- Any applicable permits

Additional items to be posted include:

- Topical Safety & Health posters (home and at work)
- Minutes of safety meetings
- Information on incidents and Lessons Learned
- Hazard communication information
- Results of the safety observations
- EHS Committee minutes

All site signage, stickers, and State and Federal postings can be found on [Dirt](#).

[State and Federal Postings](#)

[Site Signage and Stickers](#)



INCIDENT RESPONSE

INJURY RESPONSE

For an injury or illness incident to a Barton Malow employee or other persons working under Barton Malow at any tier, a Barton Malow representative immediately available at the site should handle the initial assessment and response. This could be a Barton Malow Safety Professional (if present) or other management representative, such as the Safety Representative, Project Manager, or Superintendent. The Barton Malow representative should see to the following:

1. Call 911 immediately for ambulance/EMT if warranted.
2. Administer first aid as appropriate using the designated first aid/CPR provider or other qualified individual.
3. Give prompt phone or text notification to Barton Malow safety leadership. If the injured or ill individual is not employed by a Barton Malow, also promptly notify and engage the employer's safety or management representatives.
4. If care or diagnosis is necessary beyond first aid but an ambulance is not needed, the individual should be transported to the pre-arranged clinic. The transportation should be done by a Safety Professional or other supervisory personnel of Barton Malow or the employer. Do not let the sick or injured individual transport themselves.
5. Once the individual is en route to the clinic or hospital, provide prompt phone or text notification to the Barton Malow Holdings Risk Management Workers' Compensation Specialist.

INCIDENT MANAGEMENT

An "incident" is defined as any workplace injury, illness, disease, or property or environmental damage. It also includes any "near miss" situation where an unplanned risk of the foregoing occurred, even if no injury or damage resulted.

Each Contractor is required to provide prompt verbal and electronic notification for all incidents to a Barton Malow Safety Professional or other Barton Malow representative. Normally this should occur within one hour and in any event before the end of the shift. The Barton Malow project team is required to report all incidents the same day to a Barton Malow Safety Professional, who will in turn report them promptly to Barton Malow safety leadership.

Barton Malow safety leadership, upon receiving notification of the incident, is responsible for the following:

1. Use Alert Media to notify the appropriate Barton Malow management personnel and Barton Malow Holdings Risk Management, as soon as practical and in any event within six hours of the incident.
2. For incidents of unusual severity or publicity, give phone notice to Barton Malow senior business leadership and Barton Malow Holdings Branding + Communications as soon as possible.
3. Notify OSHA or the applicable state agency if required.
4. Assure that Owner notification has occurred, if appropriate, in accordance with project requirements.

If a nurse or other medical provider is assigned to the jobsite, first aid care may be coordinated with that provider by Barton Malow's project supervision and/or Safety Professionals. This on-site medical care should not be extensive or prolonged when the circumstances call for an off-site provider.

Once the injured individual begins to receive care or diagnosis by an off-site medical provider for a work-related illness or injury, the coordination of that care or diagnosis is managed by the following:

1. Barton Malow Holdings Risk Management's Workers' Compensation Specialist and the applicable Third-Party Administrator (TPA):
 - a. For employees of Barton Malow.
 - b. For persons whose Workers' Compensation (WC) is covered by a Barton Malow CCIP.
2. The employer, its TPA, and its WC insurer:
 - a. For subcontractor employees not covered by a Barton Malow CCIP.
 - b. For other persons not covered by Barton Malow WC insurance.

Neither Safety Professionals nor jobsite personnel are authorized to manage or direct medical care or diagnosis, beyond appropriate on-site first aid soon after the incident. Costs for medical diagnosis and care for a work-related illness or injury within Barton Malow's responsibility shall be reported to and paid by Barton Malow Holdings Risk Management and/or the applicable insurer. Such costs are not to be paid by the project, individual expense reports, or Barton Malow overhead.

If it is not clear whether an injury or illness that manifests at the work site is work-related, manage it as if work-related until that determination can be made by the employer's safety leadership, with notification to Barton Malow Holdings Risk Management. In any event, ensure that the individual receives appropriate emergency care.

If one Barton Malow entity is working as a subcontractor (or as part of a joint venture) for another Barton Malow entity, assure that notifications are provided to safety leadership of all involved Barton Malow entities.

If Barton Malow is working under a non-Barton Malow Controlled Insurance Program (OCIP or CCIP), follow the safety response and investigation process defined herein (other than coordination of off-site medical care), but also comply with the CCIP's notification procedures. Barton Malow Holdings Risk Management will communicate with the parties responsible for coordinating medical care to assure that the Barton Malow team member is receiving appropriate care.

RETURN TO WORK POLICY

Barton Malow has developed and implemented a Return to Work Policy to establish guidelines in the event one of our team members becomes injured or ill on the job. Barton Malow is committed to making every reasonable effort to return the injured/ill team member to work at the earliest possible time, based on medical approval. The Return to Work Policy is designed to provide temporary transitional assignments for injured/ill team members while they continue medical treatment and/or therapy.

This Policy applies to all Barton Malow team members who have a work-related injury or illness. The work offered to the team member will be within the restrictions set forth by the treating healthcare provider.

Refer to the Return to Work Policy and the Barton Malow Holdings Risk Management's Workers' Compensation Specialist for full details and support for implementation.



INCIDENT INVESTIGATION AND REPORTING

Barton Malow will have oversight over all incident investigations arising from its jobsites or other places of work, or involving Barton Malow personnel or Subcontractors at any tier. All incidents require a prompt, thorough, and objective investigation to determine the root cause. A fully detailed investigation must be provided in writing, using the Scout software or another approved incident reporting form. The report is due within 24 hours of the incident. If that is not feasible due to the complexity or circumstances of the incident, an initial report shall be completed within 24 hours and a final report within 72 hours or as fast as circumstances allow.

If the incident involves a Subcontractor, the Subcontractor's management is responsible to conduct its own thorough and objective investigation and submit a full incident report to Barton Malow within the same time period indicated above. The assigned Barton Malow Safety Professional is responsible for the completion and integrity of Barton Malow's own separate investigation and report. Barton Malow incident reports should normally be created using the Scout software. If that is not used, all relevant information must nevertheless be entered into the Scout database within the same time period.

For recordable incidents and above, a Barton Malow Safety Professional must lead or at least participate in the investigation. Reports for other incidents may be prepared by another responsible member of the Barton Malow project team with review by the Barton Malow Safety Professional.

All incident reports must contain:

- Photographs of the incident
- Identification of all incident causal factors (root and contributing causes)
- Identification and documentation of all corrective actions
- Documentation of closure of all identified corrective actions including any discipline issued
- Accurate and complete reporting of other information called for in the report form

For recordable incidents and above, or as otherwise required by Barton Malow safety leadership, once the complete report has been submitted, an incident review meeting will be held. The purpose of the meeting is to examine and understand the details and causes of the incident including any corrective actions and process improvements.

At minimum, participants will include:

- Barton Malow Project Manager and Superintendent
- Contractor Project Manager / Superintendent (all tiers)
- Barton Malow Safety Professional
- Contractor Safety Professional

Other participants may be invited where appropriate.

For more serious incidents, including deaths, lost-time injuries to a Barton Malow employee, or other incidents in the discretion of safety leadership, the incident review meeting will be replaced or supplemented by an Executive Safety Review (XSR) in accordance with the XSR Best Method document.

Results of the incident review meeting or XSR will be communicated to the appropriate parties. A summary of the incident, including corrective actions, will be posted on the jobsite's Safety Bulletin Board. Follow up actions from the meeting will be completed, with the closeout documented in writing.

All injuries or occupational illnesses in the U.S. will be classified in accordance with applicable law, which is the U.S. Department of Labor Occupational Health and Safety Administration (OSHA) Code of Federal Regulations Recordkeeping Requirements. Incidents outside the U.S. will be classified in accordance with applicable law. Barton Malow safety leadership will make the initial determination of the correct classification for the incident and assure it is entered into the Scout database. Classifications will be updated as necessary based on receipt of new information. Barton Malow safety leadership will confer with Barton Malow Holdings Risk Management before year-end reporting is completed to assure that classifications are accurate based on up-to-date information.

MOBILE TECHNOLOGY USE

The use of mobile technology on a job site creates distractions for the user and other project personnel. As mobile technology usage continues to increase, there is a need to ensure that the project personnel considers the unique hazards created by mobile devices. Mobile devices not only include personal devices but also devices that are used for work-related tasks.

- Do not use mobile phones while operating motorized equipment or vehicles on a job site. Mobile phone usage can occur when the motorized equipment is stationary.
- When in active work locations, do not walk and use a mobile device. If mobile device usage must occur, ensure that you are stationary and in a location where you are visible and/or away from work activities.
- If setting up mobile equipment on-site (testing, surveying, video, etc.) ensure that equipment is visible and that setup does not create additional hazards for the project personnel.
- Usage of mobile devices shall not create additional hazards for users.
- Client and owner mobile device usage requirements may also be applicable and shall be adhered to.





RETURN TO WORK POLICY

RETURN TO WORK STATEMENT

In an effort to conserve the human and financial resources of Barton Malow, we have instituted a temporary transitional return to work program. This program is designed to minimize the disruption and uncertainty that often accompany occupational and non-occupational related injuries or illnesses for both the employer and for all team members.

While our primary goal is to prevent incidents, we recognize that occasionally they may occur. Our return to work program has been developed to return our most valued asset – our team members – back to work in a smooth and efficient manner.

The success of this program is the responsibility of everyone in the Family of Companies, from top management to every team member. Only by working together can we provide a safe and secure workplace.

We all should be on alert for potential accidents and strive to eliminate them. If they occur, let us work together to minimize the effects. These efforts will benefit us all.

BENEFITS

Barton Malow is encouraged by this temporary transitional return to work program. It is truly a win-win situation for both the injured/ill team member and the Family of Companies for the following reasons:

- Increases team member morale
- Promotes faster physical and mental recovery
- Provides injured workers with the opportunity to maintain their normal earnings
- Promotes an easier transition back to regular job duties
- Provides a sense of security and stability
- Reinforces management's commitment to team member's welfare
- Allows injured/ill team member to maintain a near-normal work schedule and lifestyle
- Promotes a feeling of self-worth

Barton Malow feels that returning to work is the right thing for our team members. We realize benefits from a successful Return to Work process by keeping a stable workforce without having to train new team members or temporary workers.

ELIGIBILITY

The return to work process is available for any team member who sustains a work-related injury in which the severity has or will likely result in that team member's inability to perform his/her normal job tasks. Such an injury is what is referred to as a "days away from work" injury. Such injuries are very costly to Barton Malow, the team member, the families of injured team members, insurance companies, and many other tangible entities.

Team members who are expected to have work restrictions that prohibit them from performing their full job duties will be considered for participation in a temporary transitional work assignment as part of the return to work program. Team members must also meet the following criteria:

- The team member must have had a compensable work-related injury or illness as defined by the governing state's Worker's Compensation law.
- A healthcare provider must release the team member to temporary transitional work.
- The team member must have the potential of returning to his/her original job and in good faith will work towards the goal of returning to work to the full duty of their capacity.
- Team members must be in compliance with the provisions set forth in the union's or Barton Malow's Substance Use & Abuse Policy in the event that the injured team member failed the post-accident drug/alcohol test at the time of the injury/illness.
- Team members must notify their immediate supervisor and/or a team member of the Safety team if they experience difficulties with the transitional work assignment.

GUIDELINES + LIMITATIONS

1. Barton Malow may provide temporary transitional work assignments for any team member who is injured during the course of employment. The ability to accommodate return to work will be based on the restrictions assigned by a healthcare provider and the availability of temporary transitional work.
2. All temporary transitional work assignments may last up to a maximum of 12 calendar weeks. The program period will begin with the date of release to transitional work as established by the healthcare provider and will end upon the removal of the restrictions or at the end of the 12 calendar weeks, whichever comes first. Extensions of the transitional work assignments beyond 12 calendar weeks may be granted, but only after revaluation by the healthcare provider and reassessment of business needs by Barton Malow Workers' Compensation Specialist.
3. The duration of each temporary transitional work assignment is based on medical need. Continuation of an individual's program will require ongoing documentation of medical necessity. All team members will have their transitional work assignments reviewed by their immediate supervisor and Barton Malow's Workers' Compensation Specialist prior to assignment and throughout its duration as needed.
4. Team members will be eligible to utilize Barton Malow's Return To Work process (temporary transitional work) a maximum of two (2) occurrences in a rolling calendar year. This means that team members can return to work on a temporary transitional work assignment two times within the previous 12 calendar months. Barton Malow's Workers' Compensation Specialist will determine any exceptions to this provision.
5. Every effort will be made to make reasonable accommodations to team members at the work site who have sustained a permanent restriction and qualify under the Americans with Disabilities Act, in a manner consistent with ADA, unless such action poses an undue hardship or presents a safety threat.
6. Any team member who misuses this benefit by not following specified procedures, falsifying records, or the like, is subject to discipline, up to and including termination.
7. An offer of temporary transitional work to a team member should be considered in the same manner as any other offer of employment. Failure to accept an appropriate transitional work assignment that conforms to any healthcare provider restrictions/recommendations may affect the payment of indemnity benefits.
8. Whenever possible, physical therapy and medical appointments should be scheduled to cause the least disruption to the productivity goals and work hours of Barton Malow. Any reduction in work time which results from the return to work/transitional work process, physical therapy, or work hardening will be considered days away from work and will be handled as part of the claim.
9. Any supervisor who knowingly requires a team member working in a temporary transitional work assignment to work outside of their healthcare provider restrictions and/or their temporary transitional work assignment is subject to disciplinary action up to and including dismissal. Such concerns should be reported by the affected team member to the Barton Malow's Workers' Compensation Specialist. It is our policy to fully investigate workers' compensation claims that appear to be suspicious in nature, or where excessive lag time between the occurrence and reporting has occurred, or where progress is not being made in the return to work process. Anyone who submits a fraudulent claim will be prosecuted under the law.
10. Any disagreements arising out of this policy should be resolved by contacting the Barton Malow's Workers' Compensation Specialist.

If any terms or provisions contained in this policy are contrary to any of the provisions of a Collective Bargaining Agreement or any applicable law, then to that extent the bargaining agreement and/or law will take precedence.

RESPONSIBILITIES

The entire return to work team is key to ensuring that the injured team member returns to his/her full job duties in a safe and timely manner by regularly monitoring the progress of each team member that participates.

SUPERVISOR

- Continually demonstrate support, commitment and visible involvement to ensure that this program and the associated procedures are followed

WORKERS' COMPENSATION SPECIALIST

- Act as Barton Malow's liaison for all work and non-work-related injuries/illnesses
- Coordinate the entity-wide implementation of the temporary transitional return to work program
- Remain in contact with the injured/ill team member, the healthcare provider, the insurance company, Barton Malow's Safety personnel, and the injured/ill team member's direct supervisor
- Communicate directly with the injured/ill team member unless that individual retains an attorney to represent them in their workers' compensation claim
- Obtain and coordinate all paperwork associated with the injured/ill team member including, but not limited to, documentation of medical care provider visits, OSHA injury and illness log, return to work restrictions
- May request the medical status of the claimant or a medical re-evaluation, as well as an independent medical examination
- Work with the injured/ill team member's supervisor to identify a temporary transitional job when the team member has received restrictions from the healthcare provider. An offer will be made in writing by the Workers' Compensation Specialist to the injured/ill team member. This letter will include a description of duties to be performed and reflect the doctors' restrictions.
 - If the injured team member refuses to accept a return to work offer, notify the insurance company immediately
 - If the injured team member accepts a return to work offer, notify the insurance company
- Contact the insurance company immediately if fraud is suspected on the part of the team member or healthcare provider
- Assist the insurance company in the defense of the claim

INJURED TEAM MEMBER

- Notify supervisor immediately after an incident has occurred
- Seek appropriate medical treatment (supervisor will assist)
- Provide information to the supervisor to be documented in the Incident Investigation Report
- Complete an Injured Worker Statement
- Adhere to drug and alcohol testing requirements
- Report information to the Workers' Compensation Specialist on a timely basis, including:
 - All medical appointments
 - Copies of the diagnosis, treatment, and physical capabilities of consideration for transitional work
 - Changes in medical status
- Maintain regular attendance during the temporary transitional work process
- Only perform those work tasks identified by direct supervisor while working within the restrictions as indicated by a healthcare provider – restrictions should be followed at all times, at work and outside of work
- Attend all medical appointments
- Communicate with individuals involved in your rehabilitation process (claim adjuster, healthcare provider, supervisor, Workers' Compensation Specialist, etc.)
- Limit time away from work by scheduling appointments and therapy outside of work whenever possible
- Cooperate fully with return to work efforts and work with your healthcare provider and your supervisor to return to work on a temporary transitional basis as soon as is safely possible
- Progressively increase transitional duties as written medical information allows
- Cooperate in periodic job performance reviews while participating in a transitional or alternative position
- Obtain a full duty release from the healthcare provider when medically able to return to your full work duties
- Observe all safe work practices

PROJECT MANAGER/SUPERINTENDENT/FOREMAN

- Should demonstrate through daily positive actions and knowledge, his or her support and compliance with the company's safety and health policy including the return to work program
- Facilitate immediate medical treatment for the injured team member as necessary and in accordance with Barton Malow policy (use affiliated/network healthcare providers whenever possible)

- Notify the team member's family or implement the Corporate Crisis Management Plan depending on the severity of the incident
- Communicate regularly with the Workers' Compensation Specialist and Safety personnel to develop an understanding of:
 - The nature of the injury/illness
 - What type of special accommodations are necessary so transitional work can be offered
- Assist Workers' Compensation Specialist with placement of injured team members and establishing temporary transitional work assignments
- When a team member is returned to temporary transitional duty, the supervisor who is overseeing the injured/ill team member will:
 - Welcome back the team member and explain to him/her the duties associated with the temporary transitional position – discuss the details of the Temporary Transitional Agreement with the team member. The transitional return to work agreement will be prepared by the Workers' Compensation Specialist. The project team will discuss the agreement with the injured team member. The agreement must be signed and dated by both the injured team member and his/her Supervisor then returned to the Workers' Compensation Specialist.
 - Communicate the team member's restrictions to the entire staff impacted by this position
 - Oversee the individual's work
 - Communicate with the Workers' Compensation Specialist regularly on the team member's progress with the transitional duties.
 - Ensure restrictions are being followed and accommodations, if necessary, are made in a timely fashion
 - Notify the Workers' Compensation Specialist of any potential workers' compensation fraud
 - Maintain an attitude that creates a workplace that the injured team member wants to return to
 - Demonstrate support and encouragement for team members off work for an extended period - this may be done by maintaining weekly contact, such as a phone call, when appropriate

HEALTHCARE PROVIDER

- Work with the team member, Workers' Compensation Specialist, insurance company claims adjuster and the nurse case manager (when applicable) by providing restrictions for work and indicating whether the team member will be able to return to transitional work in accordance to Barton Malow's policies.

INSURANCE COMPANY CLAIMS ADJUSTER

- Manage the workers' compensation claims.
- Assist in obtaining the restrictions from the provider as needed.
- Provide timely contact and follow-up with the team member, healthcare provider, Workers' Compensation Specialist and the nurse case manager, as necessary.
- May also provide assistance and strategies for handling difficult claims and help spot trends due to past claims experience.

NURSE CASE MANAGER

- Provide case management services and assist team members during the injury/illness period.
- Speak with the healthcare provider, as necessary, to evaluate work status and provide feedback to the team member, Workers' Compensation Specialist and the insurance company's claims adjuster.

LOCATION OF TRANSITIONAL DUTY

Every effort will be made to accommodate the team member within the team member's originating location/area without negatively affecting production. If that is not possible, this priority of placement will occur:

- Current job – same location
- Modified job – same location
- Different job – same location (pending qualifications/approval)
- Different job – different location (pending qualifications/approval)
- Different job – off-site

COMPENSATION AND BENEFITS

Team members performing transitional work will be paid during the temporary transitional work period. Any pay differentials to which the team member is entitled will be calculated and paid through the claims process. All full-time team member group benefits and payroll deductions will continue.

[Attachment AV - Return to Work Confidentiality](#)

[Attachment AW - Healthcare Provider's Letter and Statement](#)

[Attachment AX - Barton Malow Transitional Duty Return to Work](#)



DISCIPLINARY REQUIREMENTS

APPLICABILITY

The requirements of this section apply to Barton Malow employees and the employees of Subcontractors and Sub-Subcontractors who provide services for construction on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

DISCIPLINE OF EMPLOYEES

Each Contractor must advise employees and Subcontractors that unsafe acts or conditions must not be tolerated and that violators will be subject to the following:

Whenever an employee is found to be in violation of the rules contained in this manual, disciplinary actions are required and must be enforced by the Project Safety Team, Supervision, and/or Owner's Representative. In general, these actions range from verbal to written warnings with temporary or even permanent expulsion from the site should violations continue. The following procedures for disciplinary actions may differ slightly from those of Subcontractors, however, these procedures supersede those of Subcontractors if there is a disagreement on enforcement.

A progressive discipline program is described below:

CLASS 1 VIOLATION (SERIOUS OR LIFE THREATENING)

- A Class 1 violation could potentially cause death, serious injury, or property damage. Examples include any serious violations of the following program elements:
 - Failure to report an injury
 - Fall Protection
 - Control of Hazardous Energy (Lockout/Tagout)
 - Energized Electrical Work
 - Confined Space
 - Trench and Excavation
 - Cranes Hoisting and Rigging
 - Fire Prevention.
- A Class 1 violation must result in suspension from work without pay for three consecutive workdays and safety training related to the violation and/or reorientation. Any additional Class 1 violations will result in immediate and/or permanent removal from the project.
- Any Barton Malow employee or Contractor employee who is terminated from the project must not be permitted to return to the same project for another Contractor or to a different Barton Malow project.
- The project team may determine that the workers' actions warrant immediate and/or permanent removal from the project.

CLASS 2 VIOLATION (LESS SERIOUS OR NON-LIFE THREATENING OFFENSE)

- A Class 2 violation would not potentially cause death, serious injury, or property damage. Examples would include: not wearing a hardhat (no serious overhead hazards), safety glasses, failure to complete the Job Hazard Analysis (JHA) process, etc.

- A Class 2 violation must result in a verbal documented or written warning. The second warning will result in suspension from work without pay for three consecutive workdays and safety training related to the violation and/or reorientation. Any additional Class 2 violations will result in immediate and/or permanent removal from the project.
- Any Barton Malow employee or Contractor employee who is terminated from the project must not be permitted to return to the same project for another Contractor or to a different Barton Malow project.
- An employee who violates safety requirements may be charged with a violation regardless of whether his or her action was intentional. It is the employee's obligation to know the pertinent safety requirements. It is the respective Contractor's responsibility to respond to its employees' requests for information and/or work situation.

DISCIPLINE OF SUPERVISORS

Supervisors, including trade Foremen, must take responsibility for enforcing the safety requirements. Each Supervisor must administer disciplinary action(s) to subordinate employees as required. Depending on the circumstances, violations by subordinate employees may justify issuing a violation against the Supervisor as well. For example, a Supervisor who observes a violation and does not attempt to correct it may also be cited for a violation.

DISCIPLINE OF CONTRACTORS

A written Safety Hazard Notification may be issued against a Contractor that is not complying with project safety requirements, applicable law, or does not appropriately manage safety of its employees. This notification may be based on any of the following:

- One or more serious violations or incidents.
- Excessive frequency of less serious violations and/or incidents.
- Failure to comply with all applicable federal, state, and project specific safety requirements.

Barton Malow must review the violating Contractor's safety program and meet with the Contractor's management, including an officer of the Contractor. The meeting must determine the measures that will be required for the Contractor to continue to work on site. Depending on the seriousness, appropriate contractual remedies may include notice of contractual default, withholding payment, suspension of work, requiring a change of Contractor personnel, or termination of the Contractor.

FAILURE TO REPORT AN INCIDENT OR VIOLATION

Failure to report an incident or a safety violation is considered a Class 1 violation. Workers will receive discipline as described above. In addition, the employer may be issued a Safety Hazard Notification which requires that a corrective action plan be submitted.



SUBSTANCE ABUSE AWARENESS

APPLICABILITY

The requirements of this section apply to Barton Malow employees and the employees of Subcontractors and Sub-Subcontractors who provide services for construction on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

Barton Malow Builders and its affiliates (collectively "Barton Malow" or "Company") have a longstanding commitment to provide a safe, healthy, productive and drug-free work environment. Recognizing that inappropriate use of alcohol and other substances pose a threat to the health and safety of Barton Malow's employees, clients, Subcontractors and joint venture partners and to the security of the company's equipment and facilities, Barton Malow has adopted a substance use and abuse policy that balances its respect for individuals with the need to maintain an alcohol and drug-free environment.

This policy outlines the practice and procedure designed to address instances of alcohol and drug use in the workplace.

COVERED EMPLOYEES: This policy applies to all full-time, part-time, temporary, intern, contract and non-bargaining trade employees of Barton Malow. Bargaining trade employees will be subject to the collective bargaining agreement in effect during the relevant time period.

CONTRACTORS, SUBCONTRACTORS AND JOINT VENTURE PARTNERS: All Contractors, Subcontractors and joint venture partners that work on projects managed by Barton Malow will be required to have a substance abuse policy in place for their employees that is comparable to Barton Malow's policy. In the event of a conflict between policies, Barton Malow's policy will govern. This requirement will be included in all Barton Malow contracts and purchase orders.

DEFINITIONS

"ILLEGAL DRUGS" in this policy means: (a) inhalants and controlled substances; (b) any drug which is not legally obtainable; and (c) medications containing a controlled substance, which are used for a purpose or by a person for which they were not prescribed or intended or in amounts which exceed the prescribed dosage.

"LEGAL DRUGS" are defined as prescribed drugs and over-the-counter drugs which have been legally obtained, are being used only for the purpose for which they were prescribed and/or manufactured and in the prescribed amounts, and are being used by the person for whom they were prescribed.

"UNDER THE INFLUENCE" means appearance, speech, behavior, or bodily odor which causes a superior to reasonably suspect the employee to be impaired by alcohol, illegal drugs or legal drugs.

"IMPAIRED" is defined as: (a) the deterioration of an individual's judgment and a decrease in his/her physical ability due to alcohol, illegal drugs or legal drugs; (b) and/or the inability of a person to perform the essential functions of his/her job duties due to alcohol, illegal drugs or legal drugs; (c) and/or having a blood alcohol level exceeding .04%; (d) and/or testing positive for a legal or illegal drug that exceeds the following cut-off concentration level:

- Amphetamines, including Methamphetamine, Ritalin, Ecstasy – 1,000 ng/ml;
- Barbiturates – 300 ng/ml;
- Benzodiazepines – 300 ng/ml;
- Cannabinoid – 50 ng/ml;
- Cocaine – 300 ng/ml;
- Methadone – 300 ng/ml;
- Opiates – 2,000 ng/ml;
- Phencyclidine – 25 ng/ml.

PROHIBITED ACTIVITIES

Barton Malow employees are strictly prohibited from:

- Possessing or consuming any alcoholic beverage while: (a) on the job; (b) on Company property (except during a Company-sanctioned social function in which the Company provides or permits alcoholic beverages); (c) on client property (except during a client-sanctioned social function in which the client provides or permits alcoholic beverages); (d) in vehicles during work hours; or (e) in a Barton Malow-owned vehicle at any time.
- Engaging in the unlawful or unauthorized manufacture, distribution, dispensation, possession, sale, transfer, storage, concealment, transportation, promotion, or use of a controlled substance, illegal drug, alcoholic beverage or drug related paraphernalia.
- Reporting for work or working while under the influence of alcohol or with illegal drugs in the employee's system.
- Using a legal drug or medication: (a) without a prescription in the employee's name written by a physician; and/or (b) in amounts that exceed the dosage identified on the prescription; and/or (c) in amounts that impair the employee's ability to perform his or her job.

Such conduct is also prohibited during non-working hours to the extent that, in the opinion of the management of the Company, it:

- Impairs the employee's ability to perform his or her job.
- Affects the Company's reputation, threatens its integrity or interferes with a client relationship.
- Is considered illegal and/or unlawful conduct as defined by local, state or federal law.

AUTHORIZED TESTING

PRE-EMPLOYMENT TESTING: All applicants will be required to pass a Company paid substance abuse test for the presence of illegal drugs before being hired by Barton Malow. The pre-employment testing applies to all applicants, whether full-time, part-time, temporary, intern, contract and nonbargaining trades.

REASONABLE SUSPICION TESTING: An employee shall submit to a drug test and/or alcohol test if there is reasonable suspicion or cause to suspect (including but not limited to based on the employee's appearance, speech or behavior) that the employee is under the influence of alcohol, illegal drugs or legal drugs.

POST-ACCIDENT TESTING: An employee shall submit to a drug and/or alcohol test if such employee: (1) suffers an occupational on-the-job injury; (2) is suspected of causing or contributing to a serious work accident; and/or (3) is involved in a reportable accident while operating equipment or driving a motor vehicle.

- On-the-job injuries are defined as injuries occurring during a serious or potentially serious accident or incident where: (a) safety precautions were violated; (b) negligent or careless acts were performed; (c) the employee(s) failed to wear prescribed personal protection equipment; and/or (4) the employee failed to follow prescribed safety rules.
- A reportable accident is defined as: any accident which results in the death of a human being or bodily injury to a person who, as a result of the injury, immediately receives medical treatment away from the scene of the accident; or total damages to all property aggregating \$1000.00 or more, based upon actual costs or reliable estimates.

In all cases of post-accident testing, testing should be taken within eight (8) hours of the accident. It is the employee's responsibility to notify his/her Supervisor of all incidents.

FOLLOW-UP TESTING: An employee shall submit to an unscheduled follow-up drug test or alcohol test if, within the previous 24 months, the employee has done any of the following:

- Voluntarily disclosed a drug and/or alcohol dependence or other problem.
- Entered into or completed a rehabilitation program for drug or alcohol abuse.
- Failed or refused a drug test or alcohol test.
- Been disciplined for violating this rule.

AUTHORIZED TESTING (CONTINUED)

RANDOM TESTING: Barton Malow reserves the right to randomly test its employees at any time. Selection of employees for random testing will be conducted through the use of a neutral selection process.

REFUSAL TO PARTICIPATE: An individual who refuses to participate in substance abuse testing pursuant to this policy will be considered insubordinate and will be discharged.

TESTING

Barton Malow may test, at the identified cut-off levels, for any or all of the following:

- Alcohol
- Amphetamines, including Methamphetamine, Ritalin, Ecstasy – 1,000 ng/ml
- Barbiturates – 300 ng/ml
- Benzodiazepines – 300 ng/ml
- Cannabinoid – 50 ng/ml
- Cocaine – 300 ng/ml
- Methadone – 300 ng/ml
- Opiates – 2,000 ng/ml
- Phencyclidine – 25 ng/ml

Applicants and employees will be given an opportunity prior to and after testing to provide any information which they consider relevant to the test, including a list of all legal drugs they have taken recently, a list of prescribed drugs and an explanation of the circumstances for the use of these drugs in writing. This information is confidential and will be only released to management.

Barton Malow will pay the cost of the initial and confirmation drug tests it requires of employees and applicants. An employee or applicant will pay the cost of any additional drug test not required by Barton Malow.

PENALTIES

NEW HIRES: If a person given a conditional offer of employment fails or refuses to submit to the pre-employment drug test, interferes with a test procedure, or tampers with a test sample, the conditional offer of employment will be rescinded. The person is removed from all applicant pools and is disqualified from re-applying for a period of three years.

EMPLOYEE SELF-REPORTING:

- **REPORTING:** An employee who voluntarily discloses a problem with legal drugs, illegal drugs or alcohol will not be disciplined for such disclosure if, and only if, the problem is disclosed before the occurrence of any of the following:
 - For reasonable suspicion testing, before the occurrence of an event that gives rise to reasonable suspicion that the employee has violated this rule.
 - For random testing, before the employee is selected to submit to a drug or alcohol test.
 - For post-accident testing, before the occurrence of any accident that results in post-accident testing.
- **EMPLOYER ACTION:** For those employees who voluntarily seek help for an abuse problem, Barton Malow shall permit the employee an immediate leave of absence to obtain medical treatment or to participate in a rehabilitation program. Employees can use earned sick and vacation time or may be granted an unpaid leave of absence for rehabilitation. Satisfactory performance remains a requirement, even if chemically dependent employees seek medical help.
- **LIMITATION:** An employee may take advantage of subsection (b) no more often than one time while employed at Barton Malow.
- **VIOLATION OF POLICY:** An individual who tests positive for an illegal drug or is under the influence of alcohol will be subject to disciplinary action, up to and including termination. Similarly, a second occurrence for needed rehabilitation, while a Barton Malow employee, will result in disciplinary action, up to and including termination.

USE OF LEGAL DRUGS

Prescription and over-the-counter drugs are not prohibited when (a) taken in standard dosage and/or according to a physician's prescription, and (b) the employee is not under the influence of the legal drug during work hours.

Any employee using legal drugs that may affect job performance or alter his/her behavior must consult with his/her physician regarding the effects of such legal drug use, the effects on the employee's ability to perform his/her assigned duties and whether the medication may interfere with the safe performance of his/her job. Upon reporting to work, the employee should provide his/her Supervisor with written documentation to support the employee's legal drug use and fitness for duty or any restrictions imposed while taking the prescribed drug.

If the use of a legal drug could compromise the safety of the employee, fellow employees or the public, it is the employee's responsibility to use appropriate personnel procedures (i.e. call in sick, use leave, request change of duty, notify Supervisor) to avoid unsafe workplace practices. To the extent possible, the Company will make reasonable accommodations for the employee to work within his/her restrictions per the Barton Malow Return to Work Program.

No employee may be -under the influence of a legal drug during work hours. If an employee, Subcontractor's employee or a joint venture partner employee tests positive on a drug test for a prescription drug or medication, said individual may not return to work without the following:

- Evidence of a current, valid prescription for the exact prescription drug or medication written by a physician in the employee's name.
- Any work restrictions imposed by the physician while taking said prescription drug or medication.

LOCAL SUBSTANCE ABUSE SCREENING PROGRAMS

Certain states or municipalities may require employees to conform to specific regional substance abuse screening programs. For instance, the State of Michigan's MUST program will take precedence over Barton Malow's own Substance Abuse policy. Additionally, a client's requirements, as it may pertain to substance usage on their property, will take precedence over Barton Malow's substance abuse policy. Bargaining trade employees will be subject to the collective agreement in place for their work at the project.

NOTIFICATION

- **EMPLOYEE NOTIFICATION:** Any employee who is convicted of a criminal drug violation in the work place must notify Barton Malow in writing within five calendar days of the conviction.
- **NOTIFICATION TO AUTHORITIES:** Barton Malow reserves the right to notify appropriate law enforcement officials regarding employees who engage in conduct and activities which violate this policy.

AMENDMENT TO POLICY

Barton Malow reserves the right to unilaterally amend this policy at its sole discretion.



VISITORS

APPLICABILITY

The requirements of this section apply to all on-site vendors and visitors who are on a Barton Malow project.

Barton Malow and its Contractors and Subcontractors must be responsible for ensuring that all on-site vendors and visitors follow the established safety procedures in this document. Barton Malow Project Teams must post signs accordingly in conspicuous places to notify vendors and visitors of these safety procedures. Vendors must provide proper personal protective equipment (PPE) for their employees and will enforce their use whenever on the project site. Vendor's non-compliance will not be tolerated.


All visitors must be required to wear hard hats and sturdy shoes while on a project site. Tennis shoes, sandals, open toe and high heel shoes are strictly forbidden. Eye protection is mandatory and ear protection must be worn where warranted. All personnel on site must wear a high visibility outer garment.

Enforcement of these policies regarding vendors and visitors is the responsibility of each Contractor and Subcontractor. The responsibility to communicate these policies lies with the Contractor with whom the visitor/vendor is meeting.

Also, it will be a requirement that each Contractor will meet and escort any visitors and/or vendors that have not attended Site Orientation. No vehicles will be allowed onsite without permission.

SITE SECURITY

Contractors and Subcontractors are responsible for directing their employees and vendors to use specified gates as required. Contractors are responsible for securing their own equipment, office trailers, and storage areas. Equipment should be properly secured in storage trailers or sheds. Care should be taken to eliminate all fire sources. Fuel reserves should be locked.



VIOLENCE + WEAPONS

APPLICABILITY

The requirements of this section apply to Barton Malow employees and the employees of Subcontractors and Sub-Subcontractors who provide services for construction on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

Barton Malow is committed to maintaining a workplace free from threats or acts of intimidation and violence. A professional demeanor must be maintained at all times. Any reported incident must be thoroughly investigated. If an employee is observed in violation of this policy, termination of employment may result.

INTIMIDATION: A physical or verbal act toward another person, the result of which causes that person to reasonably fear for his or her safety or the safety of others.

THREAT OF VIOLENCE: A physical or verbal act that threatens bodily harm to another person or damage to the property of another.

ACT OF VIOLENCE: A physical act, whether or not it causes actual bodily harm to another person or damage to the property of another.

Workers will be held accountable for aggressive behavior. Workers are required to report all “threatening” behavior to his/her direct Supervisor who will then report it to the Barton Malow Project Team. All reports of aggressive or potentially violent behavior will be investigated and, if verified, appropriate, responsive action will be taken. Such action could include:

- Monitoring of the situation
- Taking appropriate disciplinary action, including termination.
- Warning of identified targets of the potential harm.
- Reviewing and, if appropriate, upgrading security measures.
- Consulting with local law enforcement officials.

Firearms, ammunition, or other weapons are prohibited at a Barton Malow workplace, including a jobsite or a parking lot. Knives are permitted for legitimate construction purposes.

CONTRACTOR SAFETY REPRESENTATION REQUIREMENTS

APPLICABILITY

The requirements of this section apply to all Contractors who provide services for construction on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

Worker safety and health programs must be integrated into other related site-specific worker protection activities and within the integrated safety management system. There must be an open and continuous line of communication between Barton Malow and their Contractors to discuss any unsafe acts or conditions that may arise during the project. Each Contractor has accountability for the safety of the project and must allocate the resources necessary for implementing all required safety-related codes and contract/subcontract requirements. Each Contractor must:

- Follow all site-specific Environmental, Health and Safety (EHS) requirements and associated permits as defined by this manual.
- Establish EHS flow-down requirements in all subcontracts.
- Implement the appropriate requirements of this manual into their Construction Environmental, Health and Safety Plan (CEHSP).
- Provide qualified safety representation as follows:

# OF EMPLOYEES	# AND TYPE OF SAFETY REPRESENTATIVE	MINIMUM QUALIFICATIONS
Less than 40 employees	designated Safety Representative	OSHA 30 Hour for Construction or Safety Trained Supervisor designation. This individual must be full time on the project and in a supervisory capacity.
40 to 79 employees	1 full-time Safety Representative	OSHA 30 Hour for Construction, or other recognized, accredited construction safety designation such as Certified Health and Safety Technician.
80 to 149 employees	2 full-time Safety Representative	OSHA 30 Hour for Construction, or other recognized, accredited construction safety designation such as Certified Health and Safety Technician.
150 employees or more	1 additional for each 100 employees	OSHA 30 Hour for Construction, or other recognized, accredited construction safety designation such as Certified Health and Safety Technician.

*Proposed safety staff will be evaluated by Barton Malow prior to mobilization.

- Monitor the workplace for unsafe conditions and take immediate action to correct unsafe conditions, acts, and other deficiencies identified during inspections.
- Perform necessary personal exposure monitoring.
- Coordinate and conduct pre-job planning with field Supervisors, and others, as required.
- Conduct a daily walk-around safety inspection. Instruct all employees, initially and periodically, on matters pertaining to employee safety and health rights, protections, obligations, and responsibilities.



EMERGENCY ACTION PLAN

APPLICABILITY

The requirements of this section apply to Barton Malow employees and the employees of Subcontractors, Sub-Subcontractors, visitors, and vendors who provide services for construction on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

Each Project Team must develop an Emergency Action Plan (EAP). The plan will be revised as necessary as construction operations progress. The Emergency Action Plan must consist of the following:

- Owner requirements and procedures.
- Barton Malow crisis management and site logistics protocols.
- Coordination with local emergency response personnel.
- Communicated to all first-line Supervisors.
- Be posted throughout the jobsite and communicated to workers during the Safety Orientation and weekly safety meetings.

MEDICAL EMERGENCY

During the Safety Orientation, workers will be given information on how to summon medical assistance in case of a medical emergency. Workers are to be instructed not to move an injured worker before medical assistance arrives unless the injured worker is in danger of further injury.

Workers should know the following information:

NON-LIFE THREATENING EMERGENCY CLINIC:

- Name of treatment facility
- Phone Number
- Treatment facility address
- City
- State
- Zip

LIFE THREATENING EMERGENCY:

- Name of treatment facility
- Phone Number
- Treatment facility address
- City
- State
- Zip

In case of a fire, workers will evacuate their work area immediately and report to the project's designated location where a head count will be taken.

Workers will not attempt to put a fire out unless they have received special instruction. After reporting the fire, workers will evacuate the work area and report to the pre-determined assembly area that was stated during the Safety Orientation.

SEVERE WEATHER

Should weather conditions, such as severe thunderstorms, lightning ([Attachment C - Lightning Policy](#)) or tornadoes develop around or near this project, workers will follow the direction of their immediate Supervisor. Work in areas where hurricane activity is possible will have a contingency plan in place. Workers may be directed to a safe area where they will remain until weather conditions improve. For thunderstorms, report to project's designated area until the threat passes. Workers will be notified by cell phone, audio and word of mouth.

SITE-SPECIFIC EMERGENCY EVACUATION PLAN

Project Management will ensure the project-specific EAP is communicated to all workers during orientation. Specific emergency procedures and emergency phone numbers will be posted in lunch areas, near all telephones and on project bulletin boards.

Barton Malow Safety Leaders will routinely assess Project Management, Supervisors, Contractors and workers to ensure that adequate knowledge of the project emergency action plan exists.

Each Contractor will provide the Barton Malow Safety Leader with their emergency contact numbers.

HURRICANE PREPAREDNESS

Any project where the threat of hurricanes presents itself, will watch for advanced warnings and implement provisions to prepare the jobsite when one is approaching. ([Attachment F - Emergency Action Plan](#))

HOMELAND SECURITY

Should a Severe Condition "Red" threat advisory be issued indicating a terrorist attack occurrence or the severe risk of a possible terrorist attack, the Barton Malow Project Management Team will determine whether the project should evacuate all workers or shelter them at the project.

Barton Malow Project Management Team will communicate to workers and contractors all known information of the threat and of the crisis management plan.

Should a bomb threat be called in, evacuate to the nearest mustering point at the project's designated area for a head count.

CRISIS MANAGEMENT PLAN

When an incident or crisis takes place on the jobsite, contact the Regional Safety Leader immediately. Steps for jobsite personnel to handle a crisis or an incident can be accessed via the wallet size crisis card or the crisis management chart ([Attachment AQ - Crisis Incident Management](#)).

The Safety Leadership Team Member will direct the flow of information and communication to necessary individuals including setting up an all-hands crisis conference call if necessary. The officer-in-charge or corporate resources will manage all media inquiries in the event of an incident or crisis.

In the event that the media does contact the jobsite directly, the following statement should be used:

"My name is _____ and I am the _____ for Barton Malow. Our first priority is the welfare of the workers. Due to the current emergency, we do not have verifiable information at this time. Please give us time to gather facts and take care of our responsibilities. In the meantime, please remain in the safety area. Thank you for your cooperation."



CONSTRUCTION HAZARD IDENTIFICATION + CONTROL PROCESS

APPLICABILITY

The requirements of this section apply to all Contractors' construction work activities onsite. This section provides the requirements for establishing a method for identifying, controlling, and documenting hazards associated with all work activities and communicating this information to all workers.

GENERAL REQUIREMENTS

The Contractor is responsible for understanding the scope of work in sufficient detail to ensure that the work is effectively planned for each definable work activity, the hazards associated with the work are identified and the planned protective measures are implemented. This must be accomplished utilizing methods in the section below. Hazards identified in the JHA must be addressed in the CEHSP.

COMMON SAFETY HAZARDS

Construction jobsites are unique, dynamic work environments. However, there are certain hazards and safety concerns common to many or all sites:

- Slip, trip and fall hazards must be carefully managed. Walkways, parking lots, heavily traveled paths, and work areas including platforms must be free from ice, snow, water, oil and debris.
- Back strains can result from lifting boxes or other objects.
- Injuries associated with lifting and carrying building materials, tools, and equipment are very prevalent in the construction industry. Proper lifting techniques are important in preventing injuries to the back and other types of sprains or strains.
- Repetitive motion injuries such as carpal tunnel syndrome may occur from keyboard use or other office activities if proper ergonomic practices are not followed.
- Appropriate care must be taken to assure the safety of individuals having special vulnerabilities or health needs, including persons with disabilities and pregnant women.
- Employees who have issues that could affect safety for themselves or others must notify their Supervisor. Examples include: dizziness, trouble breathing, bad back, fainting spells, or drowsiness from medication.

JOB HAZARD ANALYSIS

Use [**Attachment B - Job Hazard Analysis \(JHA\)**](#). Each Contractor must complete a JHA for their scope of work. Barton Malow will review the JHA before work commences.

At a minimum, a JHA must consist of the following:

- Detailed job steps, hazards and actions to eliminate or minimize hazards.
- Use the form provided in the attachments or equivalent.

PRE-TASK SAFETY PLAN

Use [Attachments N-N2 - Pre-Task Safety Plan](#). Each Contractor work crew will complete a Pre-Task Safety Plan (PTP) for the day's work operations. The PTP must comply with the following minimum requirements:

- Conducted by the Foreman or craft lead designated by the Foreman, provided however, that the Foreman reviews all Pre-Task Safety Plans/safe plan of action to ensure that they are appropriate, complete and accurate for the subject task(s).
- Documented in writing.
- Conducted for every job prior to the start of work or when the job task changes.
- The PTP must be reviewed and revised whenever work conditions or crew membership experience change that may affect the ability to safely complete the work.
- All crew members must participate at the job location in a Safety Huddle to review the PTP.
- Safety Huddles will be held at the beginning of the work shift.
- Include hazards and precautions identified in applicable JHA.
- Be readily available at the jobsite (posted and/or placed where crew members have knowledge of its location) and turned into Barton Malow's Project Team the next morning for review.
- The Contractor must make the PTP available in a local language that crew members can understand.

To assist Contractors who are unfamiliar with the JHA or PTP process, training will be available. Workers will be introduced to the process during the project orientation. The Project Management Staff (including Subcontractors) will periodically audit PTP forms and participate in daily Safety Huddles to show support, and monitor effectiveness.

WORKER TRAINING

The Contractor must ensure that affected workers are made aware of the foreseeable hazards and the protective measures described within the PTP prior to beginning work on the task. Workers will have the required safety training as specified in this safety program, OSHA safety and health regulations and all other applicable documents. The Barton Malow Site Orientation in no way relieves the Contractor from their orientation and training obligations.

RECORD OF TRAINING

Evidence of regulatory training must be provided by the employer to the Barton Malow Project Team before work starts and as onsite training is given. An outline of required training records is located in the Site- Specific Requirements. The Contractor must ensure that workers acknowledge being informed of the hazards and protective measures associated with assigned work activities and understand those requirements. Each worker involved in that work must sign the PTP prior to performing work.

CONTRACTOR RESPONSIBILITIES

The provisions of this procedure apply to the development and implementation of the Contractor's Hazard Identification and Control program. The Contractor (all tiers) must be responsible for implementing an effective Hazard Identification and Control program that:

- Identifies, evaluates, and controls potential and existing hazards in the workplace through the JHA process.
- Incorporates the controls into the PTP pre-job safety planning process.
- Determines that engineering devices, administrative controls, and PPE are available, appropriate, tested, and utilized by employees.
- Determines employees are trained as required.
- Manages and notifies Barton Malow when there are changes related to the work scope, materials, and/or processes that may introduce new or different hazards to the project.
- Develops, implements, and/or adheres to the JHA and other pre-job planning documents required by this manual.
- Provides training to employees in safe work practices.
- Documents all required training and provides a copy to the Barton Malow Project Team.
- Provides required PPE, training employees on how to use the equipment and enforcing its use in the field.



ORIENTATIONS, MEETINGS, + INSPECTIONS

APPLICABILITY

The requirements of this section apply to Barton Malow employees and the employees of Subcontractors and Sub-Subcontractors who perform construction activities on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

EMPLOYEE SITE ACCESS AND ORIENTATION

All workers will complete a Site Orientation before starting work on the project. The Site Orientation will include the following:

- Project purpose
- Site description and layout
- Site-specific safety requirements
- Review of safe work practices
- Emergency Action Plan
- Disciplinary program
- Parking

The Site Orientation will be conducted by the Barton Malow Safety Leader or their designee. Each meeting will include participation by a Project Manager or Superintendent to reinforce the importance of the message.

Parking will be in a designated area. Barton Malow reserves the right to tow improperly parked and/or marked vehicles. Local police or Owners may run dogs through the parking lots and Barton Malow controlled construction sites depending upon agreements with the Owner.

WEEKLY PROGRESS MEETINGS

The Project Team will designate a weekly meeting time where the next week's work operations will be reviewed. Each Contractor who will be performing work will have a Foreman or Superintendent attend the meeting. Each Contractor will review their upcoming work operations with the group to identify key safety factors, areas of coordination or interference, or other points needing clarification. A copy of the Job Hazard Analysis (JHA) for the upcoming work will be provided to the Project Team.

AUDITS AND INSPECTIONS

At a minimum, weekly documented safety audits must be performed to evaluate compliance with the project EHS Plan and applicable regulations. Note: Contractors may choose to institute more stringent requirements. Audits will be completed by Contractor supervision (Superintendent, Project Manager) and submitted to Barton Malow Project Team at time of completion. Deficiencies noted must be corrected, or have an action plan for correction attached. Results must be reviewed at the start of the weekly progress meeting or equivalent meeting on a weekly basis. Records of audit reports, findings, and corrective actions must be submitted weekly and retained through project closeout.

SAFETY HUDDLES

Safety Huddles must be held each shift prior to the start of work activities, after mid-shift break (lunch), at the end of shift for sign out, and

anytime there is a significant change in work scope. Records for these huddles, documenting the meeting content and attendance, must be maintained and a copy will be turned into the Barton Malow Project Team for review. All workers must acknowledge the information disseminated by signing the PTP.

At a minimum, Safety Huddle discussions must include:

- Planning for the day's work activities.
- Changes in work practices or environmental conditions.
- Required equipment/system daily inspections.
- Previous days incidents, near misses, lessons learned and/or other relevant issues as applicable.
- Other ongoing activities that may have project EHS implications.
- New or modified site-wide procedures or requirements.

All lower-tier Subcontractors must identify all planned tasks onsite. The level of detail must be appropriate to define all tasks that may present a hazard to people, property or environment. The listed task(s) must include the corresponding, previously reviewed JHAs or reference the applicable section from a current health and safety plan or program. If the task proposed does not have a corresponding JHA, then a new JHA will need to be developed and reviewed prior to the work moving forward. The completed JHA must be submitted to the first tier Subcontractor for review against conflicting operations, regulatory hold points, required permits and acceptable level of detail. Upon approval by the first tier Subcontractor, the approved JHA is then submitted to Barton Malow for review and work authorization. Once work authorization is received, each Contractor must develop a PTP and conduct a Safety Huddle with each work crew member prior to the start.

SAFETY WALKS

A management representative of each Contractor will participate in a weekly safety walk of the project. Participants will evaluate compliance with the Construction Environmental, Health and Safety Plan (CEHSP) requirements by observation and conversation with workers. Barton Malow will establish the meeting time and location.

MONTHLY MEETINGS

A project safety committee will be established and each Contractor (regardless of level) will have a designated representative. Committee members will consist of a craft level employee along with the designated safety representative for the Contractor. The Barton Malow Safety Team will facilitate the meetings. A record of each meeting, documenting the meeting content and attendance, must be maintained. Meeting information should be communicated to project employees via weekly meetings, safety walks, or other project-wide meetings.

At a minimum, monthly safety meetings must include a review of the following items:

- Job-related issues and concerns.
- Environmental, Health and Safety issues, concerns, findings, and training.
- Applicable lessons learned.
- Incident investigations conducted since the last meeting.

OUTSIDE INSPECTIONS

Safety inspections may be conducted by outside parties, including the Owner, insurance carriers, OSHA, or other regulators. All Contractors must inform Barton Malow immediately if any outside party is onsite to conduct an inspection. All Contractors must provide appropriate cooperation with OSHA representatives and other third party inspectors who have legitimate authority to conduct a safety review.

General guidelines are as follows:

- Contact Regional and Business Unit Safety Leadership.
- Verify that the safety inspector has proper identification and signs the visitor log.
- Confirm the reason and authority to conduct the inspection.
- Notify Contractors and make the jobsite available to the inspector.
- Accompany inspector at all times.
- Document what happened and was observed during the inspection.
- Correct deficiencies as required.
- Notify the Barton Malow Safety Leader and Project Manager regarding results; in the case of major issues, provide immediate notification.

REPORTING

WEEKLY ENVIRONMENTAL, HEALTH AND SAFETY (EHS) REPORT

Weekly EHS reports must be compiled and maintained by the designated project personnel as part of the project record and made available for review by the Project Management Team. The weekly EHS report must be available by each Tuesday for the previous week's activities. This report may be maintained as a hard copy report (on-site) or on an electronic server. The report must contain the following information as applicable for the week:

- Brief summary of significant EHS activities.
- Listing of man-hours, incidents and incident statistics.

STRETCH AND FLEX PROGRAM

- This activity will be introduced at Safety Orientation to all attendees.
- The Stretch and Flex Program increases flexibility, improves range of motion of your joints, improves circulation, promotes better posture, relieves stress and may prevent injury.
- All employees working on a Barton Malow job site will participate in the Stretch and Flex program. ([Attachment AP - See Stretch and Flex Leaders Guide](#))
- Stretch and Flex will be performed at the start of each work shift. It should be performed in tandem with the Safety Huddle, Tool Box Talk meeting or other meeting prior to the start of the shift.





CONTROL OF HAZARDOUS ENERGY + LOCKOUT/TAGOUT

APPLICABILITY

The requirements of this section apply to work and activities where the unexpected or unintended release of hazardous energy or start-up of machines, equipment, and systems could cause injury to personnel or property. This section applies to Barton Malow employees and the employees of Subcontractors and Sub-Subcontractors who provide services for construction on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

PURPOSE

The objective is to primarily prevent and secondarily mitigate injuries and mishaps associated with:

- Initial and subsequent energizing of installed and modified equipment: “power-on”.
- Checking, testing, adjusting and repair of installed and modified equipment.
- Initial and subsequent testing and start-up of subsystems, systems and plants (commissioning).
- Intentional or unintentional energization or activation of equipment.
- Interphase with existing equipment and the operations of other parties.
- Failures to properly assess and isolate energy sources.

EXPOSURE

Failure to properly identifying and isolate energy sources is one of the most common causes for workplace incidents that involve hazardous energy. The primary concern is for the hazardous release of energy, hazardous contact with electrical and mechanical energy, and any other hazardous forms of energy - potential or kinetic. Energy in this context includes, but is not limited to:

- **Electrical energy** is the most common form of energy used in workplaces.
- **Hydraulic energy** involves contained, pressurized liquids.
- **Pneumatic energy** is associated with pressurized air.
- **Chemical energy** is released when a substance undergoes a chemical reaction.
- **Mechanical energy** usually involves motion equipment elements: rotating, reciprocating, etc.
- **Stored energy** sources describe components that retain residual energy hazards even after main sources have been locked out: springs, storage vessels, capacitors, compressed air, etc.
- **Radiation** may be defined as energy traveling through space. Both ionizing and non-ionizing radiation can be harmful.
- **Gravitational energy** is a potential energy when an unrestrained elevated object or component can move or drop.

MANAGEMENT PRACTICES

There is a wide variation in the scope of work and the complexity of projects and construction environments. Sometimes Barton Malow is the Subcontractor, other times we are the Construction Manager. Often, we are working under the Lockout/Tagout (LOTO) of the Owner or their designee. A Subcontractor may be the lead on LOTO. A commissioning specialist may be hired to manage turn-over and testing and then operate as the Tagging Manager. The environment may be complex, but the exposure may be simple. On large multi-employer

work sites, coordination with other affected parties and workers is paramount. Management systems need to be applied and procedures implemented recognizing that one program or procedure does not fit all situations, and situations may vary in complexity on the same project. Systems and procedures need to be compliant with regulations and the essential standards and requirements for LOTO.

The management of this exposure begins with the Construction Hazard Identification and Control Process within this Safety Manual. The following guidelines and standards apply to all LOTO procedures:

- Controls and management systems should clarify rather than confuse.
 - Simple situations and systems should not be complicated by complex controls.
 - Control systems should simplify complex situations.
 - Control systems must be readily understandable and verifiable.
- A LOTO coordinator / tagging manager is required for all projects to ensure:
 - The care, custody, and control of LOTO is firmly established for each involved area, system or unit and assigned to either Construction, Commissioning or Operations.
 - A lead individual is designated over each phase.
 - Work controls clearly communicate the status of equipment and systems including: Unit having control (Construction, Commissioning, or Operations), Specific party within the unit with current custody (Subcontractor, vendor, etc.), and Power status of equipment or systems: energized 480v, air, hydraulics, etc.
 - Processes are established for each phase to ensure that transitions and turnovers are planned and safely executed. Turn overs may be very simple. Approvals and sign-offs occur. Construction removes their control lock or tag. A new tag reflects the changed status: "power is on, turned over for commissioning". Turn-overs may be complicated and require the involvement of multiple parties, differing LOTO systems, shared custody and control, and roles and responsibilities for all three principal units.
 - Control systems and procedures (LOTO), and planning and communications systems are established and understood, including for example: Requiring control locks and tagging on all panels and main disconnects regardless of whether workers are assigned. Requiring that all disconnects and isolation devices are tagged / locked in the off position upon initial power-on. And, all devices remain "off and tagged" during commissioning until a specific device needs energy Communication methods to convey real-time information to all affected parties: boards, placards, tags, data-bases, barricading and signs, pre-job briefings, etc. Identification and naming of Tagging Authorities. Developing LOTO procedures.
- The Authority Having Jurisdiction (AHJ) over LOTO must be identified in the planning process Owner, Original Equipment Manufacturer (OEM), Subcontractor, General Contractor, Commissioning Manager, etc.)
- The AHJ over the LOTO is responsible for:
 - Evaluating personnel for qualifications to be designated a "Tagging Authority", and to submit their evaluation to the lead person over the phase of the work. Personnel must not perform "tagging duties" unless they are on the project's list of tagging authorities.
 - Designating the tagging authority for the involved LOTO.
 - Assessing and evaluate the hazards and exposures to be controlled.
 - Determining the appropriate control system and procedures to be used.
 - Communicating to all involved parties on the hazards and control measures.
 - Supervising the application of the LOTO control system throughout the duration of work.
- Prior to assigning roles or duties, and prior to performing work under LOTO, the training and knowledge of involved personnel must be evaluated to assure that:
 - AHJ, Tagging Authorities, and Lead-persons have the requisite knowledge and skills.
 - The purpose and functions of LOTO are understood by authorized and affected workers.
 - Training is developed and implemented before assigning workers.
- Provisions will be made for audit, inspection, and enforcement measures.

EXPOSURE

LOTO and performing work under LOTO must be conducted in accordance with applicable regulations, craft best-practices, and local requirements (such as owner stipulations). Requirements within this Safety Manual, this section, and the attached LOTO Program and LOTO Guides must be followed.

The following standards apply to all work and activities associated with hazardous energy:

- The standard for energy isolation and control is “zero mechanical / zero energy state” safety systems, interlocks, E-stop, safety circuits, logics, programs or other safety controls or guards associated with systems and equipment will not be bypassed, removed, or modified.
- When checking, repair, adjusting, testing, commissioning, or troubleshooting cannot be done in zero state or require other modifications or bypasses, the following apply:
 - The need for accommodations will be addressed in pre-planning processes.
 - Accommodations will not be made simply for convenience or efficiency.
 - Accommodations will not be made for categories of work or workers. (LOTO applies to commissioning millwrights and electricians, etc.)
 - Determinations will be made by Competent Persons / subject matter experts.
 - The work plan will be specific to the accommodations being made and the conditions under which the work is performed including exposure specific controls.
 - Additional protocols may apply: notification to safety, JHAs, area controls and signs, work permits, notifications, LOTO program impacts.
 - Properly instructed, Qualified Persons must be assigned: typically tradespersons, craftpersons, engineers, technicians and OEM or vendor specialists.
 - Maximum allowable levels of protection shall be maintained; deviations will be minimized, and work practices will be prescribed. Examples (among many): Work requires LOTO for mechanical system work, but technicians need control power for systems debugging. Control power is allowed, all other power remains isolated and controlled (LOTO) We allow power to a fixture but not the associated robot. Limit the robot to teach-mode; additional persons have an “enable control”. Gate-door is bypassed to allow access but does not remain bypassed after the completion of the authorized work.
 - Some accommodations for testing, checking, adjustments and verification do not require a case-by-case authorization as they encompass standard work practices for the trades or technicians involved. Examples include “loop-checks” by commissioning technicians, bumping and adjusting drive system with a guard off when done by a Millwright.
- Each exposed person will have individual lock(s) attached to LOTOs.
 - Name and employer must be on or attached to the lock.
 - Barton Malow does not use a tag-only system. Exceptions include when necessary and offering equivalent protection or when the Owner requires a tag system.
- LOTOs will only be executed (isolating energy and placing locks and tags) by tagging authorities or under their direction (skilled trades, technicians), or by the “authorized” persons they designate.
- LOTOs must be verified, and the Tagging Authority must sign-off before assigning workers.
 - Verification includes using test equipment for electrical exposures, and test equipment, gauges or other indicators for other energy exposures.
 - If conditions change, the LOTO is modified, or any other situation present concerns, the verification process for LOTO should be repeated.
- Executed LOTO shall be readily recognizable and easily understood.
 - Expectations must be communicated in advance.
 - Enforcement and disciplinary systems apply. LOTO violations are typically serious and cause for removal. A progressive approach may be applied for less serious violations.

- Only Competent or Competent-Qualified Persons will be assigned to tasks and responsibilities.
- “Power-on” of equipment and systems must be communicated to affected parties and persons in advance. “Power-on” procedures must be developed and communicated.
- Rigid application of standards and administrative practices are not always practical or necessary to achieve protection. For example:
 - The work may be under the direct supervision of a Millwright General Foreman who is a Competent-Qualified Person. And, the work is on a relatively simple, existing system with a LOTO schematic immediately available (such as a CNC machine in an auto plant.) The crew can easily and directly lock-on. There is no real benefit to producing Logs or
 - Isolation Records as the information is immediately available.
 - A “Graded Approach” (see definitions) applies to energy isolation and control provided: Convenience and schedule are not the primary justification. Competent-Qualified Persons are involved through the entire process of development, approval, and implementation. The reliability of protection and the level of protection are: Equivalent or substantially equivalent. Compliant with applicable regulations. Pre-planned and approved in advance and reflected in JHAs, PTPs, SSSPs, coordination meetings (PODs), and similar. Evaluated and approved by a qualified Barton Malow Safety Professional.
 - Basic standards of safety, incident avoidance, care-custody-control, communication, and required competencies are not undermined.
 - Contractors may use their own documented and proven programs: For work they are directly performing. For work they are directly controlling (Subcontractors and vendors) Within coordination, authorization and planning processes.

ENERGIZED ELECTRICAL WORK

Work on energized electrical systems is prohibited unless there is no reasonable alternative course of action, and prior authorization has been given by the appropriate Barton Malow authority. When that determination is made by the owner, the Owner or Owner’s Representative must submit a letter to Barton Malow stating why the electrical circuits cannot be de-energized. If energized electrical work must be performed on hazardous circuits, the Contractor must perform the work in accordance with their electrical work plan. LOTO will be maintained to the extent possible. A permit will be issued from Barton Malow’s Project Team or Owner’s Representative once all safety precautions have been met and signoffs have been obtained. See also: [Electrical Safety](#).

EXCEPTION: Taking voltage, current measurements and verification of zero energy using standard test equipment, such as voltmeters and current probes, is permitted on energized electrical systems when performed in accordance with the Contractor’s electrical safety plan and requirements of [NFPA 70e](#).

BUILDING EQUIPMENT AND SYSTEMS LOCKOUT/TAGOUT

Prior to conducting any work which requires LOTO within an existing building or that interfaces with an existing utility system, the Contractor must first notify Barton Malow. This includes LOTOs that occurs on building construction temporary and/or permanent electrical power tie-ins at the point of supplied power distribution. Barton Malow in conjunction with the property Owner must control, coordinate and approve LOTO work being conducted on these equipment/systems and must ensure that the Contractors are aware of and comply with the requirements of the LOTO program. When Owner equipment/system specific procedures are available, they must be provided to the Contractor and incorporated as part of the lockout/tagout procedure for the project.

EXCAVATING AND DEMOLITION

Excavation and demolition work is not exempt from LOTO programs and procedures; the above sections and related attachments apply. Additional specific requirements and standards also apply to excavation and demolition work: refer to applicable regulations and sections of this manual.

REMINDER: The Emergency Action Plan must include provisions for unintended events with utilities.

EXCAVATING AND TRENCHING IDENTIFICATION

Identification, location, and control of underground utilities often requires a combined effort of utility companies, property owners, and Project Managers, Contractors, and Craft Supervisors. Whenever feasible, pre-construction should determine if the property or facility has reliable data and if the owner is prepared to provide identification, location services and verification services. Data mining and field investigations may be required of Contractors, and the project should be planned / proposed accordingly. Additional measures

may be required such as ground penetrating radar, hydro-excavating, other presence sensing systems, and exploratory work methods. Identifying, locating and isolating utilities should be closely coordinated and accurately communicated. Assigned, responsible authorities must be designated and actively involved: see LOTO sections above. (Verbal systems of communication may not be relied upon.) Energy isolation and control requires verification. When energy isolation devices are involved the exposed workers shall be signed-on. When air gaps are used, they must be visible, identified and tagged.

DEMOLITION

There is a wide variation in the scope and complexity of demolition work with our various projects and construction environments. With the exception of new construction on a greenfield project, there is almost always some exposure to demolition. By its very nature demolition requires energy isolation and control. Some of this work will fall under a project's standard LOTO procedures for industry and construction. But, demolition may also simplify the exposure and the control measures. An entire facility or main section of a facility can be isolated and controlled, and the isolation is immediately visible and verifiable. However, when selective demo is involved, the process may become more complicated and involved.

With an isolated facility (or subsection thereof), Barton Malow must still follow the fundamentals of identification, status, control and verification. If isolation devices are in use for any type of energy, or whenever energy of any type remains, care-custody-control must be determined and procedures must be followed to protect authorized and affected workers. Examples:

- The overhead, exterior power lines are gapped (disconnected), but the main gas feed is controlled by an isolation device (valve or blank).
- Certain systems remain "on" to support work such as power to a bridge crane.
- Temporary power systems must be identified and marked accordingly.

With selective demolition, mishaps can occur when utilities to be removed, to remain, or to be relocated are not properly identified and isolated. For example, several conduits run alongside each other and one is to remain. If all conduits are de-energized and we demo all conduits, we have a problem. If the one to remain is "live" then we have two big problems: possible hazardous contact and an interruption in service. If all of the several conduits are to be removed, but one of the several is not isolated and controlled, we have a problem. **Attachment AR - Removal/Relocation Planning Form** includes procedures and forms for removing and relocating utilities and energy systems. The attached procedures should be used, or one substantially equivalent should be developed and implementing.

Guidelines and key features of a planning and identification procedure include:

- Information / Request System (**see Attachment S - Lockout/Tagout Program**).
- Identification of disconnects and isolations (**see Attachment AJ - Demolition Survey**).
- Information, tagging and labeling system (e.g. color coding).
- Verification and sign-off before work is authorized.
- Instruction to workers on the procedures and control systems.
- PTP planning and pre-work briefings.



ELECTRICAL SAFETY

APPLICABILITY

The requirements of this section apply to Barton Malow employees and the employees of Subcontractors and Sub-Subcontractors who perform construction activities on the job site. Client, Owner, and employer requirements may also be applicable and can supersede these requirements.

GENERAL REQUIREMENTS

Contractors must identify the electrical hazards associated within each definable feature of work and establish the controls necessary to maintain an acceptable level of risk. To assist in the evaluation of electrical hazards, Contractors must employ an Electrical Hazard Analysis ([see Attachment Y - Energized Electrical Equipment Permit](#)) consistent with requirements of [NFPA 70E, Standard for Electrical Safety in the Workplace](#) for shock and arc flash hazards. The identified hazards and control measures must be documented in the associated Job Hazard Analysis (JHA) or other work control document that provides an acceptable level of hazard identification and control for the associated task or work sequence. The safe electrical work practices that are employed must prevent electric shock, burns, arc flash or other injuries that could result from either direct or indirect electrical contact. This may include specialized training, observing required approach distances, and the use of appropriate PPE consistent with the requirements of OSHA and [NFPA 70E](#), as applicable.

PERSONAL PROTECTIVE EQUIPMENT

Contractors are responsible for identifying, providing and maintaining their own PPE. Maintenance of PPE includes the required testing and certification. Records of such testing must be turned into the Barton Malow Safety Leader or assigned designee.

QUALIFIED ELECTRICAL WORKER

Only qualified workers who maintain the necessary skills and knowledge related to the construction, operations of electrical equipment and the associated hazards are permitted to work on electrical systems. A Qualified Electrical Worker is a person who has skills and knowledge related to the construction and operation of the electrical equipment and installations, and has received safety training on the hazards involved. The Contractor must be responsible for documenting the qualifications of the Qualified Electrical Workers utilized on the project.

GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTION

GFCIs will be used on 120-volt circuits as specified below:

- In damp or wet (standing water) work areas.
- For temporary power (e.g., extension cords) during construction, remodeling, maintenance, repair or similar activities. Outdoor receptacles must be enclosed with weatherproof (preferably metal) covers.
- When using portable, electric hand tools and equipment with cord/plug connectors.

USE OF AN ASSURED GROUNDING PROGRAM IS PROHIBITED.

The users of the GFCIs must test portable GFCIs using the test button provided before each use. If the GFCI breaker fails the test, tagout of service with a "DANGER – DO NOT USE" tag and (if portable) remove from service. Tripped circuit breakers may not be re-energized until it has been determined that the equipment and circuit can be safely re-energized. Do not reset or operate temporary or permanent construction circuit breakers unless you are a qualified member of the electrical Contractor onsite and you have proper knowledge of the system.

FLEXIBLE CORDS AND CABLES

Use UL-listed flexible cords suitable for conditions of and location of use. Flexible cord sets used with grounding-type equipment must contain an equipment grounding conductor. Protect flexible cords and cables from damage. When possible, hang extension cord sets, welding leads, etc., overhead to avoid tripping hazards and damage caused by foot traffic and equipment. Avoid sharp edges, pinching, or improper storage. Cords sets that are damaged must be removed and discarded or repaired by a Qualified Person.

LOCKOUT/TAGOUT

Contractors must ensure that electrical systems and equipment are effectively isolated, locked out, and tagged out in accordance with the requirements of the Control of Hazardous Energy and LOTO of this manual prior to performing any work on or near the energized systems. Contractors must make all feasible efforts to effectively isolate, lock and tagout energized electrical systems and equipment in order to avoid performing Hazardous Energized Electrical Work as defined below.

HAZARDOUS ENERGIZED ELECTRICAL WORK

Hazardous Energized Electrical Work is defined as "work performed on or close to exposed parts of electrical systems and equipment operating at greater than 50 volts to ground, or less than 50 volts to ground where the current exceeds 5mA, creating the potential for explosion or injuries due to electric arcs." Controls may still be required for energized work on non-hazardous circuits to protect against secondary hazards such as a startle or involuntary reactions from contact with low voltage high current sources. These would include circuits operating at 50 volts and less with a short circuit current of greater than 0.5ma or energy greater than 0.25 joules.

EXCEPTION

Taking voltage, current measurements and verification of zero energy using standard test equipment such as voltmeters and current probes is permitted on energized electrical systems when performed in accordance with the Contractor's electrical safety plan and requirements of NFPA 70e. Contractors must ensure that a second worker is present when hazardous energized electrical work is performed. The second worker functions as a safety observer and does not participate in the actual work. This worker must be trained in cardiopulmonary resuscitation and be prepared to initiate other emergency response procedures. They must have the same PPE on if they are in the area where the energized work is taking place.



EQUIPMENT + TOOLS

APPLICABILITY

The requirements of this section apply to Barton Malow employees and the employees of Subcontractors and Sub-Subcontractors who perform construction activities on the job site involving equipment and tools. Client, Owner and employer requirements may also be applicable and can supersede these requirements.

EQUIPMENT INSPECTION

All equipment will be inspected for deficiencies prior to being placed into service on the project. Inspections must comply with Regulatory and Manufacturer requirements.

Identified deficiencies must be corrected prior to using the equipment. Inspections must be documented and turned into the Barton Malow Project Team. Each piece of equipment will be given a site identification number for tracking purposes. See [Attachment AK - Daily Equipment Inspection Checklist](#).

**Remember, all equipment needs
to be inspected prior to use.**

HEAVY EQUIPMENT

Heavy equipment on site should meet all state and federal safety requirements. The equipment should be used only as intended and should be maintained in safe operating condition at all times while on site.

- Only persons who are trained and qualified by testing certification, or otherwise, may be allowed to operate moving equipment such as fork trucks, excavators, bulldozers, etc.
- The operator is responsible for the safe operation of the equipment at all times.
- Only authorized persons must be permitted in the cab or on the equipment.
- Follow operating and maintenance procedures as specified by the manufacturer.
- All dozers, loaders, tractors, end loader backhoes, and other equipment with an obstructed rear view must have functioning backup alarms.
- Rollover protective structures must be used for all material handling equipment.
- Operators must inspect the equipment and the area where work is to be performed before each shift.
- Equipment in operation must be attended at all times.
- Helpers must remain in sight of or in communication with the equipment operator.
- Riding on loads, fenders, running boards, sideboards, and gates, or with legs dangling over the ends or sides of trucks is prohibited.

TOOLS AND USE INSPECTION

All hand, pneumatic and power tools will be kept in good condition with regular maintenance. Tools are to be operated according to manufacturer's instructions and guidelines. PPE appropriate for the hand, pneumatic or power tools will be worn at all times. Tools must be inspected for defects prior to each use. Inspections must comply with regulatory and manufacturer requirements. Guards and safety devices must not be modified or removed.

Tools MUST be detached from the energy source powering them before changing blades, wheels, bits, etc.





EXCAVATIONS

APPLICABILITY

The requirements of this section apply to all Contractor's and lower-tier Subcontractor's excavation operations and activities onsite. Refer to [Attachment R - Excavation Zone Checklist](#).

EXCAVATION PLAN

The Contractor is responsible for submitting to Barton Malow an Excavation Plan for review and concurrence prior to any disruption of ground, excavation, or trenching on this project. This plan must show the proposed boundaries on a site map including depth of the affected areas and the safety precautions required.

Barton Malow and the Contractor will verify the Excavation Plan with the appropriate means including zone observation, as built drawings, hand locate, local or other utility locator, communication with owner's representative, hydro excavation, and/or ground penetrating radar to ensure proper precautions regarding existing underground utilities. Refer to Item 2 in [Attachment R - Excavation Zone Checklist](#).

UTILITY LOCATES

Location service requirements must be identified in the Contractor's excavation plan and must be performed prior to Barton Malow authorizing the Excavation Zone Checklist. The Construction Representative will verify that the Contractor has located and identified all underground services with appropriate color coded markers.

When the Contractor is responsible for the underground utility location and identification, public utility locates can be coordinated through the State recognized utility location and identification process. Some utility locates on private property may require a private utility location company to complete. Barton Malow can provide drawings with approximate location of existing utilities and structures to aid in marking the utilities in some instances.

If there is any uncertainty as to the degree of safety protection anticipated on underground electrical power lines, the electrical service should be de-energized first with a planned outage arranged and coordinated through Barton Malow.

POT HOLE OR HYDRO EXCAVATION VERIFICATION

The Barton Malow Representative or assigned representative must work directly with the Contractor who will hand dig or otherwise safely pot hole (daylight) to verify the location and depth of the various utilities and underground project and/or lines which may conflict with the excavation activity.

When the Contractor excavating activities are within four feet of underground services, the Barton Malow Representative or designated representative will be physically present for onsite monitoring to ensure compliance.

CONFINED SPACES

When the configuration of an excavation is such that the excavation is deemed to be a confined space, the provisions of Barton Malow's confined space program will apply and a Confined Space Permit would be needed. [\(refer to Attachment Q - Confined Space Entry Permit\)](#)

Some excavations can become confined spaces.

TRAINING REQUIREMENTS

Contractor excavation Competent Person(s) that are trained and knowledgeable about soils analysis, the use of protective systems, identification of existing and predictable excavation hazards and the requirements of [OSHA Subpart P, Excavation, Trenching and Shoring](#) will be considered as meeting the necessary excavation Competent Person training for working onsite. The Contractor must provide proof of such training as requested by the Barton Malow Project Team. The Contractor is required to provide a qualified and Competent Person at the job site when excavation work is ongoing. The Contractor must ensure that the Competent Person(s) can demonstrate that their knowledge and skillsets match the excavation and protective system(s) that are in place. In addition, all Contractors working in or around excavations must receive general excavation hazards awareness training.

UNDERGROUND SERVICES/UTILITIES

A potential hazard onsite is the presence of underground services and structures such as utility lines (water, electric, sewer, gas, or communication), tanks, various gas and liquid process piping, and sewers. If these services or structures are damaged in any way as a result of excavation activities, there may be injury or death to workers, contamination or interruption of services, disruption of processes, and expensive delays. Appropriate steps must be taken by the Contractor to assure the protection of underground utilities.

RESPONSIBILITIES

The Contractor is responsible for the following:

- Obtaining an approved [Attachment R - Excavation Zone Checklist](#) from Barton Malow.
- Barricading and posting appropriate signage.
- Making all excavations safely accessible by means of ladders every 25 ft. or earthen ramps before work starts.
- Providing fall protection as necessary.
- Monitoring/daily inspections of excavation, trenching and shoring operations.
- Designating a Competent Person who has had the training to act in this position and providing the Competent Person the authority to effectively discharge their duties. Record of Competent Person Training shall be given to the Barton Malow Project Team.
- Ensuring the requirements of this section are effectively communicated and enforced with lower tier Subcontractors.
- Investigating and reporting to Barton Malow all incidents involving excavations, trenching and shoring.
- Supplying design from a registered Professional Engineer for all excavations over 20 feet deep.

A Competent Person must be present when performing excavation work.



FIRE PROTECTION + PREVENTION

APPLICABILITY

Barton Malow or the Fire Protection Contractor must be responsible for the development and implementation of a fire protection program to be followed throughout all phases of the construction project. This program must apply to all Construction Contractors' and lower-tier Subcontractors' Fire Protection activities performed onsite.

WORKING WITH OPEN FLAME, WELDING, CUTTING OR GRINDING

The following requirements apply to Contractors conducting activities with open flames, welding, cutting, or grinding and other flame/spark producing tasks, hereafter referred to as "Hot Work".

- The Contractor must perform Hot Work in accordance with the Hot Work Permit System. [\(Attachment U - Hot Work Permit\)](#)
- Barton Malow must ensure that all lower-tier Subcontractors understand and comply with the requirements of the permit system.
- Contractor personnel who perform fire watch duties must be qualified and provide proof of training documentation. Individual(s) performing fire watch duties must be proficient in the use of fire extinguishers.
- Alternatives to performing Hot Work (e.g., saw cutting instead of grinding wheel or torch cutting; crimp-type pipe fittings instead of soldered fittings) should be used where practical.
- Hot Work should be performed in Contractor shops or designated areas (e.g., pre-approved weld booths or shop areas) where practical.

Storage and handling of compressed gases will include:

- Valves, regulators and hoses removed with valve caps on securely.
- Secured upright at all times, including during transportation.
- Never laid flat or lifted on someone's shoulder.
- Fuel and oxygen cylinders secured and separated by a minimum of 20 feet.
- Empty cylinders stored separate from full cylinders.
- Flash arrestors must be located at the torch and at the regulator.

HOT WORK PERMIT SYSTEM

The Contractor will be responsible for providing all the required training, materials, and PPE to conduct all Hot Work.

Prior to the start of any Hot Work activity, the Contractor must perform a walk-down of the work to facilitate thorough hazard identification and control. The Contractor is ultimately responsible for compliance with the requirements of the permit.

HOT WORK LOCATION SELECTION HIERARCHY

The location of Hot Work must be determined by utilizing the following priority list:

- If work must be conducted onsite, combustibles must not be located within 35 feet of the work area.

- If work must be conducted onsite and combustibles cannot be removed from within 35 feet of the work area, fire barriers such as screens or blankets must be used to protect combustibles.
- Protect openings in walls, floors, roofs, and ceilings where sparks can travel beyond the work area to inaccessible or unprotected areas. Openings or cracks in walls, floors, roofs or ceilings within 35 feet of the Hot Work location must be tightly covered with fire-retardant or noncombustible material to prevent the passage of sparks to adjacent areas.
- Beware of heat conduction through penetrations. Hot Work that is performed on pipes or other metal that is in contact with combustible walls, partitions, ceilings, roofs, or other combustibles, must not be undertaken if the work is close enough to cause ignition by conduction.

FIRE WATCH

The Contractor must establish a fire watch to protect the safety of workers and assets. The fire watch observes staff conducting the welding, cutting, or grinding operations and monitors adjacent areas. The worker assigned to this task of fire watch must have fire extinguishing equipment readily/immediately available.

The fire watch must observe the Hot Work area for 30 minutes (60 minutes for roof work) after the completion of Hot Work. For overhead work, a fire watch may be necessary on multiple levels. The fire watch may not be assigned any other duties during Hot Work operations. The fire watch must stop work if sparks travel beyond the area that fire watch can observe. Individuals assigned to fire watch duties must:

- Be a qualified, trained and understand the requirements of the Hot Work permit system.
- Be knowledgeable about fire and emergency reporting procedures and fire alarm pull box locations in buildings, if applicable.
- Have emergency communications, such as cellular phones or radios, available when working in remote or outside areas.
- Be trained in the use of fire extinguishing equipment.
- Prior to leaving the site, the fire watch must verify that the possibility of fire does not exist.

A fire watch is required for all Hot Work and may be required on multiple levels.

Fire watch observation times:

-30 min.
typical Hot Work

-60 min.
Hot Work performed on roofs.

FIRE PROTECTION EQUIPMENT

Fire protection equipment must be sufficient for the hazards present. At a minimum, an appropriately rated fire extinguisher is required to be conspicuously located. Fire extinguishers will be certified annually, inspected monthly and must be readily available in the immediate work area. Free access must be maintained at all times to all exits, fire alarm boxes, fire extinguishing equipment, and any other emergency equipment. Free access means clear of all obstructions. Site protection fire extinguishers must not be used as Hot Work fire extinguishers unless an emergency warrants its use. If a fire extinguisher is discharged for any purpose, it should be reported to the Barton Malow Safety Leader. Each temporary building and trailer (shops, field offices, storage boxes, etc.) will have its own appropriately sized and located ABC class fire extinguisher.

Hot Work areas require a dedicated fire extinguisher.

HOT WORK PROTECTIVE CLOTHING

Contractors must ensure that the personnel protective clothing selected for Hot Work minimizes the potential for ignition, burning, trapping hot sparks and electric shock as identified in [ANSI Z49.1, sections 4.3 and E4.3](#). This includes skin, face, eye, ear, and clothing protection. Hard hat face shields are to be worn at all times over safety glasses.

HOT WORK REQUIRED INSPECTIONS

In addition to the fire watch requirements, the Contractor's authorized worker/permit holder must inspect the work area a minimum of once per day to verify compliance with permit requirements. Additionally, responsible Contractor personnel must also perform periodic inspections to ensure continued compliance with the requirements of the permit. When inspections identify unsafe conditions or the scope of work departs from that defined in the permit, the Hot Work must be stopped immediately.

HOT WORK OUTDOORS

The Contractor must ensure that vegetation and other combustibles are removed, cut back, or otherwise protected to prevent ignition during Hot Work outdoors. A high level of caution must be exercised to prevent grass fires.

FIRE PROTECTION SYSTEM OUTAGES AND IMPAIRMENTS

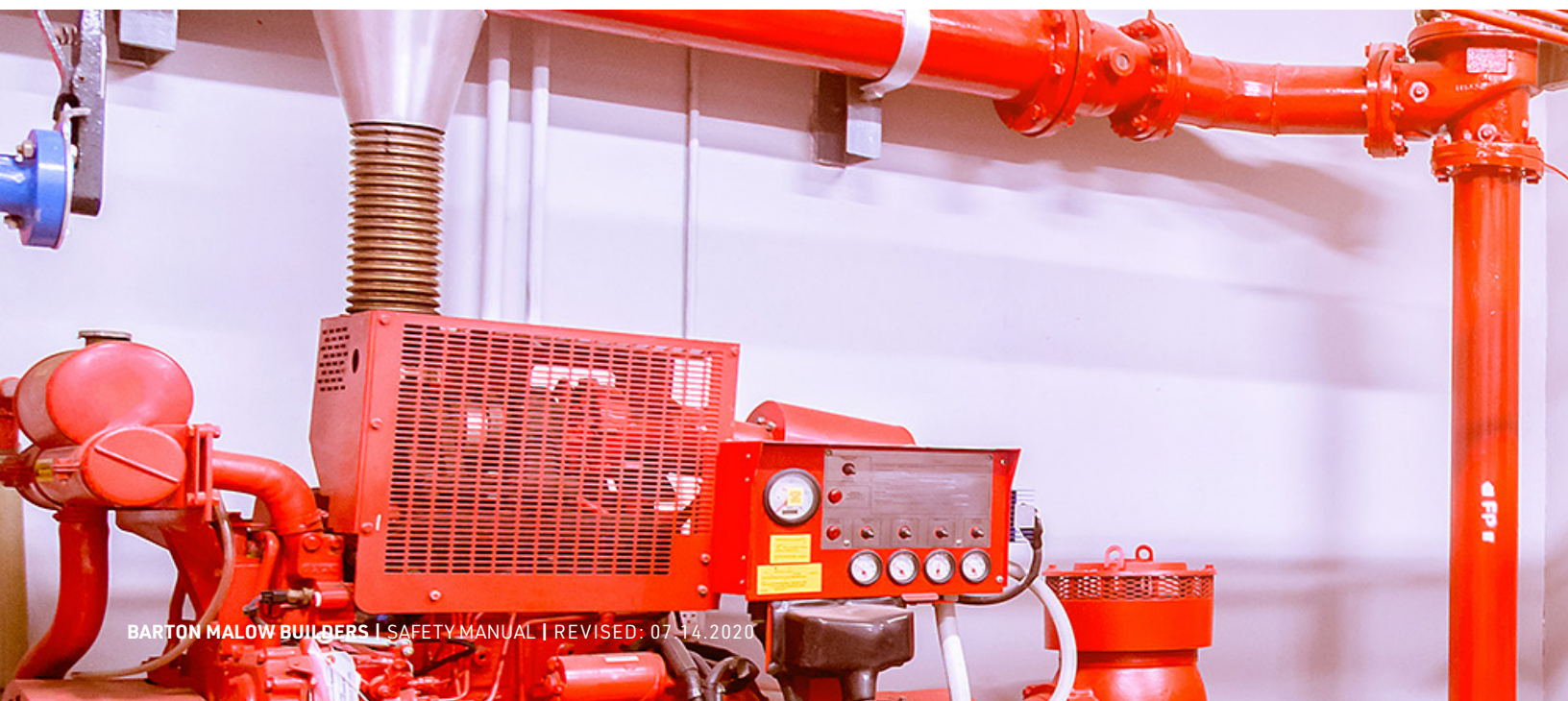
Contractors performing work must plan their work and take the necessary steps to minimize outages or impairments of fire suppression, detection, or alarm systems. When outages are necessary to perform a particular scope of work, they must be coordinated and approved by the Barton Malow Project Team. When Interim Life Safety systems will be interrupted, hazardous work operations such as Hot Work will be evaluated.

EXITS AND EXITS ACCESS

The Contractor must ensure that a clear path of at least 44 inches is maintained to exits on indoor projects. Exits must be marked by a visible sign. Access to exits must be marked by visible signs in all cases where the exit or way to reach it is not immediately visible to the occupants.

FLAMMABLE AND COMBUSTIBLE LIQUIDS STORAGE

Flammable and combustible liquids must be stored in approved containers and cabinets, such as those that are Underwriters Laboratory (UL) or Factory Mutual (FM) listed, and quantities must be limited to minimize fuel loading in accordance with National Fire Protection Association (NFPA) Codes. These cabinets should be grounded. Rags used to apply flammable liquids are to be disposed of in a self-closing, approved safety containers designed for that use. Containers must be labeled as to contents and hazard. Any onsite fuel tanks should be stored in a double walled tank with appropriate measures taken to prevent spills from migrating offsite.



SMOKING/WILDFIRE

Smoking is permitted in designated areas ONLY. All Contractors will be responsible for housekeeping of identifiable trash including cigarette butts. Contractors must supply a nonflammable butt can for their work areas that is routinely cleaned out to prevent fires. There will be NO SMOKING on or in any part of the project buildings and flammable storage areas. Due process and control must be employed to prevent grass fires. Open fires are prohibited.

HOUSEKEEPING/TRASH

Barton Malow's policy on housekeeping is that all equipment, tools, and materials will be stored, stacked, or set up to prevent an incident or injury. The area will be a clean and orderly work place. All Contractors will be responsible for housekeeping of their identifiable trash. The Contractor must continuously police their work area as work progresses and maintain good housekeeping daily. Common garbage and other waste must be disposed of each day. Containers must be provided for the collection and separation of waste, trash, oily or used rags, and other refuse. Containers used for garbage and other oily, flammable, or hazardous wastes, (such as caustics, acids, harmful dusts or similar materials) must be equipped with covers. Chemical agents or substances, which might react to create a hazardous condition, must be stored and disposed of separately.

Project Management, Supervision, Workers, vendors and third party persons will maintain all work locations in an orderly and clean manner at all times.

Tire wash areas will be located by each entrance to help eliminate mud and dirt tracked onto public streets. Onsite mud and dirt will be removed continuously during the workday. The following are the minimum housekeeping requirements for projects:

- Access walkways, roadways, and fire lanes will not be blocked with material, tools, ladders, scaffolds, welding leads, air hoses or electrical cords.
- Electrical extension cords, light stringers, air hoses, and welding leads will be elevated above walkways a minimum of seven feet or the area marked with signage stating: "TRIP HAZARD."
- Covered protection should be in place to protect cords that cross walkways and roads.
- Welding rods, nuts, bolts, and washers will be kept in proper containers.
- Shackles, slings, chokers, ladders, and safety equipment will be removed from the work area when not needed and properly stored.
- Trash containers will be placed at appropriate locations.
- All nails/screws will be removed from scrap/lumber immediately and swept up daily.
- Rubbish, trash, and debris will be removed as needed from the work area and at least daily.
- Materials may have to be positively secured depending on the structure design and elevation.





HOISTING + RIGGING

APPLICABILITY

The requirements of this section apply to all Contractors' hoisting and rigging activities. The complete [OSHA 1926 Subpart CC Crane Standard](#) is to be considered a part of this program. The equipment covered under this procedure includes devices and associated equipment such as slings, ropes, and chains, which provide mechanical assistance in raising and lowering a load. This includes either power or manually operated equipment.

SPECIFIC REQUIREMENTS/PERMITS

All Contractors (regardless of tier) must use a hoisting and rigging program that meets or exceeds the provisions of this section and OSHA standards. All equipment brought on site must be in a new or like-new condition free of hydraulic or oil leaks.

OPERATOR TRAINING AND CERTIFICATION

Contractors who provide and operate equipment, as part of a construction project or similar activity will be in compliance with all applicable parts of [OSHA 1926 Subpart CC](#) and must provide:

- Proof of Training/Certification: Prior to operating a crane, the operator will provide a copy of their crane operator certificate to Barton Malow.
- This certification/license must be current for the crane type they will be operating. (i.e., Mobile Crane Operator, Tower Crane Operator). Certification will be provided by one of four approved agencies: NCCCO, NCCER, CIC or OECP.
- Medical Requirements: Crane operators must complete a medical certification examination at least every three years in accordance with [ASME B.30.5](#). A valid medical card must be provided to document this requirement.

HOISTING AND RIGGING OPERATING REQUIREMENTS PLANNING

The Contractor must evaluate and plan operations in advance. A Competent Person must identify the hazards and determine the controls necessary to maintain an acceptable level of risk through the JHA process. A Hoisting and Rigging Lift Plan is required for complex and critical lifts. This plan must be documented and given to Barton Malow for review.

CRITICAL AND COMPLEX LIFTS

The Contractor must utilize a Hoisting and Rigging Lift Plan or other Barton Malow-accepted equivalent plan to document critical and complex lifts. All critical and/or complex lift plans require the review and concurrence of Barton Malow.

Hoisting of personnel with a crane or derrick is not allowed except with the authorization of Barton Malow under emergency conditions.

Any revisions to the procedure must be reviewed and approved through the same cycle as the original procedure.

Critical Lifts are defined as lifts for which any of the following conditions exist:

- The weight of the lift exceeds 75% of the crane's rated capacity in the configuration that will be used during the lift.
- Lifts involving non-routine or difficult rigging arrangements or where loads will require exceptional care in handling because of size, weight, close-tolerance installation or high susceptibility to damage.
- If the item being lifted were to be damaged or upset, it could result in a release of hazardous material into the environment or the release of airborne concentrations that could exceed established occupational exposure limits.

- The item being lifted is unique and, if damaged, would be irreplaceable or not repairable and is vital to a system, or project operation.
- The cost to replace or repair the item being lifted, or the delay in operations of having the item damaged, would have a negative impact on the construction project to the extent that it would affect project commitments.
- The item, although non-critical, is to be lifted above or in close proximity to a critical item or component.

Complex Lifts are defined as lifts that present logistical difficulties or lift coordination complications, thus requiring a higher level of planning and execution. Complex lifts may involve the following:

- A lift involving multiple cranes.
- Axial rotation of an object in the vertical plane or other complex movement of the load.
- A lift where the behavior of the load, while in suspension, is questionable.

PRE-LIFT MEETING

Before the Critical Lift is performed, a pre-lift meeting with all participating personnel must be held. During the meeting, the critical lift procedures must be reviewed and questions must be resolved before the lift takes place. The following items must be reviewed:

- The scope and sequence of work.
- Roles and responsibilities.
- Hazards and controls.
- Other relevant information identified in the Hoisting and Rigging Lift Plan.

When performing lifts designated as critical and/or complex, this meeting must be documented.

COMMUNICATION

The Contractor will use OSHA standard hand signals or voice/radio communications during the course of crane operations. The signal person will have completed required training and a copy will be given to the Barton Malow Safety Manager.

AREA ACCESS CONTROL

The Contractor must cordon off or manually control the lift area to prevent access by unauthorized workers by deploying barricades and warning signs and/or utilizing personnel to monitor and control access to the area. The Contractor must cordon off the swing radius area for mobile cranes with warning tape or other barricade apparatus, such as fencing.

PROTECTION OF PEOPLE

Do not place people in jeopardy by moving a suspended load over people or an occupied section of a project. Work beneath a suspended load is prohibited unless the load is supported by cribbing, jacks, or a solid footing that safely supports the entire weight. All personnel must remain clear of moving and shifting loads. Occupied areas that are underneath the arc radius of the path of travel of the hoisted loads must be vacated during the hoist. Notification of the path of travel should be discussed with the crew and adjoining workforce before any lift is lifted. An audible signal (air horn) will be sounded to let personnel know a lift is about to be flown.

RATED LOAD CAPACITY

The rated load capacity of monorails and other structural elements, such as jibs, must match, at a minimum, the rated load capacity of a hoist placed upon it. Know the weight of the object being lifted or use a dynamometer or load cell to determine the weight. If the weight of the load is unknown, a minimum 50% safety factor must be employed. This means that the crane or hoist, slings, and rigging hardware must have twice the capacity of the estimated load. Fully extend outriggers or reduce the cranes rated load capacity as directed and allowed by the crane manufacturers operating manual.

ELECTRICAL DISTRIBUTION LINES

Watch for overhead electrical distribution and transmission lines and maintain a safe working clearance from energized electrical lines of at least 20' or as required by Table A - Minimum Clearance Distances (see below). Any overhead wire must be considered to be an energized line unless proven otherwise by a Competent Person. Exercise caution when working near overhead lines having long spans as they tend to move laterally or vertically due to the wind, which could cause them to breach the safety zone. The safety zone must be marked before work around them proceeds.

ENVIRONMENTAL FACTORS

Environmental factors, such as weather and terrain can adversely affect a lift. When performing outdoor lifts, the following environmental factors must be considered:

HIGH WINDS

Lifts must be suspended if prevailing wind conditions may adversely affect the lift. As a general rule, this applies to wind speeds of 25 MPH or more. However, based on the nature of the load—such as size, surface area, or fragility—a lower wind speed limit may warrant suspension of a lift. The operator and/or lift master must evaluate behavior of the load in prevailing winds and the stresses placed upon equipment to the extent necessary to safely complete the lift.

BURIED LOADS

Check surface conditions to determine if the load may be buried. Do not use Hoisting and Rigging (H+R) equipment to “break loose” a load that is buried. This subjects equipment to severe and unintended loads. All loads should be placed on dunnage to prevent this.

GROUND CONDITIONS

Check ground conditions around the hoisting equipment for proper support, including settling under and around outriggers, ground water accumulation or other similar conditions. Geotechnical drawings and ground pressures should be reviewed to insure proper setup.

TABLE A - MINIMUM CLEARANCE DISTANCES

VOLTAGE (NOMINAL, KV,ALTERNATING CURRENT)	MIN. CLEARANCE DISTANCE (FT.)
Up to 50	10
Over 50 to 200	15
Over 200 to 350	20
Over 350 to 500	25
Over 500 to 750	35
Over 750 to 1,000	45
Over 1,000	As established by the utility owner/operator or registered professional engineer who is a Qualified Person with respect to electrical power transmission and distribution.

Note: The value that follows “to” is up to and includes that value. For example: over 50 to 200 means up to and including 200kV.





CRANE INSPECTIONS, MAINTENANCE, + TESTING

APPLICABILITY

The requirements of this section apply to all Contractor's owned and/or rented cranes.

CRANE INITIAL INSPECTION

Prior to being placed into service, all Contractors' owned and/or rented cranes must undergo an initial third-party inspection at their own cost. Cranes that will be onsite less than five days will be exempt from this independent third-party inspection. An accepted checklist must be utilized to document these inspections. When qualified third-party inspections are performed, a copy of the third-party inspection must be submitted (which will satisfy the crane physical inspection portion of the checklist) to the Barton Malow Safety Representative. Barton Malow may elect to oversee the Contractor's initial inspection of the crane. All crane inspection deficiencies must be identified and documented and the safety implications must be determined. The Contractor must maintain the original copy of the inspection report and provide a copy to the Barton Malow Safety Representative. The crane owner must take immediate action to correct the identified deficiencies.

DAILY PRE-OPERATIONAL INSPECTIONS

Operators must visually inspect the following items each day or prior to first use if the hoist has not been in regular service (Records are required):

- Functional operating mechanisms for maladjustment interfering with proper operation.
- Deterioration or leakages in lines, tanks, valves, drain pumps and other parts of air systems.
- Hooks for cracks, deformation, latch engagement, and damage from chemicals.
- Hoist rope for significant wear, kinking, crushing, bird-caging, corrosion, or broken strands or wires.
- Hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations.
- Primary hoist upper-limit device for proper operation.

DEFICIENCIES

Operators or other designated, qualified workers must examine deficiencies and determine whether the equipment should be removed from service or if a more detailed inspection is required.

MONTHLY INSPECTIONS

Cranes active on the site for periods extending beyond one month must receive monthly documented inspections. The Competent Person must at a minimum visually inspect the following items for damage, wear, or other deficiency that might reduce capacity or adversely affect the safety of the crane:

- Critical items such as brakes and crane hooks
- Hoist ropes

Signed and dated inspection records must be kept on file and a copy must be turned into the Barton Malow Project Team. Before the crane is returned to service, correct deficiencies that could reduce its capacity or adversely affect its safety.

ANNUAL INSPECTIONS

Annual crane inspections must conform to the requirements identified in **OSHA 1926 Subpart CC** and as recommended by the manufacturer. A copy of the annual inspection will be provided to Barton Malow prior to placing the crane into service.

MAINTENANCE

A preventive maintenance program must be established and based on the recommendation of the crane manufacturer. If equipment maintenance procedures deviate from published manufacturer's recommendations, the alternate procedures must be approved in advance by the manufacturer or another Qualified Person and be kept readily available. A copy of dated maintenance records should be turned into the Barton Malow Project Team. Replacement parts must be at least equal to the original manufacturer's specifications.

RATED LOAD TEST

Prior to initial use, all cranes in which load sustaining parts have been modified, replaced, or repaired must be load-tested by a qualified inspector or under the direction of that inspector. All rated load tests must be performed in accordance with manufacturer's recommendations.

RIGGING SAFETY REQUIREMENTS RIGGING COMPONENT PROCUREMENT

Rigging components must be obtained from reliable sources and must be rated for applications. Do not use damaged or suspect rigging.

All rigging components must be clearly marked with the applicable Working Load Limit (WLL) and manufacturer's tag.

STORAGE AND MAINTENANCE

Rigging equipment must be stored and maintained in accordance with the manufacturer's recommendations. Protect rigging hardware from weathering and harsh environments. Rust, corrosion, and/or UV damage can degrade rigging performance. Any rigging equipment found in dirt, water or mud must be removed from the project.

LABELING

Rigging hardware must be labeled for identification purposes with the manufacturer's tag.



RIGGING SAFE WORK PRACTICES

Ensure that the following safe work practices are utilized when rigging a load:

- Riggers should meet the training qualifications set forth in the new crane standard [OSHA 1926 Subpart CC](#). Proof of this training should be turned in to the Barton Malow Project Team prior to rigging activities taking place.
- Determine the weight of the load. Do not guess. The weight of the load must be within the rated load capacity of the rigging. Tags must be affixed with capacities clearly legible.
- Determine the proper size for slings and components. Refer to the manufacturer's literature. Select slings so that the rated load capacity is adequate when the appropriate de-ratings are applied based on sling angle and/or hitch angle considerations (choker angle de-rating).
- Verify that shouldered eyebolts are installed in accordance with the manufacturer's recommendations. Beware of side pull applications. Eyebolts must be de-rated when subject to side loads.
- Do not use shoulderless eyebolts for lifting purposes.
- Use safety hoist rings (swivel eyes) as a preferred substitute for eyebolts when possible.
- Pad sharp and small diameter edges to protect slings. Machinery foundations or angle-iron edges may not feel sharp to the touch but could cut into rigging when under load. Dense foam, tire rubber, or other dense, pliable materials may be suitable for padding.
- Do not use slings, eyebolts, shackles, hooks, or other hardware that appear to have been cut, welded, brazed, or is otherwise suspect.
- Determine the center of gravity and balance the load before moving it. Keep the attachment points of rigging accessories as far above the center of gravity as possible.
- Lift the load initially just a few inches to test the rigging and balance.
- Place blocks beneath loads prior to setting down the load to allow removal of the sling, where applicable.

Remember to inspect all rigging devices prior to use.

INSPECTION CRITERIA FOR SLINGS, BELOW-THE-HOOK LIFTING DEVICES AND RIGGING HARDWARE PRIOR TO USE INSPECTION

At the beginning of each shift or prior to use, the Competent Person must visually inspect the rigging equipment (slings, below the hook devices and rigging hardware) in accordance with the appropriate ASME/ANSI standard or according to the manufacturer's instruction (whichever is more stringent.) Defective rigging equipment must be removed from service and destroyed to prevent reuse.

PERIODIC INSPECTIONS

Rigging equipment must be inspected periodically in accordance with the appropriate ASME/ANSI standard or according to the manufacturer's instruction, whichever is more stringent. This inspection must be performed by a qualified inspector and have a documented inspection history, with records readily available.

PERSONNEL PLATFORM LIFT PLAN

The use of a man basket to hoist workers onto a platform is prohibited, except when the use of a conventional means of reaching the work area, such as a ladder, scaffold, or man lift, would be more hazardous or is not possible because of structural design or worksite conditions. Personnel lifts must be properly planned and executed. Barton Malow must authorize this type of activity in advance of the lift.

PRE-LIFT MEETING

A pre-lift meeting must be conducted prior to initiating a personnel lift. All workers involved in the work activity must attend the pre-lift meeting, including, man basket occupants, and the operator.





STEEL ERECTION

APPLICABILITY

The requirements of this section apply to all Contractors' and lower-tier Subcontractors' steel erection activities. No steel erection will begin without a written Notice to Commence Steel Erection.

FALL PROTECTION

Workers engaged in steel erection activities including but not limited to connecting, decking, and bolt up, are not exempt from Barton Malow's 100% fall protection requirements when working from surrounding elevations of six feet or greater. Barton Malow reserves the right to impose lower fall protection requirements depending upon the work to be performed and the perils in the work area.

Perimeter safety cables installed by the steel erector will remain in place unless otherwise instructed by Barton Malow. The steel erector will coordinate cable installation with Barton Malow to ensure span lengths are appropriate for future work (no more than two bays or 60 feet per turnbuckle, and a turnbuckle per cable around mechanical openings). NO ONE must dismantle perimeter cable without

[Attachment T - Guard Rail Removal Permit](#).

TRAINING

Training records indicating workers have received required steel erection and fall protection training will be maintained at the project and available for review by Barton Malow.

STEEL DELIVERIES

All steel deliveries will be coordinated with the Barton Malow Project Team to ensure traffic around the project is controlled. No deliveries must be unbound until inspected and deemed secure by a Qualified Person. A ladder will be used to access all truck beds.

HOISTING AND WORKING OVERHEAD

Design criteria for any multi-lift device must be available for review by Barton Malow. Work will be planned that no load will be swung over the public, other workers, or occupied structures. Notification of the path of travel should be discussed with the Hoist and Rigging crew and adjoining workforce before any lift is lifted. An audible signal will be sounded to let personnel know a lift is about to be flown. During bolt-up activities all steps will be taken to protect workers below from falling objects. The Contractor must cordon off the erection area to prevent access by unauthorized workers by deploying barricades appropriate for the exposure.





FALL PROTECTION PROGRAM

APPLICABILITY

The requirements of this section apply to all Construction activities which require personnel to work or potentially be exposed to unprotected heights of six feet or more. Additionally, all workers who are constructing a leading edge above surrounding elevations of six feet or greater must not be exposed to unprotected heights without fall protection. Barton Malow reserves the right to impose lower fall protection requirements depending upon the work to be performed and the perils in the work area. All employees and Contractor employees must be protected from falling by 100% continuous fall protection, guardrail systems, safety net systems, or personal fall arrest systems. No exceptions are allowed.

FALL PROTECTION PROGRAM

Contractors providing services onsite must have in place a Fall Protection Program that ensures effective fall protection system(s) are in place anytime workers are exposed to falls at heights of six feet or more. All work will be planned with the intent to eliminate identified fall hazards through Prevention Through Design. Workers exposed to fall hazards that cannot be eliminated will be equipped, trained and given periodic refresher training in fall protection to minimize the adverse effects of accidental falls. When working at heights less than twenty feet and utilizing Personal Fall Arrest Systems (PFAS), individuals will utilize retractable units, restraining devices or positioning devices.

FALL PROTECTION PLAN

Contractors must develop and submit a Fall Protection Plan (FPP) to Barton Malow for concurrence prior to the start of work. The plan must be prepared by a Qualified Person or Competent Person for the Contractor and developed specifically for the activity and/or project where the work will occur, and must be available to Barton Malow for review. The FPP must be documented and contain the following elements at a minimum:

- Project/Job location/date(s).
- Project/Job description.
- Name of the Contractor Fall Protection Program Administrator, Qualified Person and the Competent Person is responsible for fall protection on this site/project.
- Fall Hazard Analysis (FHA) conducted for each activity or similar activity type/grouping associated with the project. (Note: For projects that cannot identify all activities that will require fall protection during the life of the project, the Contractor must ensure that a FHA is performed, reviewed and accepted as required by Barton Malow and attached to the project Site-Specific Fall Protection Plan prior to performing the work).
- Identify the means to be utilized for the prompt rescue of employees in the event of a fall as necessary.
- Provide verification of training certification for personnel affected by the FPP including proper daily inspection criteria.
- Signature of the Competent Person preparing the plan and the Contractor Site Safety Representative.
- Document how the requirements of this plan will be passed down to workers and lower-tier Subcontractors.

FALL HAZARD ANALYSIS

A Fall Hazard Analysis (FHA) must be conducted for each activity or similar activity type/grouping prior to the start of work and must be included in the FPP or as part of the Job Hazard Analysis (JHA) for the subject activity and/or definable feature of work. The FHA must be performed by a Competent Person and/or Qualified Person. This analysis must identify one or more methods to eliminate or mitigate fall hazards. The analysis must be comprehensive, thorough, and address the following elements:

- Describe the fall hazards associated with the proposed activity.
- Identify the controls that will be in place to eliminate or mitigate the fall hazard. The controls must achieve 100% continuous fall protection. The selection of controls must be in accordance with the Fall Protection Hierarchy of Control and Mitigation Methods.
- As necessary, identify the means to be utilized for the prompt rescue of employees in the event of a fall.

The Contractor may perform this analysis by using a separate form, or this analysis may be conducted and included as part of the JHA prepared for the subject project/activity. The FHA and/or JHA must be revised and resubmitted to Barton Malow when they are no longer applicable.

FALL PROTECTION HIERARCHY OF CONTROL AND MITIGATION METHODS

The Contractor must incorporate the following hierarchy of control when selecting methods to eliminate or mitigate fall hazards:

- **HAZARD ELIMINATION:** First consider eliminating fall hazards. This might involve moving the work surface to ground level or changing a task so that workers do not approach the fall hazard.
- Implementing Prevention through Design, Prevention through Planning in designing the project.
- **PASSIVE FALL PROTECTION:** Take actions that isolate or effectively separate the hazard from workers, such as installing floor coverings or handrail/guardrail systems.
- **FALL RESTRAINT:** Establish a travel restraint system that prevents a worker from accessing a position from which he or she could fall.
- **FALL ARREST:** Configure a PFAS designed to arrest a fall after it has begun.
- **ADMINISTRATIVE FALL PROTECTION SYSTEM:** Controlled access zones, and safety monitors are not allowed.

FALL PROTECTION EQUIPMENT SYSTEM REQUIREMENTS

Fall protection equipment and systems must be used in accordance with the manufacturer's recommendations and the requirements of this procedure. Misapplication or use of this equipment in a way contrary to those requirements is prohibited. A Competent Person must supervise the work and verify that the fall protection system is properly established and maintained. Contractors will submit all engineered documentation on horizontal lifelines to Barton Malow for review and approval. All horizontal lifelines will be installed under the direct supervision of a Qualified Person.

PERSONAL FALL ARREST SYSTEM STRENGTH REQUIREMENTS

Contractors must ensure that the strength and testing requirements for personal fall arrest systems, components and subsystems must comply with the provisions of [ANSI Z359.1](#), Safety Requirements for PFAS, Subsystems and Components. All other applicable fall protection equipment and system requirements must at a minimum meet the requirements of [ANSI A10.32](#) Standard for Personal Fall Protection used in Construction and Demolition Operations.

PERSONAL FALL ARREST SYSTEM (PFAS) INSPECTIONS & STORAGE ROUTINE INSPECTION

PFAS equipment must be inspected by the worker using the equipment prior to each use. Equipment inspections must follow the guidelines established by the manufacturer. Damaged or questionable equipment must be immediately removed from service and tagged accordingly. Equipment that cannot be repaired must be destroyed.

PFAS equipment must be inspected prior to each use.

POST-FALL INSPECTION

PFAS equipment must be inspected by the worker using the equipment prior to each use. Equipment inspections must follow the guidelines established by the manufacturer. Damaged or questionable equipment must be immediately removed from service and tagged accordingly. Equipment that cannot be repaired must be destroyed.

EQUIPMENT STORAGE

Fall protection equipment and PFAS components must be stored in a manner that protects it from exposure to adverse conditions, such as ultraviolet light or harsh weather, that could result in damage or diminished performance and/or other specific requirements established by the manufacturer.

All fall protection equipment must be stored as recommended by the manufacturer.

SAFETY NET SYSTEMS

The use of safety net systems as the means of fall protection will require prior approval of the Barton Malow Project Team.

PORTABLE LADDERS

Barton Malow encourages the use of platform ladders onsite. These ladders provide a larger working surface to aid in better balance and positioning. Fall protection is not required when using portable ladders in compliance with the following requirements:

- Portable ladders must be set up and used in accordance with OSHA and manufacturer requirements and be a minimum Type I, Heavy Duty Classification. Light and medium duty class ladders are prohibited.
- Extension ladders must be tied/secured off to prevent displacement.
- Ladder users must maintain three-point control (three limbs maintain contact on the ladder), and that their body remains centered between the side rails.
- Tools and materials may not be hand carried while using a ladder.
- Ladder users are not subject to a fall to a level lower than the base of ladder they are working from.
- By accessing the ladder, you have not negated the protection of adjoining fall protection such as guard rails. Should you negate the existing protection, fall protection would be required.

TYPE IAA 375 POUNDS

Special Duty, Professional Use

TYPE IA 300 POUNDS

Extra Heavy Duty, Industrial Use

TYPE I 250 POUNDS

Heavy Duty, Industrial Use



GUARD RAILS

If any component of a guardrail system must be removed, the Barton Malow Project Team must issue [Attachment T - Guardrail Removal Permit](#). Any Contractor that must remove a fall protection system in the course of their work will be responsible for immediately replacing and restoring the protective system. Removal of guard rails without a permit is a violation of the project's disciplinary program up to and including termination.

TRAINING REQUIREMENTS

Contractors that are trained in accordance with the requirements identified in OSHA will be considered as meeting the necessary fall protection training requirements for working at a Barton Malow project. The Contractor must provide proof of such training as requested by the Barton Malow Project Team.

PERSONAL FALL ARREST SYSTEM (PFAS)

The Contractor must ensure that a PFAS is employed when conventional systems are not feasible to achieve 100% continuous fall protection at working heights of six feet or more. If a PFAS or conventional fall protection systems is not feasible, this justification must be documented in the fall hazard analysis and reviewed before work starts by Barton Malow's Project Team.



HEARING CONSERVATION

APPLICABILITY

The requirements of this section apply to all construction activities which may expose Contractor's employees to high-noise levels. Contractor's employees are to follow the requirements of the hearing conservation program as required.

REGULATORY REQUIREMENTS

Approved hearing protection will be worn as specified in posted areas and while working with or around high-noise level producing machines, tools, or equipment. A good rule to follow is: When you must raise your voice to be heard, you need hearing protection. Exposure to impulsive or impact noise will not exceed 140dB noise level. Barton Malow's Hearing Conservation Program must meet or exceed requirements in the OSHA standard:

- American Conference of Governmental Industrial Hygienist (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Indices," 2005.
- **OSHA 1926.52, Occupational noise exposure.**

CONTROL MEASURES

Barton Malow uses a hierarchy of control measures to reduce noise levels as low as feasible. The order of precedence for mitigating hazards establishes the actions to be considered, in an order of effectiveness, to achieve intended risk reduction.

The hierarchy is as follows:

- Elimination or substitution of the hazards.
- Engineering controls.
- Work practices and administrative controls that limit worker exposures.
- Personal protective equipment (PPE).

A hearing conservation program is required if workers are exposed to a TWA noise level of 85 dBA or higher over an 8 hour work shift.

Every feasible effort must be made to "engineer out" noise exposures greater than or equal to an 8-hr timeweighted average (TWA) sound level of 85 decibels (dBA) on the A-weighted scale prior to using personal hearing protection as a noise attenuation device. When controls are not feasible or fail to reduce noise to acceptable levels, hearing protection must be required. Additionally, if work is to be performed in an environment that is suspected to exceed the allowable noise exposures, mandatory hearing protection requirements must be implemented.

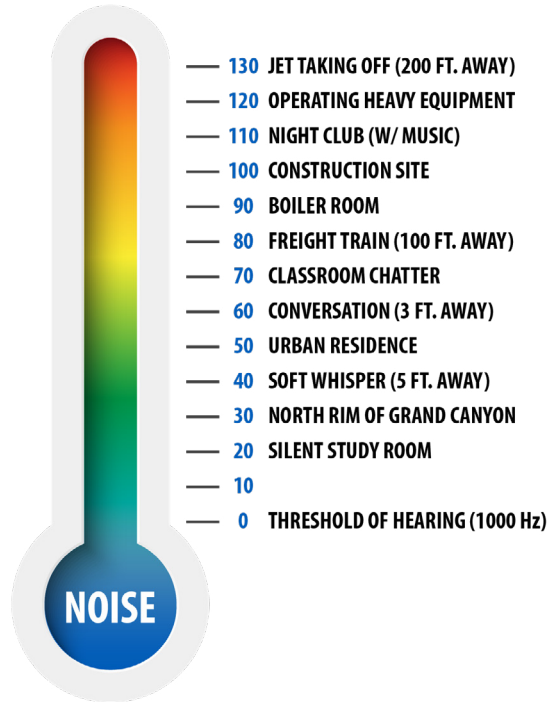
NOISE EVALUATION

The Contractor must survey and evaluate suspected high noise areas and work efforts. Employees may observe surveys and evaluations, and the results must be made available to employees. Contractors must control employee exposures when noise levels exceed 85 dBA as an 8-hr TWA, or if impact/impulse noise exceeds 140 dBA. Maximum allowable noise exposure must not exceed the permissible noise exposures shown in 29 CFR 1910.95 or the ACGIH TLV's. Noise exposure must be determined without regard to hearing protection provided.

HIGH NOISE AREA POSTING

High noise areas must be posted with appropriate warning signs at all entrances.

TYPICAL SOUND LEVELS [dBA]



INDUSTRIAL HYGIENE

APPLICABILITY

The requirements of this section apply to all Contractors' activities regarding industrial hygiene matters as they relate to the construction activities unless otherwise specifically exempted by Barton Malow. This section defines the requirements and responsibilities for anticipating, recognizing, evaluating, and controlling employee exposures to chemical, physical, and biological agents encountered during construction activities. The Contractor Industrial Hygiene (IH) program must address the following elements (as applicable to the project):

Noise	Sanitation
Lead	Safety Showers and Eyewash Apparatus
Hazardous Materials	Personal Exposure Monitoring
Hexavalent Chrome	Ionizing Radiation
Contractor Work Control	Respiratory Protection
Asbestos	Blood-borne Pathogens
Site Dust	Temperature Extremes
Lasers	Other Significant Hazards Project-related

The Contractor must provide personnel adequately trained/qualified to manage and implement their IH program to a level required for the scope of work.

GENERAL REQUIREMENTS

IDENTIFICATION OF HEALTH HAZARDS

The employer must identify and document, as part of the Job Hazard Analysis (JHA), existing and potential physical, chemical and biological health hazards. The JHA should include any additional hazards revealed by supplemental site information provided (e.g., site characterization data, as-built drawings, information regarding adjacent operations, etc.); and should be kept updated to reflect significant changes in exposure potential, new information, monitoring data, etc.

CONTROL MEASURES

The employer's IH program must require that controls are implemented to eliminate or reduce employee exposures to below recognized occupational exposure limits (PELs and TLVs). Employers should strive to maintain exposures to As Low as Reasonably Achievable (ALARA). Control measures to eliminate or reduce industrial hygiene-related exposures must be identified during the Pre-Task Plan (PTP) process and detailed in the JHA.

The implementation of control measures must follow the following hierarchy:

- Substitute to a less hazardous material if possible.
- Use engineering controls.
- Use administrative controls.
- Use PPE.

EXPOSURE ASSESSMENT

The employer must perform monitoring as necessary to document employee exposures to chemical and physical hygiene hazards. Negative exposure assessments are encouraged even when not specifically required by a substance-specific standard. Exposure assessments may be performed using various methodologies (integrated sampling, direct-reading instrumentation, modeling, etc.), as appropriate for the material(s) of concern, the site conditions and the type of data needed.

CONTROL OF HAZARDOUS MATERIALS

A hazardous material is any substance that presents a physical or health hazard to humans. Hazardous material exposures should be maintained at the lowest exposure levels practical. A chemical must not be used in any situation unless an individual has information indicating how the material can be used safely. Control measures to prevent overexposure to chemicals must be incorporated into the JHA as necessary.

CARCINOGEN CONTROL

The Contractor must make every attempt to substitute less hazardous substances for any carcinogenic material (as defined by OSHA.) If hazardous materials containing carcinogenic components are used, the Contractor must ensure that exposures are eliminated or effectively maintained As Low as Reasonably Achievable (ALARA).

Where the Contractor's use of carcinogens may impact any Barton Malow project workers, Barton Malow or the property Owner may impose additional, specific controls upon the Contractor.

WORKSITE DUST CONTROL

Dust control must be addressed as part of the JHA. Outdoor areas to be cleared for construction must be limited to keep dust generation to a minimum. Fugitive dust emissions resulting from grading and/or wind must be controlled. Construction of permanent roadways and parking areas should be scheduled during the early stages of a project.

During construction renovation activities, barriers are to be installed as needed to prevent dust migration from construction areas to other occupied space. Sufficient equipment must be kept at the jobsite to control dust whenever a nuisance or hazard occurs. Indoors, dry sweeping is discouraged.

SANITATION

Housekeeping must be maintained on a daily basis. All work areas, shops and offices must be kept clean to the extent the nature of the work allows. Walking/working surfaces must be maintained, so far as practicable, in a dry condition. Waste receptacles that do not leak and may be thoroughly cleaned and maintained in a sanitary condition must be used. All sweepings, wastes, refuse, and garbage must be removed in a timely and sanitary manner. Cleaning and sweeping must be done in a manner, which minimizes the contamination of the air with dust or particulate matter. Building entrances and openings must be maintained to minimize the entry of vermin.

TOILET FACILITY

Adequate chemical toilets are available on the jobsite for use by workers. Chemical toilets must be serviced often enough to prevent overflowing and the creation of an unsanitary condition or nuisance. Toilets must be maintained in good repair so as to prevent leakage of the contents to the surrounding ground, floor, or other portions of the structure. Separate toilets will be available for females which will be locked and keys available for controlled use. Hand washing facilities or hand sanitizing units will be provided for all workers on site.

DRINKING WATER

Every day Contractors will provide fresh clean drinking water to their employees. Drinking water will be dispensed in containers with a tight sealing lid and labeled as "Drinking Water". Drinking water containers are to be cleaned daily and have tape around the lid with the date of service and contents on the tape. A trash receptacle must be located next to the container. Adequate cups will be made available at each drinking water container. Cups will be stored in a durable, clean dispenser. A trash can or other type receptacle will be provided to collect used cups. Contractors are responsible for cleaning up around the water container area. Use of common utensils (e.g., sharing the same cup) is prohibited.

PERSONAL EXPOSURE MONITORING

The Contractor must perform monitoring as necessary to document employee exposures to chemical and physical hygiene hazards, and to meet regulatory requirements. Negative exposure assessments are encouraged even when not specifically required by a substance-specific standard. Workers must be informed of monitoring results within the OSHA-specified timeframe. Co-located workers (who have similar exposure potential as those who were monitored) must also be informed of the results, after removing any personal/confidential information. The Contractor must notify Barton Malow of the results of monitoring as soon as they are obtained, and provide copies of the results, field notes and other associated documentation.

TEMPERATURE EXTREMES

Provisions to prevent heat stress must be incorporated into the project JHA(s) when work conditions may reasonably be expected to present such hazards. The Thermal Stress section of the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs) must be the governing guidelines.

HEAT STRESS

The Contractor must provide for appropriate mitigating measures prior to heat stress becoming an issue. The American Conference of Industrial Hygienists (ACGIH) threshold limit value (TLV) guidelines must be followed for developing and implementing heat stress mitigation strategies. The use of heat stress controls must be addressed during the planning stages for all work that is to be performed in elevated temperature environments, and whenever impermeable clothing or multiple layers of clothing must be worn to conduct work.

LIGHTING AND ILLUMINATION

The minimum lighting level for construction areas either indoors and outdoors must meet or exceed [OSHA Illumination](#) requirements. Auxiliary lighting must be used when needed for task specific activities. Care must be exercised with the use of halogen lamps so that fire hazards are not created.

VENTILATION

Local exhaust ventilation is a primary engineering control and is required to reduce concentrations of hazardous, irritating, and odiferous air contaminants below allowable exposure limits (where feasible). The operability of such systems must be evaluated prior to the start of the work. The [ACGIH's Industrial Ventilation manual](#) is the reference of standard for the design, testing and operation of ventilation systems. Ventilation systems requiring HEPA filtration should be leak or DOP tested at least annually to verify their effectiveness.

SILICA EXPOSURE

The Contractor is responsible for keeping worker exposures to silica at, or below, the American Conference of Governmental Industrial Hygienists' TLVs, or the limits as calculated in [OSHA's 1910.1000, Table Z-3](#), whichever is lower. In general, engineering controls such as wet methods or ventilation should be employed whenever dust-producing activities are anticipated. Dry cutting of silica containing materials is prohibited.

HEXAVALENT CHROMIUM

The [Construction Industry Chromium \(VI\) Standard 1926.1126](#) will apply to all work performed by the Contractor that may expose workers to airborne hexavalent chromium. The Contractor must be responsible for compliance with all requirements of the Standard.

ASBESTOS

No disturbance of suspect or known asbestos-containing materials must take place unless performed by trained, certified and authorized entities. If suspect asbestos-containing materials are unexpectedly encountered during the course of construction activities, the Contractor must immediately cease work and contact Barton Malow. Asbestos-containing construction/building materials must not be brought on-site.

The Contractor conducting asbestos-related work must be responsible for compliance with the [OSHA Construction Standard 1926.1101](#).

LASERS

Class 1 laser systems incorporated into commercially available devices for use by the general public are exempt from these requirements, unless opened, serviced or modified. Laser equipment must bear a conspicuously displayed label to indicate hazard classification. Laser

use must comply with OSHA requirements. Warning signs will be placed in laser use areas.

Users of Class 1, Class 1M, Class 2, Class 2M, Class 3a, or Class 3R lasers must read and abide by the safety documentation provided in the operator's manual. Only qualified and trained personnel may service, adjust, or repair laser equipment. Employees, when working in areas in which a potentially hazardous exposure to direct or reflected laser radiation exists, must be provided with anti-laser protection devices. Setup of lasers should be above or below the sightline of adjacent workers to eliminate worker exposure.

SAFETY SHOWERS AND EYEWASHES

Setup of a suitable station for quick drenching or flushing of the eyes and body (eyewash/shower apparatus) must be provided within the work area for immediate emergency use where the eyes or body of any person may be exposed to injurious corrosive materials, (e.g., corrosives, skin sensitizers, etc.). An eyewash/shower apparatus must be located such that it would require no more than 10 seconds to reach from the hazard. Access must be free of any impediments. For battery handling areas, a station for quick drenching of the eyes and body must be provided within 25 feet.

Employees who may have a need for an eyewash/shower apparatus must know where the nearest eyewash/shower apparatus is located and how to operate it. Monthly functional testing of eyewash/shower apparatus must be documented. The potable water provided for a portable eyewash/shower apparatus must be flushed or changed according to manufacturer's specifications.

IONIZING RADIATION

Radioactive materials, sealed radioactive sources, or devices that generate ionizing radiation must not be brought on the site without express written permission of the Barton Malow Safety Department. Any Contractor needing to bring radioactive material, sources or radiation-generating devices onto site must allow sufficient lead time in their schedule for review of their program, documentation, training records, other submittals, etc.

BLOOD-BORNE PATHOGENS

Employees who may reasonably be expected to be exposed to blood or other body fluids must comply with regulatory requirements relating to this subject. First aid kits must contain "Universal Precautions" items, including chemical splash goggles, medical gloves, cardiopulmonary resuscitation (CPR) masks (with oneway valve), antiseptic hand cleaner, drying cloths, and red bags labeled "BIOHAZARD." Medical waste generated as a result of first aid response must be placed in labeled red bags, and disposed of in accordance with state and local requirements.

OTHER HEALTH HAZARDS

Other hazards that may be present during the course of the Contractor's work which is not specifically addressed in this manual must be identified by the Contractor and addressed in their JHA(s). Contractors are encouraged to discuss their potential hazards in advance with a Barton Malow Safety representative. As appropriate, Barton Malow will coordinate with Contractors to help ensure minimal impact to the project schedule and the smooth coordination of logistics.

RESPONSIBILITIES

The provisions of this procedure apply to the development and implementation of the Contractor's IH Program. The Contractor must be responsible for implementing an effective IH program that:

- Identifies, evaluates, and controls potential and existing hazards/agents in the workplace through the pre-job safety planning process. This includes prevention.
- Is thoroughly designed to engineer hazards out of the workplace.
- Determines that engineering devices, administrative controls, and PPE are available, appropriate, tested, and utilized by employees.
- Determines employees are trained as required.
- Stops work that is not being safely performed.
- Reports occupational exposure data to affected employees in a timely manner.



EYE + FACE PROGRAM

APPLICABILITY

The requirements of this section apply to all Contractors' construction work activities on the site. This section provides the requirements for the use of eye and face protection, where substitution, engineering or administrative controls are inadequate to fully protect the worker's body (including eyes and face).

GENERAL RESPONSIBILITIES

The use of PPE is a control measure that is to be used only after a hazard evaluation identifies hazards associated with a particular job or activity, and it is determined that the hazards cannot be eliminated and/or controlled to an acceptable level through engineering design or administrative actions. Utilize process and engineering controls before PPE to protect employees.

Based on hazard evaluations conducted by Supervisors, employers shall identify and select, and each affected employee shall use, PPE and safety equipment that will provide appropriate protection in accordance with OSHA requirements.

The Contractor is responsible for supplying and requiring the wearing of appropriate PPE in all operations where there is an exposure to hazardous conditions and/or where this manual indicates the need for using such equipment to reduce the hazards to the employees.

TRAINING

Contractors must provide training to each employee who is required to use PPE. Each affected employee must show understanding of training to their specific PPE. Retraining may be necessary if work activities change or the employee exhibits lack of understanding of the PPE.

At a minimum, all personnel working on construction activities or in the field must wear safety glasses with rigid side-shields.

EYE AND FACE PROTECTION

Persons shall be provided with eye and face protection equipment for the specific jobsite hazards, when machines or operations present potential eye or face injury.

Eye and face protection equipment shall be distinctly marked to facilitate identification of the manufacturer. Employees shall use eye protection that provides side protection.

Eye and face protection equipment shall meet the requirements of ANSI/American Society of Safety Engineers (ASSE) Z87.1, and bear a legible and permanent "Z87" logo to indicate compliance with the standard.

When required by this regulation to wear eye protection, persons whose vision requires the use of corrective lenses in eyeglasses shall be protected by one of the following:

- Prescription safety glasses providing optical correction and equivalent protection.
- Protective glasses with side shields designed to fit over corrective lenses without disturbing the adjustment of the glasses.
- Goggles that can be worn over corrective lenses without disturbing the adjustment of the glasses.
- Goggles that incorporate corrective lenses mounted behind the protective lenses.

Operations that require the use of, or exposure to, hot or molten substances (for example, soldering, pouring or casting of hot metals, handling of hot tar, oils, liquids, and molten substances) shall require eye protection, such as goggles with safety lenses and screens for side protection, or face masks, shields, and helmets giving equal protection. Lens mountings shall be able to retain in position all parts of a cracked lens.

Operations that require handling of harmful materials (for example, acids, caustics, hot liquids, or creosoted materials) and operations where protection from gases, fumes, and liquids is necessary shall require the wearing of goggles with cups of soft pliable rubber and suitable face shields, masks, or hoods that cover the head and neck, and other protective clothing appropriate to the hazards involved.

Operations where protection from radiant energy with moderate reduction of visible light is necessary, including welding, cutting, brazing, and soldering, shall require eye and face protection suitable to the type of work, providing protection from all angles of direct exposure, and with lenses of the appropriate shade.

Glare-resistant glasses that comply with [ANSI Z80.3](#) with an ultraviolet A-region (UVA) and ultraviolet B-region (UVB) 99% filtration shall be worn when conditions require protection against glare. When conditions so warrant, polarized lenses shall also be considered.

Tinted or automatically darkening lenses should not be worn when work tasks require the employee to pass often from brightly to dimly lighted areas.

NOTES

- Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards must be provided.
- Operations involving heat may also involve optical radiation. Protection from both hazards shall be provided.
- Face shields shall only be worn over primary eye protection.
- Persons whose vision requires the use of prescription (Rx) lenses shall wear either protective devices fitted with prescription (Rx) lenses with side shields or protective devices designed to be worn over regular prescription (Rx) eyewear.
- Wearers of contact lenses shall also be required to wear appropriate covering eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.
- Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.
- Welding helmets or hand shields shall be used only over primary eye protection.
- Soft cap welding is not permitted unless it is specifically proven to be impossible to fit one's head in the space requiring access to perform welding activity, and that it does not expose the individual to any unnecessary hazards while performing the specific task. Any request to deviate from the use of a welding helmet will be temporary, evaluated by a Barton Malow Safety Professional, and documented in the work plan.
- Lenses with dark shade or tint will not be worn inside or in dark environments unless they are for a specified purpose such as cutting or welding operations.
- Close or form fitted safety glasses are available and required for use where excessive wind, dust, foreign object or debris are present and may have a tendency for bypassing a normal pair of safety glasses. Activities such as; installing overhead acoustical ceiling tile, cutting or sanding in a windy environment, and chipping and grinding are all examples.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

APPLICABILITY

The requirements of this section apply to all Contractors' construction work activities onsite. This section provides the requirements for the use of personal protective equipment, where substitution, engineering or administrative controls are inadequate to fully protect the worker's body (including eyes, face, feet, hands, head, and hearing) from hazards capable of causing injury, illness, or impairment of any bodily function.

GENERAL REQUIREMENTS

Personal protective equipment (PPE) is not a substitute for engineering and administrative controls. These controls must be implemented, to the extent feasible, to mitigate the hazard so that the need for PPE is reduced or eliminated. Contractors must provide PPE to its employees in accordance with OSHA requirements.

At a minimum, all Contractor personnel and visitors must wear sturdy work boots, long pants (no sweat pants), and shirts as prescribed by their health and safety plan. Personnel working on construction activities or in the field must also wear hard hats, safety glasses with rigid side-shields, task specific gloves at a minimum must be on your person and worn while performing, work and high visibility shirts or vests.

The Contractor is responsible for supplying and requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions and/or where this manual indicates the need for using such equipment to reduce the hazards to the employees.

Training

Contractors must provide training to each employee who is required to use PPE. Each affected employee must show understanding of training to their specific PPE. Retraining may be necessary if work activities change or the employee exhibits lack of understanding of the PPE.

SPECIFIC REQUIREMENTS

PPE Hazard Assessment and Selection

The appropriated PPE for the work being performed must be specified in the applicable JHA. The PPE selection must be based on the hazard assessment results conducted for the work activity. Examples of applicable hazard assessment documentation include:

- Job Hazard Analysis (JHA) or Pre-task Safety Plan (PTP)
- Fall Protection Plan
- Confined Space Entry Permit
- Hot Work Permit
- Energized Electrical Work Permit
- Other work control documents

The JHA must address at a minimum the following PPE requirements as applicable to the work activity:

- | | | |
|-------------------|---------------------------|----------------------|
| • Foot Protection | • Respiratory Protection | • Hearing Protection |
| • Hand Protection | • Head Protection | • Body Protection |
| • Fall Protection | • Eye and Face Protection | |

RESPONSIBILITIES

The Contractor must:

- Perform an assessment identifying hazards or potential hazards and determine necessary PPE for activities to be performed
- Include PPE requirements in JHAs, as applicable.
- Adhere to prescribed postings and/or pre-job planning documentation requiring the use of PPE.
- Provide adequate PPE for all employees.
- Properly maintain, use and store PPE.
- Remove damaged and/or defective equipment from service.
- Provide and document appropriate training on the use of PPE.

EYE PROTECTION FOR OVERHEAD WORK

Overhead work that can create dust, metal shavings, material particles or any other type of airborne debris requires the use of additional eye protection. Employees performing overhead work that can lead to exposure of airborne debris are required to wear foam-lined safety glasses, a face shield, goggles, or other type of eye protection that will prevent debris from entering behind the lens and into the eye. The use of standard safety glasses is prohibited for overhead work.

GLOVES

Protective work gloves will be worn while performing all construction work on the project site. When not working, gloves must be immediately available for use when needed, i.e., kept on your person. Hand and finger protection must be specifically addressed in the development of project-specific safety plans, JHAs and daily PTPs. The specific protection must be identified. Each employer's Competent Person must assist in recommending the correct glove for the work task. The specific type of glove is dependent upon the work task (see chart for some examples). In general, the wearing of cut resistant style gloves is preferred. If the glove use creates an additional hazard due to a particular work task, for example working near rotating equipment, gloves will not be worn for that specific task. The PTP will document glove use.

THE MINIMUM ANSI RATING FOR
GLOVES USED BY BARTON MALOW
EMPLOYEES IS ANSI A4



WORK GLOVE SELECTION

EXPOSURE	HAND PROTECTION
General maintenance, operation, material handling and housekeeping tasks	Appropriate work gloves are required. ANSI/ENN rated Level 1 cut resistant work gloves are preferred. Equivalent protection may be provided by leather work gloves Barton Malow employees are required to use, at a minimum an ANSI A4 rated glove.
Potential cut exposure, razor knife use, sheet metal work or other exposure to sharp edges	360-degree Level 2 or higher cut resistant required. Where there is potential exposure to the arm above the cuff of the glove, also use cut resistant sleeves. Barton Malow employees are required to use, at a minimum an ANSI A4 rated glove.
Temperature extremes	Nomex or Lined Kevlar
Chemicals	Review "Material Safety Data Sheet" for appropriate glove selection.
Bodily fluids	Nitrile or Latex
Welding and burning operations	Regular welding gloves
Energized electrical work	Energized electrical work is prohibited. Reference LOTO section for more information.



HAZARD COMMUNICATION

APPLICABILITY

Barton Malow is committed to preventing accidents and ensuring the safety and health of our employees. We will comply with all applicable federal and state health and safety rules. Under this program employees are informed of the contents of the [OSHA Hazard Communications Standard](#), the hazardous properties of chemicals with which they work, safe handling procedures and measures to take to protect themselves from these chemicals. These chemicals may be physical or health-related. A site-specific hazard communication plan will be available at all Barton Malow locations.

IDENTIFYING HAZARDOUS CHEMICALS

A list of all hazardous chemicals with a potential for employee exposure will supplement this plan. The site-specific hazard communication plan will identify where this information is kept for review. Detailed information about the physical, health, and other hazards of each chemical will be included in a Safety Data Sheet (SDS). The product identifier for each chemical on the list should match and be easily cross-referenced with the product identifier on its label and on its SDS.

IDENTIFYING CONTAINERS OF HAZARDOUS CHEMICALS

The site-specific hazard communication plan will follow the requirements of the [OSHA Hazard Communication Standard](#) to be consistent with the [United Nations Globally Harmonized System \(GHS\) of Classification of Labeling of Chemicals](#).

All hazardous chemical containers used on a project site will have:

- The original manufacturer's label that includes a product identifier, an appropriate signal word, hazard statement(s), pictogram(s), precautionary statement(s) and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.
- A label with the appropriate label elements just described.
- Workplace labeling that includes the product identifier and words, pictures, symbols, or combination that provides at least general information regarding the hazards of the chemicals.

All containers will be appropriately labeled. No container will be released for use until this information is verified. Workplace labels must be legible and in English. Small quantities intended for immediate use may be placed in a container without a label, provided that the individual keeps it in their possession at all times and the product is used up during the work shift or properly disposed of at the end of the work day. However, the container should be marked with its contents.

KEEPING SAFETY DATA SHEETS (SDS)

The manufacturer or importer of a chemical is required by OSHA to develop a SDS that contains specific, detailed information about the chemical's hazard using a specified format. The distributor or supplier of the chemical is required to provide this SDS to the purchaser. Employees can review the SDS for all hazardous chemicals used at this workplace at any time during their work shifts. The storage of a SDS will be denoted on the site-specific hazard communication plan.

A SDS will be updated and managed by a person designated on the site-specific hazard communication plan. If a SDS is not immediately available for a hazardous chemical, employees can obtain the required information at [MSDS.com](#).

OSHA HAZARD COMMUNICATION STANDARD PICTOGRAMS



HEALTH HAZARD

- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity



FLAME

- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides



EXCLAMATION MARK

- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity (harmful)
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (non-mandatory)



GAS CYLINDER

- Gases under pressure



CORROSION

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals



EXPLODING BOMB

- Explosives
- Self-Reactives
- Organic Peroxides



FLAME OVER CIRCLE

- Oxidizers



ENVIRONMENT (NON-MANDATORY)

- Aquatic Toxicity



SKULL AND CROSSBONES

- Acute Toxicity (fatal or toxic)

TRAINING EMPLOYEES ABOUT CHEMICAL HAZARDS

Before employees start their jobs or are exposed to new hazardous chemicals, they must attend a new hire Safety Orientation that includes hazard communication training covering the following topics:

- An overview of the requirements in [OSHA's Hazard Communication Standard](#).
- Hazardous chemicals present in their workplace.
- Operations in their work area where hazardous chemicals are used.
- Location of the written hazard communication plan and where it may be reviewed.
- How to understand and use the information on labels and in the SDS.
- Physical and health hazards of the chemicals in their work areas.
- Methods used to detect the presence or release of hazardous chemicals in the work area.
- Steps the Project Team has taken to prevent or reduce exposure to these chemicals.
- How employees can protect themselves from exposure to these hazardous chemicals through use of engineering controls/work practices and PPE.
- An explanation of any special labeling present in the workplace.
 - What are pictograms?
 - What are the signal words?
 - What are the hazard statements?
 - What are the precautionary statements?
- Emergency procedures to follow if an employee is exposed to these chemicals.

Prior to introducing a new chemical hazard into any department, each employee in that department will have access to information and training as outlined above for the new chemical hazard.

INFORMING EMPLOYEES WHO PERFORM SPECIAL TASKS

Before employees perform special (non-routine) tasks that may expose them to hazardous chemicals, their Supervisors will inform them about the chemicals' hazards. Their Supervisors also will inform them about how to control exposure and what to do in an emergency. The employer will evaluate the hazards of these tasks and provide appropriate controls including PPE and all additional training as required.

INFORMING CONTRACTORS AND OTHER EMPLOYEES ABOUT OUR HAZARDOUS CHEMICALS

If employees of other employer(s) may be exposed to hazardous chemicals at a Barton Malow project site, they will be provided with the following information:

- The identity of the chemicals, how to review Barton Malow's SDS, and an explanation of the container labeling system.
- Safe work practices to prevent exposure.
- A SDS for any hazardous chemical a Contractor brings into the project site. The SDS will be provided and added to the site-specific hazard communication plan.





CONFINED SPACES

APPLICABILITY

The requirements of this section apply to all Contractor activities which require personnel to work in permit-required and non-permit-required confined spaces onsite.

GENERAL REQUIREMENTS

All confined space work onsite will be in accordance with [OSHA Confined Spaces](#) regulations and Contractor-specific confined space entry requirements. Confined space entry permits must be kept on file for review.

CONFINED SPACE IDENTIFICATION, COMMUNICATION, AND COORDINATION

The controlling Contractor is the primary point of contact for information about permit spaces at the work site. Before entry operations, the Host Employer must provide information to the controlling Contractor about the location of each known permit space, hazards and potential hazards of each space, and any precautions implemented for the protection of employees by the Host Employer or previous controlling Contractors. The controlling Contractor provides this information and any additional information (confined spaces created by construction operations, hazards related to construction work, additional known hazards or precautions, etc.) to the Entry Employer(s). Before entry operations, the Contractor (Entry Employer) is responsible to obtain the controlling Contractor's information and inform the controlling Contractor of the permit space program they will follow, including likely hazards to be encountered or created in each permit space. After entry, the Contractor will inform the controlling Contractor of the permit system followed and any hazards confronted or created during entry operations. The controlling Contractor will debrief the Entry Employer and apprise the Host Employer of the information exchanged with the Entry Employer.

Before work begins, each Contractor will assure that a Competent Person:

- Identifies all confined spaces in which their employees may work.
- Identifies each space that is a permit space (including testing as necessary).

Each Contractor who identifies or receives notice of a permit space must:

- Inform employees by posting danger signs by each space
- Inform the employees' representative and the controlling Contractor of the existence, location, and the dangers posed by each space.
- Implement measures to prevent unauthorized employees from entering permit spaces.

The controlling Contractor and the Entry Contractor will coordinate entry operations when:

- More than one entity is engaged in confined space work at the same time.
- Other activities could foreseeably result in a hazard in the confined space.

CONFINED SPACE CLASSIFICATION

Prior to entry, all confined spaces will be evaluated by a Competent Person and classified as either permit required or non-permit based on the actual and/or potential hazards related to entry into the space while the confined space is in its normal operating condition.

When there are changes in the use or configuration of a non-permit confined space that might increase hazards or questions about the initial classification, the Contractor's Competent Person will reevaluate the space for possible reclassification as "permit required". A space

initially classified as a “permit space” may only be reclassified “non-permit” when the Competent Person has determined compliance with the standards for reclassification.

- The Contractor must document the basis for the redetermination
- The determination must be made available to each employee entering the space.
- Workers must immediately evacuate the space if hazards arise.

All confined spaces must be classified as either permit required or non-permit required.

LABELING AND SIGNAGE

When feasible, identified confined spaces are posted with a sign stating, “Confined Space, Entry by Permit Only” or “Caution, Non-Permit Confined Space, Contact Barton Malow’s Project Team Before Entering”. When signage is not feasible, Contractors will be informed of the location and classification of known confined spaces.

IDENTIFYING A CONFINED SPACE

All Contractors should be on the lookout for confined spaces. As defined by OSHA a confined space is:

- Large enough and so configured that an employee can bodily enter and perform assigned work.
- Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry).
- Is not designed for continuous employee occupancy.

NEW OR PREVIOUSLY UNIDENTIFIED CONFINED SPACES

There is a possibility that construction activities may create new confined spaces (such as new utility vaults, manholes, ventilation ducts, tanks, sumps, and/or elevator pits). It is also possible that, during construction, Contractors may encounter a confined space that has not been previously identified. During project design, Barton Malow will attempt to identify situations that may result in the creation of new confined spaces; however, it is not always possible to anticipate every potential confined space.

It is the Contractor’s responsibility to watch for new or previously unidentified confined spaces and to inform the Barton Malow Project Team whenever new confined spaces are identified or created.

HAZARD RECOGNITION

Confined spaces must be considered hazardous until determined to be otherwise. Hazards will be identified and evaluated by a Competent Person prior to entry. The Contractor must be watchful of confined space work activities that may increase hazards – such as Hot Work, painting, cleaning or electrical work. Such work may change a non-permit-required confined space into a permit-required confined space. The Contractor will continuously evaluate confined space conditions and will stop work if hazards increase or change. Additional controls must be implemented to control the new hazards.

VERIFICATION OF COMPLIANCE WITH CONFINED SPACE ENTRY

Barton Malow will require verification that the Contractor is able to safely perform confined space entries. The Contractor must have:

- A written program.
- A confined space Competent Person.
- Entry team/authorized personnel - adequate number of workers to staff an entry team including entry Supervisor and current and documented training.
- Functioning, calibrated, monitoring equipment and staff that are familiar with the use of the equipment.
- Appropriate PPE, ventilation equipment, supplemental lighting if necessary, and rescue equipment/plan.

Barton Malow and the Contractor will discuss acceptable entry conditions. Barton Malow may request a copy of the Contractor’s LOTO program if energy isolation is necessary. Barton Malow and the Contractor will determine whose permit system will be used – either Barton Malow’s or the Contractor’s. Project personnel may observe Contractor confined space entries until such time that they are comfortable that all performance expectations are being met.

CONFINED SPACE ENTRY CONTROLS

Entries into confined spaces must be controlled either through administrative controls for non-permit confined spaces or through the permit procedure for permit-required confined spaces. Controls for confined space entries include, but are not limited to:

- Mechanical ventilation
- Use of isolation procedures (LOTO)
- Cleaning of confined space
- Electrical precautions
- Fire precautions
- PPE
- Communication procedures
- Continuous atmospheric monitoring
- Immediate notice from responders if services become unavailable
- Continuous monitoring and warning system for non-isolated engulfment hazards

CONFINED SPACE ENTRY EXPERIENCE/HISTORY REVIEW

Barton Malow must inform Contractors of Barton Malow's experience, if any, with the confined space being entered, by reviewing [Attachment Q - Confined Space Entry Permit](#), associated confined space classification, and previous canceled permits for the space in question, if available.

CONFINED SPACE POST-ENTRY EVALUATION REVIEW

Contractors must inform Barton Malow of their experience with the permit-required confined space following the entry by utilizing the Debrief of Confined Space Entry section as part of the Contractor's accepted [Attachment Q - Confined Space Entry Permit](#). Completed permits must be turned in for review and cataloging.

CONFINED SPACE ENTRY NOTIFICATION

All confined space entries must be coordinated with Barton Malow's Project Team who will issue a [Attachment Q - Confined Space Entry Permit](#). Barton Malow will provide phone numbers and will instruct the Contractor of specific notifications to be made. Exact notification requirements may vary from job to job, particularly in cases of new confined spaces arising during construction.

TRAINING REQUIREMENTS

Contractors that are trained in accordance with the requirements identified in [OSHA 1926.1207 Confined Spaces in Construction](#), will be considered as meeting the necessary confined space entry training requirements for working onsite. The Contractor must provide Barton Malow's Project Team proof of such training prior to work starting.

All confined space entries must be coordinated with the Barton Malow Project Team.



CONCRETE + RESTEEL

APPLICABILITY

The requirements of this section apply to all Construction Contractors' and lower-tier Subcontractors' work activities involving concrete construction onsite.

GENERAL REQUIREMENTS

All vertical and horizontal rebar, form stakes, metal and/or plastic conduit, and/or small pipe stub-ups will be protected with approved caps or other industry accepted alternatives to protect against impalement and injury. Workers that operate vibrators, pump nozzles, and concrete buckets will wear appropriate eye and foot protection. It is highly recommended that long sleeve shirts be worn to protect against exposure of concrete to the bare skin and the possibility of concrete burn and contact dermatitis.

FALL PROTECTION

Workers engaged in vertical rebar assembly must comply with the project six foot fall protection rules. Positioning devices alone are not approved fall protection but can be used in conjunction with personal fall protection equipment. Walkways along form walls will be constructed in accordance with OSHA [Scaffold](#) and [Fall Protection](#) standards.

GENERAL PRACTICES

- Pre-fabricated forms and form making material will be stacked neatly at all times.
- When stripping concrete forms, all material will be immediately removed and stacked in an orderly manner.
- Forming material or debris will not block walkways and aisles.
- Contractor will remove rebar, tie-wire and other debris from the work area daily.
- No employee is permitted to ride a concrete bucket.
- Ensure that reinforcing steel and forms for walls, piers, columns, stairs and similar vertical structures are adequately supported to prevent overturning and collapse and are designed and installed under the supervision of a Qualified Person.
- Ensure that coiled wire mesh is adequately secured to prevent uncoiling.

ASSOCIATED EQUIPMENT PRACTICES

- Concrete buckets must have the following:
 - Discharge device that an employee can operate without being exposed to the load.
 - Safety devices that are self-closing and prevent premature or accidental dumping.
- Concrete buggy handles must not extend beyond the wheels on either side of the buggy.
- Follow safe rigging practices when handling concrete buckets.
- When using bull floats, inspect the area to ensure there is no energized equipment or nearby power lines.
- Rotating powered concrete trowels must be equipped with dead-man controls.



AERIAL LIFTS

APPLICABILITY

The requirements of this section apply to all Contractors' use of aerial lifts. The equipment covered under this procedure includes boom and scissor lifts and associated equipment. This includes either power or manually operated equipment.

GENERAL REQUIREMENTS

OPERATOR TRAINING AND CERTIFICATION

Contractors who provide and operate aerial lift equipment as part of a construction project or similar activity will be in compliance with all applicable OSHA requirements. At a minimum contractors must provide a copy of their employee's operator certification/license to Barton Malow, prior to operating an aerial lift. This certification/license must be current for the lift type they will be operating. (i.e., scissors, boom, manufacturer).

OPERATION

At a minimum the following must be considered while operating aerial lifts:

- Maintain 100% fall protection by utilizing dual lanyards as part of the fall protection system.
- Aerial lift gates will be properly engaged whenever the lift is in use.
- Suspend operations if wind conditions adversely affect the lift; this applies to wind speeds of 25 MPH or more dependent on manufacturer's recommendations.
- Travel in aerial lifts is prohibited while platform is elevated.
- Operating the lift controls from outside the basket is prohibited except in emergency situations.
- Aerial lifts must not be used as material hoists unless the load is contained within the basket and meets the lift's rated capacity and the material is secured.
- The lift must not be modified for hoisting material unless the manufacturer approves it in writing or a manufacturer approved material handling kit is used.

Operation Specific to Scissor Lifts:

- The use of a fall restraint device is preferred in scissor lifts.
- At heights less than 20 ft., the use of shock absorbing lanyards is not recommended.
- Scissor lifts are considered to be an aerial lift and must be used in accordance with [29 CFR 1926.452 \(w\)](#), related ANSI and manufacturer standards.

SCAFFOLDS

APPLICABILITY

The requirements of this section apply to all Contractors' construction work activities involving scaffolding onsite. All scaffolding used on this project will meet the requirements established in [Subpart L of OSHA 29 CFR 1926](#).

GENERAL REQUIREMENTS

Each contractor using scaffolds must designate a Competent Person to direct and supervise the erection and dismantling of all scaffolding on this project. The Competent Person will sign and attach one of the following color-coded scaffold tags to each scaffold:

- Green Tag: Scaffolding complete and ready for use.
- Red Tag: Scaffolding incomplete and not for use.
- Yellow Tag: Scaffolding usable but other hazards present per tag details.

The Competent Person will inspect the scaffolding daily prior to use and sign the tag at the time of inspection. The [Attachment AM - Daily Scaffold Safety Inspection Report](#) will be used to document these inspections.

TRAINING

Workers required to work from scaffolding will receive training on the following:

- Nature of any known hazards, such as electrical, fall or falling objects
- Correct method of erecting, maintaining, and disassembling fall protection systems
- Falling object protection system
- Proper handling of equipment or material on the scaffold
- Maximum load-carrying capacity of the scaffold
- Any other pertinent scaffold requirements

Prior to using any scaffolding, ensure that it has been inspected and scaffold tag has been signed by the Competent Person.

Scaffolding training records must be maintained and copies turned into the Barton Malow Project Team.

SCAFFOLD ERECTION

Prior to erection, all scaffolding components must be inspected for defects. Any damaged components found must not be used. Scaffolding will be erected on a firm foundation/footing. Scaffold poles, legs, posts, frames, and uprights shall bear on metal base plates. The metal base plates shall be on mudsills or other adequate firm foundation. Scaffold legs, poles, posts, frames and uprights will be pinned or locked to prevent uplift. No scaffold will be enclosed unless a qualified engineer designs and approves the attachment to the adjacent structure.

Scaffold platforms will be constructed with no space between the platform components. The space between the platform components and the scaffold uprights will not exceed one inch. Because of special circumstances such as building a scaffold around a pipe, the space opening between the scaffold and the object/structure cannot exceed 9 ½". Scaffold planks must extend past the horizontal support a minimum of six inches and not more than 12" unless cleated or restrained by hooks.

Scaffold plank will not be overlapped unless:

- Overlap occurs at a horizontal support.
- When the minimum planking overlap is 12", only scaffolding-grade planking must be used.

Ladders or stairs must be used to access any scaffold platform that is more than two feet above or below the point of access. End frames of tubular welded scaffold can be used as a ladder if the following criteria are used:

- Specifically designed and constructed as ladder rungs
- Rung length of at least eight inches
- Spacing between rungs not to exceed 16 ¾"
- A walk-through frame or gate is provided for access at each landing. No worker will climb up or down a scaffold using the cross bracing

Workers working below scaffolding will also be protected from falling objects. Scaffold will be equipped with toe plates, screening, debris netting, catch platforms, or a canopy structure.

SUSPENDED SCAFFOLDS

An erection and dismantling plan must be provided by the manufacturer and submitted to Barton Malow prior to mobilization of a suspended scaffold. A Competent Person will evaluate suspended scaffolding, anchorages, and suspension lines before each use. Workers working from suspended scaffolding will wear a full body harness attached to an independent vertical lifeline. When welding is required from swing stage scaffolding, the scaffold will be grounded and suspension ropes protected.

MOBILE SCAFFOLDS

Interior or dry wall scaffolding (Perry or Baker type scaffolding) greater than one section high will be equipped with outriggers. All other built-up scaffolding will follow the 4 to 1 rule. Wheels on mobile scaffolding will be locked in place when workers are working from it (self-propelling is prohibited).

MAST-CLIMBING WORK PLATFORMS

An erection and dismantling plan must be provided by the manufacturer and submitted to Barton Malow prior to mobilization. Fall protection must be provided when wall openings exist on the façade of the building in front of the work platform, the distance to the façade exceeds that permitted, the platform passes an inset in the façade or it extends past the façade. In accordance with [**ANSI A92.9-1993**](#) requirements, unless the scaffold is equipped with an emergency descent device, an evacuation plan from the platform must be developed. Building access is prohibited underneath scaffold platforms. System-specific training must be provided to all workers who will be on the work platform.

When working from mobile scaffolding, ensure that scaffold wheels are locked in place.



ENVIRONMENTAL REQUIREMENTS

APPLICABILITY

The requirements of this section apply to all Contractors' activities which have the potential to affect natural resources that include storm water, wetlands, streams, air quality, vegetation and wildlife. Potential impacts to existing historical and archaeological items, as well as historical and archaeological items unearthed during construction onsite, are also addressed in this section. Any exceptions to these requirements must be approved by Barton Malow.

GENERAL REQUIREMENTS

STORMWATER DISCHARGE REQUIREMENTS

Applicable permits will be obtained.

AIR EMISSIONS REQUIREMENTS

Barton Malow will direct Contractor or obtain any necessary air emissions permits.

FUGITIVE DUST

The Contractor must minimize fugitive dust whenever possible.

VEHICULAR EMISSIONS

Construction vehicles, equipment, and Contractor's personal vehicles must be operated to minimize emissions. Unnecessary idling of vehicles and equipment is prohibited. Idling of vehicles for occupant heating/cooling comfort is prohibited.

PIPE FLUSHING

Pipeline flushing of new water lines, storm and sanitary sewer lines, or fire line flushing requires preparation and approval by Barton Malow of a plan that describes the location and nature of activity to be performed, description of the discharge (duration, anticipated volume and rate, source of the water, potential pollutants in the water used), and the industry best practices to be used to prevent potential pollutants from reaching the storm drainage system, a stream, drainage channel, ditch or groundwater.

HIGH PRESSURE GAS BLOWS

Natural gas pipeline flushing with natural gas is prohibited without approval from the Barton Malow Safety Representative. Flushing/venting should be done in accordance with the [Chemical Safety Board guidelines](#). A JHA will be reviewed and accepted by the Barton Malow Project Team before any gas work is completed.

TRASH, CONSTRUCTION DEBRIS, AND SANITARY WASTE

The Contractor must provide waste storage and removal as required to maintain the construction site in a clean and orderly condition with periodic disposal of waste off-site. Open free-fall chutes and containers without lids are prohibited. Trash and debris is prohibited from migrating outside the construction area. All trash and debris is to be collected daily. Depending on where the trash and debris accumulates, cleaning as you go will be necessary. Barton Malow reserves the right to ask for trash and debris to be cleaned up right away if a hazardous condition exists. Debris netting will be required on handrail where trash and debris can become airborne. Never pile trash, debris or materials above protective measures in order to protect people below.

WASTEWATER

Barton Malow limits wastewater discharges to sewer or septic systems. Barton Malow does not permit other direct wastewater discharges to the environment, including land and surface water. Contact Barton Malow if such a volume is planned on a routine, periodic, or occasional basis.

HAZARDOUS WASTE

Contractors must contact the Barton Malow Project Team prior to any construction activity that will generate hazardous or chemical waste. All material will be disposed of in accordance with State, local and Federal requirements.

ASBESTOS

The use of Asbestos Containing Material (ACM) is not authorized. However, it is possible that unidentified ACM may be discovered during construction activity. Should ACM be discovered, the Contractor must stop the affected work and notify Barton Malow immediately.

NOISE

Noise levels will be kept as low as reasonably achievable.

PESTICIDE AND HERBICIDE USE

All pesticide and herbicide use must be approved by Barton Malow prior to application, and must be used in a manner consistent with its labeling.

TRAFFIC CONTROL

Barton Malow will develop and implement a traffic control program that addresses the movement of construction related vehicles to and from the site.

VEGETATION

Project design must attempt to minimize the elimination of existing trees/shrubs, which provide local wildlife habitat, reduce cooling needs in summer by providing shade, and remove carbon dioxide from the air, thus contributing to a reduction of greenhouse gases generated onsite. Those trees/shrubs that must be eliminated as a result of construction must be tagged/otherwise marked and noted on construction drawings.

NATURAL RESOURCES - WILDLIFE

Natural resource protection at a project is guided by The National Environmental Policy Act, The Migratory Bird Treaty Act, The Division of Wildlife Recommended Buffer Zones and Seasonal Restrictions for Raptors, The Threatened and Endangered Species Act, and other applicable state and federal wildlife guidelines.

The following topics represent areas that may impact individual project costs and schedules:

- **Other Wildlife Species:** Construction work must avoid adverse impacts to wildlife species, whenever possible.
- **Preservation of Historical Resources:** In the event potential archaeological items are unearthed or discovered during construction, work in the area must stop. The Barton Malow Project Team will make a determination within 24 to 48 hours if work on the construction site can continue. Potential archaeological items may not be moved or stockpiled upon discovery.
- **Wetland and Drainage Areas:** No jurisdictional wetlands have been identified onsite. Each Contractor must comply with the Storm Water Pollution Prevention Plan (SWPPP).

RESPONSIBILITIES

The provisions of this procedure apply to Contractors performing activities which have the potential to affect natural resources that include storm water, wetlands, streams, air quality, vegetation and wildlife. The Contractor and all lower-tier Subcontractors must be responsible for implementation and compliance with all federal, state and local laws as described above and referenced below.

A dark, blue-tinted photograph of a demolition site. In the background, a multi-story building is being dismantled by a large excavator. The foreground is filled with a chaotic pile of debris, including twisted metal, concrete fragments, and tangled rebar. The overall scene is one of active destruction and industrial activity.

DEMOLITION

APPLICABILITY

The requirements of this section apply to all Contractors' activities regarding demolition onsite.

GENERAL REQUIREMENTS

Prior to the start of any demolition work, the Contractor must ensure a Competent Person has performed an engineering survey of the building or area to be demolished to determine the condition and location of utilities, whether hazardous materials (such as asbestos, lead, and mercury) exist, means and methods of performing the work, sequencing, etc. No work will commence until a written engineering survey has been completed and has been submitted to and reviewed by Barton Malow and a written complete Demolition Plan has been submitted.

Debris and material must not be dropped through walls, floor holes, windows or other elevated work areas without the area below being barricaded and properly signed. Under no circumstances must materials be dropped more than 20 feet without using a chute.

Debris chutes must have a substantial gate at all elevated openings. [See Attachment AJ - Demolition Survey.](#)



BLASTING PROGRAM

APPLICABILITY

The requirements of this section apply to all Contractors' blasting activities onsite. Due to the hazardous nature of the use of blasting agents and explosive materials, planning is of utmost importance to protect workers during these operations. This section outlines the requirements for a site-specific blasting plan to achieve worker safety during these operations.

GENERAL REQUIREMENTS

- The Contractor shall develop and implement a site-specific blasting plan in accordance with [29 CFR 1926 Subpart U \(Blasting and the Use of Explosives\)](#) and all other applicable Local, State and Federal regulations, including [ANSI/ASSE A10.7-2011 Safety Requirements for Transportation, Storage, Handling and Use of Commercial Explosives and Blasting Agents](#).
- The Contractor shall obtain the proper explosive permits and notify the local authorities of the blasting operations.
- Blasting plan shall be submitted to Barton Malow for review and approval prior to any blasting.
- A copy of the blasting plan shall be maintained on-site and available for review.



REMOVAL/RELOCATION PLANNING

APPLICABILITY

This section applies to all utility removal or relocation activities performed by Contractors onsite. The objective of this procedure is to provide general information on removal or relocation of utilities. It is intended to give Barton Malow employees and Contractors practical information relating to the precautions to be taken when working and to ensure that no person is exposed to dangers to their own safety or health in connection with activities onsite.

GUIDELINES

Prior to the start of any removal/relocation work the [Attachment AR - Request for Removal/Relocation](#) will be filled out in its entirety with:

Work area description to include:

- Column location
- Level at which work is to be performed
- Drawings if applicable

Work to be performed:

- Describe in detail a general overview of the work to be performed within the specific work area (Ensure a Pre-Task Safety Plan (PTP) has been developed for scope of work and reviewed with this document).

Identification of specific items to be removed:

- Task-specific description of task being performed
- Describe type and amount for each utility

Barton Malow Supervisors and Safety Personnel will coordinate with affected Contractor to hold a site review with all affected trades. (Trades to review the disconnect work completed to allow the safe demolition of utilities and equipment):

- Electrical
- Plumbing
- Mechanical
- Communication
- HVAC
- Fire Protection

Disconnects: Each utility identified will be verified that color-coding is correct and visually inspected for air gapping at each end (3"-6" gap). Upon completion of verification process, all parties involved will agree work can proceed.

The PTP will be reviewed in the field with the work crew. To ensure that all utilities that were identified for removal are color-coded properly and air gapped. Any utilities that are to remain are to be pointed out and ensure that color-coding is still in place.

REVIEW COLOR CODING

RED

**LIVE AND TO REMAIN
DO NOT TOUCH**

Examples of utilities that will be marked red in the construction area are:

Energized Cable Tray, Conduit

Compressed Air Lines

Fire Alarm Systems

Natural Gas Lines

Emergency Lighting

Pneumatic Lines

GREEN

**ISOLATED AND AIR GAPPED
SAFE TO REMOVE**

Examples of utilities that will be marked green in the construction area are:

Electrical lines in the foot print area.

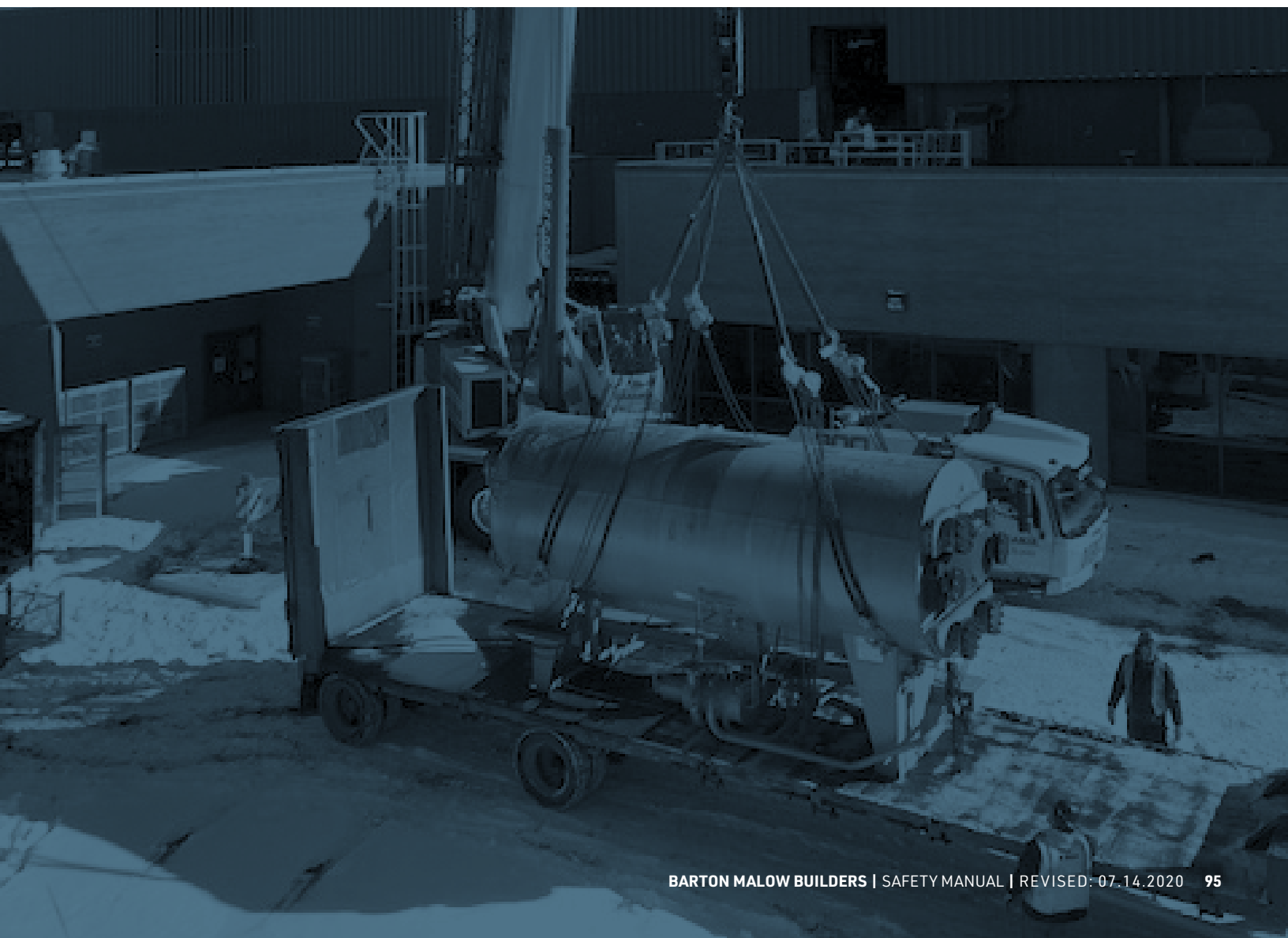
Mechanical lines, such as sanitary lines, pneumatic lines, air ducts, piping from the roof drains, etc.

DO NOT REMOVE ANY UTILITY MARKED IN RED, OR THAT IS UNMARKED.

NOTIFY SUPERVISOR IMMEDIATELY OF ANY UNMARKED OR NEWLY DISCOVERED UTILITY.

DO NOT DISTURB THAT UTILITY. ASSUME IT IS LIVE.

WORK WILL NOT BE PERFORMED WITHOUT COMPLETION OF ATTACHMENT - AR





RESPIRATORY PROTECTION PROGRAM

APPLICABILITY

The requirements of this section apply to Contractor's employees onsite who may be in environments requiring adherence to a respiratory protection program and the use of respirators. If unsafe levels of respiratory hazards are present during the course and scope of work, then Barton Malow employees and Subcontractor employees shall be protected from these levels of respiratory hazards and appropriate respirators shall be used according to [OSHA 1910.134](#) and this program. This program applies to all persons on Barton Malow projects, offices, or other locations who are required to wear respirators during the course and scope of their work.

RESPONSIBILITIES & PROGRAM ADMINISTRATION

Barton Malow Safety Leadership shall ensure the effectiveness of this program, and shall be responsible for administration, execution, recordkeeping, management, and annual review of this program for the company as a whole.

Barton Malow Safety or Barton Malow respiratory protection Competent Person(s) shall administer, execute, maintain records, and effectively manage this program on individual projects. All project supervisory personnel (Barton Malow & Subcontractor) shall be responsible for compliance with this program.

Subcontractors may be required to provide respiratory protection for Barton Malow projects in order to comply with this program.

If Barton Malow and Subcontractor disagree on the existence or level of respiratory hazard, then the Barton Malow determination or assessment shall be applied.

Individuals who are provided and authorized to wear a respirator, shall use, maintain, and store their respirators in a manner consistent with their training and the respirator manufacturer's instructions.

GENERAL REQUIREMENTS

Barton Malow and/or Subcontractors shall determine if respiratory hazards may exist at unsafe levels at a project, work location, or during the completion of a task. Such determination shall be made by a Competent Person(s), and may be accomplished by methods such as, but not limited to:

- Examination of current or upcoming work activities
- Observation of the presence of dust, fumes, vapors, or odors
- Project inspections
- Job Hazard Analysis (JHA) or Pre-Task Safety Plans (PTP)
- Gas detectors or air sampling
- Information in Safety Data Sheets (SDS) or product specs

If it is determined that respiratory hazards exist at unsafe levels, then the exposing Contractor, or creating Contractor, or both must submit a respiratory hazard protection plan to Barton Malow Project Management and/or Safety. The respiratory protection plan shall be approved by Barton Malow and must comply with [OSHA 1910.134](#).

Engineering controls shall be applied first when respiratory hazards are found to expose employees to unsafe levels above an OSHA Permissible Exposure Limit (PEL), or Threshold Limit Value (TLV), or limits provided in an SDS.

If engineering controls alone do not limit the exposure to safe levels, then respiratory protective equipment (respirator) shall be used in addition to the engineering controls. Respirators shall not be used without first applying engineering controls.

Respirators shall be defined as a respiratory device with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element. This includes:

- Any National Institute for Occupational Safety and Health (NIOSH) rated negative pressure particulate respirator with a filter as part of the facepiece or with the entire facepiece as the filtering medium. This includes N95 & P95 filtering facepieces, and half / full facepiece respirators.
- Atmosphere supplying respirators
- Positive pressure respirators
- Self-contained breathing apparatus (SCBA)
- Any other respiratory protection device defined as a respirator in [OSHA 1910.134\(b\)](#).

Nuisance dust masks are defined as a loose fitting (single strap) filtering facepiece respirator that is not NIOSH tested or approved. Nuisance dusts masks are not N95 or P95 rated, and do not have NIOSH labeling on the box or the unit. Nuisance dust masks are designed and intended only for nonhazardous particulates and they do not offer protection against hazardous gases, fumes, or dusts.

If respiratory hazards or respiratory conditions are determined to be Immediately Dangerous to Life or Health (IDLH) a Barton Malow Safety Professional must be contacted and informed of the IDLH conditions before any work may proceed in the IDLH atmosphere.

Hazards or conditions are considered to be IDLH if they pose an immediate risk of death, serious/irreversible adverse health effects, or may prevent safe escape from such conditions. An atmosphere of less than 19.5% oxygen shall be considered IDLH.

For IDLH conditions, a Barton Malow Safety Professional must be involved in the planning and execution of work. Other considerations or precautions may be required to properly address all the hazards of IDLH conditions.

CONTROL METHODS

Appropriate engineering controls and proper PPE for IDLH conditions must be selected and implemented. To eliminate, control, or mitigate respiratory hazards, a hierarchy of controls are to be used in the following order:

1. Eliminate or substitute (preferably through design) using engineering controls
2. Control & protect (water, dust collection, local exhaust, ventilation)
3. Train and inform (procedures, exposure time limitations)
4. PPE (respirator, SCBA)

A combination of engineering controls may be used to effectively control or mitigate respiratory hazards.

Engineering controls must be planned, implemented, used, and maintained in a manner that provides the required and adequate level of protection for the affected employees.

Engineering controls must be applied to any employees that are affected by a respiratory hazard.

RESPIRATOR SELECTION

Respirators shall be selected by a Competent Person based on relevant factors to ensure that affected employees are adequately protected from the hazards.

In general, respirator selection may take the following into consideration:

- Type, quantity, and severity of the respiratory hazard
- NIOSH, ANSI, OSHA, ACGIH recommendations or requirements
- SDS information
- Workplace conditions
- Employee fit and comfort
- Respirator reliability
- Other pertinent factors

If Barton Malow or its Subcontractor determines that respirator use is required:

- Affected employees shall be provided with respirators selected by Barton Malow or its Subcontractor Competent Person.
- Employees may not provide their own respirators

If Barton Malow or its Subcontractor Competent Person determines that respirator use is not required, but an employee wants to wear a respirator voluntarily:

- The employee must provide their own respirator.
- Voluntary use shall be in accordance with [OSHA 1910.134 Appendix D](#).
- The employee must complete and sign [Attachment W - Barton Malow Voluntary Respirator Use Agreement](#).

Nuisance dust masks may not be used to protect against respiratory hazards that require the use of a respirator for protection.

Nuisance dust masks may be used voluntarily or under the direction of Barton Malow or Subcontractor only when the following conditions apply:

- Barton Malow or its Subcontractor Competent Person determines that no respiratory hazard above PEL, TLV, or SDS standards exist.
- Respirator use is not required, and dust masks are not being used in lieu of respirators.

RESPIRATOR MEDICAL EVALUATION

A medical evaluation must be completed before an employee may use any type of respirator for any activity or task, or for any duration of time.

Medical evaluation for the use of respirators shall consist of the following:

- Employee completion of the [OSHA Respirator Medical Evaluation Questionnaire \(RMEQ\) \(1910.13 Appendix C\)](#).
- Employee shall be permitted to complete the RMEQ during company paid time
- Review and evaluation of the RMEQ by a physician or other licensed health care professional (PLHCP)
- Any initial or follow up medical examination of the employee if requested by the PLHCP
- Written results of the RMEQ from the PLHCP. Such results shall not include any Health Insurance Portability Accountability Act (HIPPA) protected information.

Additional medical examinations may be required if:

- Employee reports signs or symptoms of illness or injury that may be related to the use of a respirator or exposure to respiratory hazards.
- A Barton Malow administrator of this program or a PLHCP determines that a reevaluation is required.

There are significant changes in the workplace or work activities that may affect type or level of respiratory hazard, or that may result in a substantial increase in the physiological burden placed upon the affected employee(s).

Records of the RMEQ and medical examination results shall be entered and maintained in Barton Malow project records for the duration of the project, and shall be entered into permanent electronic records as prescribed in Barton Malow recordkeeping policies.

Employees shall have the opportunity to discuss the RMEQ or any medical examination with the PLHCP.

Medical evaluations and examinations may be discontinued when respirator use is discontinued.

RESPIRATOR FIT TESTING

- Upon completion of the RMEQ (and medical examination if necessary), employees who will wear and use tight fitting respirators (half face or full face) must be Fit Tested prior to wearing or using.
- Fit testing is not required for employees using loose fitting, nuisance dust masks.
- Fit testing may be qualitative or quantitative.
- Fit testing must be performed by a person thoroughly trained and competent in fit testing procedures
- Instructions and recommendations for fit testing procedures provided by manufacturers of fit test kits (such as 3M) shall be followed.
- Facial hair, eyeglasses, or any other circumstance that may interfere with the seal of the respirator shall be considered when selecting respirator users, and during fit testing. Respirators must be able to form a tight seal as per the manufacturer's recommendations, and the seal must pass the fit test.
- A record of completed fit test shall be entered and maintained in Barton Malow project records for the duration of the project, and shall be entered into permanent electronic records as prescribed in Barton Malow recordkeeping policies
- Medical evaluation and fit testing shall be repeated in accordance with ANSI Standards based on age as follows:
 - Up to 35 years old = every 5 years
 - 36 to 45 years old = every 2 years.
 - Annually for employees 46 years old and older.
 - Any time when an employee experiences a change in their medical condition.
 - Any time when work conditions or respirator types change substantially affecting the exposure or safety process.

RESPIRATORY HAZARD AND RESPIRATOR USER TRAINING

Barton Malow Respiratory Protection Competent Person(s) shall complete Respiratory Protection Competent Person Training and shall have sufficient knowledge and experience to recognize respiratory hazards and effect engineering controls and protections for such hazards. They shall also have the authority to stop work and take corrective action when necessary due to respiratory hazards in the workplace.

For projects where respiratory hazards may exist Barton Malow managers and Supervisors shall be required to complete Respiratory Protection Training for Managers.

Barton Malow employees who may encounter respiratory hazards on Barton Malow projects or work activities shall be trained to recognize those hazards, how to avoid those hazards, how to protect themselves from those hazards, and how to report those hazards to a Supervisor.

Barton Malow Subcontractor's who are deemed as respiratory hazard exposing or creating Contractors shall provide Respiratory Hazard training for their Competent Persons, Managers, Supervisors, and employees as required. Barton Malow may require documentation of such training to be submitted to Barton Malow project team or Safety Department.

Employees who are evaluated, fit tested, and authorized to wear a respirator shall be trained on the following topics:

- Respiratory hazards and the potential health effects
- Symptoms of exposure
- Identifying the respiratory hazard
- Respiratory PPE requirements, limits, and capabilities
- Physical/medical conditions that may limit or affect the safe use of respirators
- Purpose of the medical evaluation and fit testing
- Proper donning, fit, use, cleaning, maintenance, and storage of respiratory PPE
- Seal check the respirator using a negative or positive pressure test
- Identifying improper fit or incorrect use of respirator
- Use of respirators in emergency situations
- Correction of basic respirator malfunctions
- Properly reporting respirator problems and hazards

Respirator User Training shall be documented on [**Attachment AT - Barton Malow Respirator User Authorization and Training Record**](#) (or equivalent form). Such record shall be entered and maintained in Barton Malow project records for the duration of the project, and into permanent electronic records as prescribed in Barton Malow recordkeeping policies.



SILICA PROTECTION + EXPOSURE CONTROL PROGRAM

APPLICABILITY

The requirements of this section apply to all Contractor's employees who may be exposed to respirable crystalline silica onsite.

REQUIREMENTS

Barton Malow employees and Subcontractor employees on Barton Malow projects shall be protected from unsafe levels of silica hazards according to [OSHA 1926.1153](#) and [ANSI Z88.2: Practices for Respiratory Protection](#).

RESPONSIBILITIES & PROGRAM ADMINISTRATION

- Barton Malow Safety Leadership shall be responsible for administration, execution, recordkeeping and management of this program for the company and shall evaluate the effectiveness of the program annually.
- Barton Malow Safety or Barton Malow Respiratory & Silica Protection Competent Persons may administer, execute, maintain records, and manage this program on individual projects. All project Supervisory Personnel (Barton Malow & Subcontractor) shall be responsible for compliance with this program.
- Subcontractors exposed to respirable silica are required to provide Silica Competent Persons for Barton Malow projects in order to comply with this program.
- If Barton Malow and Subcontractor disagree on the existence or level of silica hazard, then the Barton Malow determination or assessment shall be applied.
- Employees affected by this program shall be expected to adhere to its provisions and comply fully with its requirements. Failure to do so may result in disciplinary action.

GENERAL REQUIREMENTS

Barton Malow and/or Subcontractors shall determine if respirable silica hazards may exist at unsafe levels at a project, work location, or during the completion of a task. Such determination shall be made by a Competent Person(s), and may be accomplished by methods such as but not limited to:

- Examination of current or upcoming work activities
- Observation of the presence of dust that may contain silica
- Project inspections
- Job Hazard Analysis (JHA) or Pre-Task Safety Plans (PTP)
- Air sampling
- Information in Safety Data Sheets, product specs, or other reliable objective data

If it is determined that silica hazards exist or shall exist at or above the OSHA Action Level of 25ug/m³ calculated as an 8-hour Time Weighted Average (TWA), then the exposing Contractor, or creating Contractor, or both must submit a written silica exposure control plan in compliance with [OSHA 1926.1153\(g\)](#) and a Respiratory Protection Plan in compliance with [OSHA 1910.134](#) to Barton Malow Project Management and/or Safety.

Engineering controls shall be applied first when silica respiratory hazards are found to expose employees to unsafe levels above the OSHA Permissible Exposure Limit (PEL) of 50 ug/m³ calculated as an 8-hour TWA.

If engineering controls alone do not limit the exposure to safe levels, then respiratory protective equipment (respirator) shall be used in addition to the engineering controls. Respirators shall not be used without first applying engineering controls.

Respirators shall be defined as a respiratory device with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element. This includes:

- Any NIOSH rated negative pressure particulate respirator with a filter as part of the facepiece or with the entire facepiece as the filtering medium. This includes N95 & P95 filtering facepiece respirators, and half/full facepiece respirators
- Atmosphere supplying respirators
- Positive pressure respirators
- Self-contained breathing apparatus
- e. Any other respiratory protection device defined as a respirator in [OSHA 1910.134\(b\)](#).

Nuisance dust mask shall be defined as a loose fitting (usually single strap) filtering facepiece respirator that is not NIOSH tested or approved. Nuisance dusts masks are not N95 or P95 rated, and do not have NIOSH labeling on the box or the unit. Nuisance dust masks are designed and intended only for non-hazardous particulates and they do not offer adequate protection against silica or other hazardous gases, fumes, or dusts. Nuisance dust masks shall not be used for protection from silica hazards.

CONTROL METHODS

Appropriate engineering controls and proper PPE for IDLH conditions must be selected and implemented. To eliminate, control, or mitigate respiratory hazards, a hierarchy of controls are to be used in the following order:

1. Eliminate or substitute (preferably through design) using engineering controls
2. Control & protect (water, dust collection, local exhaust, ventilation)
3. Train and inform (procedures, exposure time limitations)
4. PPE (respirator, SCBA)

A combination of engineering controls may be used to effectively control or mitigate respirable silica hazards.

Engineering controls must be planned, implemented, used, and maintained in a manner that provides the required and adequate level of protection for the affected employees.

Engineering controls must be applied to any employees that are engaged in a silica exposing activity or task. Engaged shall be defined as:

- Operating the tool or equipment involved in the silica hazard task
- Helping with the silica hazard task
- Having some responsibility in the silica hazard task
- Being affected by the silica dust in excess of the OSHA PEL 50ug/m³ calculated as an 8 hour TWA

Engineering controls need not be applied for persons simply in the vicinity or passing by, and not being affected by the silica dust in excess of the OSHA PEL 50ug/m³ per 8 hour TWA.

SITE SPECIFIC ENGINEERING CONTROLS

For tasks or silica hazards listed in [OSHA 1926.1153](#) – Table 1, Barton Malow and Subcontractors shall use and comply with Table 1 below:

TABLE 1: SPECIFIED EXPOSURE CONTROL METHODS WHEN WORKING WITH MATERIALS CONTAINING CRYSTALLINE SILICA

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM ASSIGNED PROTECTION FACTOR [APF]	
		≤ 4 HOURS/ SHIFT	> 4 HOURS/ SHIFT
(i) Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions.	None	None
(ii) Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade.	None	APF 10
	Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions: When used outdoors When used indoors or in an enclosed area	APF 10	APF 10
(iii) Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	For tasks performed outdoors only:	None	None
	Use saw equipped with commercially available dust collection system. Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.		
(iv) Walk-behind saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade.	None	APF 10
	Operate and maintain tool in accordance with manufacturer’s instructions to minimize dust emissions: When used outdoors When used indoors or in an enclosed area	APF 10	APF 10

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM ASSIGNED PROTECTION FACTOR [APF]	
		≤ 4 HOURS/ SHIFT	> 4 HOURS/ SHIFT
(v) Drivable saws	<p>For tasks performed outdoors only:</p> <p>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</p>	None	None
(vi) Rig-mounted core saws or drills	<p>Use tool equipped with integrated water delivery system that supplies water to cutting surface.</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</p>	None	None
(vii) Handheld and stand-mounted drills (including impact and rotary hammer drills)	<p>Use drill equipped with commercially available shroud or cowling with dust collection system.</p> <p>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</p> <p>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</p> <p>Use a HEPA-filtered vacuum when cleaning holes</p>	None	None
(viii) Dowel drilling rigs for concrete	<p>For tasks performed outdoors only:</p> <p>Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</p>	APF 10	APF 10

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM ASSIGNED PROTECTION FACTOR [APF]	
		≤ 4 HOURS/ SHIFT	> 4 HOURS/ SHIFT
(ix) Vehicle-mounted drilling rigs for rock and concrete	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. OR Operate from within an enclosed cab and use water for dust suppression on drill bit.	None	None
(x) Jackhammers and handheld powered chipping tools	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact: When used outdoors When used indoors or in an enclosed area	None APF 10	APF 10 APF 10
	OR		
	Use tool equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism: When used outdoors When used indoors or in an enclosed area	None APF 10	APF 10 APF 10
	Use grinder equipped with commercially available shroud and dust collection system.	APF 10	APF 25
(xi) Handheld grinders for mortar removal (i.e., tuckpointing)	Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.		

EQUIPMENT/TASK	ENGINEERING AND WORK PRACTICE CONTROL METHODS	REQUIRED RESPIRATORY PROTECTION AND MINIMUM ASSIGNED PROTECTION FACTOR [APF]	
		≤ 4 HOURS/ SHIFT	> 4 HOURS/ SHIFT
(xii) Handheld grinders for uses other than mortar removal	For tasks performed outdoors only: Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism: When used outdoors When used indoors or in an enclosed area	None None None	None None APF 10
	Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. OR Use machine equipped with dust collection system recommended by the manufacturer. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None None	None None
(xiii) Walk-behind milling machines and floor grinders			
(xiv) Small drivable milling machines (less than half-lane)	Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None	None

BARTON MALOW SILICA TABLE 1 ADDENDUM

EQUIPMENT/TASK	ENGINEERING CONTROLS	REQUIRED PPE & MINIMUM APF	
		≤ 4 hours/shift	> 4 hours/shift
Manual sweeping of dust that contains silica			
Mechanical sweeping (Broce Broome Sweeper or similar) of dust that contains silica	THIS SECTION TO BE REVIEWED AND CONSIDERED BY BARTON MALOW SAFETY LEADERSHIP		
Spray or patch fireproofing that contains silica			
Sanding of drywall joint compound that contains silica			



For tasks or silica hazards not in OSHA Table 1 or Barton Malow Table 1 Addendum, Barton Malow and/or Subcontractors shall ensure that no employee is exposed to airborne respirable crystalline silica in excess of OSHA PEL 50ug/m³ calculated as an 8 hour TWA. This shall be accomplished by a Competent Person conducting an exposure assessment using the performance method or the scheduled monitoring method described in [OSHA 1926.1153\(d\)\(2\)](#).

If water is used as an engineering control, it must be applied at a rate sufficient to eliminate visible dust. Water must be applied at the point of operation, and the flow must be sufficient to control the dust. If dust collection is used as an engineering control, it must not discharge silica dust in a manner that may affect others in the vicinity.

During silica exposing activities in enclosed areas, indoors, or areas of a building that are protected by a roof, an effective mechanical exhaust or ventilation shall be used to prevent the accumulation of airborne silica dust.

For routine housekeeping procedures, dry sweeping that creates an airborne silica dust exposure shall not be permitted if it is feasible instead to use sweeping compound, wet sweeping, or HEPA vacuum.

Leaf blowers or compressed air shall not be used to remove silica dust from floors, walls, or similar surfaces if such use creates a silica exposure hazard. Leaf blowers or compressed air shall not be used to remove silica dust from a person or their clothing if such use creates a silica exposure hazard.

RESPIRATOR USAGE

If respirators are required in addition to engineering controls, their selection, medical evaluation, fit testing, and training shall be done in accordance with the Barton Malow Respiratory Protection Program, and [OSHA 1910.134](#) requirements.

For silica protection, respirators must have a minimum Assigned Protection Factor (APF) of 10 or better. Nuisance dust masks, bandanas, or similar methods shall not be permitted for protection against silica hazards.

MEDICAL SURVEILLANCE

Barton Malow employees who wear or use respirators for more than 30 days in a calendar year shall be provided with medical surveillance services at no charge and at a reasonable time and place to the employee.

Medical surveillance services shall comply with [OSHA 1926.1153\(h\)](#). It shall be provided by a Physician or other Licensed Health Care Professional (PLHCP) and shall include the following:

- Initial examination with review of work history and anticipated exposure to silica dust
- A physical exam with emphasis on respiratory health
- A chest x-ray
- A pulmonary function test
- A test for latent tuberculosis infection
- Any other tests deemed appropriate by the PLHCP
- An explanation of the results to the employee by the PLHCP

SILICA HAZARD TRAINING & HAZARD COMMUNICATION

Employees who may be exposed to silica hazards shall be trained in the following:

- Health hazards of respirable silica
- Work activities that may result in respirable silica exposure
- Barton Malow measures (engineering controls, work practices, and respirators) used to protect employees from the hazards of respirable silica

Barton Malow Hazard Communication Program (HAZCOM) shall include respirable silica as a hazard. Employees shall have access to Safety Data Sheet (SDS), labels, PPE, and training as required in the HAZCOM program.



HEAT STRESS PREVENTION PROGRAM

APPLICABILITY

Many Barton Malow jobsites are located in warm climates. These include employees working at locations internationally whose primary climate is mild to extremely hot, year round. Working in hot conditions poses many safety and health hazards to the workers. Heat related illnesses and accidents range from acute to chronic. This program addresses ways to minimize and control these hazards.

Barton Malow Safety Leaders and project leadership are responsible for reducing heat-related illnesses and disorders for all Barton Malow and Subcontractor employees.

RESPONSIBILITIES

SAFETY REPRESENTATIVES

The Barton Malow Safety Team (Representatives) has the primary responsibility for assisting job sites in implementation of these best methods through training, education and support.

The Barton Malow Safety Team should be available to monitor the heat exposure of individual jobs and make recommendations to reduce heat stress risk. If employees must work for extended periods (i.e. more than one continuous hour/day) outdoors during hot weather or above the Threshold Limit Value (TLV) for heat exposure, project leadership shall be trained in the prevention of heat stress. This training includes the signs and symptoms of heat stress and preventive measures that should be taken. A plan addressing the specific needs of the project should be implemented based on the hazards and resources present.

SUPERINTENDENTS

Superintendents have the primary responsibility for providing training, sources of drinking water, and supporting personnel in adjusted work schedules to reduce heat exposure during heat events.

Superintendents and supervisors are responsible for ensuring employees who are working in hot environments take necessary precautions as outlined in the section titled Control of Heat Stress of this program.

Superintendents and Managers have the primary responsibility for the implementation of the Heat Stress Prevention in their work area. Although the ultimate responsibility for the safety of employees lies within the employee, supervisors should use available resources to control the hazards present on the job. Heat stress prevention techniques include:

- Evaluation of the work to be performed and the potential impact from hot weather on the personnel performing the work.
- Provide adequate break areas and hydration stations.
- Provide drinking water and/or electrolyte replacement drinks.
- Allow acclimatization of workers to hot environments.
- Work/rest schedule.
- Scheduling of work to reduce heat stresses as appropriate.
- Training of employees in the prevention and identification of heat related illnesses.

Employees are to be made aware that they will face no repercussions for working to protect themselves and others from experiencing a heat stress event. Scheduling should be completed with the relative climate in mind. Budgeting for items to mitigate heat stress hazards should also be completed on the forefront to avoid any unnecessary financial implications.

EMPLOYEES

Employees should attend training and follow the guidelines given to them by their supervisor (when) in regards to Heat Stress prevention. Employees are also responsible for monitoring themselves for signs and symptoms of heat stress and notifying their supervisor in the event of a hazard becoming apparent or inevitable. Employees should constantly monitor themselves and those around them for signs of heat stress. Remember, when you realize you have a problem, it is usually already too late. Prevention is the best practice in regards to heat related illnesses.

PREVENTION

Four environmental factors affect the amount of stress a worker experiences in a hot environment: temperature, humidity, air velocity and radiant heat. Examples of radiant heat include direct heat from the sun or a furnace. Job-related factors that affect heat stress include work rate and physical effort required, type of clothing and protective equipment used, and duration of activity. All of these factors should be evaluated in order to minimize their impact on the worker. Personal characteristics such as age, weight, physical fitness, and acclimatization to the climate in a given location also need to be factored in order to determine those people and areas at high risk.

HEALTH DISORDERS

The human body regulates high temperatures by two primary mechanisms; blood flow and sweating. Blood is circulated to the skin, increasing the skin temperature and allowing the body to give off the excess heat through the skin. Sweating occurs when the body senses the heat loss due to increased blood circulation is not enough to cool the body. Evaporation of the sweat cools the skin and eliminates large quantities of heat from the body. If the body is unable to release excess heat, it will store it. When this happens, the body's core temperature rises and the heart rate increases. If the body continues to store heat, the person may begin to have difficulty concentrating, may become irritable and lose the desire to drink. The next stage is often fainting which would signal a medical emergency.

TABLE 1: COMMON HEAT DISORDERS, SYMPTOMS, AND APPROPRIATE FIRST AID MEASURES

DISORDER	CAUSE	SIGNS & SYMPTOMS	TREATMENT
Heat Cramps	<ul style="list-style-type: none"> • Heavy sweating • Loss of salt 	<ul style="list-style-type: none"> • Painful spasms of arms, legs, and abdomen • Sudden onset hot, moist skin 	<ul style="list-style-type: none"> • Drink water • Massage cramped area • Rest
Heat Exhaustion	<ul style="list-style-type: none"> • Dehydration • Non-acclimatized 	<ul style="list-style-type: none"> • Heavy sweating • Intense thirst • Pale, moist, cool skin • Rapid pulse • Fatigue, weakness • Fainting, collapse 	<ul style="list-style-type: none"> • Move to shade or an air-conditioned space • Rest, lying down, legs elevated • Loosen clothing • Drink water
Heat Stroke	<ul style="list-style-type: none"> • Excessive exposure to hot environments • Body's system of temperature regulation fails • Body temperature rises to critical levels 	<ul style="list-style-type: none"> • High body temperature • Lack of sweating • Hot, red, dry skin • Rapid pulse • Chills • Difficulty breathing • Disoriented weakness • Unconsciousness 	MEDICAL EMERGENCY <ul style="list-style-type: none"> • Call for emergency help • Immerse person in water • Massage body with ice

WORKPLACE SURVEILLANCE

Work being done in non-air-conditioned indoor spaces should be monitored by the superintendent. Employees identified as working in a high-risk area will need to follow the guidelines in Table 2 and the section Control of Heat Stress. Employees who are working outdoors or in non-air-conditioned space should pay attention to the temperature, humidity and heat stress indices. When the heat stress index, as defined in Table 3, exceeds the extreme caution level of 90 F, precautions as outlined in Table 2 and the section Control of Heat Stress should be followed. If employees are wearing protective clothing such as welding leathers or tyvek for asbestos or other assigned work, precautions as outlined in Table 2 and the section Control of Heat Stress should be followed at a heat index in excess of 88 F.

If the heat stress index exceeds 120 F, or 118 F for workers with protective clothing, work in a heat stress environment should stop. If it is imperative that work gets done, contact a Barton Malow Safety representative for additional assistance. A plan should be developed using engineering and administrative controls to mitigate the hazards present.

GUIDELINES FOR HEAT EXPOSURE LIMITS

Always monitor signs and symptoms of heat-stressed workers. Discontinue any activity for a person when:

- Sustained heart rate greater than 160 beats per minute for those under 35 and 140 for those 35 and over.
- There are complaints of sudden and severe fatigue, nausea, dizziness, lightheadedness, or fainting.
- There are periods of inexplicable irritability, malaise or flu-like symptoms.
- Sweating stops and the skin becomes hot and dry.

TABLE 2: APPARENT TEMPERATURE, HEAT STRESS INDEX [HSI]*

RELATIVE	ENVIRONMENTAL TEMPERATURE									
HUMIDITY %	70	75	80	85	90	94	100	105	110	115
0%	64	69	73	78	83	87	91	95	99	103
10%	65	70	75	80	85	90	95	100	105	111
20%	66	72	77	82	87	93	99	105	112	120
30%	67	73	78	84	90	96	104	113	123	135
40%	68	74	79	86	93	101	110	123	137	151
50%	69	75	81	88	96	107	120	135	150	
60%	70	76	82	90	100	114	132	149		
70%	70	77	85	93	106	124	144			
80%	71	78	86	97	113	136	EXTREME DANGER			
90%	71	79	88	102	122					
100%	72	80	91	108						

*Apparent temperature, Heat Stress Index (HSI): A measure of how hot it really feels in degrees Fahrenheit when relative humidity is factored with the actual air temperature. This chart has been adapted from the National Weather Service's "heat index" and an adjustment has been made with the apparent temperature categories to match more closely working in full sunshine. This guideline should be followed for employees not wearing protective clothing.

CATEGORY	APPARENT TEMPERATURE (°F)	DANGERS
Extreme danger	Greater than 120	Heat stroke imminent
Danger	105-120	Heat exhaustion likely
Extreme caution	90-105	Heat cramps, exhaustion possible
Caution	80-90	Exercise more fatiguing than normal

TRAINING

Employees who work in hot environments will receive yearly training regarding heat disorders, and their recognition, prevention and treatment. Training for jobs that are seasonal may need to be scheduled prior to the hot season. New employees should receive training prior to working in a hot work environment. That training may include locations of break and rest areas and the resources contained within those such as water, misting fans, etc. Supervisors should be advised to give adequate breaks for workers, and workers should be advised to take breaks as necessary to avoid a heat related illness. Training on PPE used to mitigate hazards should be given if necessary for job completion. Those items may include, long sleeve shirts, Tyvek, cooling cloths for neck and helmet use, etc.

CONTROL OF HEAT STRESS

The following guidelines should be followed to prevent heat-related disorders.

ENGINEERING CONTROLS

Heat may be controlled through general ventilation and spot cooling by local exhaust ventilation at the point of high heat production. Shielding may be needed for protection against radiant heat sources. Other control measures include opening windows or using fans to create airflow. Outdoor work areas need to have a shaded area accessible to the employees. Shaded areas can be created by using tarps or canopies or equipping tractors with canopies or cabs.

An example of how the policy could be implemented on site is providing a shade tent, some chairs or a picnic table, a portable fan for air movement, and a source of clean potable water for a cool down area. The closer the cool down area is to the work activity, the more effective it will be in reducing heat illness. Multiple cool down areas may be needed depending on the size of the project.

A work activity that should have at least one cool down area is any activities that involve being up on the roof. Workers are directly exposed to the sun with little to no shade opportunity for breaks. Bringing in artificial shade, i.e. shade tents, will help with heat illness and prevent a potential incident.

ACCLIMATIZATION

Employees need to adapt to new temperatures. This adaptation period is usually 5 days. New employees and employees returning from an absence of two weeks or more may need a 3-5 day period of acclimatization. This period could begin with 50% of the normal workload the first day and gradually build up to 100% on the last day. Age, experience, weight, and other factors may influence the amount of time needed to acclimate to a given climate.

An example of how the policy could be implemented is by having your newer worker complete tasks that aren't strenuous for the first 3 days on site and gradually give the worker more labor intensive tasks until the worker is comfortable enough in the elements to be working at full capacity.

WEATHER CONDITIONS

Check weather conditions frequently during the day and adjust the work schedule. It might be appropriate to change the actual hours of work to minimize working during the heat of the summer months. Heavy work should be scheduled for the cooler hours of the day. Non-essential tasks should be postponed when there is a heat warning issued.

An example for utilizing proper planning and coordination with the weather is roofing activities. Trades arrive early in the morning to do layout and other work activities prior to the sun's heat becoming a problem. Once the sun's heat becomes an issue, the crew(s) are moved to another work task.

WORK/REST CYCLES

Heavy and minimal work activities should be alternated. Tasks should be rotated among workers. Employees should be allowed sufficient breaks in a cool area to avoid heat strain and promote recovery. Shade or an air-conditioned break room should be provided.

An example of this best practice is when the temperature is over 85 degrees, a minimum of 55 minutes working and 5 minute rest should be provided. When temperatures exceed 90 degrees, coordination may be needed to increase the rest time provided within the working hour. Using this method, it is important to remember that production will start to go down due to an increase in taking breaks. Rest should be taken in areas where the employee can rehydrate, use facilities, and remain in a cooler location until work resumes.

PERSONAL PROTECTIVE EQUIPMENT

During work in hot environments, workers should use the lightest weight or “breathable” protective garments that give adequate protection. For work in extremely hot environments, cooling towels and cool vests are available from several manufacturers. These vests typically provide 1-2 hours of cooling, recharge in 20 minutes, and maintain a constant temperature of 55 F. For example, cooling towels typically provide about 30 minutes of cooling with an easy refresh rate of a few minutes while a new towel is found or the existing towel is rinsed in cool water and then placed back onto the body.

An example of this best practice would be to budget for additional purchases of PPE including lightweight and breathable shirts that uphold the safety policies put in place for visibility of the worker. Other PPE that can be budgeted for and purchased are sun visors that go over the hard hat, cooling cloths for the neck, and other cooling devices such as vests. Advising workers to wear appropriate clothing for the task being performed as well as the climate in the area is important.

FLUID INTAKE

Fluids, such as water or electrolyte replacement drinks, i.e. Gatorade, need to be conveniently available to workers so they can drink about 8 oz. of liquids every 20 minutes. The ideal temperature for liquids should be 50 – 60 °F. For remote outdoor work locations this means providing a cooler of liquids and ice that the workers can transport with them to the location.

An example of this best practice is to have water kegs and bottles in close proximity to the work area(s) so that the employees do not have to travel far to get them. Another practice is to budget and purchase sports drinks or another similar product to help replenish electrolytes in the workers. Squenchers brand in particular do not have a lot of salt and sugar so it is safe to have in larger quantities.

TRAINING

Employees should be trained prior to working in a high heat area to be aware of the hazards of working in the heat, how to recognize heat-related illnesses and procedures for first aid and medical attention. They should also be aware of the methods used to avoid heat-related illnesses, including how some things, which happen off the job, can increase the risk of heat illnesses at work.

An example of this best practice is to have this training included in orientation before the worker begins work to be performed on site. Education is extremely important to help the employee be smarter and safer. Other training for heat illness could include weekly tool box talks, stand downs, and daily muster meetings.

ACTIONS TO TAKE IN CASE OF EMERGENCY

There are varying forms of heat stress illnesses that may occur. Should a heat related event occur, the worker should be evaluated by medical professionals capable of treatment or advanced notification of other needed resources (911). This should be completed on a case by case basis.

Heat cramps is often the first sign of a looming emergency if left untreated. If an employee is experiencing heat cramps they should be moved to a cool area immediately. Rehydration and rest is essential treatment. If symptoms persist, they should be treated by advanced medical personnel. That may include Emergency Medical Services (EMS) or other medical professionals.

Heat exhaustion occurs after a worker is exposed to high temperatures for too long and is accompanied by dehydration. Symptoms may include profuse sweating, confusion, weakness, fatigue, nausea, cramps, rapid heartbeat, etc. If left untreated, heat exhaustion will progress into a heat stroke. If a worker is experiencing heat exhaustion, they should be moved into a cool, preferably air conditioned area immediately. Removal of excess clothing or PPE, rehydration, sitting or lying down, or being placed in a cool source of water safely may help to ease their symptoms and lessen further damage to the body from heat exhaustion. If symptoms persist or treatment is unavailable, advanced medical attention is always necessary.

Heat stroke occurs when a worker is left untreated after experiencing less serious events such as heat cramps or exhaustion. Heat strokes can cause brain damage or death when left untreated. Symptoms may strike even if there were no previous signs of heat stress from the individual. Symptoms of heat stroke include a core temperature of 104 °F or greater, confusion, dizziness, rapid heartbeat that may be strong or weak, red and dry skin, lack of sweating, seizures, unconsciousness, etc. Advanced medical attention is paramount for a worker experiencing a heat stroke. First aid should be given to the worker until EMS arrives.

EXAMPLES OF UTILIZING RESOURCES



By placing posters on job boards around the site, we can help the worker remain aware of the dangers and signs of heat stress throughout the day.

If permanent structures cannot reasonably be established, utilizing the locations natural shaded areas may be sufficient for workers taking breaks. However, if at all possible, provided fans, water, and chairs should be considered in these areas as well as permanent areas.



Wearing appropriate PPE for the task should never be compromised, however, consideration of clothing and PPE can help the worker remain more comfortable in extreme heat.



If possible, a permanent or semi-permanent rest area should be established for workers to utilize. There, fans, misting fans, water, chairs, picnic tables, etc. can be set up for easy access.

REFERENCES

American Conference of Governmental Industrial Hygienists. TLVs and BEIs. 1999

U.S. Environmental Protection Agency. A Guide to Heat Stress in Agriculture. Publication number EPA-750-b-92-001. May 1993

U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health. Criteria for a Recommended Standard. Occupational Exposure to Hot Environments. Publication number 86-113.1986

U.S. Department of Labor, Occupational Safety and Health Administration, Instruction TED 1.15, OSHA Technical Manual, Section II: Chapter 4, Heat Stress. September 22, 1995

COLD STRESS PREVENTION PROGRAM

APPLICABILITY

Barton Malow's work site locations include all types of weather climates including moderate to extreme cold and wet environments. These weather extremes can pose health and safety concerns to onsite workers. Employees exposed to extreme cold or cold and wet environments are at risk for cold stress. Short-term exposure to extreme cold or longer exposure to cold can lead to serious health problems including but not limited to hypothermia and frostbite.

RESPONSIBILITIES

SAFETY REPRESENTATIVES

The Barton Malow Safety Team is responsible for assisting jobsites in implementing the best methods to prevent cold stress through proper training, education, or engineering and administrative controls measures.

The Barton Malow Safety Team should be available to monitor cold stress conditions and make recommendations to reduce the risks of cold stress. If employees must work for extended periods in cold or extreme cold that might cause frostbite or hypothermia, project leadership shall be trained in the prevention of cold stress. The training includes identifying the signs and symptoms of cold stress and the preventative measures that must be taken. The plan addressing the specific needs of the project should be implemented based on the hazards and resources present.

SUPERINTENDENTS

Superintendents have the primary responsibility to identify work activities that put workers at risk to cold stress. The superintendent will also provide cold stress training and educational materials to site workers.

The superintendent will use engineering and administrative industry best practices to prevent cold stress. These include:

- Ensuring workers are appropriately dressed and stay covered, including extremities.
- Employees should never touch cold metal surfaces with bare skin.
- Requiring additional breaks in warm break rooms or environments.
- Monitoring and rotating employees working in cold environments.
- Providing adequate amounts of drinking water to keep workers hydrated, instructing workers to limit caffeine intake.
- Educating workers on how to identify and report cold-related injuries or illnesses.
- Advising workers to maintain a change of clothes in case clothing becomes wet.
- Allowing workers time to acclimate to site conditions.
- Scheduling work activities to minimize extreme cold and wind.

EMPLOYEES

Employees should attend training and follow the guidelines given to them by their supervisor in regards to cold stress. It is the employee's responsibility to notify their supervisor of signs and symptoms of cold stress. Keep in mind that cold environments can exacerbate pre-

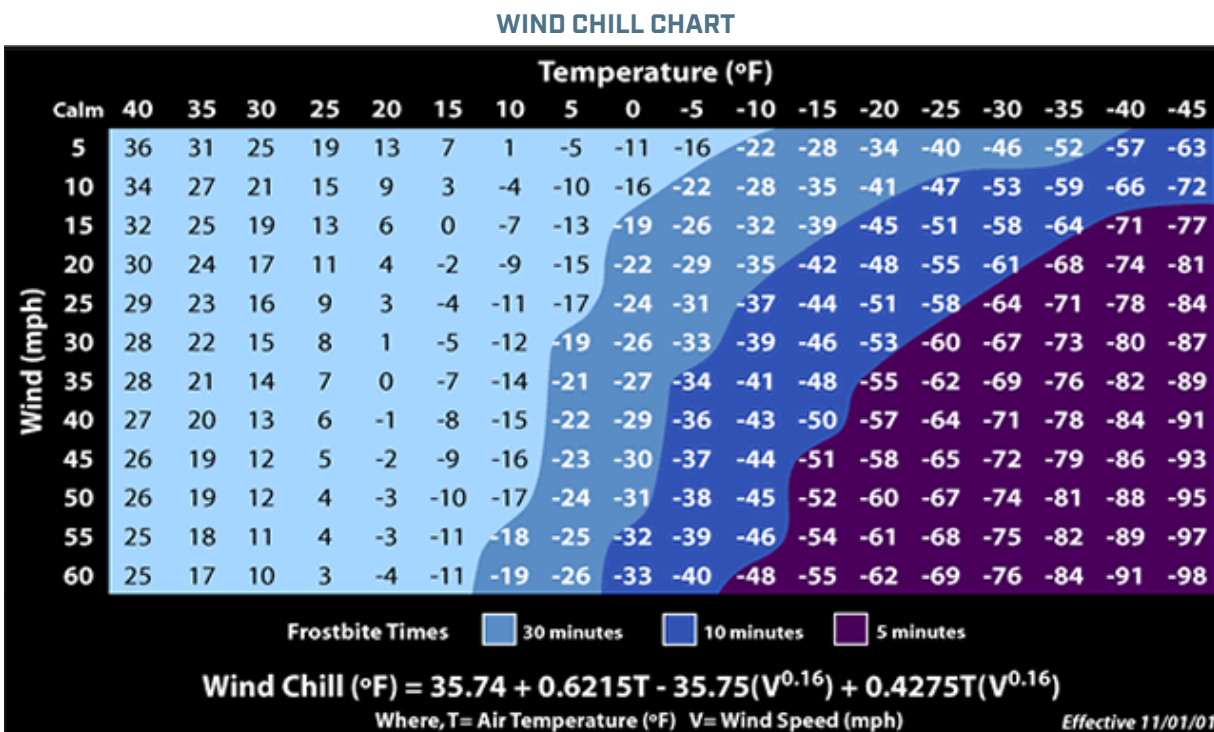
existing medical conditions.

Employees will mitigate the risk of cold stress by doing the following:

- Wearing appropriate clothing for weather conditions. This may include clothing designed to keep the worker not only warm but also dry. Best practices include:
 - Multiple layers of dry, loose-fitting clothing.
 - Inner and middle layers should be made of wool, silk, or synthetic materials for moisture-wicking and insulation; outer layers should be windproof and waterproof and allow for some ventilation.
 - Avoid tight or restrictive clothing.
 - A hat or hood, including a knit mask if necessary. Protect your ears, face, and hands.
 - Insulated, waterproof gloves and boots.
 - Carry an extra change of clothes, and change out clothing if it becomes wet.
 - Do not allow bare skin to be exposed to extreme cold.
- Staying hydrated
- Drinking hot non-caffeinated beverages
- Monitoring conditions for signs and symptoms of cold stress
- Avoiding overly strenuous activities

PREVENTION

Cold climates and environments affect worker's health in varying degrees. Personal characteristics such as age, weight, physical fitness, heart and lung disease, and diabetes can determine whether an employee can or cannot tolerate cold stress. Cold stress is determined by the temperature, humidity, and air velocity. The National Weather Service's wind chill index chart shown below illustrates how wind and cold together cause the potential for frostbite.



ENGINEERING CONTROLS

Some engineering controls include:

- Providing warm, dry areas where employees can spend breaks
- Providing a wind barrier
- Installing localized heat

ADMINISTRATIVE CONTROLS

ACCLIMATIZATION PROTOCOL

New and relocated employees who are new to working in a cold stress environment will be gradually introduced to the cold environment during the first week of the job. This involves gradually increasing their time in cold environments to that of a fully-acclimated employee.

JOB ROTATION

Job rotation is a good way to limit the amount of time employees are in cold, wet environments.

BREAKS

Employees shall take breaks in warm, dry areas and will have access to warm beverages (e.g., coffee, tea, etc.). Supervisors must assure break areas are easily accessible, kept warm, and that employees take regular breaks.

HEALTH DISORDERS

The following are symptoms of cold stress. If workers experience any of these symptoms or suspect that someone else has, they should notify their supervisor.

HYPOTHERMIA

- Early signs may include shivering and excessive moving around to try to generate heat.
- Moderate to severe symptoms include the cessation of shivering, loss of coordination, confusion, dilated pupils, slowed pulse and heartbeat.

FROSTBITE

- The affected area is red with white or gray blotches in addition to blisters in severe cases.
- The affected area is numb but firm or hard to the touch.

TRENCH FOOT

- Feet are numb, swollen, or red; blisters may be present.

WORKPLACE SURVEILLANCE

Factors that may contribute to cold stress:

- Temperatures at the worksite
- Whether employees work outdoors and are exposed to weather
- Working indoors in a unheated or insulated cold storage warehouse facility
- Wind speed
- Time of day
- Amount of time spent working in the cold
- How acclimatized employees are to cold temperatures
- Physical contact with cold objects or liquids

- Clothing and PPE employees are required to wear
- Physically strenuous work
- Lack of shelter from wind or cold temperatures

FIRST AID PREPAREDNESS

- Coordinate with medical personnel ahead of time to ensure readiness for an emergency.
- Ensure that first aid personnel are readily available and can be reached quickly in an emergency.
- Locate on site first aid kits.
- Keep first aid kits stocked with chemical hot packs.

EMERGENCY RESPONSE AND TREATMENT

Employees that show symptoms of cold stress shall be immediately removed from the cold environment for treatment. In the event of a medical emergency, call 911.

HYPOTHERMIA

- Call 911 for severe symptoms of hypothermia.
- Move the individual to a warm, dry area.
- Replace any wet clothes with dry layers.
- Wrap the individual in layers of blankets and cover their body with a tarp or garbage bag to trap water vapor; leave their face uncovered.
- If medical help is more than 30 minutes away, attempt to keep the individual warm by placing warm bottles or hot packs around their torso and giving them warm, sweetened beverages. However, do not attempt to give a drink to an unconscious person.
- If the individual is not breathing or has no pulse:
 - Call 911.
 - Follow the instructions for treatment above, but do not try to give the individual any liquids.
 - If there is no breathing or pulse after 60 seconds, trained employees may begin rescue breathing for the individual or administer a defibrillator if one is present. CPR may also be administered at the direction of the 911 operator or emergency medical responder.

FROSTBITE

- Obtain medical assistance as soon as possible.
- Take actions to warm the individual's body, but do not attempt to treat or re-warm the affected area directly before getting medical help. Avoid rubbing or applying coverings or water to the affected area; leave any blisters intact.

TRENCH FOOT

- Obtain medical assistance as soon as possible.
- Remove the individual's shoes and socks and keep their feet warm and dry.



TOOL TETHERING PROGRAM

APPLICABILITY

The purpose of the Tool Tethering Program is to establish guidelines for eliminating falling tools while working at heights. This Program is intended to significantly reduce both hazards and the risk of serious injury to employees posed by falling objects from. The requirements of this section apply to Barton Malow employees and the employees of subcontractors and sub-subcontractors who perform construction activities on the jobsite.

RESPONSIBILITIES

SAFETY REPRESENTATIVES

The Barton Malow Safety Team has the primary responsibility for assisting locations in implementation of the Tool Tethering Program.

Barton Malow's Safety Team is available to assist in assessing site specific hazards and will arrange for training of Superintendents and other necessary personnel. This training may include recognition of situations that may present the hazard of tools being dropped, as well as preventative measures that should be taken to mitigate the hazard. A plan for site-specific needs should be implemented based on the hazards.

SUPERINTENDENTS

Superintendents have the primary responsibility for providing training, proper personal protective equipment (PPE) and ensuring compliance from all personnel.

Superintendents and Supervisors are responsible for ensuring employees, who are working directly above or adjacent to, individuals at a lower level, are utilizing preventative measures such as netting systems and toe boards, and active controls such as tool tethering and equipment to protect individuals and property below.

Superintendents and Project Managers have the primary responsibility for the implementation of the Tool Tethering Program in their work area. Although the ultimate responsibility for the safety of employees lies with the individual employee, Supervisors shall use preventative measures to control the hazards present on the job.

This includes:

- Evaluating the work to be performed
- Communicating the work
- Providing ready access to equipment
- Ensuring workers are familiar with work being done below or adjacent to
- Scheduling of work to reduce hazards as appropriate
- Providing documented training for employees

EMPLOYEES

Employees shall attend training and follow the guidelines given to them by their supervisor in regards to the Tool Tethering Program.

They are also responsible for monitoring themselves and others and notifying their supervisor in the event of a hazard. Employees should constantly monitor their work area and those areas around them for situations where a dropped tool may cause injury or property damage. Prevention is the best practice in regards to struck-by falling tools on the construction site.

PREVENTION

ENGINEERING CONTROLS

Hazards may be mitigated by use of engineering controls such as netting systems, toe boards, tool tethers, barricades, etc. Cordoning off areas may be necessary to reduce risks associated with unnecessary foot traffic. Engineering controls must be inspected. Workers are required to be trained on the proper use of the equipment. ANSI has developed procedures regarding the testing and has been adopted in this program as standard practice. [American National Standard ANSI/ISEA 121-2018.](#)

ADMINISTRATIVE CONTROLS

Administrative controls may be used to mitigate hazards that cannot be controlled otherwise. Controls may include:

- Scheduling of activities to prohibit elevated work at specific times
- Requiring that certain work activities involve specific equipment to be used
- Purchasing additional signage to inform of falling tools hazard
- Job-specific administrative controls shall be communicated to all personnel

TOOL TETHERING

When the coordination huddle determines tools shall be tethered, follow the guidelines noted below:

- Hand tools that weight five pounds or less will be tethered to either the workers hands, arms, or harness D-rings
- Hand tools in excess of 10 pounds will only be tethered to the MEWP platform or structural steel, not to the employee in any way
- Machine tools (i.e. mag drills, impact wrenches, etc.) must be tethered to structural steel only
- Acceptable tethers for hand tools may be "squiddies", elastic cords, vinyl coated wire rope or similar with carabiners. All tethers shall be rated for use with the specific tools weight.
- Acceptable tethers for machine tools are chain, wire rope, and wire or nylon slings
- Homemade tethers or lanyards are not permitted to be used

UTILIZING RESOURCES



Workers operating above others should utilize every precaution to ensure objects cannot fall from their level, potentially striking those below.



Utilization of tool tethers is a simple, inexpensive, and effective way to keep tools and other objects connected secured to the worker.

Accessories are available to connect to a wide variety of objects. Weight and application specifications should be followed by the worker to ensure effectiveness.



MOBILE ELEVATED WORK PLATFORMS

APPLICABILITY

Barton Malow owns and leases Mobile Elevated Work Platforms (MEWPs) for use on projects across the United States, Canada, and Mexico. The purpose of this program is to provide project teams with the guidance needed to operate MEWPs properly and safely. This program will define the protocol for equipment procurement, and explain the training and inspection requirements for managers, supervisors, operators, and occupants.

RESPONSIBILITIES

SAFETY REPRESENTATIVES

The Barton Malow Safety Team Representative is responsible for ensuring that all MEWPs training is conducted in accordance with the ANSI A92.22 and A92.24 Standards, and applicable Federal and State Occupational Safety and Health Regulations.

Typical training options include:

- In-house instructor led training.
- Third party instructor led training.
- On-line computer training.

Training requirements:

- Training is in accordance with ANSI A92.22 and A92.24.
- Cover all applicable OSHA, Federal, State, client, company and project requirements.
- Supervisors, operators and occupants must receive the required training for their respective role.

Personnel using MEWPs must be able to provide proof of training upon request.

SUPERINTENDENTS

Superintendents or supervisors using MEWPs have the primary responsibility to properly execute the MEWPs safe use plan. Prior to commencement of work, a risk assessment (see sample form included in this section) will be performed by the superintendent or supervisor. The risk assessment will determine the type of MEWPs suited for the work to be performed.

Supervisors that order, lease, or direct the use of MEWPs will be trained on the following:

- The ANSI A92.22 Standard for Safe Use.
- The ANSI A92.24 Standard for training requirements for use, operation, inspection, testing and maintenance of MEWPs.
- Their role as a supervisor of MEWP's operators and occupants.
- Barton Malow's equipment specifications as noted above.
- Performing a MEWPs risk assessment.
- Inspecting work area(s) for potential hazards or changing conditions.

- The MEWP types and proper selection.
- Rescue procedures needed for the equipment selected.
- Monitoring the safe use of the equipment.
 - Prohibiting untrained workers from operating equipment.

EMPLOYEES

All employees performing tasks which require the use of a MEWP must be properly trained on the safe use of the assigned MEWP.

Operators must be trained in the following:

- ANSI A92.22 standard for Safe Use.
- ANSI A92.24 Standard for training requirements for use, operation, inspection, testing and maintenance of MEWPs.
- Familiarization training for occupants. The operator will instruct the occupant(s) on the following:
 - How to use fall protection and the location of fall protection anchors.
 - How their actions could affect stability.
 - How to safely use MEWP accessories they are assigned to use.
 - How to adhere to the safety plan and avoid site-specific hazards
 - How to complete emergency procedures in line with manufacturer's warnings and safety information.
- Inspecting work area for potential hazards.
- Documentation requirements.
- Rescue procedures.
- Personal equipment.
- Use of ground controls.
- Inspecting and testing equipment.
- Notifying supervisor of an equipment damage, malfunction, or concerns.
- Annual and regular inspections.
- Notifying supplier of equipment damage or malfunction.

Occupant training is provided by the operator and includes:

- How to use fall protection and the location of fall protection anchors.
- How their actions could affect stability.
- How to safely use MEWP accessories they are assigned to use.
- How to adhere to the safety plan and avoid site-specific hazards.
- How to complete emergency procedures in line with manufacturer's warnings and safety information.

EQUIPMENT PROCUREMENT

When procuring equipment that is categorized as a MEWP, it must be compliant with the applicable ANSI A92.20 design requirements for MEWPs. Barton Malow requires that all new or used MEWP will be equipped as follows:

- A control protection device that will stop the MEWP from operating if the operator is caught between the control panel and an adjacent structure.
- Foam filled tires.
- Self-closing gates.
- The new ANSI A92.20 design requirements for MEWPs manufactured after December 2019.

RISK ASSESSMENT

Attachment AU - Supervisor's Risk Assessment Form is required to be completed for all tasks involving MEWPs. For reference, an example of a completed risk assessment form is included on the next page.

The Supervisors of the tasks requiring the use of MEWPs will conduct and complete a risk assessment. If the work tasks, site conditions, crew, and equipment remain unchanged, one risk assessment form is sufficient. The intent of the risk assessment is to ensure the safe use of the equipment by trained operators and occupants.

ANSI Standard A92.22 requires the need for users to have a rescue plan. Supervisors responsible for workers in MEWPs must develop a rescue plan and include it in the risk assessment.

Rescue types:

- **Self-rescue:** by person involved.
 - Can only occur if individual is conscious.
 - Exiting the MEWP to an adjacent stable surface.
 - Use of controls by other occupant, if applicable.
- **Assisted rescue:** by other(s) in the work area.
 - Use of ground controls.
 - Use of other MEWPs in the work area to access occupants needing rescue.
 - Bleeding out hydraulic system to lower MEWP.
 - Use of ladder or other equipment to assist in exiting the MEWP.
- **Technical rescue:** by emergency services.
 - Performed by first responders or designated response team.
 - Can be complicated and include medical assistance.

Rescue scenarios include:

- Failure of MEWP controls.
- Entanglement preventing lowering of MEWP.
- Fall from an MEWP leading to suspension from a fall arrest system.
- Medical emergency while operating MEWP.
- Instability of MEWP due to change in ground conditions or from struck by.

Supervisor's Risk Assessment Form – EXAMPLE		
Project Name: Lions Practice Field		Location: Oak Park, MI
Date: 1/1/2020		Supervisor's Name: John Barton
Stages	Information	
1. Identify the Task	Task: Replace outdoor lighting on 2 nd floor awnings at main entrance	
	Location: Main entrance – SE corner of field	
	Timing: 3 days of work from 2-4 PM due to practice times	
2. Select a MEWP	Classification: Type 3 Group A, Self-Propelled Vertical Lift Model: 1930ES Scissor Lift	
3. Risk Assessment & Mitigation	Use this section to assess risk, identify control measures and safety protocol. Communicate the risk assessment and mitigation measures to operators, occupants and affected workers.	
Is the operator properly trained and occupant familiarized with the equipment, safety requirements, how their actions might affect stability and emergency rescue procedures?	Yes <input checked="" type="checkbox"/>	All operators are trained on equipment used within 3 years and have a license issued from Barton Malow Company. The trained operator will familiarize all occupants on their responsibilities and safety requirements Comments: Operator presented his training card
Will the MEWP adequately reach the work area?	Yes <input checked="" type="checkbox"/>	The height needed is: 20 Feet Type of lift (scissor or boom): Scissor lift
Surface & soil conditions have sufficient strength to withstand all floor/ground load forces imposed by the MEWP in all configurations. See operator's manual.	Yes <input checked="" type="checkbox"/>	A placard on the lift that provides weight. List weight restrictions: Lifts larger than 3500# are not allowed on concrete sidewalk or manhole covers. Lift weighs 3000#
Pedestrian traffic where the lift will be operated is properly barricaded or controlled by trained spotters	Yes <input checked="" type="checkbox"/>	No one allowed under booms or work platforms Name of spotter: N/A – work area barricaded off with saw horses.
Public roadways, spotter, signal person	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Proper training needed for flaggers. High visibility vests worn as required. – N/A
Precautions for other moving equipment, conveyors, etc are in-place. Traffic control, barricades, LOTO equipment, etc.	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	List the preventative measures needed:
Overhead obstructions and crushing hazards are identified or will not pose a hazard.	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	List hazard & list preventative measures needed:
Ramps and other sloped surfaces that could affect the vehicle's stability are identified and protected.	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	List proper procedure: Handicap ramp are on east end will not be used
Drop-offs or holes, including those concealed by water, ice, mud, etc are identified or protected	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	List measures needed: N/A – Sidewalk in good condition

Housekeeping, is adequate for safe use	Yes <input checked="" type="checkbox"/>	Comments: Clean area
Bumps or floor obstructions are identified or protected	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Comments: N/A
Hazardous environmental locations where the vehicle will be operated are identified.	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Hazard(s): N/A Location(s): N/A
Electrocution hazards, MEWP operators will stay 20 feet away or notify power company to Lock Out power. Operators will not exceed minimum approach distance. Refer to Operators Manual	Yes <input checked="" type="checkbox"/>	Hazards: Overhead power line is 50 feet away from work area Location(s): 50 feet south of main entrance
Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust has been checked and does not pose a health or safety concern	Yes <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Location(s): N/A Type of monitoring needed: N/A
Wind and weather conditions - lightning, wind limited to manufacturers' requirements	Yes <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	Wind gusts up to 20 MPH – Manufacturer allows sustained winds of 28 MPH
Other possible unsafe conditions		LOTO required prior to working on light fixtures.
If any of the above conditions change, STOP and revise risk assessment.		
4. Emergency Rescue	The following protocol will be used to safely rescue workers if the operator is unable or the work platform is stuck in elevated position.	
Rescue Types	Options	
Self-rescue – by person involved	Main option: If there is an occupant in the basket with the injured worker the occupant will lower basket as instructed during familiarization	
	Back up option: Call supervisor for instructions	
Assisted rescue – by other(s) in the work area	Main option: Use the second scissor lift used on site.	
	Back up option: N/A	
Technical rescue – by emergency services	Main Option: Call 911 and use ladder truck for rescue	

**Rescue planning for your site may require a more comprehensive plan. If there are any concerns regarding adequate emergency response planning, please reach out to your supervisor or safety professional*

ATTACHMENTS



{Insert Date}

Subject: Safety Submittal

Dear Contractors:

We look forward to working with your company and workers on construction of the ***{Insert Project Name}***. You have been chosen to help us on this project for a variety of reasons. A primary reason is your high regard towards safety and the attainable goal of sending everyone home better than when they came to work. We will work together proactively to keep safety on the forefront of everything we do. Prevention through design, planning and coordination will go a long way in making this a safe and successful project.

Sincerely,

Barton Malow

**{INSERT PROJECT NAME}
CONTRACTOR SITE SPECIFIC REQUIREMENTS**

All Contractors are required to provide Barton Malow with a Site-Specific Safety Program for this project. Items to be included should only pertain to this job. Below is a list of all required information. Contractors will not be allowed to start work until this has been submitted and approved by the Barton Malow team.

- A Job Hazard Analysis (This is an overview of the project highlighting all risks and the method of mitigation)
- List of Supervision (To include: Superintendent, Foremen, Safety Person, Competent Person, and First Aid/CPR Person)
- Documentation of Contractor Orientation and Training Procedures. (What do you go over in new hire training and based on your JHA's what will you be training your workers on).
- List of all trained workers on this site (Each worker will need proof of training, whether it be for equipment or tools. It can be on company letter head or a copy of a training certificate).

For example:

- | | |
|---|---|
| 1. Fall Protection | 11. First Aid/CPR |
| 2. Ladder Training | 12. Pre-Task Planning |
| 3. How to read an SDS | (Job Hazard Analysis, Task Safety Analysis) |
| 4. Equipment (Forklift, Backhoe, Excavator) | 13. Competent Person |
| 5. Company Policies and Procedures | 14. Scaffold Erection |
| 6. Welding Certifications | 15. Scaffold User |
| 7. Fire Watch Training | 16. Small Tools (Drills, Skill Saws, etc.) |
| 8. Rigging Certification | 17. Lockout/Tagout Procedures and Training |
| 9. Signaling Certification | 18. Confined Spaces |
| 10. Crane Operator Certification | |

- Supervision, foremen and up should possess an OSHA 30-hr card that was taken in the last 5 years.
- Drug Policy: All workers may be required to pass a 9 panel drug test before they are allowed onsite to work. Subcontractor must have a drug policy program.
- Job Specific SDS (SDS for products used on this site only. As new products arrive requiring a SDS it must be provided before the product is used on site).
- Job Specific Tool Box talks will be required. They will be turned into the Barton Malow Safety Department each week.
- Daily Equipment Inspection Logs (Aerial Lift, Cranes, Heavy Equipment etc.). They will be turned into the Barton Malow Safety Department each week.
- Weekly Jobsite inspections and Job walks to be turned into the Barton Malow Safety Department.
- Specific PPE needed for this site (to include documentation of training).
- Roles and Responsibilities of Supervision on site in relation to HSSE
- Refueling Procedures for equipment on site
- Pre-Task Planning log (Provide a copy to Site Safety Manager each morning before the start of work)
- Written Fall Protection Plans and Fall Hazard Analysis.



Attachment A

CONTRACTOR SITE SPECIFIC REQUIREMENTS

This Handbook will be kept on site inside the Safety office. A copy must be kept with the Superintendent or Company Safety Representative. Tool Box Talks will be done on a weekly basis with a copy of the talk given to the Barton Malow Safety Manager.

All workers will be required to attend a job site orientation before they will be allowed to start work on site. All workers will be required to wear hard hats with their respective company's name on the hat.

If you have any questions or would like to meet to discuss the development of your Site-Specific Handbook please contact the Barton Malow Site Safety Director.

[illegible]

The following is a work control document that identifies the work tasks, hazards and controls of the overall project and provides the basis for the development of the contractors' site-specific Construction Environmental, Health and Safety Plan (CEHSP). Mobilization and jobs you know you will be performing should be sent right away. Make sure they are job specific.

Job Hazard Analysis

Project Number/Task: Sheet / Trench Box Install & Removal		Date: 6/26/2014
Project Name:		Prepared by:
Location: Flint, Michigan		Reviewed by:
Required and/or Recommended Personal Protective Equipment:		
Safety glasses, hard hats, hearing protection, gloves, high visibility clothing		
		Page 1 of 5
Activity Operation	Unsafe Condition, Action or Hazard	Preventative or Corrective Action
Personal Protective Equipment	Foreign body in eyes	Safety Glasses that meet ANSI Z87.1, hard hats, ear plugs, orange safety vest, long sleeves and work boots are required to be worn at all times while in the construction zone.
	Loud noise	Employees to wear hearing protection inside the plant at all times and outside when required.
	Head injury	Hard Hats are required at all times in the construction zone.
	Lifting objects & material handling	Objects that are awkward in size / shape may require additional personnel. Get help or a hand cart when moving material / equipment that is too heavy. Lift with your legs and not your back. Refrain from twisting while lifting.
	General working conditions	Danger tape must never be crossed without the express consent of the contractor that installed the danger tape. Do not interact w/plant personnel / other contractors in a hostile manner. In the event of a possible argument with gm personnel / other subcontractors walk away and inform your foreman / supervisor of the issue.

Project Number/Task: Sheet / Trench Box Install & Removal		Date: 6/26/2014
Project Name:		Prepared by:
Location:		Reviewed by:
Required and/or Recommended Personal Protective Equipment:		
Safety glasses, hard hats, hearing protection, gloves, high visibility clothing		
		Page 2 of 5
Activity Operation	Unsafe Condition, Action or Hazard	Preventative or Corrective Action
Moving material / equipment inside the plant down K/J main aisle.	Pinch Points	Employees to wear Orange vests inside and outside of building. Be aware of possible pinch points inside the building or while moving equipment / material. When escorting equipment onsite maintain visual with the operator and be aware of where the equipment is at all times.
	Plant Aisle Traffic	Give Operators right of way at all times. Coordinate in advance plant personnel.
	Overhead Die Movement	
	Tracking Dirt / Soil Inside Plant	A floor scrubber will be utilized throughout the project to minimize soil contamination inside the plant. Barton Malow personnel will assist plant personnel in this endeavor.

--	--	--

Project Number/Task: Sheet / Trench Box Install & Removal		Date: 6/26/2014
Project Name:		Prepared by:
Location:		Reviewed by:
Required and/or Recommended Personal Protective Equipment:		
Safety glasses, hard hats, hearing protection, gloves, high visibility clothing		
		Page <u>4</u> of <u>5</u>
Activity Operation	Unsafe Condition, Action or Hazard	Preventative or Corrective Action
Install / Remove 8' x 20' plates for slope support and 4' x 8' plates for structural support (sheet shoring)	Leading Edge / Excavation	Erection of trench box must be 10' away from excavation at all times.
	Loose Soil Composition	A Penetrometer will be utilized for soil classification throughout the project. Only trained and competent personnel will operate the penetrometer.
	Unknown Gases	Barton Malow will provide periodic air monitoring during the excavation process. Ideal contracting will provide secondary air monitoring throughout the project as needed. Excavation testing / reporting will be conducted on a daily basis by designated Barton Malow competent person.
	Limited Ingress / Egress	Excavation will be benched / sloped during operation. Site built ladders will be utilized during the process and secured in the excavation. All ladders must extend 36" from the landing.
	Improper Rigging Procedures for Sheet Install	Barton Malow personnel will inspect the rigging of the plates prior to installation / removal. All slings / cables will be inspected prior to use and all damaged / defective
	Impacting plates	

--	--	--

Project Number/Task: Sheet / Trench Box Install & Removal		Date: 6/26/2014
Project Name:		Prepared by:
Location:		Reviewed by:
Required and/or Recommended Personal Protective Equipment:		
Safety glasses, hard hats, hearing protection, gloves, high visibility clothing		
		Page 5 of 5
Activity Operation	Unsafe Condition, Action or Hazard	Preventative or Corrective Action
Install / Remove 8' x 16' trench box into DVC excavation	Improper Rigging Procedures for Trench Box Install	Barton Malow personnel will inspect the rigging of the trench box prior to installation / removal. All slings / cables / shackles will be inspected prior to use and all damaged / defective equipment will be red tagged and removed from site. Barton Malow riggers will adjust rigging to compensate for any displacement.

PURPOSE

The purpose of this policy is to establish a program and procedures for lightning safety on Barton Malow construction sites. This topic is addressed in the Barton Malow Safety Manual under emergency action plans and inclement weather. There are local and site differences that impact on the program for a given project location that need to be considered within the program elements that follow. For example, derricks, towers, and scaffolds increase exposures and require more time to react to the threat of lightning. Location specific weather features present challenges with standardizing a single policy for all locations. *Contact your regional safety managers if your location requires special considerations.*

BACKGROUND INFORMATION

Lightning strikes present a hazard to workers engaged in construction work. Statistically, the number of lightning related fatalities in construction is low: 7 cases nationwide in the last ten years (Bureau of Labor Statistics, 2005-2014.) The highest percentages of fatalities occur during recreational activities involving open spaces, such as golf courses, athletic fields, and bodies of water. Many of these events occur due to a lack of knowledge or failure to follow guidelines.

PREVENTION AND PROGRAM ELEMENTS

The goal of this policy is to protect our workforce, our projects, and the company from personal-injury hazards associated with lightning strikes. This policy is built around the following elements:

- Knowledge and education on lightning hazards and practices to reduce exposure.
- Monitoring and detection to support an “alert” system and “take shelter” notifications.
- Shelter locations and the means to reduce injury potential if unable to shelter (see education).
- Assignment of responsibilities.

EDUCATION and TRAINING

There are common myths and misinformation about lightning. Our policy is to provide factual and useful information so that managers as well as workers:

- Understand the risks associated with lightening.
- Adjust their work plans and behaviors proactively.
- Respond appropriately to the threat of lightning.
- Understand and properly implement the Lightning Program.

CR LIGHTNING PROGRAM**Instruction and Education**

The makeup of a workforce varies. Each project will determine the level of knowledge and the education and instruction needed to support the Lightning Program. We may have a *veteran* Barton Malow self-perform crew that is well versed in the program. Or, the workforce may need instruction in the basics of lightning safety and the Lightning Program. We may also have supervisors and managers who are new to the program, but are well versed in managing inclement weather, (etc.): instruct and train accordingly.

Action Plan

An action plan will be developed, communicated and implemented at each work site to establish:

- A chain of command for making and communicating decisions.
- Means and methods of monitoring weather conditions.
- Strategies for managing work when inclement weather is forecasted.
- Designated safe sites and shelter locations.
- Knowledge and use of safe work practices.
- Criteria for the suspension and resumption of work.

Management Practices

The local site team will develop a site-specific action plan: see above bullet points. The action plan will state the means and methods for monitoring lightning. (Insert the specifics into the following procedure.) There are various means for monitoring and responding to lightning potential. All projects pay attention to forecasts and National Weather Service warnings and alerts. All projects pay direct attention to actual weather conditions, immediate and advancing weather. Projects may also rely on technologies that communicate lightning activity with distances and time factors.

The project should be evaluated for lightning exposures. There are many characteristics to consider: equipment (scaffolds boom trucks, cranes, manlifts), site features (large open spaces, structures and areas to avoid), type and duration of the work, and the quality and availability of shelters or safe locations. When forecasts and weather alerts advise of potential storms, work plans should be adjusted accordingly as some work presents higher risk for lightning strikes and some work is more difficult or time consuming to suspend.

Weather is not always predictable, or it is predicted but varies in speed and intensity. Procedures are designed to assure preparedness and a proactive response. However, in some cases alternate procedures must be followed to assure that safety and property is protected. Projects should make every effort to avoid urgencies. The project designates the person or persons who can authorize alternate procedures and defines appropriate alternate procedures: 30/30 rule, flash to bang, and similar.

Procedures**TAKING SHELTER FOR LIGHTNING OR THUNDER**

If you hear thunder and see lightning, act right away – especially if you count 30 seconds or less between the thunder and lightning. If the thunder gets louder or you see the lightning more often, the storm is getting closer. Tell your supervisor and your co-workers.

BARTON MALOW SUPERVISION WILL MONITOR WEATHER ON A DAILY BASIS

Monitoring will be visual (aided by weather reports), by a weather service, or by a specific App. The monitoring will generate notices to the workforce. There will be three distance ranges (and usually a 30 minute time factor) that will trigger notifications and expected actions: Alert, Watch, and Warning.

ALERT (30 mile radius)

- An alert does not trigger a stoppage of work activities.
- It is used to alert site personnel of possible approaching inclement weather.
- Work that cannot be suspended within time limits should not be started.
- Take preliminary steps to support work suspension (complex work)

WATCH (20 mile range)

- A watch is in effect and ALL workers need to be prepared to take shelter by
 - Putting away all tools and materials that are not in use.
 - Securing areas from wind and rain.
 - Suspending work that can't be immediately suspended under a "warning".
- All the following outdoor work will be discontinued:
 - High work (scaffolding, structural steel, decks, towers, etc.)
 - Cranes, aerial lifts, Carry deck cranes, Booms (man buckets, concrete pumps), etc.

- Work determined to increase risk and require additional time to react:
- Open spaces with distance to shelter issues.
- Incomplete /ungrounded structures or objects - with distance issues.
- Topographical features (hills, trees, water) with distance issues.

WARNING (10 mile range)

- All remaining work stops
- Workers seek shelter immediately
- Return to work only when warning is lifted
- “All clears” require 10 miles and 30 minutes free from lightning

Alternate Procedures may be required when unexpected weather conditions occur, such as “pop-up” and fast-moving events. Alternate procedures may be used only when needed to protect and secure. And, when normal procedures have been followed, or when normal procedures cannot be followed.

In no case will persons be exposed to immediate or impending lightning threats.

Lightning Safety Awareness Guide

The National Weather Service reports an average of 31 deaths over the last ten years (2006-2015). OSHA reports a total of 7 construction related lightning fatalities for a ten year period (2005-2014). These numbers seem small, especially when spread out over the years and throughout the United States. But, consider that rates have been falling over the years, and that the workplace has become safer than our personal lives. *Over 70% of lightning deaths and injuries occur during recreation activities.* And, only ten percent of lightning strikes result in death. The other 90% often cause serious injuries with lasting effects. The injuries vary, include burns, but are usually internal with long term affects to the brain, behavior, and body functions. The overall risk may be rather small, but the effects can be catastrophic. Knowing about lightning and following guidelines can reduce your risk.

Lightning: What You Need to Know: Tips for Safety (National Weather Service)

Lightning: What You Need to Know

- **NO PLACE** outside is safe when thunderstorms are in the area!!
- If you hear thunder, lightning is close enough to strike you.
- When you hear thunder, *immediately* move to safe shelter: a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows up.
- Stay in safe shelter at least 30 minutes after you hear the last sound of thunder.

Indoor Lightning Safety

- Stay off corded phones, computers and other electrical equipment that put you in direct contact with electricity.
- Avoid plumbing, including sinks, baths and faucets.
- Stay away from windows and doors, and stay off porches.
- Do not lie on concrete floors, and do not lean against concrete walls.

Last Resort Outdoor Risk Reduction Tips

If you are caught outside **with no safe shelter anywhere nearby** the following actions *may* reduce your risk:

- Immediately get off elevated areas such as hills, mountain ridges or peaks
- Never lie flat on the ground
- Never shelter under an isolated tree
- Never use a cliff or rocky overhang for shelter
- Immediately get out and away from ponds, lakes and other bodies of water

Stay away from objects that conduct electricity (barbed wire fences, power lines, wind turbines, etc.



Attachment D

CONTRACTOR SITE SPECIFIC SAFETY INFORMATION (SSSI) FORM

SITE-SPECIFIC SAFETY INFORMATION (SSSI) FORM ZERO TOLERANCE FOR UNSAFE ACTS OR CONDITIONS

PROJECT IDENTIFICATION

Owner Name:

Project Name:

Jobsite Location:

Barton Malow Project No.:

Jobsite Phone (voice):

Jobsite Fax:

• PROJECT OPERATIONAL LEADERSHIP

Title	Name	Office Phone #	Cell Phone #	24-hour contact #
Project Director				
Project Manager				
Project Engineer				
Dir. of Field Operations				
Superintendent				
Superintendent				
Project Safety Director				
Regional Safety Director				

EMERGENCY RESPONSE INFORMATION

Key Phone Numbers

Emergency response (medical/fire):

Police Dept. (non-emergency):

Fire Dept. (non-emergency):

Security Service:

Injury Response

Certified First Aid Provider at Jobsite:

Name: Cell:

Location of First Aid Equipment:

Nearest Hospital:

Directions to Hospital:

Hospital phone number:

Recommended Clinic:

Directions to Clinic:

Clinic phone number:

Clinic hours:

Project Operational Leadership:

Other emergency information:

Utilities

Gas Company:

Electric Company:

Water Company:

Evacuation/Rescue

Location of rescue equipment:

Gathering point after evacuation:

Severe weather shelter:

Emergency Signals

Evacuation (fire, bomb, etc):

Seek Shelter (weather):

All Clear:

OTHER SITE-SPECIFIC SAFETY INFORMATION

(If not applicable or no additional information beyond Contract Documents, leave item blank.)

- 1) General Safety Requirements. Each Contractor on the jobsite is required to observe all applicable laws and contractual duties, including Section 00810 of the Project Manual and any procedures or other requirements set forth in this SSSI form or its Exhibits. Nothing stated in or omitted from this SSSI form excuses compliance with requirements stated elsewhere in the Contract Documents. The failure to identify a safety condition in this document does not represent or warrant that no such condition is present.
- 2) Postings. Notices required by federal or state law regarding safety, employment, and other matters will be posted on a bulletin board at the following jobsite location:
- 3) SDS forms. Safety Data Sheet (SDS) information for all Contractors will be maintained at the following jobsite location:
- 4) Owner Requirements. Special Owner safety requirements for this project are:
 - a) ☐ Attached as Exhibit SSSI-4; or
 - b) ☐ Stated here:
- 5) Insurance. Is this project covered by a Controlled Insurance Program (CIP)?
 - a) ☐ Yes, an Owner Controlled Insurance Program (OCIP)
 - b) ☐ Yes, a Contractor Controlled Insurance Program (CCIP)
 - c) ☐ No CIP
 - d) CIP procedures or other special insurance procedures are:
 - i) ☐ Attached as Exhibit SSSI-5; or
 - ii) ☐ Stated here:
- 6) Employees. Information on employee requirements specific to this jobsite (jobsite safety orientation, identification badges, drug testing, etc.) is:
 - a) ☐ Attached as Exhibit SSSI-6; or
 - b) ☐ Stated here:
- 7) Planning. Information on special requirements for safety planning (e.g., written job hazard analysis or pre-task planning) is:
 - a) ☐ Attached as Exhibit SSSI-7; or
 - b) ☐ Stated here:
- 8) Jobsite Access. Information relating to site access (parking, pedestrians, deliveries, heavy equipment, traffic control, emergency vehicle access, etc.) is:
 - a) ☐ Attached as Exhibit SSSI-8; or
 - b) ☐ Stated here:
- 9) Jobsite Security. Information relating to jobsite security procedures (security services, visitor policy, etc.) is:
 - a) ☐ Attached as Exhibit SSSI-9; or
 - b) ☐ Stated here:
- 10) Staging and Laydown. Information on staging and laydown areas at the jobsite is:
 - a) ☐ Attached as Exhibit SSSI-10; or
 - b) ☐ Stated here:
- 11) Cranes. Special requirements associated with crane access or placement at the jobsite are:
 - a) ☐ Attached as Exhibit SSSI-11; or
 - b) ☐ Stated here:
- 12) Environmental Hazards. Information on hazards and procedures associated with environmental conditions at the jobsite (including known or suspected hazardous materials, toxic chemicals, pollutants, etc.) is:

- a) ☐ Attached as Exhibit SSSI-12; or
b) ☐ Stated here:
- 13) Utilities. Information on hazards and procedures associated with underground or overhead utilities at the jobsite is:
a) ☐ Attached as Exhibit SSSI-13; or
b) ☐ Stated here:
- 14) Risks to or from Property. Information on structures, animals, plants, habitats, artifacts, or other property, on or near the jobsite, which either present a hazard or must be protected from damage, is:
a) ☐ Attached as Exhibit SSSI-14; or
b) ☐ Stated here:
- 15) Sitework. Information on management of stormwater or sediment runoff at this jobsite is:
a) ☐ Attached as Exhibit SSSI-15; or
b) ☐ Stated here:
- 16) Underground. Information on known or suspected unusual conditions in the soil or underground at this jobsite is:
a) ☐ Attached as Exhibit SSSI-16; or
b) ☐ Stated here:
- 17) Interim Life Safety. Information on how interim life safety measures will be handled during construction is:
a) ☐ Attached as Exhibit SSSI-17; or
b) ☐ Stated here:
- 18) Fire Protection. Information on fire hazards and procedures specific to this jobsite is:
a) ☐ Attached as Exhibit SSSI-18; or
b) ☐ Stated here:
- 19) Confined Spaces. Information on confined spaces at the jobsite and procedures for safe entry is:
a) ☐ Attached as Exhibit SSSI-19; or
b) ☐ Stated here:
- 20) Energy Lockout/Tagout. Information on hazards from energized systems (electrical, machinery, high pressure piping, etc.) and lockout/tagout procedures is:
a) ☐ Attached as Exhibit SSSI-20; or
b) ☐ Stated here:
- 21) Infection Control. Information on special procedures for infection control is:
a) ☐ Attached as Exhibit SSSI-21; or
b) ☐ Stated here:
- 22) Hazardous Operations. Information on unusual or hazardous construction methods or other dangerous operations at or near the jobsite (demolition, blasting, etc.) is:
a) ☐ Attached as Exhibit SSSI-22; or
b) ☐ Stated here:
- 23) Other. Other information on hazards or safety-related procedures or requirements for the jobsite is:
a) ☐ Attached as Exhibit SSSI-23; or
b) ☐ Stated here:

RELATED DOCUMENTS

Attention is directed to Bidding and Contract Requirements, and to Division 1, General Requirements, which are hereby made a part of this Section.

[CONTRACTOR/SUBCONTRACTOR]'S SAFETY REQUIREMENTS**General**

[Contractor/Subcontractor] is responsible for its own Safety Program for Work on this Project that is at least as stringent as the requirements set forth in this section of the Project Manual.

[Contractor/Subcontractor] shall provide a safe workplace and shall otherwise take all precautions for the safety of Subordinate Parties and persons and property in or near the premises where work is being performed.

[Contractor/Subcontractor] shall comply with all applicable federal, state and local laws, rules and regulations, including, but not limited to, applicable provisions of the Occupational Safety and Health Act ("OSHA") and/or the governing state law.

[Contractor/Subcontractor] shall comply with all requirements stated in the Site-Specific Safety Instructions (SSSI) form or elsewhere in the Contract Documents.

[Contractor/Subcontractor] shall ensure that its employees understand and comply with applicable safety and health programs, rules and regulations.

[Contractor/Subcontractor] will assign an individual to act as Safety Representative who will have the responsibility of resolving safety matters, and act as a liaison among **[Contractor/Subcontractor]**, Barton Malow and the Owner. The Safety Representative must be a person who is capable of identifying existing and predictable hazards in surroundings that are unsanitary, hazardous or dangerous to employees, and has the authority to take prompt corrective measures to eliminate them. The Safety Representative must meet the standards for a Competent Person under applicable law when required (scaffolding, confined spaces, etc.). The Safety Representative must be on site full time. The Safety Representative or an alternate must attend periodic safety meetings as directed by Barton Malow. The Safety Representative must have completed the OSHA 30 hour Construction Training Course.

[Contractor/Subcontractor] shall ensure that its site Supervisors and/or Safety Representative attend a pre-construction meeting where planning for safe execution of the project will be addressed.

[Contractor/Subcontractor] is fully responsible for all Hazardous Materials it creates or releases in connection with, or brings to, the Project. **[Contractor/Subcontractor]** shall immediately report to Barton Malow any Hazardous Materials that it discovers or which are released at the Project.

Minimum training for on-site employees shall include basic safety orientation, task-specific safety instruction, weekly Toolbox Talks, and other periodic safety meetings. **[Contractor/Subcontractor]** shall document all such training.

[Contractor/Subcontractor] shall self-inspect its areas of control to assure compliance with the safety requirements.

All on-site employees of either **[Contractor/Subcontractor]** or its Subordinate Parties are required to report any unsafe act or condition and any work-related injuries or illness immediately to a supervisor. If the act or condition can be safely and easily corrected, the employee or supervisor should make the correction.

[Contractor/Subcontractor] shall notify Barton Malow immediately of all injuries requiring clinical attention and all property damage potentially in excess of \$1,000.

[Contractor/Subcontractor] shall have emergency procedures to deal with the immediate removal and treatment, if necessary, of any employee who may be injured or become ill. **[Contractor/Subcontractor]** shall keep on the Project site a first-aid kit supplied according to current regulations, and shall have on-site a person trained to administer first aid.

[Contractor/Subcontractor] shall inform Barton Malow of the arrival of any federal or state inspector or compliance officer prior to touring the site. Any reports, citations, or other documents related to the inspection shall be provided promptly to Barton Malow.

[Contractor/Subcontractor] shall have a written Substance Abuse Policy. The use or possession of illegal drugs or the use of alcohol while performing work on the Project are strictly prohibited and will lead to immediate removal from the Project.

[Contractor/Subcontractor] shall be responsible for payment of all safety-related citations, fines and/or claims arising out of or relating to its Work levied against the Owner, Architect, Barton Malow, or their employees or affiliates.

Barton Malow has the right to require that **[Contractor/Subcontractor]** submit monthly its hours worked and incident rates for the Project.

Additional Barton Malow Requirements

Work crews shall conduct a Job Hazard Analysis (JHA,) discussion (i.e. Huddle) to plan for safe performance before beginning any work task. **[Contractor/Subcontractor]** is required to prepare a written record of each JHA.

All workers, management, and visitors shall wear approved hard hats while on site, outside the trailers. Cowboy-style hard hats are prohibited. Hard hats must not be removed to use welding shields. Welding shields must attach to hard hats or be hand held.

Sleeved shirts (minimum of four inches), long pants and durable work boots are required minimum clothing.

Personal cell phones are not to be used on construction sites except to report an emergency or on approved break time. Use of business cell phones must not interfere with jobsite safety.

Personal radios or music players are not permitted.

All persons working at elevations of six feet or greater must have 100% continuous fall protection. Engineering controls are preferred, but personal fall arrest systems are also permissible. An exception is permitted for safe use of ladders up to 24 feet long.

[Contractor/Subcontractor] is responsible to repair or restore any barricade that it modifies or removes.

Class II III (household) stepladders are prohibited; metal ladders are strongly discouraged.

All scaffolds must be inspected daily and before each use for safety compliance. Scaffold inspection tags must be used. Scaffolds shall never be left in an unsafe condition and must be removed / disabled immediately if not to be used again.

All persons operating cranes must be certified as crane operators by the National Commission on the Certification of Crane Operators (NCCCO), Crane Institute Certification (CIC) or Operating Engineers Certification Program (OCEP). Daily written crane inspection reports must be prepared by the operator and kept with the crane, available for inspection.

Riding the headache ball is prohibited.



Attachment E

ON-SITE PROJECT SAFETY + LOSS CONTROL PROGRAM (SECTION 00810)

All dozers, loaders, tractors and end loader backhoes must have functioning backup alarms.

Keep equipment at least 15 feet from energized power lines.

Electrical, pneumatic, and other energy systems that could be accidentally energized or started up while work is in process must be locked out (not merely tagged out).

Only fire-retardant materials may be used to build shanties or other temporary enclosures inside of buildings finished or under construction. Shanties shall be continually policed by their occupants to prevent the accumulation of waste or other combustibles.

Engineering controls must be used to restrain silica dust per applicable law. Dry cutting without engineering controls is prohibited.

The Contractor is required to design and/or implement a Stretch and Flex program for their employees. The purpose of the program is to gently condition the muscles and tendons for the workers before they engage in their duties in order to avoid injury. All Contractors of any tier shall ensure that all employees participate in stretching exercises at the beginning of the work day. It is recommended that you consult with your insurance carrier, licensed physician or other medical personnel to develop suitable stretches for your work crew.

The Contractor is required to implement a glove program. All workers performing construction work must wear appropriate protective work gloves. When not performing work, gloves must be kept available for immediate use. Cut resistant work gloves are required for any operation with sharp material or cut potential.

[CONTRACTOR/SUBCONTRACTOR]'S SAFETY SUBMITTALS

[Contractor/Subcontractor] shall provide copies of the following written safety submittals to Barton Malow at the times indicated:

Submittal	Timing
Site-specific Safety Program, including Job Hazard Analysis, substance abuse policy, hazard communication program, and Safety Data Sheets (SDS)	Before on-site work begins
Tool Box Talk Reports	Weekly
Incident Reports	Within 24 hours of incident
Hours worked and incident rates	Monthly
Stretch and Flex program	Before on-site work begins

Barton Malow's receipt of the Safety Program or other submittals from **[Contractor/Subcontractor]** does not constitute approval of the Program or submittal or permission to deviate from the requirements of the Contract Documents and applicable law.

[Contractor/Subcontractor] will allow inspection of, and Barton Malow may request copies of, any and all safety-related documents and records in its possession relating to the Project.

BARTON MALOW RIGHTS

Safety Hazard Notifications may be issued to the **[Contractor/Subcontractor]** when an unsafe act or condition is reported or observed. Barton Malow shall not be required to supervise the abatement or associated reprimand of unsafe acts or conditions within a **[Contractor/ Subcontractor]'s** scope of work as this is solely the responsibility of **[Contractor/Subcontractor]**. Nevertheless, Barton Malow has the right, but not the obligation, to require **[Contractor/Subcontractor]** to cease or abate any unsafe practice or activity it notices, at **[Contractor/Subcontractor]'s** sole expense.



Attachment E

**ON-SITE PROJECT SAFETY + LOSS CONTROL
PROGRAM (SECTION 00810)**

[Contractor/Subcontractor]'s failure to comply with the contract safety requirements will be considered a default of the Agreement, and may result in remedial action including, but not limited to, withholding of payment of any sums due or termination.

Barton Malow's failure to require the submission of any form, documentation, or any other act required under this Section, 00810, of the Project Manual shall not relieve the **[Contractor/Subcontractor]** from any of its safety obligations.

Nothing in this Section or in this Agreement makes Barton Malow responsible or liable for protecting **[Contractor/Subcontractor]'s** employees and other Subordinate Parties or assuring or providing for their safety or preventing accidents or property damage.

All requirements referenced in this Section 00810 are binding on **[Contractor/Subcontractor]** and all of its Subordinate Parties, even where such requirements may exceed the standards of applicable law.

Barton Malow Emergency Action Plan EAP

{Insert Project Name}

This is a living document and will be updated as needed throughout the project.

Revision No.: {Insert Revision No.}

{Insert Date}

SUPPLEMENTARY INFORMATION ON EMERGENCY ACTION PLAN

OSHA requires employers to have an emergency action plan. The purpose of the plan is to eliminate or minimize the hazards to employees in the event of a fire or other emergency. The basic plan must be communicated to all employees during safety orientation.

Minimum Plan Requirements

All employers must have a plan. Employers with 10 or more employees must have a written plan. Employers with fewer than 10 employees may have an oral plan. The plan designates employer's and employees' actions to ensure safety during a fire, weather emergency or other type of emergencies. The plan must be kept at the workplace and available for employee review.

The following must be included in the plan:

- Emergency escape procedures and escape route assignments
- Procedures for employees who remain behind to perform critical plant/project operations
- Procedures to account for all employees after the emergency evacuation
- Identification of employee rescue or medical duties
- Preferred means of reporting fires, and other emergencies (air horns, manual pull boxes, public address systems, 2-way radios, telephones, etc.).
- Types of evacuation to be used in emergency circumstances
- Names and job titles of persons who can be contacted for further information regarding the emergency action plan.

Employers must post emergency telephone numbers near telephones and other conspicuous locations when the telephones serve as the means of reporting an emergency

Note: For projects in coastal areas that could be subject to hurricanes and other climatic events, the Emergency Action Plan should be supplemented to include the Hurricane Preparedness Plan under Appendix I.

{Insert Project Name}

PURPOSE

The purpose of this Emergency Action Plan is to determine the protocol to follow for all fire, medical other emergencies and major disasters (severe weather (tornado), earthquake, or bomb threat). This document will clearly define the emergency action plan and the measure needed to be prepared an emergency. This plan will complement the Crisis Management Plan.

COMMUNICATION/TRAINING

Every employee on site must be properly trained in a basic emergency response/action plan. This training must occur during the initial safety orientation training. The plan should be reviewed periodically.

The emergency procedure, important phone numbers, and seek shelter/evacuation procedures shall be conspicuously located on site.

Every employee must be able to:

- Recognize an emergency situation
- Know how to call for/initiate emergency services
- Recognize seek shelter or evacuation signals
- Know where to seek shelter
- Know the designated mustering point(s)

PROJECT OPERATIONAL LEADERSHIP – IMPLEMENTATION

Emergencies usually do not happen very often but when they do it's important to have clearly defined written procedures. Employees must be knowledgeable in the basic first aid, CPR, fire safety procedures. Project Operational Leadership should be assembled of management and trade labor employees. This team will be very knowledgeable in the Emergency Action Plan and have other necessary training to allow them the ability to handle all emergencies including medical, fire, weather or other emergencies.

Responsibilities – Project Operational Leadership:

- Understand the Emergency Action Plan
- Provide first aid and CPR as trained
- Help communicate the emergency action plan
- Assess all emergencies
- Initiate warning signals as needed –evacuation or seek shelter
- Assign duties to field and management personnel.
- Take any actions necessary to protect human life and property

In case of emergency situation, the highest-ranking management person shall have the final authority to coordinate procedures and amend, modify or supersede any provisions of this plan in order to ensure employee safety. A list of phone numbers for the Barton Malow Project Operational Leadership members is provided in this plan.

MEDICAL EMERGENCY OR RESCUE PROCEDURES

Any person who receives information regarding a medical emergency shall notify the fire department and/or emergency medical services immediately. The following procedure applies to this job site:

Call

Describe the emergency in detail – do not hang up until instructed to do so. Give the project address/location:

Below is a list of site specific detail of emergency procedure:

Immediately notify the Barton Malow Project Operational Leadership members and designate someone to escort them to the injured worker. Call other project contacts for assistance as needed.

The emergency response team will coordinate and direct the fire department and/or EMS units to the site location or the employee's whereabouts. Designate some of the Project Operational Leadership members to keep crowds of onlookers away from the incident scene so emergency crews can do their jobs.

ALARMS – EMERGENCY ALERT SIGNALS

Each employee should understand the alarms that will be used onsite. Construction projects or temporary offices may not have permanent alarm systems. These project or locations must use temporary systems such as the following:

EVACUATION PROCEDURES AND ALERT SIGNALS

Evacuation Signal:

Please stand in a safe area away from vehicular traffic and emergency vehicles. The Project Operational Leader members, safety department, senior management and contractor management shall conduct a role call or head count to insure all personnel are accounted for.

FIRE PROCEDURES

In the event of a fire, the following procedures shall be followed:

If the fire is minor, meaning in a localized area and can be immediately controlled, use the proper fire extinguisher(s). All fires, even minor, must be reported to Barton Malow immediately.

If fire is judged uncontrollable, immediately call the fire department .

Give building location

Give column line location and floor (if applicable).

Describe type of fires (Class A: combustible material, Class B: flammable chemicals, Class C: Electrical, and/or Class D: Metallic)

Sound evacuation signal if evacuation is necessary

Notify the Project Operational Leadership members.

Project Operational Leadership members shall assign responsibilities to each contractor's superintendent.

As a reminder, the designated contractor mustering points shall be

BOMB THREAT EVACUATION PROCEDURE:

- The person receiving the bomb threat shall write down all information, immediately and notify the police, Barton Malow, and all the Project Operational Leadership members.
- Project Operational Leadership members shall determine the appropriate procedures:
- Order immediate evacuation to the designated Mustering points.
- Contact police 911 or your designated emergency number .
- Contact Barton Malow Management
- Contractor management shall conduct a role call or head count to insure all personnel are accounted for.
- Do not allow re-entry until the site has been searched and declared safe by designated authority such as the local police department.

TORNADO SURVIVAL PLAN

- In the event of a tornado alert, the regular _____ will be sounded to initiate an evacuation.
- All employees will leave their work areas and walk in a slow orderly manner to their vehicles to head away from the direction the tornado is coming.
- Supervisory personnel will conduct a head count on your way off site.

Reason for Plan

A tornado is a column of violently rotating winds extending down from a thunderstorm-like cloud that touches the surface. Tornadoes usually originate from the southwest at speeds of 20 to 40 mph. However, they have traveled at speeds near 70 mph. Tornadoes wind speed vary from 100 mph to nearly 300 mph. Tornadoes do their destructive work through the combined action of their strong winds, flying debris and the partial vacuum in the center.

Tornadoes are nature's most violent – and erratic – storms. A tornado can travel for miles along the ground, lift, and suddenly change direction and strike again. There is little we can do to protect our workplaces from the strength of tornado winds, but there are actions we can take to better protect ourselves and our co-workers.

Tornadoes are formed by severe thunderstorms, most frequently in the spring and summer. If you are in a tornado-prone area, stay alert during severe weather.

Terms

Tornado Watch is given when weather conditions are favorable to the formation of tornadoes. Tornado Warning is given when a tornado funnel is sighted or indicated by radar. You should take shelter immediately.

Survival Plan

Know your community's and this project's warning signals. Most often, warnings will be given by local radio or television stations, announcements and by NOAA Weather Radio. Barton Malow's onsite safety team will have a weather radio and utilize weather software to monitor weather events.

Although there is no guaranteed safe place during a tornado, some locations are better than others. By following these suggested safety tips, you can increase your chances of survival.

Mobile Offices

Do not stay in a mobile office during a tornado. Even office trailers with a secure tie-down system cannot withstand the force of tornado winds.

If a tornado warning is given, leave your mobile office and seek shelter nearby. Lie down flat in a ditch or ravine and put your arms over your head. Don't take shelter under an office trailer.

Office Buildings

Get into the innermost portions on the lowest floor possible. Employees should take shelter under a desk or table. Avoid windows and glass doorways.

Do not use elevators; the power may go off and you could become trapped. Protect your head and make yourself as small a target as possible by crouching down.

Lofted Structures

If you are caught in a lofted structure stay away from windows and get in a restroom, if possible. Restrooms are usually made from concrete block. Besides having the four walls and plumbing holding things together, the metal partitions help support any falling debris.

If there is not time to go anywhere, seek shelter right where you are. Try to get up against something that will support or deflect falling debris. Remember to protect your head.

On the Road

Do not try to outrun a tornado in your vehicle. If you see a tornado, stop your vehicle and get out. Seek shelter away from the vehicle in a nearby ditch or ravine; do not get under your vehicle. Lie flat and put your arms over your head.

In the Open

If you are caught outside during a tornado and there is no underground shelter immediately available, lie in a gully, ditch or the low spot in the ground. Protect your body and head with anything possible. Do not go into a grove of trees or under a vehicle.

After the tornado

Do not enter damaged buildings; they may collapse completely. Wait for help to search for others.

If the office appears undamaged, check for gas or other utility line breaks carefully. If the lights are out, use a flashlight only; do not use a match, lighter or any open flame.

Environmental Emergency

- Upon notification from Barton Malow or the owner declaring a chemical release, Barton Malow shall initiate the evacuation signal and communicate an area of safe location for all personnel to assemble.
- Contractor management shall conduct a role call or head count to insure all personnel are accounted for.
- All personnel shall remain calm and in the safe location until an all clear has been given.
- Barton Malow Management will call a local spill contractor should an environmental response be needed on the site.

EARTHQUAKE EMERGENCY

Earthquakes will usually occur without warning. Due to the suddenness, all personnel shall attempt to get to a place where he or she feels safety is warranted, such as: exit the building if practical, seek cover in the office trailers and office buildings (i.e. under the desks, in the doorways or in the closets). The following procedures shall be followed after an earthquake:

- All personnel shall help restore a calm environment for fellow personnel.
- Anyone trained in CPR can assist and provide first aid as needed.
- Contractor management shall conduct a role call or head count to insure all personnel are accounted for.
- The Project Operational Leader members shall inspect buildings for damage. If major structural damage has occurred, the Project Operational Leadership members shall order an evacuation.
- The Project Operational Leadership members shall notify proper utility companies as needed

LIGHTNING PROCEDURES

In the event of lightning, the following procedures shall be followed:

- Insert site specific requirement:
- All personnel shall remain a safe distance from any metal structures and/or standing water.
- All personnel shall remain calm and in the safe location until all clear has been given.

Note: There may be circumstances where crane booms shall be lowered due to the adverse weather conditions. Project Operational Leadership members and contractor superintendents will make this determination after evaluating the wind speed and weather conditions.

Introduction

Barton Malow is committed to preventing accidents and ensuring the safety and health of our employees. We will comply with all applicable federal and state health and safety rules. Under this program employees are informed of the contents of the OSHA Hazard Communications Standard, the hazardous properties of chemicals with which they work, safe handling procedures and measures to take to protect themselves from these chemicals. These chemicals may be physical or health-related. A site-specific hazard communication plan will be available at all Barton Malow locations.

Identifying Hazardous Chemicals

A list of all hazardous chemicals with a potential for employee exposure will supplement this plan. The site-specific hazard communication plan will identify where this information is kept for review. Detailed information about the physical, health, and other hazards of each chemical is included in a Safety Data Sheet (SDS); the product identifier for each chemical on the list matches and can be easily cross-referenced with the product identifier on its label and on its Safety Data Sheet.

Identifying Containers of Hazardous Chemicals

The site-specific hazard communication plan will follow the requirements of the 2012 revision of the OSHA Hazard Communication Standard to be consistent with the United Nations Globally Harmonized System (GHS) of Classification of Labeling of Chemicals.

All hazardous chemical containers used at this workplace will have:

1. The original manufacturer's label that includes a product identifier, an appropriate signal word, hazard statement(s), pictogram(s), precautionary statement(s) and the name, address, and telephone number of the chemical manufacturer, importer, or other responsible party
2. A label with the appropriate label elements just described
3. Workplace labeling that includes the product identifier and words, pictures, symbols, or combination that provides at least general information regarding the hazards of the chemicals.

All containers will be appropriately labeled. No container will be released for use until this information is verified. Workplace labels must be legible and in English.

Small quantities intended for immediate use may be placed in a container without a label, provided that the individual keeps it in their possession at all times and the product is used up during the work shift or properly disposed of at the end of the work day. However, the container should be marked with its contents.

Keeping Safety Data Sheets (SDS)

The manufacturer or importer of a chemical is required by OSHA to develop a Safety Data Sheet (SDS) that contains specific, detailed information about the chemical's hazard using a specified format. The distributor or supplier of the chemical is required to provide this SDS to the purchaser.

SDS's are readily available to all employees during their work shifts. Employees can review SDS for all hazardous chemicals used at this workplace. The storage of SDS's will be denoted on the site-specific hazard communication plan.

SDS's will be updated and managed by a person designated on the site-specific hazard communication plan. If a SDS is not immediately available for a hazardous chemical, employees can obtain the required information at [MSDS.com](https://www.msdsonline.com).

Training Employees about Chemical Hazards

Before they start their jobs or are exposed to new hazardous chemicals, employees must attend a new hire orientation that includes hazard communication training covering the following topics:

- An overview of the requirements in OSHA's Hazard Communication Standard.
- Hazardous chemicals present in their workplace.
- Any operations in their work area where hazardous chemicals are used.
- The location of the written hazard communication plan and where it may be reviewed.
- How to understand and use the information on labels and in Safety Data Sheets.
- Physical and health hazards of the chemicals in their work areas.
- Methods used to detect the presence or release of hazardous chemicals in the work area.
- Steps we have taken to prevent or reduce exposure to these chemicals.
- How employees can protect themselves from exposure to these hazardous chemicals through use of engineering controls/work practices and personal protective equipment.
- An explanation of any special labeling present in the workplace.
 - What are pictograms?
 - What are the signal words?
 - What are the hazard statements?
 - What are the precautionary statements?
- Emergency procedures to follow if an employee is exposed to these chemicals.

Prior to introducing a new chemical hazard into any department, each employee in that department will have access to information and training as outlined above for the new chemical hazard.

Informing Employees who do Special Tasks

Before employees perform special (non-routine) tasks that may expose them to hazardous chemicals, their supervisors will inform them about the chemicals' hazards. Their supervisors also will inform them about how to control exposure and what to do in an emergency. The employer will evaluate the hazards of these tasks and provide appropriate controls including Personal Protective Equipment all additional training as required.










Informing contractors and other employers about our hazardous chemicals

If employees of other employer(s) may be exposed to hazardous chemicals at our workplace they will be provided with the following information:

- The identity of the chemicals, how to review our Safety Data Sheets, and an explanation of the container labeling system.
- Safe work practices to prevent exposure.

A Safety Data Sheet for any hazardous chemical a contractor brings into the workplace will be provided and added to the site-specific hazard communication plan.

HCS Pictograms and Hazards

 <ul style="list-style-type: none"> ▪ Carcinogen ▪ Mutagenicity ▪ Reproductive Toxicity ▪ Respiratory Sensitizer ▪ Target Organ Toxicity ▪ Aspiration Toxicity 	 <ul style="list-style-type: none"> ▪ Flammables ▪ Pyrophorics ▪ Self-Heating ▪ Emits Flammable Gas ▪ Self-Reactives ▪ Organic Peroxides 	 <ul style="list-style-type: none"> ▪ Irritant (skin and eye) ▪ Skin Sensitizer ▪ Acute Toxicity ▪ Narcotic Effects ▪ Respiratory Tract Irritant ▪ Hazardous to Ozone Layer (Non-Mandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> ▪ Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> ▪ Skin Corrosion/Burns ▪ Eye Damage ▪ Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> ▪ Explosives ▪ Self-Reactives ▪ Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> ▪ Oxidizers 	<p>Environment (Non-Mandatory)</p>  <ul style="list-style-type: none"> ▪ Aquatic Toxicity 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> ▪ Acute Toxicity (Fatal or Toxic)

PROJECT NAME:

WORK LOCATION:

SITE-SPECIFIC

This plan must be reviewed by all workers and posted with a site plan in prominent locations accessible to all workers. This plan is a supplement to the project-specific safety & health management program.

This is a project-specific Emergency Evacuation Plan communicating evacuation procedures, specific alarms, and assembly points, should an emergency evacuation become necessary because of severe weather, fire, hazardous chemical release, explosion or other emergencies that could cause worker harm. It is each worker's responsibility to familiarize themselves with evacuation routes, alarms and assembly points in case an emergency evacuation of the work area is required.

Caution: Evacuation routes, alarms or assembly points for one emergency may differ from another emergency. Therefore, familiarize yourself with each of the emergency plans below.

IN CASE OF MEDICAL EMERGENCY OR RESCUE

EMERGENCY PHONE NUMBER: CALL 911

GIVE DIRECTIONS TO GET TO SITE:

Alarm or Notification: Contact the closest Barton Malow Team member, guard or company supervision. Send someone to the project entrance to help guide the emergency services to the injured worker.

Project Team Actions: Barton Malow Management will meet the Emergency Responder Crews at the Construction Entrance. Send someone to the road to help guide the emergency services to the injured worker.

IN CASE OF SEVERE WEATHER

Alarm or Notification: A Long Siren sound from the horn multiple times, Text, Radio or Verbal Notification.

Assembly Point:

Crew Actions: Workers will seek shelter until an "All Clear" is given.

IN CASE OF A FIRE, CHEMICAL RELEASE, EXPLOSION OR BOMB THREAT



EMERGENCY EVACUATION PLAN + MAP

Alarm or Notification: 3 short blasts from a horn multiple times.

Evacuation Route:

Crew Actions: Exit the site in accordance with the Evacuation Route Plan and wait for the Project Manager to perform a headcount.

Spill Kit Location:

Workers will immediately evacuate their work area upon hearing the alarm or being notified of the emergency and ordered to evacuate. No worker is exempt from evacuation even if the evacuation is a drill.

Workers are required to:

- 1.) Report immediately to their designated assembly point and be accounted for.
- 2.) Failure to report may cause another to risk danger in an effort to search for you.
- 3.) Do Not leave the project without prior authorization from first-line supervision.

IF APPLICABLE – INSERT EMERGENCY EVACUATION MAP

Purpose

This policy establishes guidelines when preparing for inclement weather up to and including hurricanes. Appropriate precautions for severe weather can help reduce the potentially serious losses associated, and protect the assets of our jobsites.

Scope

This policy applies to all jobsites and regional offices.

Definitions

- **Tropical Wave:** A cluster of clouds and/or thunderstorms without a significant circulation and generally moving from east to west through the Tropics.
- **Tropical Depression:** A cluster of clouds and/or thunderstorms with a center of circulation and sustained wind speeds of less than 39 mph.
- **Tropical Storm:** An organized system of strong thunderstorms with top sustained winds of 39 mph to 73 mph. Tropical storms can quickly develop into hurricanes. Storms are named when they reach tropical storm strength.
- **Tropical Storm Watch:** Tropical storm conditions are possible in the specified area of the watch, usually within 36 hours.
- **Tropical Storm Warning:** Tropical storm conditions are expected in the specified area of the warning within 24 hours.
- **Hurricane:** An intense tropical weather system with a sustained wind speed of 74mph or higher.
- **Hurricane Season:** The Atlantic Hurricane Season begins June 1 and lasts through November 30
- **Storm Surge:** A dome of sea water up to approximately 20 feet in height that arrives with a hurricane, and can affect more than 100 miles of coastline. Evacuation zones are identified by their likelihood of being flooded by this rising water, which is responsible for most hurricane deaths.
- **Hurricane Watch:** Hurricane conditions are possible in the specified area of the watch, usually within 36 hours.
- **Hurricane Warning:** Hurricane conditions are expected in the specified area of the warning within 24 hours. Complete all storm preparations and immediately follow local emergency management official's advice about evacuating dangerous or low-lying locations.
- **Local State of Emergency:** Declaration by County officials in order to prepare the county for response to the storm. Shortly after that, public protective measures will be announced, i.e. evacuation orders. This is your signal to have your preparations complete and be ready to act.
- **Hurricane Strengths:**

Category	Wind Speed	Damage Level
1	74-95 mph	Minimal damage to buildings
2	96 - 110 mph	Moderate damage to buildings
3	111 - 130 mph	Extensive damage to small buildings
4	131 - 155 mph	Extreme structural damage
5	> than 155 mph	Catastrophic building failures

Tracking and Mapping

- It is Barton Malow's policy to begin tracking and mapping storms with potential landfall in the area of our construction sites and offices when they reach the "tropical storm" strength. This is when a storm becomes a "named storm."
- Barton Malow's office and project sites will use the National Oceanic Atmospheric Administration (NOAA) website as their primary resource for storm maps and tracking. This information can be found at noaa.gov.

Procedure**Prior to Hurricane Season (June 1):**

- Site Specific Procedures:
 - Prepare or update the emergency phone list in section VI of this procedure showing home phone numbers of all project personnel and subcontractor's supervisors. Include all land lines and cell phones. These numbers shall be used for emergency purposes only.
 - Assign all responsibilities listed in section VI of this procedure and identify additional site-specific measures; solicit subcontractor input for site specific procedures.
 - Communicate the Hurricane Preparedness Plan and site-specific procedures.
- Prepare and issue a "phone tree" for the project. This shall contain numbers for all Barton Malow staff and subcontractor supervisors.
- Establish a Project Recovery Team that shall:
 - Be comprised of Barton Malow and subcontractor representatives
 - Return to the site immediately after the "all clear" signal is issued by local authorities.
- Establish a recovery team for regional offices.
- Sandbag or dike equipment in low-lying areas.
- Prepare a hurricane recovery kit including but not limited to the following items:
 - Water
 - Weather radio
 - Pumps
 - #9 wire
 - ¾" perforated banding, Tapcon fasteners or other anchors
 - Rope
 - Tarps
 - Pump hose
 - Power cords
 - Rolls of heavy plastic and/or 10 millimeter contractor bags
 - Generators and gasoline
 - Flashlights with batteries
 - Additional radio and cell phone batteries
 - Camera/video camera

Tropical Storms:

- When a storm with potential landfall in the area of Barton Malow construction sites reaches "tropical storm" (named) strength, sites shall track and map the storm.
- National Oceanic Atmospheric Administration (NOAA) resources shall be used to track and map storms. The website for this information is found at noaa.gov.

Potential Hurricane (3-5 days out):

- Monitor storm progress with the NOAA website (noaa.gov), television and radio about the strength and movement of the storm.
- The phone list shall be maintained on site and the Senior Superintendent or designee will take a copy home for safe keeping during the storm.
- When first warnings are received, monitor material and equipment deliveries to the job site.
- Determine plywood needs for boarding and protecting glass and openings throughout buildings. Obtain/locate cargo netting and banding materials for securing materials that are difficult to band.
- Contact the Regional Safety Manager or Corporate Safety Director for additional instructions.

Hurricane Watch (24-36 hours out):

- Conduct safety meetings and issue orders for preparedness.
- Housekeeping:
 - Broom clean entire project, inside and out, and remove trash from the job site.
 - Move loose materials to dried-in floors or secured Conex boxes if possible
 - If dried-in floors are unavailable or loose materials cannot be moved from exposed floors, use post shores or banding and Tapcon fasteners to secure materials to the floor
 - Secure or remove chemicals or fuel to prevent releases. Maintain supply of fuel for generators.
 - Close and secure all building doors and windows except where working

Equipment:

- Secure all portable toilets and dumpsters together in one location.
- Remove all portable equipment from the job or store in a secured Conex box.
- Fill all vehicles and powered emergency equipment with fuel.
- Lower all crawler or truck crane booms to the ground
- Lower all earthmoving machinery buckets and blades to the ground.
- Let tower cranes weathervane (contact Crane Company for their requirements).
- Check the security of crane counterweight(s), wedges and clamps.
- Fill all water kegs the day before the storm. Potable water may not be available for several days after the storm.
- Make sure all office trailers and barricades are secured to the ground using 1/2" cable located in at least three (3) places along the trailer. Anchor cables in a 55 gallon drum filled with concrete if available.
- Remove, band and secure all boards from scaffolds and tie all rolling scaffolds to columns or other structural members.
- Remove formwork that has not been poured with concrete.
- If removal is not possible, load the deck with banded rebar, steel and/or beams and secure where possible.
- Document conditions of the project and the surrounding area by videotaping or taking pictures of adjacent properties and any construction projects in the vicinity. These photographs will show materials that may blow over from other jobs, damaging windows or other property.
- Fully charge all job radios and spare batteries.

Hurricane Warning (Less than 24 hours out):

- All Project areas prepare for site evacuation. Allow sufficient time to accomplish evacuation work.
- Call contractors and notify them of jobsite status; if necessary advise them not to report for work.
- Inform non-essential Barton Malow personnel not to report to work until notified.
- De-energize electrical systems.
- Traffic control device considerations:
 - Jobs using barricades and other traffic control devices shall call the subcontractor to pick up devices.
 - Removal of traffic control devices should be as late as possible without jeopardizing safety.
 - Use sand bags to delineate travel lanes for precautionary measures.
 - Backfill all open excavations.
- Office trailers
 - Perform a complete backup of all servers and computers.
 - The Office or Project Manager shall ensure that the backup tapes are secured.
 - Move computers and printers to an interior room or closet in order to minimize damage to the equipment.
 - Move equipment away from windows and into interior areas of the offices or into closets in trailers.
 - If movement of equipment is not possible, cover all equipment with heavy duty plastic or inside 10 millimeter contractor bags and secure.
 - The Office / Project Manager shall ensure that all papers from desks are removed and stored in a dry place.
 - Secure heavy duty plastic or 10 millimeter contractor bags around file cabinets for added protection.
 - The Office / Project Manager shall ensure that all project drawings are protected and secured in a dry place. If possible remove project drawings from the site.

- If trailers are in a low lying area, order sandbags for all entrances.
- Secure trailers as much as possible from flood damage.

Post Storm Procedures

- Return to work - construction sites
 - Recovery Team shall report to the site immediately after the “all clear” signal is given. If the “all clear” is given after hours, the team will meet the next morning.
 - Recovery Team will inspect the sight to determine if it is safe for other employees to return to work.
 - Electricians will inspect to ensure that electrical hazards do not exist.
 - Shell / Concrete contactors will inspect formwork to determine safety.
 - Evaluate the site condition to determine what trades should return to work and when.
- Return to work-offices
 - Recovery Team shall report to the office immediately after the “all clear” is given. If the “all clear” is given after hours, the team will meet at 8:00 AM the next morning.
 - Recovery Team will inspect the office to determine if it is safe for other employees to return to work.
 - Evaluate the site condition to determine what departments should return to work and when.
- Damage reporting
 - A Comprehensive Damage Report of each office and/or project site shall be produced by the Recovery Team.
 - Damages shall be videotaped and submitted with the written report.
 - Comprehensive Damage Reports shall be submitted to the Regional Safety Director and Safety Manager within 2 days.
 - Communicate instructions to department leaders.
 - Communicate to trade supervisors when to return to the job site.



Attachment I

HURRICANE PREPAREDNESS PLAN

Project Operational Leadership Contact Phone Numbers

[illegible]

Hurricane Watch Issued:

- When a Hurricane Watch is issued for the county or surrounding counties in which this job is located, the following action items will be executed.
- Responsibility for completion of these action items shall be identified prior to the beginning of hurricane season.
- The following action items shall be assigned, but the project shall consider site specific conditions as well.

ACTION ITEM	RESPONSIBILITY
Conduct safety meetings and issue orders for preparedness.	Safety Dept.
Initiate contact of all subcontractors and communicate procedures.	Office Manager
Broom clean entire project, inside and out, and remove trash from the job site.	All Crews
Move loose materials to dried-in floors if possible.	All Crews
If dried in floors are unavailable or loose materials cannot be moved from exposed floors, use post shores to secure materials to the floor.	All Crews
Secure or remove chemicals or fuel to prevent releases.	All Crews
Close and secure all building doors and windows.	Barton Malow Supt
Arrange pickup of all dumpsters and portable toilets or secure together.	Barton Malow Supt
Move all portable equipment into designated area.	All Crews
Fuel all vehicles and gas all powered emergency equipment.	All Crews
Make sure all office trailers and barricades are secured to the ground using 1/2" cable located in at least three (3) places along the trailer. Anchor cables in a 55 gallon drum filled with concrete if available.	Barton Malow Supt
Remove, band and secure all boards from scaffolds and tie all rolling scaffolds to a column.	All Crews
Pour all forms ready for concrete.	All Crews
Remove formwork that has not been poured with concrete.	All Crews
Remove all outriggers from the building.	N/A
Lower and secure all suspended scaffolds.	All Crews
Document conditions of the project and the surrounding area by video taping or taking pictures of adjacent properties and any construction projects in the vicinity.	Barton Malow Supt, Safety Dept.
Fully charge all job radios and spare batteries.	N/A
Backup project files to cloud services. Contact the IT Helpdesk with questions.	All Staff
Secure all accounting documents. Send to an alternate location if necessary.	Office Manager, All Staff



Attachment I

HURRICANE PREPAREDNESS PLAN

ADDITIONAL SITE SPECIFIC MEASURES	RESPONSIBILITY

Hurricane Warning Issued:

- In the event a Hurricane Warning is issued the following additional action items shall take place:

ACTION ITEM	RESPONSIBILITY
Photograph all the precautions put in place to protect from storm damage.	Barton Malow Supt, Safety Dent
Lower all crawler or truck crane booms to the ground.	All Crews
Check the security of crane counterweight(s), wedges and clamps.	All Crews
Let tower cranes weathervane (contact crane company for their requirements).	N/A
Fill all water kegs the day before the storm. Potable water may not be available for several days after the storm.	All Crews
Load all unpoured decks with banded rebar, steel and/or beams and secure where possible.	All Crews
Lower all earthmoving machinery buckets and blades to the ground.	All Crews
Shut off power and water supply to the building.	Barton Malow Supt.
Check roof drains and overflow scuppers for obstructions.	All Crews
Place skidpans on ground and fill with water or dirt.	All Crews
Release all-non-essential personnel from the site until further notice.	Barton Malow Management
ADDITIONAL SITE SPECIFIC MEASURES	RESPONSIBILITY
Contact appropriate vendors for assistance with equipment, generators, etc.	Barton Malow Supt.



Attachment I HURRICANE PREPAREDNESS PLAN

After the Storm:

- Once the storm is over and the all clear signal is given, the recovery team shall return to the site.
- The recovery team will consist of the following people:

RECOVERY TEAM			
Name	Company and Title	Cell Phone #	Home Phone #

- The Recovery Team's responsibilities include but are not limited to:

ACTION ITEM	RESPONSIBILITY
Evaluate the site and determine if it is safe for the rest of the staff to return.	Recovery Team
Implement Crisis Management program if appropriate	Recovery Team
Contact all Barton Malow and Subcontractor emergency contacts and advise them of the worksite status.	Office Manager
Contact owner and architect and request their presence to assess the damage.	Barton Malow Management
Make a list of all potential safety hazards the workforce may face when they return to the site; communicate the finding to the appropriate subcontractors.	Barton Malow Supt, Safety
Inspect all scaffolds, formwork, tables, platforms, etc.	Dept.
Domestic water supply tested.	Barton Malow Supt, Safety
Solicit list of subcontractor losses.	Dept.
	Barton Malow Management
ADDITIONAL SITE SPECIFIC MEASURES	RESPONSIBILITY
Videotape all conditions of the site and surrounding areas/adjacent property.	Barton Malow Supt, Safety
	Dept.

Barton Malow Traffic Control Plan

{Insert Project Name}

This is a living document and will be updated as needed throughout the project.

Revision No.: {Insert Revision No.}

{Insert Date}

{Insert Project Name} Traffic Control Plan

Site Address: _____

Hours of Work: _____

Project Scope: _____

Site Entry: _____

Site Exit: _____

Oversized Loads: _____

PPE Requirements: Anyone that plans to access the site must abide by the PPE requirements of this site. Hardhats, glasses, gloves, high visibility vest or shirt, pants and sturdy work boots are required at all times. It is the responsibility of the contractor to provide PPE and enforce that their vendors, delivery drivers and visitors comply. Communication with these parties ahead of time will help manage this endeavor.

Access and Badging: _____

Logistical Questions: _____

Emergency Contacts: See Contact List Below



Attachment K

CONTRACTOR MONTHLY INCIDENT SUMMARY REPORT

{Insert Project Name}

Contractor Name:

Sub-Tier Subcontractor To:

Reporting Period: {Insert Month} {Insert Year}

This form must be submitted to Barton Malow no later than the 5th of each month. It is to be submitted even if no accidents occurred.

NOTE: Contractors that fail to submit this report may not receive payment.

DIRECTIONS: *Report all injuries, no matter how minor as indicated below!* When reporting number of OSHA recordable medical cases that had lost work days, enter number of calendar days away from work (do not count first day of injury, but the weekends must be counted). Carry over days from a previously reported lost time case where the worker is still off work in this reporting period. Report the number of OSHA recordable medical cases that had restricted or light duty work and the total number of calendar days or restricted or light duty (do not count the first day of injury, but the weekend must be counted). Carry over days from a previously reported restricted or light duty case where the worker is still on restricted or light duty. Report number of first aid only cases for period as well.

	Man-hours Worked	First Aid Injuries	Medical Treatment Only	Lost Time Injuries	Days Lost	Restricted Work Injuries	Days of Restricted Work
Month							
YTD							

Name of person completing report:

Print Name:

Signature: _____

Phone Number:



Attachment L INCIDENT INVESTIGATION REPORT

(Check all that apply):

☐ Clinic / Hospital
☐ Lost Time

☐ First Aid
☐ Near Miss

☐ Recordable
☐ Notice Only

☐ Restriction
☐ Property

Name: _____
(name of person involved in incident)

Birth Date: _____

Address: _____

Home Phone No.: _(____)_____

Mobile Phone No.: _(____)_____

Trade / Occupation: _____

Date Employed: _____

Emergency Contact: _____

Contact Telephone No.: _____

Barton Malow Region: ☐ Central ☐ Eastern ☐ Southeast

Barton Malow Employee: ☐ Yes ☐ No

(If not an employee of Barton Malow, list employer below)

Employer: _____

Employer Phone No.: _(____)_____

Contact Email: _____

PROJECT INFORMATION

Project Name: _____ Job #: _____

Project Site and Address: _____

Supervisor or Foreman: _____

Employees Length of Time on Project: _____

Witness: _____ Witness: _____

Witness Statement Taken: Yes (Attached) ☐ No ☐

Photographs Taken: Yes ☐ No ☐ Pre Task Plan / (JHA) Completed: Yes ☐ No ☐

Photographs Attached: Yes ☐ No ☐ Pre Task Plan / (JHA) Attached: Yes ☐ No ☐

(Note: Photos and Pre Task Plan must be provided)

INCIDENT INFORMATION

Date of Incident: _____ Time of Incident: _____ Date Reported: _____

Any Lost Time? Yes ☐ No ☐ Not Yet Determined ☐ If Yes, list Date Last Worked: _____

Is the employee on restricted duty? Yes ☐ No ☐ Not Yet Determined ☐

Nature of Injury (i.e. fracture, laceration, sprain/strain, contusion - right / left - hand, knee, wrist, foot, leg, back, etc.):

DESCRIPTION OF TASK & INCIDENT**TREATMENT**Treatment Location (*name & address*): _____

Describe Treatment Given for Injury:

INCIDENTDid Incident Cause Any Property Damage? Yes ☐ No ☐ Describe: _____

List Equipment Involved: _____

Describe Any Hazards, Unsafe Conditions, or Acts:

Describe Underlying Cause(s) or Failure(s):

FOLLOW UP

Immediate Action Taken:

Planned Corrective Action / Counter Measures:

REPORT PREPARED BY

Printed Name: _____

Contact Information: _____

Signature: _____

Date: _____



Attachment L1
WITNESS REPORT

Witness's Name: _____ Project: _____

Witness's Address: _____

Contact Information: _____

Witness's Employer:

☐ Barton Malow Trade: _____ Union #: _____

☐ Subcontractor: _____

☐ Other: _____

The following is my statement regarding the incident detailed in the attached Incident Investigation Report.

Witness's Signature: _____ Date: _____



Attachment M
SAFETY TRAINING ROSTER

	Project Name:		Project Location:	
	Course:			
	Date:		Presented by:	
	<i>This is to certify that I, the undersigned, have attended this Safety Training course and understand the contents presented during the program.</i>			
	Name (print)	Company Name	Signature	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

Review checklist while completing front page of PTP. Check all that apply.

REQUIRED PERMITS				
<input type="checkbox"/> Confined Space	<input type="checkbox"/> Hot Work	<input type="checkbox"/> Ground Disturbance (over 12")		
<input type="checkbox"/> Guard Rail Removal	<input type="checkbox"/> Excavation	<input type="checkbox"/> Energy Isolation/LOTO		
REQUIRED PPE				
<input type="checkbox"/> Hard Hat <input type="checkbox"/> Ear Plugs / Muffs EYE PROTECTION <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Face Shield <input type="checkbox"/> Chemical Goggles <input type="checkbox"/> Welding Hood	HAND PROTECTION <input type="checkbox"/> Cut Resistant Gloves <input type="checkbox"/> Welder Gloves <input type="checkbox"/> Nitrile Gloves <input type="checkbox"/> Rubber Gloves <input type="checkbox"/> Elect. Insulated Gloves <input type="checkbox"/> Arm Sleeves	FOOT PROTECTION <input type="checkbox"/> Sturdy Work Boots <input type="checkbox"/> Safety Toe Boots <input type="checkbox"/> Rubber Boots <input type="checkbox"/> Dielectric Footwear	RESPIRATORY PROTECTION <input type="checkbox"/> Dust Mask <input type="checkbox"/> Air Purifying Resp. <input type="checkbox"/> Supplied Air Resp. <input type="checkbox"/> SCBA <input type="checkbox"/> Emerg. Escape Resp. SPECIAL CLOTHING <input type="checkbox"/> Coveralls <input type="checkbox"/> Tyvek Disposable <input type="checkbox"/> Safety Vest <input type="checkbox"/> Rain Suit	FALL PROTECTION <input type="checkbox"/> Harness <input type="checkbox"/> Double Lanyard Req'd <input type="checkbox"/> Anchorage Point Avail. <input type="checkbox"/> Add'l Anchorage Connection <input type="checkbox"/> Needed (i.e. Cross arm strap, etc.) <input type="checkbox"/> Horizontal Life Line System Req'd <input type="checkbox"/> Fall Clearance Distance Adequate <input type="checkbox"/> Fall Rescue/Retrievable Plan Set Up
HAZARD	HAZARD CONTROL MEASURES			
<input type="checkbox"/> Overhead Utilities	<input type="checkbox"/> Power De-energization Required <input type="checkbox"/> Fire Watcher Required	<input type="checkbox"/> Insulation Blankets Required <input type="checkbox"/> Safe Work Zone Marked	Required clearance distance in _____ ft.	
<input type="checkbox"/> Crane or Other Lifting Equip.	<input type="checkbox"/> Signalman Assigned <input type="checkbox"/> Area Around Crane Barricaded <input type="checkbox"/> Lifting Equip. Inspected	<input type="checkbox"/> Worker Protected/Overhead Load <input type="checkbox"/> Tag Line in Use		
<input type="checkbox"/> Underground Utilities	<input type="checkbox"/> Reviewed As-Built <input type="checkbox"/> Received Ground Disturbance Permit	<input type="checkbox"/> Subsurface survey <input type="checkbox"/> Safe Work Zone Marked	Required clearance distance in _____ ft.	
<input type="checkbox"/> Electrical	<input type="checkbox"/> Lock Out/Tag Out/Try Out <input type="checkbox"/> Confirm Equip. De-Energized	<input type="checkbox"/> Reviewed Elect. Safety Procedures		
<input type="checkbox"/> Excavations	<input type="checkbox"/> Permits <input type="checkbox"/> Proper Sloping/Shoring <input type="checkbox"/> Access/Ingress Provided	<input type="checkbox"/> Inspected Prior to Entering <input type="checkbox"/> Barricades Provided <input type="checkbox"/> Protected from Water		
<input type="checkbox"/> Fire Hazard	<input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Fire Watch <input type="checkbox"/> Adjacent Area Protected	<input type="checkbox"/> Fire Extinguishers <input type="checkbox"/> Unnecessary Flammable Material Removed		
<input type="checkbox"/> Vehicular Traffic of Heavy Equip.	<input type="checkbox"/> Traffic Barricades <input type="checkbox"/> Lane Closure <input type="checkbox"/> Cones	<input type="checkbox"/> Communication w/ Operator <input type="checkbox"/> Sign <input type="checkbox"/> Flagman		
<input type="checkbox"/> Noise > 85db	<input type="checkbox"/> Hearing Protection Required <input type="checkbox"/> Ear Plugs	<input type="checkbox"/> Ear Muffs <input type="checkbox"/> Both Ear Plugs & Ear Muffs		
<input type="checkbox"/> Hand & Power Tools	<input type="checkbox"/> Inspect General Condition <input type="checkbox"/> Identified PPE <input type="checkbox"/> Guarding OK	<input type="checkbox"/> GFCI Used <input type="checkbox"/> Reviewed Owner Manual Safety Req.		
<input type="checkbox"/> Hand Hazards	<input type="checkbox"/> PPE – gloves, etc. <input type="checkbox"/> Protected Sharp Edges			
<input type="checkbox"/> Manual Lifting	<input type="checkbox"/> Hand Protection Required <input type="checkbox"/> Back Support Assistance	<input type="checkbox"/> Reviewed Proper Lifting Technique <input type="checkbox"/> Reviewed Equip. for Proper Lifting		
<input type="checkbox"/> Ladders	<input type="checkbox"/> Inspect General Condition Prior <input type="checkbox"/> Proper Angle and Placement <input type="checkbox"/> Reviewed Ladder Safety	<input type="checkbox"/> Ladder Tied Off or Held <input type="checkbox"/> Ladder Inspected within Last Quarter		
<input type="checkbox"/> Slips, Trips, & Falls	<input type="checkbox"/> Inspect for Trip Hazards <input type="checkbox"/> Tools & Material Properly Stored <input type="checkbox"/> Hazards Marked	<input type="checkbox"/> Work Zone Debris Free <input type="checkbox"/> Hazards Marked <input type="checkbox"/> Extension Cords Properly Stored		
<input type="checkbox"/> Pinch Points	<input type="checkbox"/> Working Near Operating Equip. <input type="checkbox"/> Hand/Body Positioning			
<input type="checkbox"/> Working with Chemicals	<input type="checkbox"/> Reviewed SDS <input type="checkbox"/> Exposure Monitoring Req.	<input type="checkbox"/> Have Proper Containers w/ Labels <input type="checkbox"/> Identified Proper PPE		
<input type="checkbox"/> Asbestos or Lead Paint Potential	<input type="checkbox"/> Area Contains Asbestos or Lead <input type="checkbox"/> Lead Paint Controls in Place	<input type="checkbox"/> Asbestos Controls in Place <input type="checkbox"/> Exposure Monitoring Req.		
<input type="checkbox"/> Heat Stress Potential	<input type="checkbox"/> Head Stress Monitoring > 85° <input type="checkbox"/> Cool Down Periods <input type="checkbox"/> Sun Screen	<input type="checkbox"/> Liquids Available <input type="checkbox"/> Reviewed Heat Symptoms		
<input type="checkbox"/> Environmental	<input type="checkbox"/> Air Emissions <input type="checkbox"/> Water Discharge <input type="checkbox"/> Pollution Prevention	<input type="checkbox"/> Hazardous Waste <input type="checkbox"/> Waste Minimization <input type="checkbox"/> Other:		
<input type="checkbox"/> Natural or Site Hazards	<input type="checkbox"/> Weather <input type="checkbox"/> Terrain	<input type="checkbox"/> Biological Hazard <input type="checkbox"/> Animals/Reptiles/Insects		
<input type="checkbox"/> Adjacent Work Processes	<input type="checkbox"/> Notified Them of our Presence <input type="checkbox"/> Others above/below	<input type="checkbox"/> Coordinated with Adjacent Employers <input type="checkbox"/> Need Barriers Between		
<input type="checkbox"/> Barricades/Covers	<input type="checkbox"/> Danger Barricade Tape Req. <input type="checkbox"/> Covers over opening <input type="checkbox"/> Warning Signs Req.	<input type="checkbox"/> Caution Barricade Tape Req. <input type="checkbox"/> Rigid Railing Req.		

TASKS	HAZARDS OR EXPOSURES	HAZARD CONTROL MEASURES	PERSON(S) ASSIGNED
List the tasks needed to perform the work activity in the sequence in which they will be performed.	List the hazards or exposures that could cause injury when the task is performed.	List the control measures required to eliminate or minimize the risk of injury arising from the identified hazard.	Who is assigned to ensure control measure is in place?
Emergency Action Plan discussed before start of job? Yes <input type="checkbox"/> No <input type="checkbox"/>		EMERGENCY NAMES & PHONE NUMBERS	
Emergency Muster Area:		Fire: Police: EMS: Superintendent: Project Manager: Safety: Other:	



TEAM MEMBERS

DATE	NAME	SIGNATURE	
SUPERVISOR SIGNATURE		DATE	PHONE

REPORT ALL INCIDENTS TO YOUR SUPERVISOR IMMEDIATELY. STOP ALL UNSAFE WORK.

NEAR MISS REPORT

Did you see a near miss today?

Project Name: _____

Date: _____

Time: _____

What did you see? : _____

Action Taken to Correct/Prevent a Similar Incident :

Who did you talk with concerning the near miss?

N/A: ☐

TODAY'S JOB SCOPE UNDERSTOOD?

YES OR NO

END OF SHIFT REVIEW

	Yes	No	N/A
Work Area Cleaned Up?			
Permits Turned in and Signed off?			
Tools/Equipment put away?			
Was anyone on the crew injured today?			

Notes: _____

Foreman Review (Initial): _____



Stop the job any time anyone is concerned about safety. Stop the job if anyone identifies a hazard not recorded on the Huddle. Be alert to any changes in personnel, conditions at the work site, or hazards not covered by the original Huddle. If it is necessary to **STOP THE JOB**, reassess the task and hazards, and amend the Huddle as needed.

Barton Malow Company | Safety Manual | 8/6/2018 | Attachment N1

SAFETY PRE-TASK PLAN TRI-FOLD

Company: _____

Date: _____

Time: _____

Emergency Phone #: _____

Job Name: _____

Card Completed by (print): _____

Crew: _____

New Employees: _____

Experienced Partner: _____

LIST TODAY'S TASKS

TOOLS/EQUIPMENT REQUIRED FOR TASKS

Training Required?	Yes	No
Respirator		
Power Actuated Tools		
Aerial Lifts/JLG		
Forklift		
Skidsteer		
Hearing Protection		
Fall Protection		

PERMITS/INSPECTIONS NEEDED

Inspected Before Use?	Yes	No
Digging Permit		
Hot Work Permit		
Scaffolding		
Confined Space		

MY HIGH RISK ACTIVITIES FOR TODAY

IDENTIFY POTENTIAL HAZARDS

Trips/Slips/Falls	
Soft Tissue Injuries	
Particles in Eye	
Overexertion	
Falls over 6'	
Overhead Work	
Sprains/Strains	
Fire	
Abrasion/Cuts	
Cave-in	
Loud Noises	
Heat/Cold Exposure	
Electric Shock	
Pinch Points	
Lead/Abestos	
Moving Machinery	
Live Utilities	
Working with Chemicals	
Spills	
Tools/Materials	
Dropping to a Lower Level	

LIST ADDITIONAL HAZARDS

HAZARD ELIMINATION

Keep Area Picked Up	
Stretch and Bend	
Face Shield/Goggles	
Get Help	
Fall Protection	
Toeboards/Netting	
Lift/Carry Properly	
Fire Watch/Fire Ext.	
Wear Proper Clothing	
Sloping/Shoring	
Hearing Protection	
Dress Appropriately	
Cords/Tools Inspected	
Be in Proper Position	
Get the Experts	
Make Eye Contact	
Distruption Avoidance	
Review the MSDS	
Containment Needed?	
Tools/Materials	
Secured in Place	

HAZARD RECOGNITION REPORT

Did you see a hazard today?

Project Name: _____

Date: _____

Time: _____

What did you see? : _____

Action Taken to Correct/Prevent a Similar Incident :

Who did you talk with concerning the hazard?

N/A: ☐

****NOT ACTUAL SIZE

Attachment N2
Pre-Task Plan 11x17

[illegible]Did everyone coming into the job location review & sign the POD? Y ☐ / N ☐

Is the job location cleaned up & secure? Y ☐ / N ☐

Is equipment back in service with all LOTO removed? Y ☐ / N ☐

Were there any incidents/injuries during the job? Explain the incident below: Y ☐ / N ☐

Name: _____ Signature: _____ Date: _____

Attachment N2
Pre-Task Plan 11x17

Completed by: _____ Date Completed: _____ Shift: _____

Project Name & Site Location: _____ **Job/Task Description:** _____

Review Performed by:

EMERGENCY INFORMATION		PHONE NUMBER:
<input type="checkbox"/> First Aid Services <input type="checkbox"/> Evacuation / Shelter	<input type="checkbox"/> Safety Showers <input type="checkbox"/> Eye Wash	<input type="checkbox"/> Emergency Procedures: ___ Information / Contacts ___ Evacuation ___ Shelter
GENERAL CONDITIONS		
<input type="checkbox"/> Traffic / Heavy Equipment <input type="checkbox"/> Lighting / Visibility <input type="checkbox"/> Heat / Cold <input type="checkbox"/> Severe Weather	<input type="checkbox"/> Walking / Working Surfaces <input type="checkbox"/> Heights / Falls / Openings <input type="checkbox"/> Lifting / Strains <input type="checkbox"/> Fire / Chemicals / Gasses	<input type="checkbox"/> Overhead Work <input type="checkbox"/> Barricading (Secure Areas) <input type="checkbox"/> Utilities (Power Lines, etc.) <input type="checkbox"/> Health / MSDS / Particulates
<input type="checkbox"/> Insects / Animals / etc. <input type="checkbox"/> Aircraft / Watercraft / Water <input type="checkbox"/> Noise <input type="checkbox"/> Other:		
PERSONNEL / COMMUNICATIONS		
<input type="checkbox"/> New / Inexperienced <input type="checkbox"/> Restricted	<input type="checkbox"/> Language Barriers <input type="checkbox"/> Voice / Sight Obstructions	<input type="checkbox"/> Other:
SITE SPECIFICS		
<input type="checkbox"/> Restricted Areas/Activities <input type="checkbox"/> Restricted Materials	<input type="checkbox"/> Containment <input type="checkbox"/> Protection	<input type="checkbox"/> Other:
ENVIRONMENTAL		
<input type="checkbox"/> Spill Prevention / Contain.	<input type="checkbox"/> Spill Clean Up / Disposal	<input type="checkbox"/> Other:

PERSONAL PROTECTIVE EQUIPMENT			
<input type="checkbox"/> Standard PPE (Hardhat, Glasses, Boots) <input type="checkbox"/> Vests <input type="checkbox"/> Face Shield	<input type="checkbox"/> Goggles <input type="checkbox"/> Protective Footing <input type="checkbox"/> Gloves (type): _____	<input type="checkbox"/> Hearing <input type="checkbox"/> Foot ___ Toe ___ Foot <input type="checkbox"/> Respirator (type): _____	<input type="checkbox"/> Clothing (type): _____ <input type="checkbox"/> Other (explain): _____
TOOLS Y <input type="checkbox"/> / N <input type="checkbox"/>			
<input type="checkbox"/> GFCI, Cords <input type="checkbox"/> Guards, Handles	<input type="checkbox"/> Inspect/Remove		<input type="checkbox"/> Other: _____
ENERGY CONTROL / LOCK OUT – TAG OUT Y <input type="checkbox"/> / N <input type="checkbox"/>			
<input type="checkbox"/> LOTO Training Verified <input type="checkbox"/> Group LOTO	<input type="checkbox"/> Individual LOTO <input type="checkbox"/> Sources Identified	<input type="checkbox"/> De-energized / Controlled <input type="checkbox"/> Verified	<input type="checkbox"/> Notification
AERIAL LIFTS Y <input type="checkbox"/> / N <input type="checkbox"/>			
<input type="checkbox"/> Trained (Permit) <input type="checkbox"/> Fall Protection	<input type="checkbox"/> ___ Lanyard ___ SRL ___ Exiting (100% tie off) <input type="checkbox"/> Barricade/Secure Area	<input type="checkbox"/> Ground Man <input type="checkbox"/> Rescue / Key	<input type="checkbox"/> Inspection / Manual <input type="checkbox"/> Weight Limits
FALL PROTECTION Y <input type="checkbox"/> / N <input type="checkbox"/>			
EXPOSURES	STANDARD FALL PROTECTION	FALL PROTECTION PLAN/OTHER CONTROLS	PERSONAL FALL ARREST SYSTEMS
<input type="checkbox"/> Pits/Trenches <input type="checkbox"/> Openings <input type="checkbox"/> Roofs <input type="checkbox"/> Sides/Edges <input type="checkbox"/> Impalement <input type="checkbox"/> Leading Edges <input type="checkbox"/> Ramps/Runways <input type="checkbox"/> Falling Objects <input type="checkbox"/> Other: _____	<input type="checkbox"/> Guardrails <input type="checkbox"/> PFA <input type="checkbox"/> Covers <input type="checkbox"/> Nets	<input type="checkbox"/> Barricading <input type="checkbox"/> Positioning <input type="checkbox"/> Warning Line <input type="checkbox"/> Controlled Access <input type="checkbox"/> Monitoring Systems	<input type="checkbox"/> Trained/Experienced <input type="checkbox"/> Inspections (Annual, Pre-use) <input type="checkbox"/> Anchorage ___ Structure ___ Other: _____ <input type="checkbox"/> Connection ___ SRL ___ Lifeline ___ Lanyard <input type="checkbox"/> Other: _____
CONFINED SPACE Y <input type="checkbox"/> / N <input type="checkbox"/>			
<input type="checkbox"/> Retrieval <input type="checkbox"/> Fall Protection	<input type="checkbox"/> Hazardous Atmosphere <input type="checkbox"/> Engulfment	<input type="checkbox"/> Internal Configuration	<input type="checkbox"/> Health or Safety Hazards: ___ Permit ___ Alternate ___ Per-work Check
EXCAVATIONS/TRENCHING Y <input type="checkbox"/> / N <input type="checkbox"/>			
<input type="checkbox"/> Soil type: _____ <input type="checkbox"/> Protection ___ Sloped ___ Benched ___ Shored ___ Box (Certificate) Other: _____	<input type="checkbox"/> Barricades <input type="checkbox"/> Access/Egress (ladder 25 ft) <input type="checkbox"/> Permits <input type="checkbox"/> Inspections Utilities Entry Daily	<input type="checkbox"/> Special/Additional Hazards ___ Air ___ Loads ___ Vibrations ___ Water ___ Fall Protection ___ Confined Space Other: _____	<input type="checkbox"/> Other: _____



Stop the job any time anyone is concerned about safety. Stop the job if anyone identifies a hazard not recorded on the Huddle. Be alert to any changes in personnel, conditions at the work site, or hazards not covered changes in personnel, conditions at the work site, or hazards not covered by the original Huddle. If it is necessary to STOP THE JOB, reassess the task and hazards, and amend the Huddle as needed.

****NOT ACTUAL SIZE

Attachment N2
Pre-Task Plan 11x17

HOT WORK			
<input type="checkbox"/> Weld/Cut/Burn/Grind	<input type="checkbox"/> Extinguisher (type, location, inspection)	<input type="checkbox"/> Equipment Storage/Handling	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Permit	<input type="checkbox"/> Fire Watch	<input type="checkbox"/> Fueling/Fuel-fired Equipment	
LIFTING, DIGGING, MOTORIZED EQUIPMENT			
<input type="checkbox"/> Operator (Qualified/Certified)	<input type="checkbox"/> Loads (Weight, Center of Gravity, Limitations)	<input type="checkbox"/> LOTO ___ Lines/Utilities	<input type="checkbox"/> Spotters/Communicators
<input type="checkbox"/> Daily Inspections	<input type="checkbox"/> Communications (Special Conditions)	<input type="checkbox"/> Proper Rigging/Rigging Planned	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Barricading	<input type="checkbox"/> Swing Radius	<input type="checkbox"/> Lift Plan/Permit Required (Critical, etc.)	
ELECTRICAL (Power, Utilities, Power-on, Outages)			
<input type="checkbox"/> Inspect & Manage Cords/GFCI	<input type="checkbox"/> Power-On	<input type="checkbox"/> Locate/Identify	
<input type="checkbox"/> Outage	<input type="checkbox"/> Hazardous/Restricted	<input type="checkbox"/> Other: _____	
SCAFFOLDS			
<input type="checkbox"/> Sign-Off/Daily Inspection	<input type="checkbox"/> Stable (base) Secure (4:1/attached)	<input type="checkbox"/> Wheels Locked ___ Diagonal Support	<input type="checkbox"/> Rescue/Utilities
<input type="checkbox"/> Railings, Toe Boards, Fully Planked	<input type="checkbox"/> Ladder (access ___ PFA _____)	<input type="checkbox"/> Secured (above/below)	
LADDERS			
<input type="checkbox"/> Pre-use Inspection	<input type="checkbox"/> 4:1 Angle / 3 ft. Rule	<input type="checkbox"/> Stay Off Top Steps	
<input type="checkbox"/> Tied Off/Area Secure	<input type="checkbox"/> Fully Open and Locked	<input type="checkbox"/> Fall Protection: _____	
OTHER			
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

NOTES

EMERGENCY RESPONSE

EMERGENCY CONTACTS	NAMES & CONTACT NUMBERS	EQUIPMENT/JOB LOCATION GPS Coordinates, Site Location or Directions for Emergency Response	CLOSEST ASSEMBLY POINT
Safety/Supervisor			
Project Manager			
Emergency Contact			
Hazardous Spill Response			



Stop the job any time anyone is concerned about safety. Stop the job if anyone identifies a hazard not recorded on the Huddle. Be alert to any changes in personnel, conditions at the work site, or hazards not covered by the original Huddle. If it is necessary to **STOP THE JOB**, reassess the task and hazards, and amend the Huddle as needed.

[illegible]

Company Name:

[illegible]



Attachment P
PERMIT REQUEST FORM

Contact Information:

Contractor: _____ **Date:** _____

Foreman's Name: _____ **Foreman Phone No.:** _____

Barton Malow **Approval Name:** _____ **Phone No.:** _____

Type of Permit		Permit No.
Confined Space Permit	<input type="checkbox"/>	
Excavation Permit	<input type="checkbox"/>	
Energized Electrical Work Permit	<input type="checkbox"/>	
Building Work Permit	<input type="checkbox"/>	
Guardrail Removal Permit	<input type="checkbox"/>	
Hot Work Permit	<input type="checkbox"/>	
Other <i>(please list)</i> :	<input type="checkbox"/>	
Other <i>(please list)</i> :	<input type="checkbox"/>	
Other <i>(please list)</i> :	<input type="checkbox"/>	

Work to be performed:

Duration:

Approval by Barton Malow Management:

Description – Required for all entries	
Permit #: _____	Employer: _____
Supervisor: _____	Location: _____
Permit Valid Until: _____	
Type: <input type="checkbox"/> Non-Permit <input type="checkbox"/> Permit <input type="checkbox"/> Reclassified	Date and Time of Entry: _____ / _____ <input type="checkbox"/> AM <input type="checkbox"/> PM
Location of Confined Space: _____	
Type of Confined Space: <input type="checkbox"/> Tank <input type="checkbox"/> Pipe <input type="checkbox"/> Manhole <input type="checkbox"/> Tunnel <input type="checkbox"/> Vault <input type="checkbox"/> Other: _____	
Work Description/Purpose of Entry: _____ _____	
Hazards: _____	

Verifications – Required for all entries	
	Supervisor's Initials
Lockout/Tagout (isolation measures) _____	_____
Purged, Cleaned, Drained and Ventilated _____	_____
Employee Training _____	_____

Required for all entries			Additional Permit Required Controls		
	Required	Verified		Required	Verified
Pre-Task Plan (PTP)	X	<input type="checkbox"/>	Authorized Entry Log at Access	<input type="checkbox"/>	<input type="checkbox"/>
Safety Representative Notified	X	<input type="checkbox"/>	Fire Extinguisher Available	<input type="checkbox"/>	<input type="checkbox"/>
Adequate Access	X	<input type="checkbox"/>	Attendant	<input type="checkbox"/>	<input type="checkbox"/>
Access Protected (fall exposure)	<input type="checkbox"/>	<input type="checkbox"/>	Warning Signs Posted at Access	<input type="checkbox"/>	<input type="checkbox"/>
Adequate Lighting (low voltage)	<input type="checkbox"/>	<input type="checkbox"/>	Respirators Required? If required, what type? _____	<input type="checkbox"/>	<input type="checkbox"/>
Harness / Lifelines	<input type="checkbox"/>	<input type="checkbox"/>	Protective Clothing Required (describe) _____	<input type="checkbox"/>	<input type="checkbox"/>
Training	X	<input type="checkbox"/>	Rescue Equipment/Service Available (Tri-pod/winch or emergency services)	<input type="checkbox"/>	<input type="checkbox"/>
Ventilation Adequacy	X	<input type="checkbox"/>	Hot Work Permit Required	<input type="checkbox"/>	<input type="checkbox"/>
Communications Equipment	<input type="checkbox"/>	<input type="checkbox"/>			
Continuous Air Monitoring	X	<input type="checkbox"/>			

Air Monitoring – Required for all entries							
Make: _____		Model: _____		ID#: _____			
Field Calibration Date: _____				Calibrated by: _____			
Atmosphere Checked by: _____							
Contaminants	Permissible Levels	*1 st Check	Time	*2 nd Check	Time	*3 rd Check	Time
% Oxygen (O2)	19.5% to 23.5%						
LEL	Less than 10%						
Carbon Monoxide (CO)	Less than 35 ppm						
Hydrogen Sulfide (H2S)	Less than 10 ppm						
Other:							
*1 ST CHECK TO BE COMPLETED PRIOR TO ENTRY							

IN CASE OF EMERGENCY: _____ OR RESCUE: _____

Authorization	
Entry Supervisor: _____	Date: _____
Signature: _____	Duration: _____



Location:	Equipment/Space:	Date:
-----------	------------------	-------

<input type="checkbox"/> Non-permit	<input type="checkbox"/> Reclassification to Non-Permit	<input type="checkbox"/> Comment (<i>controls, conditions, etc.</i>)	
Name <i>Competent person</i>	Signature	Date	Company

<input type="checkbox"/> Suspension		<input type="checkbox"/> Cancellation	
Name		Signature	Date

Debrief of confined space entry (program followed, hazards confronted or created):			
Name	Signature	Date	Company

Date: _____ Weather: _____ Temperature: _____ F / C

Competent Person(s): _____

Crew: _____

Job Name: _____ Duration of Work: _____

Description: _____ Location: _____

Excavation Total Depth Range _____

1. Call local or other utility locator (811 even if it is on private property) ☐ YES (initials) _____

Completed by _____ Permit # _____ MISS Dig Permit # _____

2. Which of the methods below are being used to locate Underground? (initials) _____

☐ Zone observation ☐ As built drawings ☐ Hand locate ☐ Local or other utility locator

☐ Communication with Owner Rep's ☐ Hydro Excavation ☐ Ground Penetrating Radar

What Underground Utilities have been identified in this work zone? – check all that apply and ensure that they are shown on the work zone area drawing that is required to be an attachment as a part of this

Excavation Zone Checklist (check all that apply):

☐ Electrical ☐ Gas ☐ Fiber Optic ☐ Phone ☐ Sanitary/Sewer ☐ Water

☐ Other (please list) _____

Visual Tests Performed: (observed soil adjacent to excavation, soil forming sides of excavation, soil taken as sample from excavated materials, etc.)

Completed by: _____ Date: _____ Time: _____

Manual Tests Performed: (check manual test performed)

☐ Dry Strength (dry and crumbles on its own)

☐ Plasticity (moist sample rolled into thread – add water if necessary)

☐ Thumb Penetration (make a ball – add water if necessary)

☐ Pocket Penetrometer: (Class "A" – 1.5 TSF and above) ☐ Other _____

(Class "B" – 0.5 TSF to 1.5 TSF)

(Class "C" – 0.5 TSF or less)

Completed by: _____ Date: _____ Time: _____

Soil Classification: ☐ "A" 1:1 ☐ "B" 1:1/2 ☐ "C" 2/1 ☐ Solid Rock ☐ Fractured Clay

☐ Stiff Clay ☐ Firm Clay ☐ Granular Soil Dry ☐ Granular Soil Wet ☐ Saturated Granular Soil ☐ Running Soil

Shoring System Used: ☐ Sloping ☐ Benching ☐ Trench Box/ Shield ☐ Hydraulic Shoring
☐ Timber Shoring ☐ Other ☐ N/A

If *Sloping / Benching* are used, ensure angle of repose correct for Soil Classification? ☐ YES (initials) _____

If *Timber or Hydraulic* shoring is used, are materials and spacing correct? ☐ N/A ☐ YES (initials) _____

Trench Box used: ☐ N/A ☐ YES (initials) _____

Trench Box(s) Number: _____

Tabulated Data on site for shoring system used: ☐ N/A ☐ YES (initials) _____

All Professional Engineering Plans must be attached. ☐ N/A ☐ YES (initials) _____

What method is being used to properly sign and barricade the excavation zone?

☐ Guardrail ☐ Rope ☐ Concrete Barriers ☐ Soil Berm ☐ Other _____



Attachment R

EXCAVATION ZONE CHECKLIST

Is there water in the excavation? ☐ Yes ☐ No

Method used to dewater excavation: _____ (initials) _____

Is the excavation subject to vibration? ☐ YES ☐ NO

Method used to prevent vibration from impacting the integrity of the excavation:

_____ (initials) _____

What methods of access and egress are being used? _____

AIR MONITORING

Air Monitoring is required to be performed if the excavation is considered a Confined Space or has any of the following:

Fuel, Oil, Gas Line, Sanitary Sewer or Storm Sewer, Contaminated Soil, Manhole, or Catch Basin

Has atmosphere in the excavation been tested? ☐ YES ☐ NO (initials) _____

Results reviewed by: _____ Date: _____ Time: _____

Results of Air Monitoring are attached and verified by:

Verified by: _____ Date: _____ Time: _____

Checklist completed by: _____ Date: _____ Time: _____

Checklist Reviewed by: _____ Date: _____ Time: _____

LOCKOUT TAGOUT PROGRAM

**Barton
Malow**

Project Safety “Lock Out / Tag Out” Program

Safety Tagging Procedure (Hazardous Energy Control)

1.0 Purpose

The purpose of this procedure is to establish the method in which lockout / tag out and permit to work functions will be administered. Not properly assessing and dissipating stored energy is one of the most common causes for workplace incidents that involve hazardous energy. Control of hazardous energy includes isolating the system from its primary power source and residual energy. The intent of implementing this program is to avoid any hazardous release of energy that could threaten the health and safety of project personnel or damage equipment. Energy in this context includes, but is not limited to:

1.0.1 Electrical energy is the most common form of energy used in workplaces. It can be available live through power lines or it can also be stored, for example, in batteries or capacitors. Electricity can harm people in one of three ways:

1. Electrical shock.
2. Secondary injury.
3. Exposure to an electrical arc.

1.0.2 Hydraulic potential energy is the energy stored within a pressurized liquid. When under pressure, the fluid can be used to move heavy objects, machinery, or equipment. Examples: automotive car lifts, injection moulding machines, power presses, and the braking system in cars. When hydraulic energy is released in an uncontrolled manner, individuals may be crushed or struck by moving machinery, equipment or other items.

1.0.3 Pneumatic potential energy is the energy stored within pressurized air. Like hydraulic energy, when under pressure, air can be used to move heavy objects and power equipment. Examples: spraying devices, power washers, or machinery. When pneumatic energy is released in an uncontrolled manner, individuals may be crushed or struck by moving machinery, equipment or other items.

1.0.4 Chemical energy is the energy released when a substance undergoes a chemical reaction. The energy is normally Released as heat, but could be released in other forms, such as pressure. A common result of a hazardous chemical reaction is fire or explosion.

1.0.5 Mechanical energy is the energy contained in an item under tension. For example, a spring that is compressed or coiled will have stored energy which will be released in the form of movement when the spring expands. The release of mechanical energy may result in an individual being crushed or struck by the object. Heat gain and loss in many materials will induce forces into the material that is constrained creating stored energy.

1.0.6 Radiation energy is energy from electromagnetic sources. This energy covers all radiation from visible light, , microwave, infra-red, ultraviolet, and X-rays. Radiation energy can cause health effects ranging from skin and eye damage (lasers and UV light) to cancer (X-rays).

1.0.7 Gravitational potential energy is the energy related to the mass of an object and its distance from the earth (or ground). The heavier an object is, and the further it is from the ground, the greater its gravitational potential energy. For example, a 1 pound weight held 2 feet above the ground will have greater gravitational potential energy then a 1 pound weight held 1 feet above the ground.

1.2. Lock Out / Tag Out (LOTO) is required whenever construction, modification, testing, commissioning, servicing, or maintenance is being performed on equipment or systems in which the unexpected energization, commissioning, or release of stored energy, could cause injury to people or damage equipment.

2.0 Definitions

2.1. Affected Employee: Person whose job requires him/her to operate or use a machine or equipment on which construction, modification, testing, commissioning, servicing or maintenance is being performed under a **Lock Out / Tag Out**, or whose job requires him/her to work in an area in which such activities are being performed.

2.2. Authorized Employee: Person, usually supervisor level or above, whom is authorized to request **LOTO** tagging and implement the isolation if so directed by the applicable Tagging Authority. **This person must be trained and must demonstrate understanding and competence in execution of the Lock Out / Tag Out and Permit to Work (PTW) Programs (understanding and competence is demonstrated by passing a written test).**

2.3. “Caution – System Under Test” (SUT) Tags (yellow w/black lettering): Tag used to identify major equipment or systems under the control of Commissioning which may be operated or energized as necessary for the testing of the system or components. **Each tag must have the appropriate Tagging Authority’s name written on it (Attachment LOTO-A7). Only the person whose name is on the tag and those working under his/her direction may operate the system or device.**

2.4 “Caution – System Under Operations” (SUO) Tags (orange w/black lettering): Tag used to identify major equipment and systems under the control of Operations which may be operated or energized as necessary to support the project operational requirements (Attachment LOTO-A8).

2.5 “Danger – Do Not Operate” (DNO) Tags (white w/red and black lettering): Tag used to identify an isolation point and control the position or status of any device (valve, breaker, etc.) required to ensure a safe lockout. These tags will have a unique number and will be accompanied by an appropriate locking device (Attachment LOTO-A6).

2.6 Electrical Lock Board: A board utilized to organize electrical locks and tags for the isolation of electrical equipment see section 3.2 “Electrical Lock Out Setup”.

2.7 Electrical LOTO Log: Log sheet specific to each electrical isolating device, which is used to track **LOTO** status on that device. Authorized Employees are required to sign on and off as DNO tags are hung and removed (Attachment LOTO-A2).

2.8 Energy Isolating Device: An energy isolating device is a mechanical device that physically prevents the transmission or release of energy. Typical energy isolating devices are as follows.

- A manually operated circuit breaker.
- A disconnect switch.
- A manual isolating valve.
- A blank flange, slip blind, or any similar device used to physically block or isolate energy.
- Push buttons, selector switches, and other control circuit type devices are not acceptable energy isolating devices.

2.9 Isolation Record (IR): A form used to initiate or request an isolation and to track the placement and removal of that isolation. All isolations requiring more than one Lock Out / Tag Out, or single mechanical isolations, must be documented on an Isolation Record. Single electrical isolations can be controlled from the Electrical LOTO Log. Isolation Records have a unique number assigned for tracking purposes (Attachment LOTO-A4).

2.10 Holder: Any Affected or Authorized employee who is signed onto the Isolation Record or the Electrical LOTO Log as a holder. By signing on as a Holder personnel ensure the **LOTO** is maintained until they have signed off. **LOTO’s cannot be removed without first clearing all holders off the respective forms. All LOTO’s must have at least one Holder.**

2.11 Lead Person: Person directly involved with the execution of work and primarily responsible for the coordination / oversight of that work. Typically, this person is a Foreman level or above.

2.12 Lockout Device: A device that uses positive means, such as a lock, to hold an energy isolating device in the safe position and thus prevent the inadvertent energization of a machine or equipment or prevent the transmission or release of hazardous energy. Typical lockout devices and their acceptable use are as follows.

a) Padlocks/Tie wraps: Padlocks in conjunction with chains or specialized locking devices, or heavy duty tie wraps are used for mechanical and / or electrical lockouts when it is necessary to prevent the physical operation of a device (such as a valve or breaker). Each lock or tie wrap must be accompanied by a DNO tag for identification purposes.

b) Multi-lock Device(s): A device that accommodates more than one lock or tag. This allows personnel such as craft foremen or subcontractors to attached their own lock for additional protection during the performance of their work. Individual crew members have the right to affix their own locks if desired.

c) Electrical Distribution Panel Breaker Locking Devices: Panel breakers can be locked out by utilizing one of the following methods:

- Panel board locking device affixed over the breaker, accompanied by a DNO Tag (first preference).
- Any other means of hazardous energy control that equals the protection provided by locks and tags.

d)Physical Separation: Mechanical blind or method of physically separating or cordoning off a component or system. These devices must have a DNO attached.

2.13 Other Employee: Any employee whose work operations may be in an area where energy control procedures may be used.

2.14 Permit to Work (PTW): A work authorization required to perform work on equipment, areas, systems, or sub-systems that have been turned over to Commissioning or Operations. See section 3.1 for detailed information on when a PTW work authorization is required. The PTW form is preprinted in triplicate with a unique sequential number assigned (Attachment LOTO-A3).

2.14.1 Requester must submit specific documentation for any system affected by LOTO, PTW request.(examples; P&IDs, One/Three Line Electrical drawings etc.)

2.15 Safety Tagging Displays: Displays located throughout the plant of which communicate the tags and locking devices authorized for use on the project.

2.16 Tagging Authority: The Tagging Authority is a supervisor-level employee who has been assigned responsibility over a given area, discipline, or group of systems and has been trained in the implementation of the project Lock Out / Tag Out and PTW program. The Tagging Authority is the person who approves PTWs, DNO Isolations, the hanging of SUT and SUO tags for his/her area of responsibility, and has been trained in the applicable Safety standards.

3.0 Procedure

3.1 Lock Out / Tag Out Sequence and Responsibilities

Sequence steps and personnel responsibilities for the **Lockout / Tag Out Program** vary with the three main stages of the project: Construction, Commissioning, and Operations.

Table LOTO-T1: Outline of roles and responsibilities in each stage

Stage	Tagging Authority	Authorized Employee	Notes
-------	-------------------	---------------------	-------

Construction	Construction Manager Disc. Superintendent (by area of responsibility)	Disc. Superintendent General Foremen Disc. Foremen	<ul style="list-style-type: none"> Construction is in control of equipment and systems. DNOs are used for LOTO.
Commissioning	Commissioning Manager & Commissioning Engineers (by assigned system)	Disc. Superintendent General Foremen Disc. Foremen Commissioning Engineer Commissioning Technician	<ul style="list-style-type: none"> Commissioning has accepted items on a system basis. Commissioning Boundary Tag to be used (see LOTO-A9). SUTs indicate items are in Commissioning phase. DNOs are used for LOTO.
Operations	Commissioning Manager Operation Supervisors	Disc. Superintendent General Foremen Disc. Foremen Commissioning Engineer Commissioning Technician Client Personnel	<ul style="list-style-type: none"> Operations have accepted control of system. SUOs indicate items are in operation. DNOs are used for LOTO.

LOTO rules, which apply in all cases and to all stages of the project are defined below:

3.2 Procedural

3.2.1 Training must be conducted to ensure that all personnel are knowledgeable of their duties with regard to Lock Out Tag Out and hazardous energy control (i.e. training must be commensurate with their level of responsibility and involvement – Other, Affected, Authorized, and Tagging Authority).

3.2.2 Only one type of tag (DNO, SUT, or SUO) can be on the same device at the same time.

3.2.3 All electrical isolations are tracked on an Electrical Isolation Log specific to that piece of equipment.

3.2.4 LOTOs on devices other than electrical must be initiated and tracked utilizing the Isolation Record Form (See Attachment LOTO-A4). Isolations that require more than one LOTO (electrical and/or mechanical) must also be tracked utilizing the Isolation Record Form.

3.2.5 Prior to removing an isolation, all holders must have signed off the Isolation Record and the Electrical Isolation Log.

3.2.6 Only the Tagging Authority or designated Authorized Employee is authorized to place or remove tags.

3.2.7 In the event a tag or tags are found either missing or lying on the ground, they are to be reported to the appropriate Tagging Authority A.S.A.P.! Do NOT assume you know where they are to be placed or replace them yourself. Upon notification, the Tagging Authority must immediately investigate and determine the status of the LOTO and if the tag can be reattached or a work stoppage is necessary for personnel or equipment safety.

3.2.8 All locking devices should be accompanied by a DNO tag and must be identified or traceable to the user by a name or unique number as determined by the lock user's supervisor. Locking devices not accompanied by a DNO tag are at risk of being removed, however the same stipulations must apply for removal as described in an Emergency Release, listed below.

3.2.9 Failure to comply with the Tagging Procedure rules must be considered just cause for discharge or removal of the persons involved from the job site.

Examples of failure to comply include the following:

- a) Operating or working on a system or piece of equipment without obtaining a proper LOTO and or Permit to Work.
- b) Operating or working on a system or piece of equipment in violation of the tags in place.
- c) Removing tags from a system or piece of equipment without proper authorization.

3.2.10 System Under Test Tags must have the appropriate Tagging Authority's name on the tag. Only the person whose name is on the tag is authorized to operate or direct the operation of that device/system and or remove the tag.

3.2.11 LOTO Isolation Records and/or PTW requests are directed to and approved by the appropriate Tagging Authority (see Attachment LOTO-A1 for identification of the Tagging Authorities and their assigned areas of responsibility).

3.2.12 Emergency Release: Under extraordinary circumstances, it may be necessary to remove a lock or tag, that has been affixed by someone else or without the proper signoff of a holder. Only the Tagging Authority may authorize the removal of a lock or tag and only in accordance with the following stipulations:

- a) The employee who is responsible for the lock or tag or is a holder of the isolation is not present at the facility, and all reasonable efforts have been taken to contact the responsible employee.
- b) All measures are taken to notify the employee prior to his resuming work.
- c) In addition, if the lock or tag is on an item that is in the construction, Commissioning, or operations stage the authorization of the project superintendent, Commissioning manager or plant manager will also be required, respectively. A log will be kept to document these authorizations. (see Attachment LOTO-A5)

3.3 LOTO Sequence

Once it is determined that a LOTO is required, the following sequence is followed:

3.3.1. Tagging Authority or designate approves the isolation, ensuring that all sources of hazardous energy will be safely controlled.

3.3.2. Lockout devices and tags are issued for the isolation by the Tagging Authority or designate, and affected employees are notified of the actions to be taken.

3.3.3. Energy isolating devices are located or operated to properly isolate hazardous energy from the area or equipment to be protected.

3.3.4. Lockout devices and tags are affixed to the energy isolating devices.

3.3.5. Any stored energy is released and verified (by venting, draining, grounding, ventilating, including release or securing of potential energy sources such as compressed springs and elevated weights, etc.).

3.3.6. Effectiveness of isolation is verified (by visual inspection, voltage testing, attempt to operate, sniffer, etc.).

3.3.7. Personnel are then authorized to commence work once they have signed on as holders of the isolation.

3.3.8. After work is completed, all personnel sign off as holders and the proper restored condition of the equipment or area is confirmed (cleanliness, proper completion of work – everything put back together properly, bolts tight, protective guards on, etc.).

3.3.9 Should it become necessary to have a clearance released when the clearance holder (craft supervisor) is off duty, the procedure must be:

3.3.9.1 The Qualified Person must contact the clearance holder (at home if necessary) and request a release of the clearance. If unable to do so, the clearance holder's supervisor must be notified.

3.3.9.2 The supervisor must check the work prior to authorizing the release. He/she will then sign the clearance holder's name and his/her own name on the appropriate line of the clearance form.

3.3.10. Tagging Authority or designate approves the removal of the isolation.

3.3.11 Tagging Authority takes responsibility to ensure equipment and devices are in a safe condition (i.e. status of energy isolating devices is safe for the level of completion or status of the equipment – operational or otherwise)

NOTE: Certain types of equipment may have specific Commissioning instructions from the manufacturer or resulting from a Process Hazard Analysis conducted under the provisions of 29 CFR 1910.119, Process Safety Management.

3.4. Construction Stage Activities:

3.4.1 The Construction stage starts at site mobilization and lasts through construction execution, and ends on a system by system basis as the systems are turned over to Commissioning.

3.4.2 The Project Field Manager and or Construction Manager must ensure the following:

- a) Verify adequate knowledge by testing.
- b) Maintain records of training and testing (Records of training will be maintained by the Project Safety Manager or designated alternate).
- c) Implementation of the Safety Tagging / Hazardous Energy Control Program in accordance with this procedure.
- d) Tagging authorities and their areas of responsibility are defined in Attachment LOTO-A1. This list will be updated and redistributed as necessary.
- e) Electrical lockout on Motor Control Centers (MCC) will be executed by applying DNOs and lockout devices on all MCC buckets prior to energization of the MCC. The responsible Tagging Authority must sign onto the Electrical LOTO Log to hold these LOTO's for each bucket (see Attachment LOTO-A2 for Electrical LOTLog).
- f) LOTOs on devices other than electrical must be initiated and tracked utilizing the Isolation Record Form (See Attachment LOTO-A4). Isolations that require more than one LOTO (electrical and/or mechanical) must also be tracked utilizing the Isolation Record Form.

3.5. Construction Stage LOTO Sequence

3.5.1 Affected employees are responsible for requesting a LOTO through an Authorized Employee. Affected employees must also confirm that the LOTO has been properly executed prior to performing any work on systems where equipment has reached the stage where operation / energization is possible and such operation or energization could result in injury to personnel or equipment. (On electrical systems, work must not be performed on locked buckets without first signing on to the corresponding LOTO as a holder).

3.5.2 Authorized Employees request permission for a LOTO from the Tagging Authority responsible for that area by completing an Isolation Record.

3.5.3 The responsible Tagging Authority, or designate, will complete the following:

- a) Determine if it is safe to perform the planned work and what LOTO conditions are required to ensure the safety of personnel and equipment.
- b) Finalize the Isolation Record, listing all items to be locked out and tagged, and sign approval on the Isolation Record (approval for placing isolation).
- c) Ensure lockout tag out is executed properly.

3.5.4 Any LOTO executed under an Isolation Record must have the IR # written on the DNO tags.

- a) Release the requesting party to sign the Isolation Record as a holder and proceed with work.

3.5.5 If an electrical isolation is included the Isolation Record number must be entered in the appropriate column on the Electrical Log sheet. At least one of the Isolation Record Holders must sign onto the Electrical LOTO Log (preferably the lead person responsible for the work).

NOTE: The Tagging authority may delegate all of the above tasks, except for step 1, "Determination", to an Authorized Employee he/she deems qualified; however, the Tagging Authority will still be responsible for the proper implementation of the LOTO program.

3.5.6 The requesting party signs the Isolation Record and Electrical LOTO Log, if applicable, indicating himself as having confirmed the LOTO and as a holder of the LOTO (no one else can remove the LOTO without his signoff).

3.5.7 Upon completion of work, all Authorized Employees signed onto the Isolation Record and the Electrical LOTO Log must sign off and notify the responsible Tagging Authority that they are signed off.

3.5.8 When the last Authorized Employee signs off of the Isolation Record and or the Electrical LOTO Log, The responsible Tagging Authority must determine if the LOTO should be removed or left on.

- a) If the LOTO is to be removed, the Tagging Authority must sign off and remove the LOTO (note: in the case of MCC buckets, LOTOs should remain on unless there is a specific purpose for removing them).
- b) If the LOTO is not to be removed, the Tagging Authority either remains signed onto the Isolation Record or LOTO Log, if applicable, or signs on in order to keep the LOTO active.

3.5.9 System Under Test (SUT) tags can be used by construction as advisories or measures of control for construction testing activities if required. The tag must clearly be labeled "Construction Testing" and have the Tagging Authority's name written on the tag (testing activities such as Hydro, etc.).

3.6 Commissioning Stage Activities

3.6.1 The Commissioning stage starts on a system by system basis when construction turnover of a system is accepted by Commissioning as substantially complete (in accordance with project turnover procedure). The Commissioning stage ends on a system by system basis as the system is accepted by Operations as substantially complete. This status is indicated in the field by the presence of System Under Test (SUT) tags on major equipment, valves, etc.

3.6.2 The Project Field Manager and or Commissioning Manager must ensure the following:

- a) All personnel are properly identified as Other, Affected, Authorized, or Tagging Authority and are properly trained.
- b) Verify adequate knowledge by testing.
- c) Maintain records of training and testing (Records of training will be maintained by the Project Safety Manager or designated alternate).
- d) Implementation of the Safety Tagging / Hazardous Energy Control Program in accordance with this procedure.

3.6.3 Tagging authorities and their areas of responsibility are defined in Attachment LOTO-A1. This list will be updated and redistributed as necessary.

3.6.4 Upon acceptance of a system from construction, the Tagging Authority assigned to that system will assume control of the LOTO functions for that system. Actions required are as follows:

- a) Status of the corresponding Electrical LOTO Log sheets for equipment included in the system will be changed from Construction to Commissioning and the New Tagging Authority defined on each log sheet.
- b) LOTOs in place at the time of transfer will remain in effect except that the new Tagging Authority will be the new contact for signoff.

3.6.5 System Under Test (SUT) tags will be hung on all major equipment, major system valves (including boundary valves) and corresponding electrical breakers except where an existing LOTO may interfere). The Tagging Authority's name must be entered on all SUT tags hung on field equipment plus exclusion zones required by Site specific Safety Boundary requirements.

a) If a LOTO is in effect, the SUT tag should be hung on the hook corresponding to the electrical breaker on the Electrical Lock Board. From this point forward, the DNO and SUT will be switched from the board to the device as LOTOs are placed and removed.

3.6.6 The general sequence of LOTO for the Commissioning stage is the same as during the construction stage, except for the following clarifications:

a) The Responsible Tagging Authority will be a Commissioning person who is assigned to the respective system as indicated in Attachment LOTO-A1.

b) ALL work to be performed by construction on systems under the control of Commissioning requires a work authorization under the PTW system PRIOR to commencement of work.

3.7 Operational Stage Activities

3.7.1 The Operational Stage starts on a system by system basis when Commissioning turnover of a system is accepted by Operations as substantially complete (in accordance with the project turnover procedure). This status is indicated in the field by the presence of System Under Operations (SUO) tags on major equipment, valves, etc.

3.7.2 The Project Field Manager, Commissioning Manager, and or Operations Manager must ensure the following:

a) All personnel are properly identified as Other, Affected, Authorized, or Tagging Authority and are properly trained.

b) Verify adequate knowledge by testing accepted means.

c) Maintain records of training and testing (Records of training will be maintained by the Project Safety Manager or designated alternate).

d) Implementation of the Safety Tagging / Hazardous Energy Control Program in accordance with this procedure.

3.7.3 Tagging Authorities and their areas of responsibility are defined in Attachment LOTO-A1. This list will be updated and redistributed as necessary.

3.7.4 Upon acceptance of a system from Commissioning, the Tagging Authority assigned will assume control of the LOTO and PTW functions for that system. Actions required are as follows:

a) Status of the corresponding Electrical LOTO Log sheets for equipment included in the system will be changed from Commissioning to Operations and the New Tagging Authority defined on each log sheet.

b) LOTOs in place at the time of transfer will remain in effect, except the new Tagging Authority will be the new contact for signoff.

c) System Under Operations (SUO) tags will be hung on major equipment, major system valves (including boundary valves), and corresponding electrical breakers, except where an existing LOTO may interfere. SUT tags should be removed and returned to Commissioning at the same time.

d) If a LOTO is in effect, the SUO tag should be hung on the hook corresponding to the electrical breaker on the Electrical Lock Board. From this point forward the DNO and SUT will be switched from the board to the device as LOTOs are placed and removed.

3.7.5 The general sequence of LOTO for the Operational stage is the same as during the Construction and Commissioning Stages, except for the following clarifications:

Attachment LOTO-A1.

a) The Responsible Tagging Authority will be an Operations Supervisor as indicated in

- b) ALL work to be performed by construction on systems under the control of operations requires a work authorization under the PTW system PRIOR to commencement of work.
- c) ALL work to be performed by Commissioning except for required troubleshooting/problem solving, and optimization on systems under the control of operations requires a work authorization under the PTW system PRIOR to the commencement of work.

3.8 Permit To Work (PTW) Procedure

3.8.1 A PTW work authorization is required in the following circumstances:

- a) ALL work to be performed by construction on systems under the control of Commissioning or operations requires a work authorization under the PTW system PRIOR to commencement of work!
- b) ALL work to be performed by Commissioning except for required troubleshooting/problem solving, and optimization on systems under the control of operations requires a work authorization under the PTW system PRIOR to the commencement of work.

3.9 PTW Sequence

3.9.1 A request for a PTW work authorization can be initiated by any Authorized Employee by completing the "Requestor" section of the PTW form and submitting it to the responsible Tagging Authority. (See attachment LOTO-A3)

3.9.2 The requesting party must determine if a LOTO is required. If a LOTO is thought to be required the requesting party must complete an Isolation Record with the proposed isolation and submit it with the PTW form to the Tagging Authority (See Attachment LOTO-A4).

3.9.3 The Tagging Authority must review the PTW requestor information and makes a determination as to whether the work can be allowed to proceed (for example will it interfere with other Commissioning or operations plans that take precedence).

3.9.4 If work cannot proceed the Tagging Authority checks "NO" in the approved box, signs and dates the PTW form, and return the original to the requestor (also stating the reason in the comments section).

3.9.5 If work can be allowed, the Tagging Authority makes the final determination as to whether a LOTO or additional permits are required in order to ensure the work can proceed safely.

3.9.6 Procedures for the execution of additional permitting or planning requirements are defined in the Barton Malow Safety Manual. An example of the other permits or plans which may be required are Confined Space Entry Permit (CSE), Hot Work Permit (HWP), Safe Work Plan (SWP) or Job Hazard Analysis (JHA).

3.9.7 If a LOTO is not required, the Tagging Authority ensures "NO" is checked in the LOTO required box and checks "YES" in the approval box, signs and dates the PTW form, and returns the original to the requestor.

3.9.8 If a LOTO is required, the Tagging Authority ensures the LOTO required "YES" box is checked, checks "YES" in the approval box, signs and dates the LOTO request and the following steps will be followed:

3.9.9 The Tagging Authority or designate reviews the LOTO Isolation Record and confirms that the proposed isolation will ensure the safety of personnel and equipment. The Isolation Record must be modified as required to ensure safety.

3.9.10 The Tagging Authority or designate approves the Isolation Record and executes the LOTO in accordance with the Isolation Record.

3.9.11 The Tagging Authority or designate establishes DNO tags and completes the corresponding information on the Isolation Record and the Electrical LOTO Log sheets if applicable.

3.9.12 NOTE: DNO tags must have the corresponding Isolation Record number written on them.

3.9.13 The Tagging Authority or designate places each device in its' prescribed position, locks and tags the device as appropriate, signs and dates the Isolation Record and the Electrical LOTO Log sheet (if electrical lockout is included) indicating that the lockout has been placed.

3.9.14 The Tagging Authority or designate then signs and dates the isolation completed box on the PTW form.

3.9.15 After completion of the LOTO the requestor must sign the Isolation Record as a holder of the LOTO and sign and date the PTW issued box on the PTW form.

a) At the discretion of the Tagging Authority, additional personnel can sign directly on to the Isolation Record as holders if their scope of work was included in the original PTW requestor information. If the scope of work was not included an additional PTW must be requested and if deemed appropriate, the same Isolation Record can be used.

b) Personnel who want to hang their own locks can hang them only if their lock is identifiable as belonging to them and only after they have signed as a holder of the Isolation Record. Individual or personal locks used on Electrical isolations must also be logged in the LOTO log book to record all of the locks that are approved to be on that device.

3.9.16 The original of the PTW form is then given to the requestor and serves as a work authorization.

3.9.17 PTW work authorizations must either be in the possession of the person performing the work or in the vicinity of the work and accessible upon request.

3.9.18 The requestor is responsible to keep the Tagging Authority apprised of the work progress and whether there is any significant change in the work scope or expected duration.

3.9.19 Upon completion of the work, the requestor (holder) must return the PTW to the Tagging Authority or designate and sign off the PTW and the Isolation Record.

3.9.20 Once all holders are signed off the Isolation Record, the Tagging Authority or designate removes the isolation returns the devices to the proper position or status (ensuring that a safe condition exists), signs and dates the Isolation Record and Electrical LOTO Log, if applicable, as removed or released.

4.0 Implementation Instructions

4.1 Electrical Lock Out Setup

4.1.1 During construction, the Construction Manager or designate initiates the first steps of the LOTO program by executing the following actions:

4.1.2 Establish an Electrical LOTO Log book that includes the following:

- a) A Log Sheet for each breaker or other electrical isolating device (See Attachment LOTO-A2).
- b) Log sheets will be organized by MCC or other logical grouping of electrical devices.
- c) Electrical Lock Board in each MCC or other common area of electrical equipment.

4.1.3 Electrical Lock Boards will be configured and utilized as follows:

a) A Large board affixed to the wall, or free standing, containing an individual hook or eye bolt that corresponds to a specific breaker or isolating device. Each hook or eye bolt will be clearly labeled as to what device it corresponds to.

- b) Each breaker will have a primary DNO tag and lock assigned to it. The DNO tag and lock will either be on the breaker when a LOTO is required or placed on the proper hook when a LOTO is not required.
- c) Keys will either be a common key issued to a short list of Tagging Authorities, or a key box will be established to control the access to keys for each lock.

NOTE: In special cases of isolated or existing breakers (possible with existing client breakers), deviation of the lock board requirement is allowed with Project Field Manager approval.

4.2 Panel Safety Tagging

4.2.1 After each panel or DCIS cabinet is turned over to Commissioning or Operations, a SUT or SUO tag will be placed on the panel door with instructions to contact the Control Room prior to opening any cabinet door.

4.2.3 This is to alert everyone that terminals within the cabinet may be energized either by a source internal to the cabinet or external from the cabinet and that checkout activities are in some state of progress.

4.3 Training Requirements

4.3.1 Prior to performing a job requiring Lock Out / Tag Out, training and verification of knowledge as outlined below must be performed to ensure that the purpose and function of the Project Safety Tagging Program is clearly understood by all field employees.

4.3.2 Affected Employees are required to be trained in the following areas:

- a) The use of this procedure.
- b) Recognition of hazardous energy sources.
- c) Type and magnitude of hazardous energy present in workplace (potential danger).
- d) Potential hazards caused by failing to adhere to the Safety Tagging Program.

4.3.3 Authorized Employees are required to be trained in the following areas:

- a) The use of this procedure.
- b) Recognition of hazardous energy sources.
- c) Type and magnitude of hazardous energy present in workplace (potential danger).
- d) Methods and means necessary for proper isolation and control.
- e) Proper use of the following forms: Isolation Record, PTW, Electrical LOTO Log.
- f) Proper methods and sequencing for placing and removing LOTOs.
- g) Closing out PTW.

4.3.4 Other Employees are required to be trained in the following areas:

- a) The purpose of the safety tagging program.
- b) The use and appearance of locks and tags.
- c) The potential hazards that locks and tags protect against.
- d) The penalties for removing locks and tags.
- e) Prohibitions against attempting to operate locked or tagged equipment.

4.3.6 Tagging Authority is required to be trained in the following areas:

- a) The use of this procedure.
- b) Recognition of hazardous energy sources.

- c) Type and magnitude of hazardous energy present in workplace (potential danger).
- d) Methods and means necessary for proper isolation and control.
- e) Proper use of the following forms: Isolation Record, PTW, Electrical LOTO Log.
- f) Proper methods and sequencing for placing and removing LOTOs.
- g) Closing out PTW.
- h) Considerations in determining if and when a requested work activity can be approved to proceed.
- i) Proper delegation of LOTO functions and follow-up to ensure program is implemented properly.
- j) Proper identification of the need for additional permits (Confined Space Entry, Hot Work Permit, Safe Work Plan), and establishment of these programs in accordance with the Barton Malow Safety Manual.

4.3.7 The Tagging Authority list (Attachment LOTO-A1) will be updated by the construction and commissioning Managers as it becomes necessary to make adjustments to personnel and or assigned areas of responsibility. Copies of the updated Tagging Authority list will be maintained in the following locations:

- a) Construction Office (during construction stage)
- b) Commissioning Office (during Commissioning)
- c) Control Room (during operations)

4.3.8 Retraining will be provided for all affected and authorized employees under the following conditions:

- a) Change in job assignment.
- b) Change in machinery/equipment/process that presents a new hazard.
- c) Change in the Safety Tagging Procedure.
- d) When deviations or inadequacies in employee's knowledge is identified.
- e) When deviations in the use of the Safety Tagging Procedure are identified.

The Site Safety Manager or designated alternate must maintain a record of all Tagging Authority, Authorized, Affected, and Other Employee training efforts. A list of Authorized Employees will be kept and made available to Tagging Authorities for the purposes of verifying Authorized Employees.

5.0 Auditing

5.1 Audit will be performed on a Bi-weekly basis by Site Safety Manager and/or Site Commissioning Manager.

5.2 Audit will review Tagging Authority List of Construction, Commissioning, and Operations personnel to assure compliance

5.3 Verify LOTO policies and procedures are adhered to.

5.4 Verify devices to be locked/tagged are in proper sequential order of isolation,



Tagging Authority List

Date Updated _____

Construction Tagging Authorities	
Area of Responsibility	Tagging Authority

Commissioning Tagging Authorities	
Area of Responsibility	Tagging Authority

Operations Tagging Authorities	
Area of Responsibility	Tagging Authority





IR No.: _____		ELECTRICAL LOTO LOG MCC: _____ System: _____ Equipment Tag No.: _____ Equipment Description: _____			• <input type="checkbox"/> Const. _____ <input type="checkbox"/> Com. _____ <input type="checkbox"/> Ops _____	
IR No. (if applicable)	DNO Tag No.	Position / Status	Placed / Holder	Date / Time	Released	Date / Time

	PERMIT TO WORK	PTW No. _____
---	----------------	---------------

Request

Requested By: _____ <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%; text-align: center;">_____ Signature</div> <div style="width: 45%; text-align: center;">_____ Company</div> </div>	Date: _____ Time: _____
Expected Duration of Tagging: _____	Date Needed: _____ Time Needed: _____
System: (if applicable) _____	Equipment Tag No.: (if applicable) _____
Description of Work:	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> LOTO Required? <input type="checkbox"/> Yes <input type="checkbox"/> No Isolation Record Attached <input type="checkbox"/> Yes <input type="checkbox"/> No </div> <div style="width: 45%;"> Other Permits Required? <input type="checkbox"/> Hot Work Permit <input type="checkbox"/> Safe Work Plan (JHA) <input type="checkbox"/> Confined Space Entry <input type="checkbox"/> Other: _____ </div> </div>	

Approval / Isolation / Issuance

Tagging Authority: Approved? <input type="checkbox"/> Yes <input type="checkbox"/> No Signature: _____ Date: _____ Time: _____	
Tagging Authority Comments:	
Isolation Record Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No IR No.: _____	Marked Up Drawings Attached? <input type="checkbox"/> Yes <input type="checkbox"/> No
Isolation Completed By: _____ <div style="text-align: center; margin-top: 10px;">_____ Signature</div> Date: _____ Time: _____	PTW Issued To: _____ <div style="text-align: center; margin-top: 10px;">_____ Signature</div> Date: _____ Time: _____

Sign-off

Actual Work Completed:	
Reason for PTW Satisfied? <input type="checkbox"/> Yes <input type="checkbox"/> No Lockout and Tagout Still Required? <input type="checkbox"/> Yes <input type="checkbox"/> No Comments:	
PTW Signed Off By: _____ <div style="text-align: center; margin-top: 10px;">_____ Signature</div>	LOTO Removed? <input type="checkbox"/> Yes <input type="checkbox"/> No Isolation Closed: <input type="checkbox"/> Yes <input type="checkbox"/> No <div style="text-align: center; margin-top: 10px;">_____ Signature</div>


Date: _____

Time: _____

Date: _____

Time: _____

LOTO-A4

IR No.: _____	 <h3 style="margin: 0;">Isolation Record</h3>	<div style="display: flex; justify-content: space-between;"> <div> <p>System: _____</p> <p>Equipment Tag: _____</p> <p>Equipment Description: _____</p> </div> <div> <p>Status</p> <p><input type="checkbox"/> Const. _____</p> <p><input type="checkbox"/> Com. _____</p> <p><input type="checkbox"/> Ops _____</p> </div> <div> <p>Tagging Authority</p> <p>_____</p> </div> </div>
---------------	--	---

List Energy Isolating Devices to be locked/tagged in proper sequential order of isolation, indicating their respective safe position.

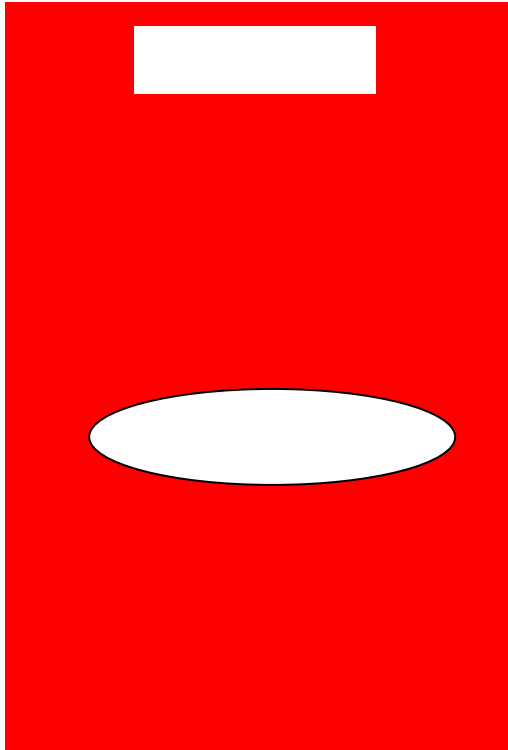
DNO Tag No.	Equipment Tag No.	Equipment Description	Position	LOTO Placed By:	Date	LOTO Removed By:	Date

Tagging Authority Approval: _____ **Date:** _____

Holder List

PTW No.	Signed Onto LOTO Name	Date / Time	Signed Off LOTO Name	Date / Time

LOTO-A3



**DO NOT
OPERATE**

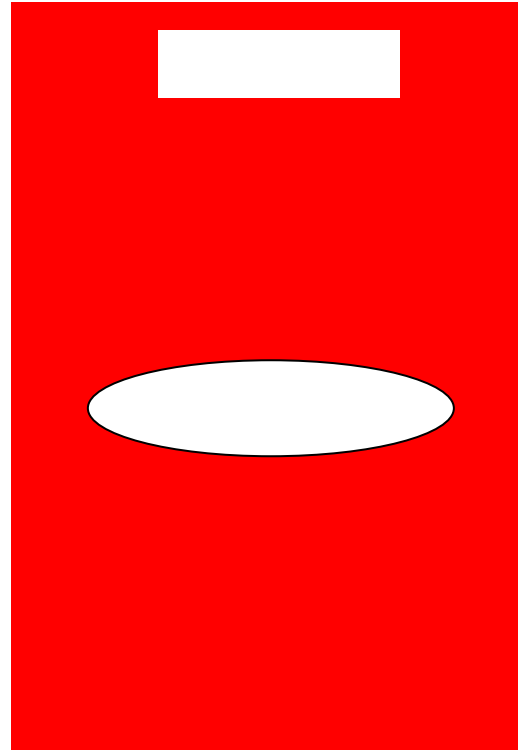
DNO TAG NO.: XXXXXX

SYSTEM: _____

EQUIPMENT TAG NO.: _____

ISOLATION RECORD NO.: _____

PERMIT TO WORK NO.: _____



**DO NOT
OPERATE**

:SEE OTHER SIDE:

REMARKS: _____

DO NOT REMOVE THIS TAG
UNLESS AUTHORIZED TO DO SO!

○ **CAUTION
SYSTEM
UNDER
TEST**

**THIS EQUIPMENT MAY
OPERATE AT ANY TIME**

**OPERATION OF THIS
EQUIPMENT IS BY
AUTHORIZED PERSONNEL
ACTING UNDER THE
AUTHORITY OF THE
UNDERSIGNED.**

**WORK TO BE PERFORMED
MUST BE APPROVED BY
THE UNDERSIGNED.**

SYSTEM: _____

TAGGING AUTHORITY

**CAUTION SYSTEM
UNDER TEST**

**THIS EQUIPMENT MAY
OPERATE AT ANY TIME**

SEE OTHER SIDE:

REMARKS: _____

**DO NOT REMOVE THIS TAG
UNLESS AUTHORIZED TO DO SO!**

<p>○ CAUTION SYSTEM UNDER OPERATION</p> <p>THIS EQUIPMENT MAY OPERATE AT ANY TIME</p> <p>OPERATION OF THIS EQUIPMENT IS BY AUTHORIZED PERSONNEL ACTING UNDER THE AUTHORITY OF THE UNDERSIGNED.</p> <p>WORK TO BE PERFORMED MUST BE APPROVED BY THE UNDERSIGNED.</p> <p>SYSTEM: _____</p> <p>TAGGING AUTHORITY _____</p>

<p>CAUTION SYSTEM UNDER OPERATION</p> <p>THIS EQUIPMENT MAY OPERATE AT ANY TIME</p> <p>:SEE OTHER SIDE:</p> <p>REMARKS: _____ _____ _____ _____ _____ _____ _____</p> <p>DO NOT REMOVE THIS TAG UNLESS AUTHORIZED TO DO SO!</p>
--

LOTO-A8

LOTO-A9

LOTO Emergency Lock Removal Procedure

This form is required to be filled out for each lock to be removed by someone other than the person who placed it. Please check the boxes after each step is performed. Two separate signatures are required, one from the employee removing the lock, the other from a jobsite employee with authority.

PROJECT NAME:**PROJECT NUMBER:*****Reason Lock Has To Be Removed:***

- | |
|--|
| |
| |
- ☐ The authorized employee is the person performing this lock removal procedure.
 - ☐ Verification employee who attached the lock is not at the facility.
 - ☐ All reasonable efforts to contact the employee have been made.
 - ☐ The area, equipment and system affected by this lock removal have been inspected to ensure safe working conditions and that no employees will be harmed.
 - ☐ The Project Manager or Project Superintendent has been contacted before the lock has been removed.
 - ☐ The Site Safety Representative has been contacted before the lock has been removed.
 - ☐ The employee affected by this lock removal procedure has been informed of this action in person as soon as they have returned to the jobsite.

Name (Printed): _____
(I am the Barton Malow employee who removed this lock)

Signature: _____ **Date:** _____

Name (Printed): _____
(I verify this procedure was properly followed)

Signature: _____ **Date:** _____



Attachment T GUARDRAIL/CABLE REMOVAL PERMIT

WORK WILL NOT BE PERFORMED UNTIL THIS FORM IS APPROVED BY BARTON MALOW

Contact Information:

Contractor: _____ Date: _____

Foreman's Name: _____ Foreman Phone #: _____

Write out specific Location N, S, E, W, NW, SW, etc.) Include column line (if known), Level (Level 1, Level 2, Suite A, Concourse 1 etc.)

Location

Level

Employee(s) Performing Work:

Name:	Signature:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Considerations:

Reason for Cable being dropped / removed? _____

Number of Spans being affected? _____ What other contractors are working in the area? _____

Total length of cable affected? _____ How will you continually notify other contractors? _____

Amount of time Cable will be down? _____

Fall Protection Plan:

Yes No

Does your company have a fall protection Program?

☐ ☐

Have workers performing work been trained in Fall Protection?

☐ ☐

Has Fall Protection Plan been put in place?

☐ ☐

Will workers be tied off if within six (6) feet of down cable?

☐ ☐

Describe how workers will be tied off:

Describe how the other trades will be protected from the fall hazard:

If NO is answered to any of the above questions then the Barton Malow Safety Department must be contacted for review prior to guardrail/cable removal.

Barton Malow Approval Signature: _____ Print: _____



Attachment U
HOT WORK PERMIT

Date: _____
Location: _____ Shift: ☐ 1st ☐ 2nd ☐ 3rd
Company Name: _____
Location of Work: _____
Floor/Level/Elevation: _____
Description of Work: _____
Any Special Precautions: _____

Employee(s) Performing Work:

Name: _____	Signature: _____
_____	_____
_____	_____
_____	_____

Fire Watch

Name: _____	Signature: _____
-------------	------------------

To be completed with the Contractor in attendance:

- | | |
|---|--|
| <input type="checkbox"/> a. The above location has been physically inspected by: _____ | <input type="checkbox"/> d. Suitable extinguishers are immediately available and at adjoining risk particularly below. |
| <input type="checkbox"/> b. Combustible gas monitoring required
<input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> e. The operatives have had the nearest fire alarm/telephone pointed out to them and have been told what to do in the event of a fire. |
| <input type="checkbox"/> c. All combustible materials, vapors, liquids, gases, or dust have either been removed or suitably protected against heat and sparks, including where there is risk of levels underneath/below | <input type="checkbox"/> f. Additional supervision is required by the Contractor as to areas below. |
| | <input type="checkbox"/> g. Existing fire detection/suppression system must be protected. |

Signature of person issuing the Permit: _____
Barton Malow Supervisor Printed Name

The following inspections of the work area have taken place during the course of the operations and the proper procedures are being followed.

Time: _____	Signature: _____
	Barton Malow Supervisor Printed Name

The Contractor responsible for the works confirms that the works are complete and that the work area and adjacent areas to which heat and sparks might have spread have been thoroughly inspected.

Signature: _____	Time: _____	Print Name: _____
for _____	(Contractor)	

After signing, the Contractor is to immediately return this permit to the issuing Barton Malow Representative.

The area has been thoroughly inspected by the Contractor's Competent Person for 30 minutes after the work being completed to ensure no smoldering has taken place and that there is no risk of a fire starting.

Signature: _____	Print Name: _____
Superintendent	Time: _____

This permit is required for all operations involving flame, hot air, or arc welding and cutting equipment, brazing and soldering equipment blow lamps, bitumen, boilers, sawsall and other equipment producing heat or having open flames.



Attachment V NOTICE TO COMMENCE STEEL ERECTION

Project Name: {Insert Project Name}

Steel Erector Company:
Project Name:
Address:

Barton Malow is hereby authorizing you to commence steel erection activities with the following notifications:

Concrete in footings, piers, and walls, and mortar in masonry piers and walls has attained, based on the appropriate ASTM standard test for field cured samples either 75% of the intended minimum compressive strength or sufficient strength to support the loads imposed during steel erection.	Name of testing agency: Attached testing reports:
Repairs or modifications were made to anchor rods/bolts: <input type="checkbox"/> Yes <input type="checkbox"/> No Locations of repairs/modifications:	Approval by: (Structural Engineer of Record): Approval in writing? <input type="checkbox"/> Yes <input type="checkbox"/> No (attach) Date approved: As built drawings available? <input type="checkbox"/> Yes <input type="checkbox"/> No

You are notified of your responsibility to: (initial each below)

	Initials:
Indicate to Barton Malow what material laydown areas are needed, and intended routes of transferring materials. Only those designated laydown areas will be utilized, and Barton Malow responsibility to maintain laydown areas will be limited to those that are designated.	
Preplan all overhead hoisting operations to prevent traveling loads over other contractor personnel, and to coordinate hoisting activities with Barton Malow and other contractors to minimize impacts on other operations.	
Provide a written site specific erection plan if any part of your operations will deviate from the published OSHA Standard 29 CFR 1926.752(e).	
Conduct documented daily inspections of all cranes, forklifts, and other hoisting equipment utilized in steel erection activities.	
Designate a qualified trained rigger(s) to inspect all rigging equipment (Submit record of training)	
Maintain on the project written proof of training for all employees engaged in connecting, bolt-up, multiple lift rigging procedures, exposure to falls, equipment operation, and as required by any other specific standard.	
Assure that all columns are properly anchored by a minimum of 4 anchor bolts.	
Maintain and require the use of fall protection equipment for all employees exposed to fall elevations of 6 feet or greater as directed in the project Incident Prevention Program.	
Properly install perimeter guardrail systems on all exterior and interior leading edges consisting of a top rail and mid rail meeting the requirements of 29 CFR 1926.502 (b)(1-15)	
Maintain required fire protection/prevention equipment appropriate to the type of work operation and hazards involved.	
Meet all other requirements of the Barton Malow Incident Prevention Program, Published OSHA Standards, and the requirements of local regulations.	

Barton Malow Project Manager / Superintendent

Steel Erector Representative

I _____ am requesting to use a disposable paper filter respirator, also known as a Dust Mask for my personal comfort.

I will be performing the following work task: (Example Sweeping Floor, etc.)

I clearly described the task I am to perform to my supervisor or safety coordinator and upon evaluating the task they determined I should not be exposed to a hazardous chemical or substance.

I have been supplied the following Dust Mask:

Brand: _____ Model: _____

I understand that the disposable dust mask is for personal comfort and not intended to protect me from a hazardous chemical or substance. I further understand the voluntary use is limited to the task described above.

Please read the following:

Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirators use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substances does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern, NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

I HAVE READ THE ABOVE SECTION FROM THE OSHA STANDARD FOR RESPIRATORY PROTECTION AND UNDERSTAND ITS CONTENT. I FURTHER UNDERSTAND THAT I AM RESPONSIBLE FOR THE CARE, MAINTENANCE/UPKEEP, AND PROPER STORAGE OF THIS RESPIRATOR. INSTRUCTIONS ON THE PROPER WEAR WERE MADE AVAILABLE TO ME.

Signature: _____

Date: _____

Name of Contractor(s):	Scope of Work: <input type="checkbox"/> Temporary Electrical Service <input type="checkbox"/> Permanent Electrical Service <input type="checkbox"/> Mechanical Work <input type="checkbox"/> Other
Name of Contractor's On Site Supervisor :	
Date of Coordination Meeting:	Date(s) LO/TO Will Be In Affect:

Name of Meeting Attendees:	Title/Responsibility:

1. Has a project specific safety plan or Job Hazard Analysis (JHA) been developed by the contractor(s) doing the work? ☐ Yes ☐ No

2. What type of energy sources or systems will be worked on and/or needed to be isolated and locked out?
(Check all that apply)

	Lockout / Tag Out Required? (Check One)		
Type of System	YES	NO	N/A
Electrical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High volt (> 480 v)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low volt (< 480 v)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic/Steam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pneumatic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chemical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Are other contractors or entities affected by this lock out? ☐ Yes ☐ No

If yes, please identify

Name of Contractor

4. Identify the companies and individuals who will responsible for leading the Lockout-Tagout program for their employer. These individuals must be on site for the duration of the lockout-tag out in most circumstances.

Name of Contractor	Name of Individuals

☐ Check here if Barton Malow will be participating in locking out the affected system(s).

Safety Equipment and Procedures Checklist

- A. Will the work proceed in a flammable or Class I atmosphere? ☐ Yes ☐ No

If no, continue to item B. If Yes, check all safety equipment that will be used.

- ☐ Non sparking tools
☐ Intrinsically safe lights, tools, radios, etc.
☐ Non static charging clothing or shoes
☐ LEL Monitor

- B. Will other trades be working in the immediate vicinity of live circuits or Otherwise be affected or exposed to the hazards of the activity? ☐ Yes ☐ No

If yes, describe safety precautions that must be taken to protect affected workers:

- C. Check the safety equipment or procedures that will be followed to protect the safety of the workers conducting live work (hot taps, working on energized circuits, etc.):

<input type="checkbox"/> Safety glasses with side shields and/or face shield	<input type="checkbox"/> Electrical blankets	<input type="checkbox"/> Gloves (electrical, hot work, or chemical resistant?)
<input type="checkbox"/> Hard hat (regular or high volt?)	<input type="checkbox"/> Blankets for hot work	<input type="checkbox"/> Insulating mats
<input type="checkbox"/> Leathers or heat resistant clothing	<input type="checkbox"/> Chemical resistant clothing	<input type="checkbox"/> Barricades around the work area
<input type="checkbox"/> Insulating tools	<input type="checkbox"/> Air monitor	<input type="checkbox"/> Retrieval equipment
<input type="checkbox"/> Low volt lighting	<input type="checkbox"/> Harness and lanyard	<input type="checkbox"/> Locks and Tags

Comments:

If work is to proceed on live, energized, charged, or otherwise operating systems, describe why work CANNOT proceed in a locked-out or de-energized state:

***If working on energized systems, complete Attachment Y - Energized Electrical Equipment Permit.**



Attachment Y

ENERGIZED ELECTRICAL EQUIPMENT PERMIT

To Be Completed By Barton Malow

Project Number: _____ Date: _____

Project Name: _____

Superintendent: _____ Safety _____

Justification as to why equipment must be energized:

Start Time: _____ End Time: _____

Permit not to exceed one shift

To Be Completed By Qualified Person Performing the Work

Has a written request been made to de-energize the equipment? ☐ Yes ☐ No *(attach documentation)*

Location: Building Floor Room Voltage

Equipment ID No. Equip. Fed From In Room:

Results of Shock Hazard Analysis

Limited Approach Boundary:	<input type="text"/>	Feet	<input type="text"/>	Inches
Restricted Approach Boundary:	<input type="text"/>	Feet	<input type="text"/>	Inches
Prohibited Approach Boundary:	<input type="text"/>	Feet	<input type="text"/>	Inches

Results of Arc/Flash Hazard Analysis – Category *(check one only)*: ☐ 1 ☐ 2 ☐ 3 ☐ 4

Work on Category 3 or 4 energized is prohibited

Flash Hazard Protection Boundary:	<input type="text"/>	Feet	<input type="text"/>	Inches
-----------------------------------	----------------------	------	----------------------	--------

PPE _____

Voltage Rated Tools _____

Detailed description of work to be performed *(attach additional pages as necessary)*:

How will approach boundaries be established? _____

Has a pre-task job briefing been conducted? ☐ Yes ☐ No *(attach documentation)*



Attachment Y

ENERGIZED ELECTRICAL EQUIPMENT PERMIT

Have all affected personnel been trained to identify hazards associated with this specific task? ☐ Yes ☐ No

Do you agree that this work can be done safely? ☐ Yes ☐ No *(If NO, return to GC Superintendent)*

Electrically Qualified

(print name)

(signature)

Electrically Qualified

(print name)

(signature)

Approvals	Print Name	Signature	Phone Number
Contractor Safety Representative:			
Electrical Contractor			

Owner Approval	Print Name	Signature	Phone Number
Owner:			



Attachment Z

ENERGIZED PANEL + EQUIPMENT PERMIT

Room No. and Location _____

Electrical Contractor: _____

- All panel covers are in place and locked out!
- There are no open circuits
- Competent person in room to observe operations. Only authorized persons in room.
- Competent person Name: _____

Date of Permit: _____

CONTRACTOR REQUESTING PERMIT: _____

(Authorized Signature)

- All personnel have been trained in the recognition of hazards of working in an area or room where there are energized panels or equipment.
- All proper PPE is in use.

BARTON MALOW REPRESENTATIVE OR SUPERINTENDENT AND SAFETY REPRESENTATIVE

(Authorized Signature – Barton Malow Superintendent)

Date

(Authorized Signature – Barton Malow Safety)

Date

Attachment AA

LATTICE BOOM CRANE – ANNUAL INSPECTION FORM

Date:		Location:		Service Status:	
Make:		Model:		Serial Number:	
Unit ID Number:		Max. Capacity:		Date of Manufacturer:	
Inspector:		Title:		Inspector Certification Number:	
<input type="checkbox"/> Before inspection crane, lockout / tag out power source. <input type="checkbox"/> Consult Operator / Service Manual for additional inspection items, service bulletins, and other service information. <input type="checkbox"/> Before inspection and operating, crane, crane must be set up away from power lines and leveled.					
References: O = OSHA 1926.550, 101-.180, ANSI B30.5 (1968) A = ANSI / ASME B30.5 (1995) C = New York City Cranes & Derricks (1996)					
Status: S = Satisfactory D = Deficiency R = Recommendation NA = Not Applicable					
Item		Status		Item	
1.0 Historical Data				Operator's Cab & Station (cont.)	
1.1	Monthly Inspection Records			5.7	Fire Extinguisher
1.2	Maintenance Records			5.8	Mirrors
1.3	Repair/Modification Records			5.9	Seat Restraint
1.4	Load Test Reports			5.10	Seat Belt
1.5	Other			5.11	Operator's Manual
				5.12	Operating Instructions / Decals
				5.13	Electrocution Warning Sign(inside)
				5.14	Hand Signal Chart
2.0 General				5.15	Swing Brake
2.1	Sheet Metal			5.16	Positive Swing Lock
2.2	Guards / Covers			5.17	Controls-Forces / Movements
2.3	External Lights			5.18	Air Pressure
2.4	Housekeeping			5.19	Foot Brakes – Latches / Linkage
2.5	Safety / Warning Decals & Labels			5.20	Power Controlled Lowering
2.6	Hand Signal Chart (outside)			5.21	Engine Clutch
2.7	Paint Condition / Corrosion Control			5.22	Accelerator / Throttle Control
2.8	Other			5.23	Other
2.9	Other			5.24	Other
3.0 Power Plant					
3.1	Performance			6.0 Load Chart	
3.2	Exhaust System/Guards & Insulators			6.1	Per Configuration
3.3	Belts / Hoses – Condition			6.2	Durable
3.4	Guards/Covers–Rotate & Recip. Parts			6.3	Legible
3.5	Other			6.4	Visible from Operator's Station
				6.5	Secured
				6.6	Other
4.0 Crawler Assembly					
4.1	Car Body / Side Frames			7.0 Safety Devices/ Operational Aids	
4.2	Chain – Condition / Adjustment			7.1	Warning Devices
4.3	Sprockets / Idlers / Rollers			7.2	Boom Angle Indicator
4.4	Track Pads / Pins			7.3	Boom Length Indicator
4.5	Travel Locks			7.4	Main Drum Rotation Indicator
4.6	Steering Clutches			7.5	Aux. Drum Rotation Indicator
4.7	Other			7.6	Load Moment Indicator
4.8	Other			7.7	Load Weight Indicator
				7.8	Radius Indicator
5.0 Operator's Cab and Station				7.9	Crane Level Indicator
5.1	Grab Rails / Steps / Platforms			7.10	Anti-Two Block Device
5.2	Anti-Skid Surface			7.11	Two Block Warning Device
5.3	Protection from Weather			7.12	Boom Hoist Shut Off
5.4	Window Glass				
5.5	Windshield Wiper(s)				
5.6	Door Restraint				

[illegible]

Lattice Boom Crane - Annual Inspection Form (con't)					
Status: <i>S = Satisfactory</i> <i>D = Deficiency</i> <i>R = Recommendation</i> <i>NA = Not Applicable</i>					
Item		Status	Item		Status
13.0 Main Load Block & Hook			14.0 Overhaul Ball & Hook		
Manufacturer:			Manufacturer:		
Rated Capacity:			Rated Capacity:		
Block Weight:			Block Weight:		
Original Hook Throat Opening:			Original Hook Throat Opening:		
13.1	Capacity Marking		14.1	Capacity Marking	
13.2	Weight Marking		14.2	Weight Marking	
13.3	Sheaves		14.3	Safety Latches	
13.4	Safety Latches		14.4	10 Degree Hook Twist	
13.5	10 Degree Hook Twist		14.5	15% Hook Throat Opening	
13.6	15% Hook Throat Opening		14.6	10% Hook Wear	
13.7	10% Hook Wear		14.7	Swivel	
13.8	Swivel		14.8	Bearing	
13.9	Bearing		14.9	Wedge Socket / End Fitting	
13.10	Wedge Socket / End Fitting		14.10	NDT – Results	
13.11	Reeving		14.11	Other	
13.12	NDT – Results		14.12	Other	
13.13	Other		14.13	Other	

15.0 No-Load Operational Test		
Item	Status	
15.1	No-Load Operational Test	Caution: Operation of cranes by Safety Department inspectors shall be limited to those crane functions necessary to accomplish the inspection. Inspectors must be qualified as outlined in ANSI/ASME B30.5.

16.0 Load Test							
Hoisting From:	Boom / Ext. / Jib Length	Load Radius	Boom Angle	Parts of Line	Rated Capacity	Test Weight	% of Rated Capacity
Main Boom							
Jib							

Item	Status
Load Test Results:	<input type="checkbox"/> Passed <input type="checkbox"/> Failed <input type="checkbox"/> N/A
Explanation:	
CAUTION: Load tests shall be conducted only by a designated competent person.	

Project Name: _____ **Project No.:** _____ **Date:** _____

Date:		Location:		Service Status:	
Make:		Model:		Serial Number:	
Unit ID Number:		Max. Capacity:		Date of Manufacturer:	
Inspector:		Operator:		Superintendent:	
<input type="checkbox"/> Before inspection crane, lockout / tag out power source. <input type="checkbox"/> Consult Operator / Service Manual for additional inspection items, service bulletins, and other service information. <input type="checkbox"/> Before inspection and operating, crane, crane must be set up away from power lines and leveled.					
References: O = OSHA 1926.550, 101-.180, ANSI B30.5 (1968) A = ANSI / ASME B30.5 (1995) C = New York City Cranes & Derricks (1996)					
Status: S = Satisfactory D = Deficiency R = Recommendation NA = Not Applicable					
Item		Status		Item	
1.0 Historical Data				Operator's Cab & Station (cont.)	
1.1	Daily Inspection Records			5.7	Fire Extinguisher
1.2	Maintenance Records			5.8	Mirrors
1.3	Repair/Modification Records			5.9	Seat Restraint
1.4	Load Test Reports			5.10	Seat Belt
1.5	Other			5.11	Operator's Manual
				5.12	Operating Instructions / Decals
				5.13	Electrocution Warning Sign(inside)
2.0 General				5.14	Hand Signal Chart
2.1	Sheet Metal			5.15	Swing Brake
2.2	Guards / Covers			5.16	Positive Swing Lock
2.3	External Lights			5.17	Controls-Forces / Movements
2.4	Housekeeping			5.18	Air Pressure
2.5	Safety / Warning Decals & Labels			5.19	Foot Brakes – Latches / Linkage
2.6	Hand Signal Chart (outside)			5.20	Power Controlled Lowering
2.7	Paint Condition / Corrosion Control			5.21	Engine Clutch
2.8	Other			5.22	Accelerator / Throttle Control
2.9	Other			5.23	Other
				5.24	Other
3.0 Power Plant					
3.1	Performance			6.0 Load Chart	
3.2	Exhaust System/Guards & Insulators			6.1	Per Configuration
3.3	Belts / Hoses – Condition			6.2	Durable
3.4	Guards/Covers–Rotate & Recip. Parts			6.3	Legible
3.5	Other			6.4	Visible from Operator's Station
				6.5	Secured
				6.6	Other
4.0 Crawler Assembly					
4.1	Car Body / Side Frames			7.0 Safety Devices/ Operational Aids	
4.2	Chain – Condition / Adjustment			7.1	Warning Devices
4.3	Sprockets / Idlers / Rollers			7.2	Boom Angle Indicator
4.4	Track Pads / Pins			7.3	Boom Length Indicator
4.5	Travel Locks			7.4	Main Drum Rotation Indicator
4.6	Steering Clutches			7.5	Aux. Drum Rotation Indicator
4.7	Other			7.6	Load Moment Indicator
4.8	Other			7.7	Load Weight Indicator
				7.8	Radius Indicator
5.0 Operator's Cab and Station				7.9	Crane Level Indicator
5.1	Grab Rails / Steps / Platforms			7.10	Anti-Two Block Device
5.2	Anti-Skid Surface			7.11	Two Block Warning Device
5.3	Protection from Weather			7.12	Boom Hoist Shut Off
5.4	Window Glass			7.13	Boom Hoist Ratchet and Pawl
5.5	Windshield Wiper(s)			7.14	Other
5.6	Door Restraint				

Lattice Boom Crane - Monthly Inspection Form (con't)															
Status:		S = Satisfactory		D = Deficiency		R = Recommendation		NA = Not Applicable							
Item						Status		Item				Status			
8.0 Rotating Upper Structure								10.0 Jib							
8.1 Hydraulic Hoses / Tubes / Fittings								10.1 Positive Stops							
8.2 Electrical Wiring								10.2 Sheave(s)							
8.3 Main Hoist – Clutches / Brakes								10.3 Wire Rope Retainer(s)							
8.4 Main Hoist – Wrapping on Drum								10.4 Lattice Members							
8.5 Main Hoist – Min. 2 Rope Wraps								10.5 Cord Members							
8.6 Aux. Hoist – Motor / Valves & Lines								10.6 End Containers / Pins							
8.7 Aux. Hoist – Clutches / Brakes								10.7 Other							
8.8 Aux. Hoist – Wrapping on Drum								Visual							
8.9 Aux. Hoist – Min. 2 Rope Wraps								(unable to lay boom down)							
8.10 Boom Hoist – Motor / Valves & Lines								Physical							
8.11 Boom Hoist – Clutches / Brakes								(able to lay boom down)							
8.12 Boom Hoist – Wrapping on Drum															
8.13 Boom Hoist – Min. 2 Rope Wraps								11.0 Main Load Block & Hook							
8.14 Swing System / Assembly								Manufacturer:							
8.15 Anti-Skid Surface								Rated Capacity:							
8.16 Steps / Hand Holds / Platforms								Block Weight:							
8.17 Access to Cab and Roof								Original Hook Throat Opening:							
8.18 Air System – Compressor / Lines etc.								11.1 Capacity Marking							
8.19 Counterweight and Mounting								11.2 Weight Marking							
8.20 Counterweight Warning Sign								11.3 Sheaves							
8.21 Electrocuting Warning Sign (outside)								11.4 Safety Latches							
								11.5 10 Degree Hook Twist							
9.0 Boom Support System								11.6 15% Hook Throat Opening							
9.1 Boom Hoist Reeving								11.7 10% Hook Wear							
9.2 Hoist Line Dead End								11.8 Swivel							
9.3 Wire Rope Retainer(s)								11.9 Bearing							
9.4 Boom Head Section								11.10 Wedge Socket / End Fitting							
9.5 Auxiliary Boom Head								11.11 Reeving							
9.6 Hydraulic Hoses / Tubing & Fittings															
9.7 Holding Device (check valve)								12.0 Overhaul Ball & Hook							
9.8 Other								Manufacturer:							
								Rated Capacity:							
								Block Weight:							
								Original Hook Throat Opening:							
								12.1 Capacity Marking							
								12.2 Weight Marking							
								12.3 Safety Latches							
								12.4 10 Degree Hook Twist							
								12.5 Swivel							
								12.6 Bearing							
								12.7 Wedge Socket / End Fitting							

13.0 Wire Rope											
Rope Application	Type	Size	Construction	Grade	Core	Rope Damage	Measured Wear	Broken Wires	Lubrication	End Connections	Status
Main Hoist Drum											
Aux. Hoist Drum											
Boom Hoist Drum											
Boom Pendants											
Jib Pendants											

Inspector: _____ Make / Model: _____ Serial #: _____
 Unit ID: _____ Jobsite: _____
 Date: _____

Status: S = Satisfactory D = Deficiency R = Recommendation NA = Not Applicable									
CONDITION			MON	TUE	WED	THUR	FRI	SAT	SUN
Fluid Level	1.	Crankcase Oil							
	2.	Coolant							
	3.	Hydraulic Oil							
CAB(S)	4.	Electrical System							
	5.	House Lock							
	6.	Service / Parking Brake							
	7.	Swing Brake / House Lock							
	8.	Gauges							
	9.	Housekeeping							
	10.	Fire Extinguisher(s)							
	11.	Load Chart							
Functions	12.	Windows / Mirrors							
	13.	Travel							
	14.	Steering							
	15.	Outriggers							
	16.	Boom Up / Down							
	17.	Hoist Up / Down							
Safety Devices	18.	Swing							
	19.	Anti-Two-Block							
	20.	LMI / Load Weight Indicator							
	21.	Boom Angle Indicator							
	22.	Lights							
	23.	Locks							
	24.	Buzzers							
	25.	Back Up Alarm							
Boom, Jib & Accessories	26.	Horn							
	27.	Boom Kick Out							
	28.	Load Block / Ball / Hooks							
	29.	Headache Ball							
	30.	Hooks							
	31.	Safety Latches							
	32.	Wedge Sockets							
	33.	Sheaves							
	34.	Wire Rope Retainers							
	35.	Main Boom							
	36.	Jib (Extension)							
	37.	Carrier (Car Body)							
	38.	Shoes							
	39.	Tracks							
	40.	Chain							
	41.	Outriggers							
	Upper Works	42.	Machine Guards						
43.		Hoist Brakes							
44.		Clutches							
45.		Hoses							
	46.	Hoist(s)							
	47.	Wrapping on Drum							
	48.	Rope Reeving							



Attachment AC
LATTICE BOOM CRANE – DAILY INSPECTION FORM

	49.	Wire Rope							
	50.	Gantries / Bridles							
	51.	Operator's Initials							

Superintendent Signature: _____

Date:		Location:		Service Status:	
Make:		Model:		Serial Number:	
Unit ID Number:		Max. Capacity:		Date of Manufacturer:	
Inspector:		Operator:			
<input type="checkbox"/> Before inspection crane, lockout / tag out power source. <input type="checkbox"/> Consult Operator / Service Manual for additional inspection items, service bulletins, and other service information. <input type="checkbox"/> Before inspection and operating, crane, crane must be set up away from power lines and leveled.					
References: O = OSHA 1926.550, 101-.180, ANSI B30.5 (1968) A = ANSI / ASME B30.5 (1995) C = New York City Cranes & Derricks (1996)					
Status: S = Satisfactory D = Deficiency R = Recommendation NA = Not Applicable					
Item		Status		Item	
1.0 Historical Data				5.0 Operator's Cab & Station (cont.)	
1.1	Monthly Inspection Records			5.1	Boxes
1.2	Maintenance Records			5.2	Beams
1.3	Repair/Modification Records			5.3	Cylinders
1.4	Load Test Reports			5.4	Floats / Pads
1.5	Other			5.5	Hydraulic Hoses / Tubing / Fittings
				5.6	Holding Valves
2.0 General				5.7	Position Locks
2.1	Sheet Metal			5.8	Warning Signs
2.2	Guards / Covers			5.9	Other
2.3	External Lights				
2.4	Housekeeping			6.0 Operator's Cab & Station	
2.5	Safety / Warning Decals & Labels			6.1	Grab Rails / Steps / Platforms
2.6	Electrocution Warning Chart (outside)			6.2	Anti-Skid Surface
2.7	Hand Signal Chart (outside)			6.3	Protection from Weather
2.7	Paint Condition / Corrosion Control			6.4	Window Glass
2.8	License Plates			6.5	Windshield Wiper(s)
2.9	Other			6.6	Door Restraint
				6.7	Fire Extinguisher
3.0 Power Plant				6.8	Mirrors
3.1	Performance			6.9	Seat Restraint
3.2	Exhaust System/Guards & Insulators			6.10	Seat Belt
3.3	Belts / Hoses – Condition			6.11	Operator's Manual
3.4	Guards/Covers–Rotate & Recip. Parts			6.12	Controls Clearly Identified
3.5	Other			6.13	Operating Instructions / Decals
				6.14	Electrocution Warning Sign (inside)
4.0 Carrier				6.15	Hand Signal Chart
4.1	Transmission Function			6.16	Parking Brake
4.2	Drive Line Function			6.17	Swing Brake
4.3	Main Frame Members			6.18	Positive Swing Lock
4.4	Hydraulic Hoses / Tubing / Fittings			6.19	Controls-Forces / Movements
4.5	Hydraulic Fluid Level			6.20	Accelerator / Throttle Control
4.6	Anti-Skid Surface			6.21	Air Pressure
4.7	Backup Alarm			6.22	Hydraulic Leaks
4.8	Tires / Wheels Condition			6.23	Horn / Warning Device
Front Left:	Size:	Press -		6.24	Electrical Access Panels Covered
Front Rt:	Size:	Press -		6.25	Other
Back Left:	Size:	Press -			
Back Rt:	Size:	Press -		7.0 Load Chart	
4.9	Tire Size and Pressure per Load Chart				Per Configuration
					Durable and Legible
					Visible from Operator's Station
					Secured
					75% of Tipping



Status: <i>S = Satisfactory</i> <i>D = Deficiency</i> <i>R = Recommendation</i> <i>NA = Not Applicable</i>					
Item		Status	Item		Status
8.0	Safety Devices/ Operational Aids		10.0	Main Boom	
8.1	Boom Angle Indicator		10.1	Lift Cylinder(s)	
8.2	Boom Length Indicator		10.2	Telescoping Cylinder(s)	
8.3	Main Drum Rotation Indicator		10.3	Hydraulic Hoses / Tubing & Fittings	
8.4	Aux. Drum Rotation Indicator		10.4	Holding Device (check valve)	
8.5	Load Moment Indicator		10.5	Boom Selection Alignment	
8.6	Load Weight Indicator		10.6	Wear Pads	
8.7	Radius Indicator		10.7	Equal Extension	
8.8	Crane Level Indicator		10.8	Sheaves	
8.9	Anti-Two Block Device		10.9	Hoist Line Dead End	
8.10	Overload Indicator		10.10	Wire Rope Retainer	
			10.11	Boom Hinge Pin	
9.0	Rotating Upper Structure		10.12	Boom Head Section	
9.1	Turntable		10.13	Auxiliary Boom Head	
9.2	House Lock		10.14	Structure	
9.3	Frame		10.15	Other	
9.4	Hydraulic Pump(s)				
9.5	Hydraulic Hoses / Tubes / Fittings		11.0	Material / Pinned Section	
9.6	Hydraulic Pressure		11.1	Alignment	
9.7	Electrical Wiring		11.2	Locking Device	
9.8	Main Hoist – Motor / Valves / Lines		11.3	Structure	
9.9	Main Hoist – Wrapping on Drum		11.4	Other	
9.10	Main Hoist – Min. 2 Rope Wraps				
9.11	Aux. Hoist – Motor / Valves & Lines		12.0	Lattice Boom Extension	
9.12	Aux. Hoist – Wrapping on Drum		12.1	Boom Extension Alignment	
9.13	Aux. Hoist – Min. 2 Rope Wraps		12.2	Cords	
9.14	Counterweight & Mounting		12.3	Lattices	
9.15	Swing Gear Box		12.4	End Connections	
9.16	Electrocution Warning Sign (outside)		12.5	Storage Device	
9.17	Counterweight Warning Sign		12.6	Sheave(s)	
9.18	Other		12.7	Wire Rope Retainer	
9.19	Other		12.8	Structure	
			12.9	Other	
			13.0	Jib	
			31.1	Positive Stops	
			13.2	Sheave(s)	
			13.3	Wire Rope Retainer(s)	
			13.4	Structure	
			13.5	Other	

[illegible]

Telescoping Boom Crane- Annual Inspection Form (con't)									
Status:		S = Satisfactory		D = Deficiency		R = Recommendation		NA = Not Applicable	
Item			Status		Item			Status	
15.0 Main Load Block & Hook					16.0 Overhaul Ball & Hook				
Manufacturer:					Manufacturer:				
Rated Capacity:					Rated Capacity:				
Block Weight:					Block Weight:				
Original Hook Throat Opening:					Original Hook Throat Opening:				
15.1 Capacity Marking					16.1 Capacity Marking				
15.2 Weight Marking					16.2 Weight Marking				
15.3 Sheaves					16.3 Safety Latches				
15.4 Safety Latches					16.4 10 Degree Hook Twist				
15.5 10 Degree Hook Twist					16.5 15% Hook Throat Opening				
15.6 15% Hook Throat Opening					16.6 10% Hook Wear				
15.7 10% Hook Wear					16.7 Swivel				
15.8 Swivel					16.8 Bearing				
15.9 Bearing					16.9 Wedge Socket / End Fitting				
15.10 Wedge Socket / End Fitting					16.10 NDT – Results				
15.11 Reeving					16.11 Other				
15.12 NDT – Results									
15.13 Other									

17.0 No-Load Operational Test		
Item		Status
17.1	No-Load Operational Test	

Caution: Operation of cranes by Safety Department inspectors shall be limited to those crane functions necessary to accomplish the inspection. Inspectors must be qualified as outlined in ANSI/ASME B30.5.

18.0 Load Test							
Hoisting From:	Boom / Ext. / Jib Length	Load Radius	Boom Angle	Parts of Line	Rated Capacity	Test Weight	% of Rated Capacity
Main Boom							
Jib							
Boom Extension							
Jib							

Item	Status
Load Test Results:	<input type="checkbox"/> Passed <input type="checkbox"/> Failed <input type="checkbox"/> N/A
Explanation:	
CAUTION: Load tests shall be conducted only by a designated competent person.	

TELESCOPING BOOM CRANE – ANNUAL INSPECTION FORM

DEFICIENCY / RECOMMENDATION REPORT

The following corrective action(s) (repairs, adjustments and replacement parts, etc.) are to be performed by a qualified person in accordance with all manufacturer's instructions, specifications and requirements. OSHA requires that "any deficiency (d) be repaired or defective parts replaced before continued use".

Recommendation(s) (R) should be considered for corrective action. The advisability of a particular recommendation depends on the facts of each situation. Any corrective action(s) is to be performed by a qualified person in accordance with all manufacturer's recommendations, specifications and requirements.

D = Deficiency R = Recommendation

[illegible]

Crane Inspector

Project / Equipment Manager

Project Name: _____ **Project No.:** _____ **Date:** _____

Date:		Location:		Service Status:	
Make:		Model:		Serial Number:	
Unit ID Number:		Max. Capacity:		Date of Manufacturer:	
Inspector:		Operator:		Superintendent:	
<input type="checkbox"/> Before inspection crane, lockout / tag out power source. <input type="checkbox"/> Consult Operator / Service Manual for additional inspection items, service bulletins, and other service information. <input type="checkbox"/> Before inspection and operating, crane, crane must be set up away from power lines and leveled.					
References: O = OSHA 1926.550, 101-.180, ANSI B30.5 (1968) A = ANSI / ASME B30.5 (1995) C = New York City Cranes & Derricks (1996)					
Status: S = Satisfactory D = Deficiency R = Recommendation NA = Not Applicable					
Item		Status		Item	
1.0 Historical Data				5.0 Outriggers	
1.1	Daily Inspection Records			5.1	Boxes
1.2	Maintenance Records			5.2	Beams
1.3	Repair/Modification Records			5.3	Cylinders
1.4	Load Test Reports			5.4	Floats / Pads
1.5	Other			5.5	Hydraulic Hoses / Tubing / Fittings
				5.6	Holding Valves
2.0 General				5.7	Position Locks
2.1	Sheet Metal			5.8	Warning Signs
2.2	Guards / Covers			5.9	Other
2.3	External Lights				
2.4	Housekeeping			6.0 Operator's Cab & Station	
2.5	Safety / Warning Decals & Labels			6.1	Grab Rails / Steps / Platforms
2.6	Electrocution Warning Chart (outside)			6.2	Anti-Skid Surface
2.7	Hand Signal Chart (outside)			6.3	Protection from Weather
2.7	Paint Condition / Corrosion Control			6.4	Window Glass
2.8	License Plates			6.5	Windshield Wiper(s)
2.9	Other			6.6	Door Restraint
				6.7	Fire Extinguisher
3.0 Power Plant				6.8	Mirrors
3.1	Startup and Performance			6.9	Seat Restraint
3.2	Exhaust System/Guards & Insulators			6.10	Seat Belt
3.3	Belts / Hoses – Condition			6.11	Operator's Manual
3.4	Guards/Covers–Rotate & Recip. Parts			6.12	Controls Clearly Identified
3.5	Other			6.13	Operating Instructions / Decals
				6.14	Electrocution Warning Sign (inside)
4.0 Carrier				6.15	Hand Signal Chart
4.1	Transmission Function			6.16	Parking Brake
4.2	Drive Line Function			6.17	Swing Brake
4.3	Main Frame Members			6.18	Positive Swing Lock
4.4	Hydraulic Hoses / Tubing / Fittings			6.19	Controls-Forces / Movements
4.5	Hydraulic Fluid Level			6.20	Accelerator / Throttle Control
4.6	Anti-Skid Surface			6.21	Air Pressure
4.7	Backup Alarm			6.22	Hydraulic Leaks
4.8	Tires / Wheels Condition			6.23	Horn / Warning Device
Front Left: Size: Press - Front Rt: Size: Press - Back Left: Size: Press - Back Rt: Size: Press -				6.24	Electrical Access Panels Covered
				6.25	Other
4.9 Tire Size and Pressure per Load Chart				7.0 Load Chart	
				Per Configuration	
				Durable and Legible	
				Visible from Operator's Station	
				Secured	
				75% of Tipping	



Telescoping Boom Crane- Monthly Inspection Form (con't)

Status: **S** = Satisfactory **D** = Deficiency **R** = Recommendation **NA** = Not Applicable

Item		Status	Item		Status
8.0	Safety Devices/ Operational Aids		12.0	Jib	
8.1	Boom Angle Indicator		12.1	Positive Stops	
8.2	Boom Length Indicator		12.2	Sheave(s)	
8.3	Main Drum Rotation Indicator		12.3	Wire Rope Retainer(s)	
8.4	Aux. Drum Rotation Indicator		12.4	Structure	
8.5	Load Moment Indicator		12.5	Other	
8.6	Load Weight Indicator			Visual (unable to lay boom down)	
8.7	Radius Indicator			Physical (able to lay boom down)	
8.8	Crane Level Indicator				
8.9	Anti-Two Block Device				
8.10	Overload Indicator				
			13.0	Main Load Block & Hook	
9.0	Rotating Upper Structure & Boom		Manufacturer:		
9.1	Hoist Line Dead End		Rated Capacity:		
9.2	Main Boom Head Section		Block Weight:		
9.3	Auxiliary Boom Head		Original Hook Throat Opening:		
9.4	Main Hoist – Wrapping on Drum		13.1	Capacity Marking	
9.5	Main Hoist – Min. 2 Rope Wraps		13.2	Weight Marking	
9.6	Aux. Hoist – Wrapping on Drum		13.3	Sheaves	
9.7	Aux. Hoist – Min. 2 Rope Wraps		13.4	Safety Latches	
9.8	Counterweight Warning Sign		13.5	10 Degree Hook Twist	
			13.6	15% Hook Throat Opening	
10.0	Material / Pinned Section		13.7	10% Hook Wear	
10.1	Alignment		13.8	Swivel	
10.2	Locking Device		13.9	Bearing	
10.3	Structure		13.10	Wedge Socket / End Fitting	
10.4	Other		13.11	Reeving	
11.0	Lattice Boom Extension		14.0	Overhaul Ball & Hook	
11.1	Boom Extension Alignment		Manufacturer:		
11.2	Sheave(s)		Rated Capacity:		
11.3	Wire Rope Retainer		Block Weight:		
11.4	Structure		Original Hook Throat Opening:		
	Visual (unable to lay boom down)		14.1	Capacity Marking	
	Physical (able to lay boom down)		14.2	Weight Marking	
			14.3	Safety Latches	
			14.4	10 Degree Hook Twist	
			14.5	15% Hook Throat Opening	
			14.6	10% Hook Wear	
			14.7	Swivel	
			14.8	Bearing	
			14.9	Wedge Socket / End Fitting	

15.0 Wire Rope

[illegible]

TELESCOPING BOOM CRANE – MONTHLY INSPECTION FORM

DEFICIENCY / RECOMMENDATION REPORT

The following corrective action(s) (repairs, adjustments and replacement parts, etc.) are to be performed by a qualified person in accordance with all manufacturer's instructions, specifications and requirements. OSHA requires that "any deficiency (d) be repaired or defective parts replaced before continued use".

Recommendation(s) (R) should be considered for corrective action. The advisability of a particular recommendation depends on the facts of each situation. Any corrective action(s) is to be performed by a qualified person in accordance with all manufacturer's recommendations, specifications and requirements.

D = Deficiency R = Recommendation

[illegible]

Crane Inspector

Project / Equipment Manager

Project Name: _____ **Project No.:** _____ **Date:** _____

Make / Model: _____
Unit ID: _____
Inspector: _____

Serial #: _____
Jobsite: _____
Date: _____

Status:		S = Satisfactory	D = Deficiency	R = Recommendation	NA = Not Applicable				
CONDITION		MON	TUE	WED	THU	FRI	SAT	SUN	
Fluid Level	1. Crankcase Oil								
	2. Coolant								
	3. Hydraulic Oil								
	4. Engine Oil								
	5. Transmission Oil								
CAB(S)	6. Electrical System								
	7. Service / Parking Brake								
	8. Swing Brake / House Lock								
	9. Oil Gauge								
	10. Fuel Gauge								
	11. Air Pressure Gauge								
	12. Water Temperature Gauge								
	13. Housekeeping								
	14. Fire Extinguisher(s)								
	15. Load Chart								
	16. Windows / Mirrors								
Functions	17. Travel								
	18. Steering								
	19. Outriggers								
	20. Boom Up / Down								
	21. Boom In / Out								
	22. Hoist Up / Down								
	23. Swing								
Safety Devices	24. Anti-Two-Block								
	25. LMI / Load Weight Indicator								
	26. Boom Angle Indicator								
	27. Crane Level Indicator								
	28.								
	29. Radius Indicator								
	30. Warning Lights / Alarms								
	31. Back Up Alarm								
	32. Horn								
Boom, Jib & Accessories	33. Load Block								
	34. Headache Ball								
	35. Hook(s)								
	36. Safety Latches								
	37. Wedge Socket(s)								
	38. Sheaves								
	39. Wire Rope Retainers								
	40. Main Boom								
	41. Jib (Extension)								
	42. Lift Cylinder(s)								
Lower Works Upper Works	43. Tires / Inflation								
	44. Tracks								
	45. Carrier								
	46. Outriggers								
	47. Machine Guards								



Attachment AF

Telescoping Boom Crane – Daily Inspection Form

	48.	Hoist Brakes							
	49.	Clutches							
	50.	Hoses							
	51.	Hoist(s)							
	52.	Wrapping on Drum							
	53.	Rope Reeving							
	54.	Wire Rope							
	55.	Auxiliary Hoist							
		Operator's Initials							

Superintendent Signature: _____

Contractor: _____ Date of Check List: _____
 Rig No.: _____ Month of Check List: _____
 Rig Model: _____ CD No: _____
 Rig Hours: _____
 Operator: _____
 Maintenance Person: _____
 Super/PM on Project: _____
 Project Name: _____ Project: _____

Description of Service	Action	Okay	Replace / Repair	Comments
Air Cleaner Restriction	Check			
Charge Air Piping	Check			
Charge Air Cooler	Check			
Fuel Injection Pump Mounting	Check			
Air Compressor Mounting	Check			
Filter or Change the Hydraulic Oil	Check/Change If Needed			
Replace the Hydraulic Oil Filter Elements	Check/Change If Needed			
Clean the Hydraulic Oil Tank	If Needed			
Pressure Settings of the Hydraulic System	Check			
Hydraulic Valve System Functions Properly	Check			
Hydraulic Hose and Pipe Connections	Check			
Mountings of the Hydraulic Pumps	Check			
Torque up the Slewing Ring and the Swing Drive Bolts	Check/Tighten If Needed			
Winch Brakes	Check			
Winch Transmission Oil Level	Check/Refill If Needed			
Track Drive Transmission Oil Level	Check/Refill If Needed			
Swing Drive Transmission Oil Level	Check/Refill If Needed			
Tighten the Track Shoe Bolts	Check/Tighten If Needed			
Hydraulic Cooler	Check/Clean If Needed			

A copy of this report must be left in the rig at all times.

Please note that all actions shall be done the first of every month.

If a Mechanic is needed please notify your Superintendent or Project Manager and a Mechanic will be dispatched.

Contractor: _____

Date: _____

	Acceptable	NOT Acceptable	Comments
Work Description	<input type="checkbox"/>	<input type="checkbox"/>	
Work Duration	<input type="checkbox"/>	<input type="checkbox"/>	
Associated Working Drawings	<input type="checkbox"/>	<input type="checkbox"/>	
Crane Model	<input type="checkbox"/>	<input type="checkbox"/>	
Location Pick	<input type="checkbox"/>	<input type="checkbox"/>	
Capacity of Crane at Pick Radius	<input type="checkbox"/>	<input type="checkbox"/>	
Weight of Pick	<input type="checkbox"/>	<input type="checkbox"/>	
Ground Conditions	<input type="checkbox"/>	<input type="checkbox"/>	
Overhead Wires Present	<input type="checkbox"/>	<input type="checkbox"/>	
Proximity to Traffic	<input type="checkbox"/>	<input type="checkbox"/>	
Outrigger Placement	<input type="checkbox"/>	<input type="checkbox"/>	
Outrigger Blocking as per Drawing	<input type="checkbox"/>	<input type="checkbox"/>	
Rigging in good working order	<input type="checkbox"/>	<input type="checkbox"/>	
Delivery Location	<input type="checkbox"/>	<input type="checkbox"/>	
Wind Speed and Approximate Direction	<input type="checkbox"/>	<input type="checkbox"/>	
Weather	<input type="checkbox"/>	<input type="checkbox"/>	
Operator	<input type="checkbox"/>	<input type="checkbox"/>	
IW Foreman	<input type="checkbox"/>	<input type="checkbox"/>	
Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	
Design Engineer	<input type="checkbox"/>	<input type="checkbox"/>	

Prepared by:		
<i>(Print Name)</i>	<i>(Signature)</i>	<i>(Date)</i>

Approved by: <i>(Must be approved by Barton Malow Superintendent or Safety Representative)</i>		
<i>(Print Name)</i>	<i>(Signature)</i>	<i>(Date)</i>



Attachment AH
CRITICAL LIFT CHECKLIST

Date of lift _____
Lifting Plan _____

A. Weight

- a. Weight of load empty _____ lbs.
- b. Weight of headache ball _____ lbs.
- c. Weight of block _____ lbs.
- d. Weight of lifting bar _____ lbs.
- e. Weight of slings and shackles _____ lbs.
- f. Weight of jib _____ lbs.
 - i. Erect _____ Stored _____
- g. Weight of headache ball of jib _____ lbs.
- h. Weight of cable (load fall) _____ lbs.
- i. Allowance for unaccounted _____ lbs.
- j. Other _____ lbs.

Total Weight _____ lbs.

Source of load weight: _____

(name plate, drawings, scales, etc.)

Weight verified by: _____

B. Jib

- a. Is jib to be used? _____
- b. Length of jib _____
- c. Angle of jib _____
- d. Rated capacity of jib _____
- e. Radius _____

C. Crane, Forklift or Lifting Device

- a. Any deviation from smooth & solid? _____
- b. Foundations in or near area? _____
Describe: _____
- c. Electrical hazards near area? _____
- d. Obstacles or obstructions near area? _____

e. Swing direction & degrees? _____

D. Cable

- a. Number of parts of cables _____
- b. Size of cable _____
- c. Rated capacity of cable _____

E. Sizing of slings & shackles

- a. Type of arrangement _____
- b. Number of slings in hook up _____
- c. Sling size diameter _____
- d. Sling length _____
- e. Rated capacity _____
- f. Pin diameter _____
- g. Shackle capacity _____
- h. Number of shackles _____
- i. Shackle attached to load by:

F. Crane

- a. Type of crane

- b. Capacity _____
- c. Lifting arrangement _____
- d. Maximum distance
center of load to center of pin of crane _____
- e. Length of boom _____
- f. Angle of boom at pick up _____
- g. Angle of Boom at set _____
- h. Rated capacity of crane at 360°
radius for this lift _____
- i. Maximum load on crane _____
- j. What is the percentage of the cranes rated
capacity? _____

Example:

Chart reading = 6,000 lbs.

Actual weight = 4,000 lbs.

% = actual / chart X 100

% = 4,000 / 6,000 X 100

% = 0.66 X 100

66%

G. Pre lift checklist

Yes

No

- a. Load radius rechecked
- b. Crane level
- c. Mating acceptable
- d. Outriggers extended
- e. Signalmen
- f. Load chart in crane
- g. Crane inspection
- h. Wind conditions

Signatures to proceed:

Crane Operator

Name _____

Signature _____

Rigger

Name _____

Signature _____

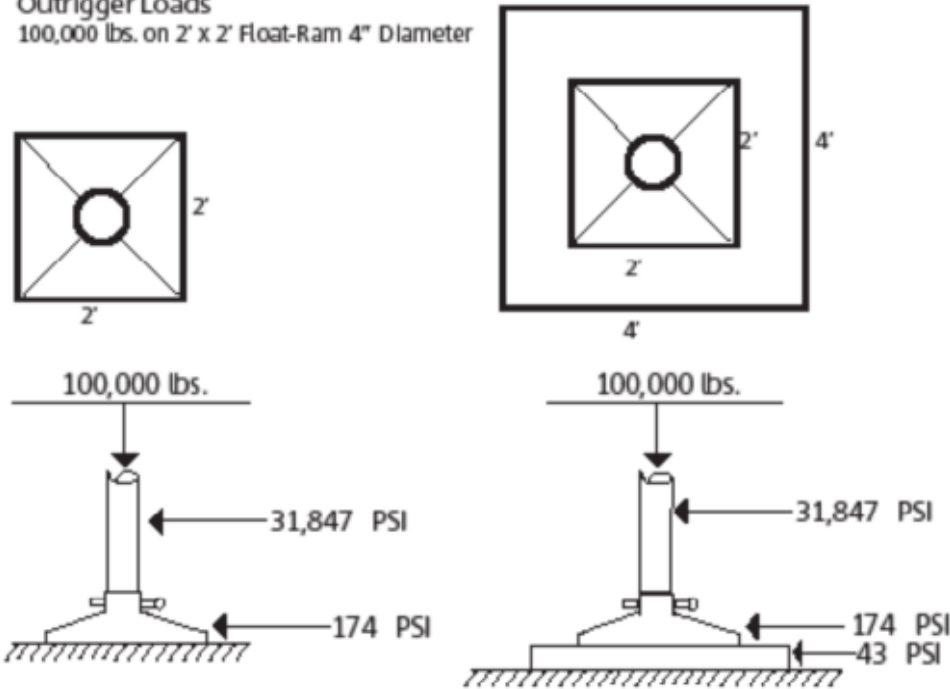
Supervisor

Name _____

Signature _____

Mobile Cranes

Outrigger Loads
100,000 lbs. on 2' x 2' Float-Ram 4" Diameter



Soil Bearing Capacities

Soils		Approximate Bearing Capacities
Hardpan -Cemented Sand & Gravel.....		135 PSI
Gravel-Sand & Gravel -	Compact.....	110 PSI
	Firm.....	81 PSI
	Loose.....	54 PSI
Sand-Coarse to Medium -	Compact.....	81 PSI
	Firm.....	60 PSI
	Loose.....	40 PSI
Sand-Fine, Silty, or with trace of Clay -	Compact.....	54 PSI
	Firm.....	40 PSI
	Loose.....	27 PSI
Silt.....	Compact.....	40 PSI
	Firm.....	33 PSI
	Loose.....	27 PSI
Clay.....	Compact.....	54 PSI
	Firm.....	33 PSI
	Loose.....	13 PSI



(Please Print Clearly)

Attachment AJ
PRE-DEMOLITION SURVEY

Project Name: _____ Project No.: _____

Location: _____ Survey Date: _____

Name: _____

Major Cross Streets: _____ Title: _____

Structure Information

Basement: ☐ Yes ☐ No Type: ☐ Block ☐ Concrete ☐ Other: _____

Building Height: _____ No. of Stories: _____

Shoring Required: ☐ Yes ☐ No

(if yes, complete the following)

Type of Shoring Describe: _____

Location of Shoring Describe: _____

Adjacent Properties: Describe: _____

(if yes, complete the following)

Protection Required: Describe: _____

Underground Tanks: Describe: _____

Location of Tanks Describe: _____

Previous Use Describe: _____

Tanks Drained Date: _____

Tanks Purged Date: _____

Tested: Performed By: _____

Public/Worker Protection

Required: Describe: _____

(if yes, complete the following)

Signage: Describe: _____

Barricades: Describe: _____

Fencing: Describe: _____

Demo Methods: _____

Disconnects

Reference No.: _____

Utility Disconnect		Disconnect Date	Utility Contact Name and Phone No.
Electric	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Gas	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Water	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Sewer	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Phone	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
Security	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____
PC Network	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____	_____

Location of Energized Power / Communication Lines / Gas:

Signature of Superintendent or General Superintendent_____
Date**Must distribute the following:**

- ☐ Original copy to Superintendent
 - ☐ Copy to General Superintendent
 - ☐ Copy to Main Office Safety File via Barton Malow Safety Dept.
-

**PRE-SHIFT EQUIPMENT INSPECTION CHECKLIST**

(Use for Backhoe, Bull Dozer, Cart/Golf, Forklift, Excavator, Loader, Etc.)

Project Name / Number:								Week Beginning Date:								Definition: ✓ = Okay R = Repair Needed NA = Not Applicable			
Lift Truck Number or Serial Number:								Equipment Make/Model:											
	M	Tu	W	Th	F	Sa	Su		M	Tu	W	Th	F	Sa	Su				
ENGINE								OPERATIONAL											
Engine Oil								Annual Inspection											
Hydraulic Oil								Horn											
Wires								Back-up Warning Device											
Fuel Line								Steering											
COMPONENTS								Gas Pedal											
Fuel Level								Parking Brake											
Fuel - LPG Tank								Service Brake											
LPG Tank Straps								Gear Shift Lever											
Gauges, Temperature								Seat / Seat Belt											
Gauges, Hour Meter								Tire Condition											
Gauges, Sped								Track Condition											
Gauges, Battery								Quick Coupler											
Battery								Manual/Maintenance											
Belts								Mast Lift Up											
Brake Fluid								Mast Lift Down											
Grease Fittings								Mast Tilt											
Lubricate Units								Mast Side / Squeeze											
Hydraulic Fluid Level								Hose Reel											
Hydraulic Lines								ALL TERRAIN											
Radiator Level								Boom – Up											
Scrubber								Boom – Down											
Transmission Level								Boom – Extend											
BODY								Boom – Retract											
Annual Inspection								Fork Tilt - Forward											
Lights, Head								Fork Tilt - Reverse											
Lights, Tail								Frame Level – Left											
Lights, Signal								Frame Level – Right											
Lights, Strobe								Carriage Tilt – Left											
Lights, Warning								Carriage Tilt – Right											
Fire Extinguisher								Drive - Forward											
Glass / Windows								Drive - Reverse											
Mirrors								Fork Side Shift – Left											
Instruction Stickers								Fork Side Shift – Right											
Swing/Counterweight Stickers								Outriggers – Up											
Lifting Capacity								Outriggers – Down											
Roll Over Protection (ROPS)								Emergency Stop(s)											
Boom Angle Indicator																			
Quick Coupler Stickers																			
OPERATOR NAME PER DAY (PRINT):								OPERATOR NAME PER DAY (PRINT):											
REPAIR NEEDED:								DATE REPAIRED:											

TAKE EQUIPMENT OUT OF SERVICE IF SAFETY WOULD BE COMPROMISED. TAG EQUIPMENT.

Project Name / Number:								Week Beginning Date:								Definition: ✓ = Okay R = Repair Needed NA = Not Applicable		
Lift Truck Number or Serial Number:								Equipment Make/Model:										
	M	Tu	W	Th	F	Sa	Su			M	Tu	W	Th	F	Sa	Su		
SAFETY								FUNCTION TEST – GROUND TEST										
Alarm								Ground Controls										
Fuel Level								Drive – Forward										
Battery Fluid								Drive – Reverse										
Oil Level								Boom – Up										
Coolant Level								Boom – Down										
Hydraulic Fluid Level								Boom – Extend										
Operators Manual in Lift								Boom – Retract										
Hour Meter								Steer – Left										
Fluid Leaks								Steer – Right										
Tire Condition								Rotate – Left										
Horn								Rotate – Right										
Hoses/Belts								Basket/Platform – Level										
Strobe Light								Basket/Platform – Extend										
Work Platform Free of Debris								Basket/Platform – Rotate										
Scissor/Boom Components								Auxiliary Power										
Labels/Instructions Legible								Outrigger – Up										
Proper Tie-Off/Attachments								Outrigger – Down										
Structurally Sound								Emergency Stop(s)										
General Appearance								Emergency Descent Valves										
Rails, Gates, Chains in Place								FUNCTION TEST – PLATFORM/BASKET CONTROLS										
								Platform/Basket Controls										
								Boom – Up										
								Boom – Down										
								Boom – Extend										
								Boom – Retract										
								Drive – Forward										
								Drive – Reverse										
								Steer – Left										
								Steer – Right										
								Rotate – Left										
								Rotate – Right										
								Basket/Platform – Level										
								Basket/Platform – Extend										
								Basket/Platform – Rotate										
								Auxiliary Power										
								Outrigger – Up										
								Outrigger – Down										
								Emergency Stop(s)										
OPERATOR NAME PER DAY (PRINT):								OPERATOR NAME PER DAY (PRINT):										
REPAIR NEEDED:								DATE REPAIRED:										
TAKE EQUIPMENT OUT OF SERVICE IF SAFETY WOULD BE COMPROMISED. TAG EQUIPMENT.																		

Company Name:							Date:		
Supervisor's Name:							Time:		
Type of Scaffold:									
Location:									
Definition: Y = Yes N = No NA = Not Applicable									
	M	Tu	W	Th	F	Sa	Su	Action Taken	
Are 2"x10" mud sills and base plates used?									
If CMU piers are used for footings are they poured solid?									
Are all components free of damage?									
Are scaffold frames plumb and level?									
Are scaffold frames pinned together to prevent displacement?									
Are cross braces used at all locations?									
Are frames and braces compatible?									
Are all working levels fully planked (Max. 1" gap between planks)?									
Are all platforms at least 18" wide?									
Is the work platform not more than 14" from the wall?									
Do all planks overlap their end supports 6" - 12"?									
Are scaffold planks free of damage, splits, etc.?									
Are scaffolds secured to the structure once the scaffold is 4 times as high as it is wide including guardrails?									
Are scaffold ties repeated every 26' vertically after the first set of ties?									
Where scaffold ties are required are they installed at both ends of the scaffold and at 30' max. intervals between ends?									
Is a safe means of access provided to all scaffold platforms more than 2' high? (extension ladders, attachable ladders, stairs or integral ladder access frames must be used.)									
Does the ladder extend 3' above the platform?									
Are ladders secured to prevent displacement?									
Are ladders installed as scaffold is erected to provide access for erectors?									
Are scaffold at safe distances from power lines?									
Are tag lines used when hoisting loads onto scaffolds with cranes?									
Are guardrails installed on all platforms over 6' high?									
Is the top rail between 38"-45" high and capable of supporting 200 lbs.?									
Are midrails capable of supporting 150 lbs.?									
Where cross bracing is used as a mid-rail is the crossing point of the brace between 20"-30" above the work platform?									
Where cross bracing is used as a top rail is the crossing point of the brace between 38"-48" above the work platform? (cross bracing cannot serve as both top rail and mid-rail)?									
Are platforms kept clear of unnecessary material and debris?									
Are all material platforms equipped w/toe boards?									
Are all areas below and around scaffolds barricaded to prevent workers from walking under scaffolds?									
Are canopies erected when workers must pass under scaffolds?									
Are all scaffolds that are incomplete tagged "Danger Do Not Use"?									
Are all damaged components removed from service and tagged "Danger Do Not Use"?									
Are there legible scaffold tags at each access point?									
Is the tag proper for the scaffold condition? (red, yellow or green)									
COMPETENT PERSON INITIALS PER DAY:									
TAKE EQUIPMENT OUT OF SERVICE IF SAFETY WOULD BE COMPROMISED. TAG EQUIPMENT.									



Attachment AN
SAFETY HAZARD NOTIFICATION

SAFETY HAZARD NOTIFICATION

Once completed, immediately provide this report to the Safety Department via fax 248-436-5489 or email.

TO PRIME CONTRACTOR _____ Date _____

Supervisor: _____ Project: _____

IN REGARD TO
CONTRACTOR _____ Phone: _____

Supervisor _____

Observations _____

The following unsafe actions or conditions are noted:

PRIME CONTRACTOR

Received by: _____

Title _____ Date _____

BARTON MALOW

By: _____

Superintendent Date: _____

By: _____

Project Manager Date: _____

By: _____

Project Director Date: _____

By: _____

Vice President Date: _____

Corrective action is to be taken immediately. Note below the action taken and return original to Barton Malow within 72 hours

Signed: _____

The report of the above item is not intended to indicate that other unsafe conditions do not exist, nor is it intended to imply that other violations and/or hazards not observed or reported thereon are safe and under control at the time of this survey.

This document **does not** in any way relieve you of your complete responsibility for compliance with safety requirements.

PURPOSE

The purpose of this plan is to establish a program and procedures for the safe use of hazardous chemical substances at Barton Malow.

The Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS) 29 CFR 1910.1200 (General Industry) and 29 CFR 1926.59 (Construction Industry) call for the development of a hazard communication program when employees may be exposed to any chemical in the workplace under normal conditions of use or in a foreseeable emergency. In 2012, OSHA revised the HCS to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). As a result, this program has been revised to comply with the requirements of the OSHA HCS 2012. The written hazard communication program will include and address the following criteria in order to satisfy the minimum requirements of the OSHA HCS 2012:

- List of all hazardous chemicals known to be present in the workplace or individual work area
- Methods used to ensure that all containers, including pipes and holding tanks, are labeled, tagged or marked properly
- Methods used to obtain and maintain safety data sheets (SDSs)
- Methods used to provide employees with information and training on hazardous chemicals in their work areas
- Methods used to inform employees of the hazards of non-routine work practices
- Methods used to provide the employees of other employers (e.g., consultants, construction contractors and temporary employees) on-site access to SDSs for each hazardous chemical that the other employer's employees may be exposed to while working in the workplace
- Methods used to inform the employees of other employers of precautionary measures that need to be taken to protect themselves during the workplace's normal operating conditions and in foreseeable emergencies
- Methods used to inform the employees of other employers of the labeling system used in the workplace

The hazard communication program will identify the following:

- Key personnel responsible for the program
- Location of chemical inventory list and SDSs
- Workplace labeling system
- Good work practices and procedures to minimize exposures
- How training will be performed
- Procedures to maintain the program and update the required information
- How records will be maintained

President, CEO (signature)

Date

Safety Director (signature)

Date

The Safety Director, __{insert name and title}__, is responsible for administering the hazard communication program.

This person is also responsible for:

- Reviewing the potential hazards and safe use of chemicals
- Maintaining a list of all hazardous chemicals and a master file of SDSs
- Ensuring that all containers are labeled, tagged or marked properly
- Providing new-hire and annual training for employees
- Maintaining training records
- Monitoring the air concentrations of hazardous chemicals in the work environment
- Properly selecting and caring for personal protective equipment
- Directing the cleanup and disposal operations of the spill control team
- Identifying hazardous chemicals used in non-routine tasks and assessing their risks
- Informing outside contractors who are performing work on company property about potential hazards
- Reviewing the effectiveness of the hazard communication program and making sure that the program satisfies the requirements of all applicable federal, state or local hazard communication requirements

The Safety Director __{insert name and title}__, is responsible for:

- Contacting chemical manufacturers and/or distributors to obtain SDSs and secondary labels for hazardous chemicals used or stored in the workplace
- Reviewing incoming hazardous chemicals to verify correct labeling
- Holding hazardous chemicals in the receiving area until receipt of the SDS for the product

Employees are responsible for the following aspects of the hazard communication program:

- Identifying hazards before starting a job
- Reading container labels and SDSs
- Notifying the supervisor of torn, damaged or illegible labels or of unlabeled containers
- Using controls and/or personal protective equipment provided by the company to minimize exposure
- Following company instructions and warnings pertaining to chemical handling and usage
- Properly caring for personal protective equipment, including proper use, routine care and cleaning, storage, and replacement
- Knowing and understanding the consequences associated with not following company policy concerning the safe handling and use of chemicals
- Participating in training

CHEMICAL INVENTORY LIST

Attached to this program is a list of hazardous chemicals used, produced and/or stored at Barton Malow. Copies of the chemical inventory list are available in the __{insert location}__.

This list will contain the product identifier that is referenced on the appropriate SDS, the location or work area where the chemical is used, and the personal protective equipment and precautions for each chemical product. This list will be updated annually and whenever a new chemical is introduced to the workplace.

Each container of hazardous chemicals received from the chemical manufacturer, importer or distributor will be labeled with the following information:

- Product identifier
- Signal word
- Hazard statement(s)
- Pictogram(s)
- Precautionary statement(s)
- Name, address and telephone number of the chemical manufacturer, importer or other responsible party

Barton Malow will use the GHS labeling system for secondary containers. When a chemical is transferred from the original container to a portable or secondary container, the container will be labeled, tagged or marked with a GHS label containing the following information:

- Product identifier
- Signal word
- Hazard statement(s)
- Pictogram(s)
- Precautionary statement(s)

Portable containers into which hazardous chemicals are transferred from labeled containers and that are intended for the immediate use of the employee who performs the transfer does not require a label. If the portable container will be used by more than one employee or used over the course of more than one shift, the container must be labeled. Food and beverage containers should never be used for chemical storage.

Signs, placards, process sheets, batch tickets, operating procedures or other such written materials may be used in lieu of affixing labels to individual, stationary process containers as long as the alternative method identifies the containers to which it is applicable and conveys the information required for workplace labeling.

Where an area may have a hazardous chemical in the atmosphere (e.g., where extensive welding occurs), the entire area will be labeled with a warning placard.

Pipes that contain hazardous chemicals should be labeled in accordance with ANSI/ASME A13.1 and indicate the direction of flow. (Please note that this not a requirement of the OSHA HCS but a best practice or requirement of local jurisdiction.)

Workplace labels or other forms of warning will be legible, in English and prominently displayed on the container or readily available in the work area throughout each work shift. If employees speak languages other than English, the information in the other language(s) may be added to the material presented as long as the information is presented in English as well.

Note: After Dec. 1, 2015, distributors may not ship containers labeled by the chemical manufacturer or importer unless the label on the container meets GHS labeling requirements.

SAFETY DATA SHEETS

An SDS will be obtained and maintained for each hazardous chemical in the workplace. SDSs for each hazardous chemical will be readily accessible during each work shift to employees when they are in their work areas.

SDSs will be obtained from the chemical manufacturer, importer or distributor. The name on the SDS will be the same as that listed on the chemical inventory list. SDSs for chemicals or

HAZARD COMMUNICATION PROGRAM

process streams produced by the company will be developed and provided by the Safety Director.

The Safety Director will maintain the master file of all original SDSs. Hard copies of the master file will be located in the ___{insert location}__.

SDSs for new products or updated SDSs for existing products will be obtained by the purchasing agent and forwarded to the Safety Director. The Safety Director will then update the master file with new and/or updated SDSs.

If problems arise in obtaining an SDS from the chemical manufacturer, importer or distributor, a phone call will be made to request an SDS and to verify that the SDS has been sent. The phone call will be logged and a letter will be sent the same day. The company will maintain a written record of all efforts to obtain SDSs. If these efforts fail to produce an SDS, the local OSHA office will be contacted for assistance.

EMPLOYEE INFORMATION AND TRAINING

Employees included in the hazard communication program will receive the following information and training prior to exposure to hazardous chemicals and when new chemical hazards are introduced to their work area:

- Requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 (General Industry) or 29 CFR 1926.59 (Construction Industry)
- Operations in the work area where hazardous chemicals are present
- Location and availability of the hazard communication program, chemical inventory list and SDSs
- Methods and observations used to detect the presence or release of a hazardous chemical in the work area, such as monitoring devices, visual appearance or odor of hazardous chemicals when being released
- Physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified of the chemicals in the work area
- Measures employees can take to protect themselves from hazards, such as appropriate controls, work practices, emergency and spill cleanup procedures, and personal protective equipment to be used
- Explanation of the labels received on shipped containers
- Explanation of the workplace labeling system
- Explanation of the SDS, including order of information and how employees can obtain and use the appropriate hazard information

Note: To facilitate understanding of the new GHS system, the OSHA HCS requires that employees be trained regarding the new label elements and SDS format by Dec. 1, 2013. Employers are required to update the hazard communication program and to provide any additional training for newly identified physical or health hazards no later than June 1, 2016.

NON-ROUTINE TASKS

The Safety Director and the immediate supervisor of an employee performing a non-routine task, such as cleaning machinery and other process equipment, is responsible for ensuring that adequate training has been provided to the employee on any hazards associated with the non-routine task. Employees share in this responsibility by ensuring that their immediate supervisor knows that the non-routine task will be performed.

Special work permits are required for the performance of certain non-routine tasks, such as entry to confined spaces, breaking and opening piping systems, and welding and burning. For some special tasks, employees are required to follow special lockout/tagout procedures to ensure that all machinery motion has stopped and energy sources are isolated prior to and during the performance of such tasks.

Prior to beginning work, the Safety Director will inform contractors with employees working on company property of any hazardous chemicals that the contractors' employees may be exposed to while performing their work. The Safety Director will also inform contractors of engineering or work practice control measures to be employed by the contractor, personal protective equipment to be worn by the contractors' employees, and any other precautionary measures that need to be taken to protect their employees during the workplace's normal operating conditions and in foreseeable emergencies.

Furthermore, the Safety Director will advise contractors that they must comply with all OSHA standards while working on company property. Appropriate controls will be established with the contractor to ensure that company employees are not exposed to safety and health hazards from work being performed by the contractor and that company operations do not expose contractors' employees to hazards.

The Safety Director will inform contractors of the workplace labeling system and the availability and location of SDSs for any chemical to which contractors' employees may be exposed while performing their work.

RECORDKEEPING

Records pertaining to the hazard communication program will be maintained by the Safety Director. The Safety Director will keep the following records:

- Chemical inventory list
- Hazardous material reviews
- Copies of phone call logs and letters requesting SDSs
- Employee training records
- Warnings issued to employees for not following the hazard communication program

I, __{insert Employee Name}__, have read and understand the hazard communication program at Barton Malow

(Barton Malow employee signature)

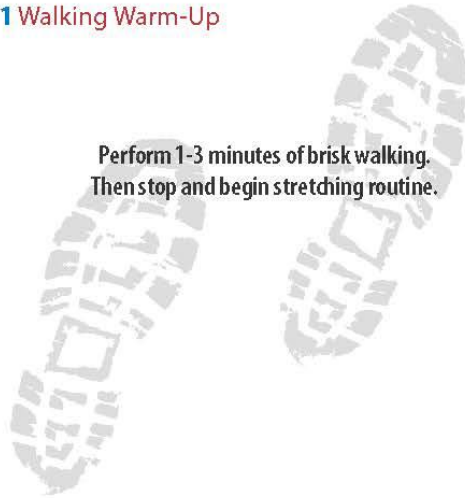
Date

MONDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

Perform 1-3 minutes of brisk walking.
Then stop and begin stretching routine.



2 Waist Twist and Hold



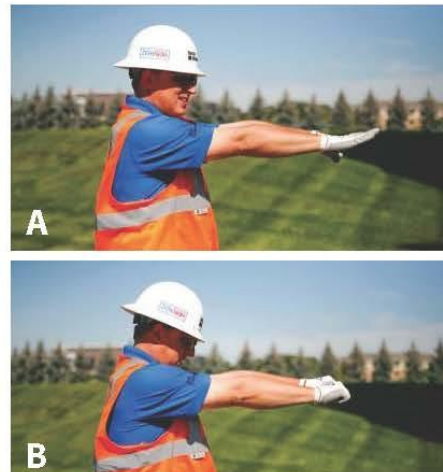
3 Upper Back Stretch



4 Shoulder Circles



5 Hand Stretch



6 Standing Quad Stretch

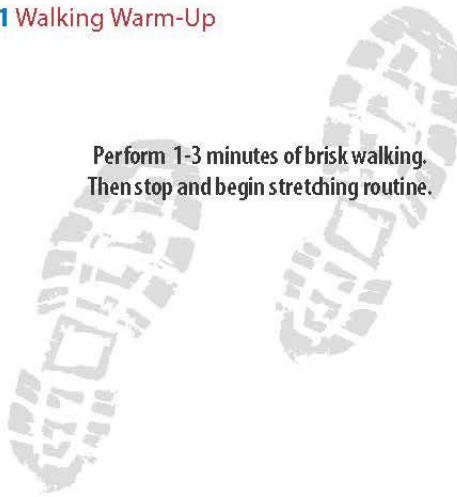


TUESDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

Perform 1-3 minutes of brisk walking.
Then stop and begin stretching routine.



2 Low Back Extension



3 Overhead Stretch



4 Forearm Stretch



5 Side Lunge



6 Ankle Flex Stretch



TUESDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

- ✓ Perform 1-3 minutes of brisk walking, then stop and begin stretching routine

Precautions/Contraindications

- ✓ If walking inside, avoid congested/hazardous areas; if walking outdoors in a heavy traffic area, be aware of motorists.
- ✓ This stretch may not be appropriate for some individuals with back, leg, foot or hip problems.

2 Low Back Extension

- ✓ Stand with feet placed shoulder-width apart, and abdominal muscles contracted to hold torso stable
- ✓ Cross arms across chest so hands are resting on opposite shoulders (shoulders should be relaxed)
- ✓ Lean back slightly until a slight stretch is felt in the lower back, not to exceed 30 degrees (caution, do not overextend)
- ✓ Hold; relax; repeat
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 2-4 stretches, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the lower back

Precautions/Contraindications

- ✓ Do not stretch beyond the point of mild tension
- ✓ This stretch may be contraindicated for some individuals with back problems

3 Overhead Stretch

- ✓ Stand with feet shoulder-width apart and abdominal muscles contracted to hold torso stable
- ✓ Reach both arms overhead, clasp the hands, turn the palms facing upward and reach as high as possible, trying to elongate the torso
- ✓ Hold; relax and repeat

Recommendations

- ✓ Perform 2-4 stretches, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the shoulders, waist, and upper back

Precautions/Contraindications

- ✓ None

4 Forearm Stretch

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to hold torso stable
- ✓ Extend one arm straight out in front of the body with fingers pointed upwards
- ✓ With opposite hand, gently grasp fingers of the extended arm and pull palm (from side) toward the body until mild tension is felt; hold for 15 seconds
- ✓ Now bend the wrist so fingers are pointing downwards
- ✓ With opposite hand, gently grasp fingers of the extended arm and pull back of hand (from side) toward the body until mild tension is felt; hold for 15 seconds
- ✓ Relax and repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform both stretches on each arm, hold each stretch a minimum of 15 seconds

Conditioning Effect

- ✓ Stretches the top and bottom of forearm and wrist

Precautions/Contraindications

- ✓ If too much strain is felt, decrease the tension placed on fingers and palms
- ✓ This stretch may be contraindicated for some individuals with wrist or hand problems

5 Side Lunge

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to ensure torso stabilization
- ✓ Step to the side with one leg about 2-3 feet (exact distance depends upon leg length)
- ✓ Bend one knee and shift body weight onto that leg, placing hands on bent thigh for support.; keep bent knee directly over heel
- ✓ Slowly lower the body and turn the foot of the straight leg slightly outwards until mild tension is felt on the inside of the thigh of the straight leg
- ✓ Keep back straight
- ✓ Hold; relax; repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each side, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the inner thigh

Precautions/Contraindications

- ✓ If too much strain is felt on inner thigh, shorten stance (i.e. bring feet closer together)
- ✓ This stretch may be contraindicated for some individuals with hip problems

6 Ankle Flex Stretch

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to ensure torso stabilization
- ✓ Allow arms to hang at sides
- ✓ Place one heel on ground while pointing toes upward (flex)
- ✓ Hold for 15 seconds
- ✓ Lower toes to the ground and lift heel off of the ground (extend)
- ✓ Hold for 15 seconds
- ✓ Relax and repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform both stretches on each side; hold each stretch for a minimum of 15 seconds

Conditioning Effect

- ✓ Stretches the calf, shin and ankle

Precautions/Contraindications

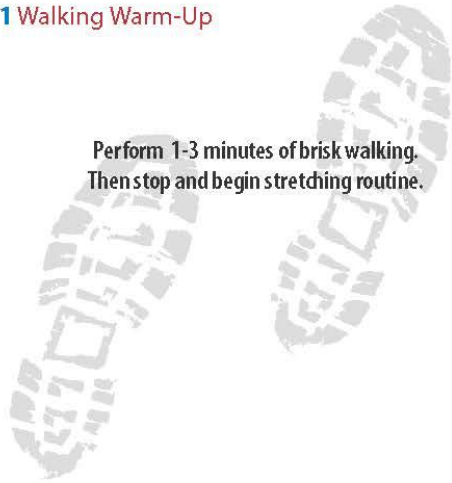
- ✓ This stretch may be contraindicated for some individuals with ankle problems

WEDNESDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

Perform 1-3 minutes of brisk walking.
Then stop and begin stretching routine.



2 Side Bend Stretch



3 Standing Knee Lifts



4 Calf Stretch



5 Shoulder Stretch



6 Forearm Rotation



WEDNESDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

- ✓ Perform 1-3 minutes of brisk walking, then stop and begin stretching routine

Precautions/Contraindications

- ✓ If walking inside, avoid congested/hazardous areas; if walking outdoors in a heavy traffic area, be aware of motorists.
- ✓ This stretch may not be appropriate for some individuals with back, leg, foot or hip problems.

2 Side Bend Stretch

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to hold torso stable
- ✓ Place one hand on same side outer thigh for support
- ✓ Reach up with opposite hand as high as possible (palm towards ceiling) and bend slightly to the opposite side until a stretch is felt in the waist and up through the shoulder
- ✓ Hold; relax; repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each side, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the waist and upper torso

Precautions/Contraindications

- ✓ Bend directly to the side; do not lean forward or backward
- ✓ Do not arch back
- ✓ This stretch may be contraindicated for some individuals with back problems

3 Standing Knee Lifts

- ✓ Stand with feet together, knees slightly bent, and abdominal muscles contracted to ensure torso stabilization
- ✓ Lift one knee, placing clasped hands and fingers slightly below or under lifted knee (use one hand to hold on to support object, if necessary)
- ✓ Keep torso and back straight
- ✓ Hold; relax; repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each leg; hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the lower back, buttocks, and back of thighs (hamstrings)

Precautions/Contraindications

- ✓ Do not arch back
- ✓ This stretch may be contraindicated for some individuals with poor posture or balance

4 Calf Stretch

- ✓ Stand with feet placed 3-4 feet apart (one foot in front of the other)
- ✓ Place hands on front thigh for support
- ✓ Keeping both heels on the ground and both feet facing forward, slowly bend front knee and lower body forward until a stretch is felt in the calf of the back leg; body should be straight from head to heel of back leg
- ✓ Hold; relax and repeat on other side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each leg, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the calf muscles of the lower leg

Precautions/Contraindications

- ✓ Do not allow bent front knee to exceed tip of toes
- ✓ This stretch may be contraindicated for some individuals with ankle problems

5 Shoulder Stretch

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to ensure torso stabilization
- ✓ Extend one arm in front of the body, parallel to the ground
- ✓ Grasp the straight elbow with the opposite wrist and gently pull across the front of the body until mild tension is felt in the back of the shoulder and tricep of the straight arm
- ✓ Hold; relax; repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each arm, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Increase range of motion in the shoulder joint
- ✓ Stretches the shoulder and back of arm (pectoralis, trapezius, rhomboids, deltoids, and triceps)

Precautions/Contraindications

- ✓ Avoid overstretching by forcing the arm towards the body
- ✓ This stretch may not be appropriate for individuals with shoulder problems

6 Forearm Rotation

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to hold torso stable
- ✓ Clap hands together with fingers intertwined and bring hands up towards torso
- ✓ Keep shoulders relaxed
- ✓ Rotate wrists so that thumbs are rotating to one side; hold for 3-5 seconds
- ✓ Next, rotate wrists so that thumbs are rotating to opposite side; hold for 3-5 seconds and repeat
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 6-10 stretches in each direction; hold each stretch a minimum of 3-5 seconds

Conditioning Effect

- ✓ Stretches the forearms and hands

Precautions/Contraindications

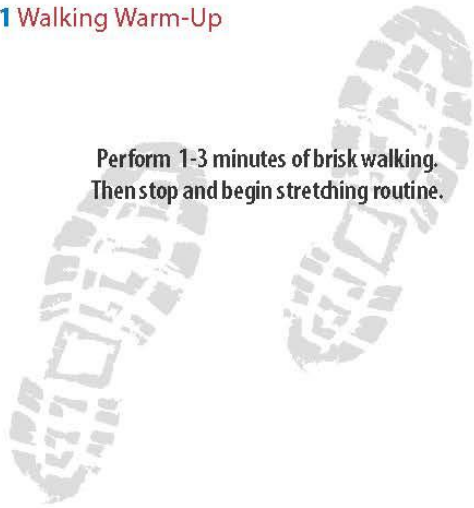
- ✓ This stretch may be contraindicated for some individuals with hand problems

THURSDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

Perform 1-3 minutes of brisk walking.
Then stop and begin stretching routine.



2 Three Point Back Stretch



3 Arm Crosses



4 Praying Stretch



5 Achilles Stretch



6 Standing Hamstring



THURSDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

- ✓ Perform 1-3 minutes of brisk walking, then stop and begin stretching routine

Precautions/Contraindications

- ✓ If walking inside, avoid congested/hazardous areas; if walking outdoors in a heavy traffic area, be aware of motorists.
- ✓ This stretch may not be appropriate for some individuals with back, leg, foot or hip problems.

2 Three Point Back Stretch

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to hold the torso stable
- ✓ Place hands on hips for stability
- ✓ Lean to one side not to exceed 45 degrees; hold; return to center
- ✓ Lean/flex forward not to exceed 30 degrees; hold; return to center
- ✓ Lean to the opposite side not to exceed 45 degrees; hold; return to center
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches at each point, hold each stretch a minimum of 10-20 seconds

Conditioning Effect

- ✓ Stretches the lower back, abdominals and waist

Precautions/Contraindications

- ✓ Do not stretch beyond the point of mild tension
- ✓ This stretch may be contraindicated for some individuals with back problems

3 Arm Crosses

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to ensure torso stabilization
- ✓ Extend arms out to the sides at shoulder level parallel to the ground with elbows bent at 90 degrees; keeping shoulders relaxed
- ✓ Bring arms forward to cross in front of the chest
- ✓ Lightly grasp upper arms or shoulders
- ✓ Hold; open the arms to starting position and repeat alternating the other arm to the top
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 2-3 sets of crosses in a slow and controlled fashion; hold each stretch for a minimum of 10-15 seconds

Conditioning Effect

- ✓ Increases range of motion in the shoulder joint.
- ✓ Stretches the chest, upper back and shoulders (pectorals, trapezius, rhomboids, and deltoids)

Precautions/Contraindications

- ✓ Avoid throwing or whipping the arms back and forth

4 Praying Stretch

- ✓ Stand with feet shoulder-width apart and abdominal muscles contracted to hold torso stable
- ✓ Both arms should be at side of body with both elbows bent and pointing outward so forearms are parallel to the ground
- ✓ Press palms together and slowly lower wrists until you feel a comfortable stretch in the wrists and forearms
- ✓ Hold; relax; repeat
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches, hold each stretch a minimum of 30-60 seconds

Conditioning Effect

- ✓ Increases range of motion in the wrists
- ✓ Stretches the wrists, forearms, and chest

Precautions/Contraindications

- ✓ This stretch may not be appropriate for individuals with hand or wrist problems

5 Achilles Stretch

- ✓ Stand with feet placed 3-4 feet apart (one foot in front of the other)
- ✓ Place hands on front thigh for support, if necessary
- ✓ Keeping both heels on the ground and both feet facing forward, slowly bend front knee and lower body forward
- ✓ Slowly bend the back knee slightly until a comfortable stretch near the ankle of the back leg (back heel should remain on ground)
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each leg, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the calf muscles of the lower leg, especially near the ankle
- ✓ Variations
- ✓ If a wall is available, you may place hands on wall at shoulder level for support (as opposed to having hands on thigh)

Precautions/Contraindications

- ✓ This stretch may be contraindicated for some individuals with ankle problems

6 Standing Hamstring

- ✓ Stand with feet placed shoulder-width apart and abdominal muscles contracted to ensure torso stabilization
- ✓ Extend one leg forward and place heel on the ground and point toes upwards
- ✓ Bend opposite knee slightly
- ✓ Place hands on thigh of straight leg for support if necessary
- ✓ Keeping thighs aligned, bend at hips until a comfortable stretch is felt in the back of the thigh of extended leg (sit into the stretch)
- ✓ Hold back straight and keep head aligned with spine
- ✓ Hold, relax; repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each leg, hold each stretch a minimum of 15-30 seconds

Conditioning Effect

- ✓ Stretches the back of thigh (hamstrings)

Precautions/Contraindications

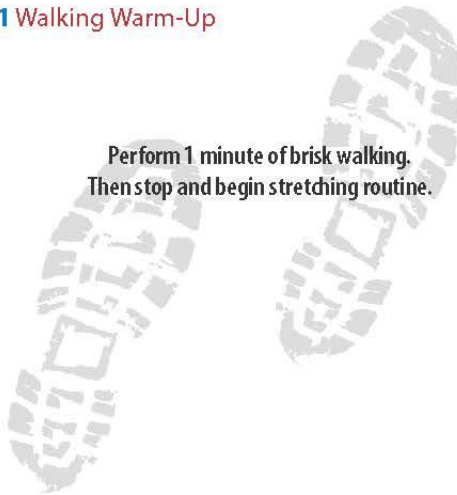
- ✓ Avoid pressing on the knees
- ✓ This stretch may be contraindicated for some individuals with back problems

FRIDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

Perform 1 minute of brisk walking.
Then stop and begin stretching routine.



2 Low Back Extension



3 Upper Back/Chest Stretch



4 Tricep Stretch



5 Three Point Neck Stretch



6 Standing Quad Stretch



FRIDAY

Stretching Program - Leader's Guide

1 Walking Warm-Up

- ✓ Perform 1-3 minutes of brisk walking, then stop and begin stretching routine

Precautions/Contraindications

- ✓ If walking inside, avoid congested/hazardous areas; if walking outdoors in a heavy traffic area, be aware of motorists.
- ✓ This stretch may not be appropriate for some individuals with back, leg, foot or hip problems.

2 Low Back Extension

- ✓ Stand with feet placed shoulder-width apart, and abdominal muscles contracted to hold torso stable
- ✓ Cross arms across chest so hands are resting on opposite shoulders (shoulders should be relaxed)
- ✓ Lean back slightly until a slight stretch is felt in the lower back, not to exceed 30 degrees (caution, do not overextend)
- ✓ Hold; relax; repeat
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 2-4 stretches, hold each stretch a minimum of 15-30 seconds

Conditioning effect

- ✓ Stretches the lower back

Precautions/contraindications

- ✓ Do not stretch beyond the point of mild tension
- ✓ This stretch may be contraindicated for some individuals with back problems

3 Upper Back/Chest Stretch

- ✓ Stand with feet placed shoulder-width apart, and abdominal muscles contracted to hold torso stable
- ✓ Place fingertips on shoulders, raise elbows to shoulder level and point them out to the sides
- ✓ Bring elbows together in front of the body until a stretch is felt in the upper back (round the upper back for a deeper stretch); hold
- ✓ Move the elbows back to sides until a stretch is felt in the chest; hold
- ✓ Relax and repeat
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches to front and back, hold each stretch a minimum of 15-30 seconds

Conditioning effect

- ✓ Stretches the upper back and chest

Precautions/contraindications

- ✓ Do not stretch beyond the point of mild tension

4 Tricep Stretch

- ✓ Stand with feet placed shoulder-width apart, and abdominal muscles contracted to hold torso stable
- ✓ Reach both arms overhead
- ✓ Bend one arm at the elbow, dropping the hand behind the head and touching it to the mid-back
- ✓ Grasp top of raised elbow with opposite hand and gently press down and in, toward center of body
- ✓ Hold; relax and repeat on other arm
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each arm; hold each stretch a minimum of 15-30 seconds

Conditioning effect

- ✓ Stretches the muscles of the upper arm and shoulder

Precautions/contraindications

- ✓ Press/pull elbow gently; avoid stretching beyond a comfortable level
- ✓ This stretch may be contraindicated for some individuals with shoulder and neck problems

5 Three Point Neck Stretch

- ✓ Keeping shoulders relaxed, slowly lower head forward; bring chin towards chest
- ✓ Hold; return to starting position
- ✓ Slowly lower head toward either side; bring the ear toward the shoulder
- ✓ Hold; return to starting position and repeat on other side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches at each point, hold each stretch a minimum of 10-20 seconds

Conditioning effect

- ✓ Stretches the neck and upper back

Precautions/contraindications

- ✓ Do not stretch beyond the point of mild tension
- ✓ This stretch may be contraindicated for some individuals with neck problems

6 Standing Quad Stretch

- ✓ Stand with feet together, and abdominal muscles contracted to hold torso stable
- ✓ Keeping knees aligned, bend one knee and raise foot toward buttocks
- ✓ Grasp ankle (or back of pant leg) of bent leg with same side hand; do not grasp toes (use one hand to hold on to support object, if necessary)
- ✓ Tuck the buttocks under the hipbones to yield a stretch in the front of the thigh
- ✓ Keep the body erect
- ✓ Hold; relax; repeat on opposite side
- ✓ Maintain normal, steady breathing

Recommendations

- ✓ Perform 1-2 stretches on each leg; hold each stretch a minimum of 15-30 seconds

Conditioning effect

- ✓ Stretches the front of the thighs (quadriceps)

Precautions/contraindications

- ✓ Lift foot straight back; do not lift to the side
- ✓ Avoid pulling the lower leg too close to the thigh; this may strain the knee
- ✓ This stretch may be contraindicated for some individuals with knee problems, ankle problems, poor posture or poor balance

STRETCH & FLEX PROGRAM

BARTON MALOW SAFETY STANDARD

**We have one Barton Malow Safety Standard
Promote Safety – Quality – Productivity on
every Barton Malow Project**

**Lead by example with Zero Tolerance for
Unsafe Acts or Conditions**

**Work towards a best-in-class safety culture
that includes education, mentoring,
empowerment, and accountability.**

**STOP the job any time a worker has a
safety concern**

**Work with subcontractors that share our
pursuit of excellent safety performance**

**Manage every incident to reduce impact on
performance**

“Build it Safe...No Exceptions”

BENEFITS OF STRETCHING

- ✓ Stretching increases flexibility. Flexible muscles can improve your daily performance. Tasks such as lifting packages and bending to tie your shoes become easier and less tiring.
- ✓ Stretching improves range of motion of your joints. Good range of motion keeps you in better balance, which will help keep you mobile and less prone to injury from falls – especially as you age.
- ✓ Stretching improves circulation. Stretching increases blood flow to your muscles. Improved circulation can speed recovery after muscle injuries.
- ✓ Stretching promotes better posture. Frequent stretching keeps your muscles from getting tight, allowing you to maintain proper posture and minimize aches and pains.
- ✓ Stretching can relieve stress. Stretching relaxes the tense muscles that often accompany stress.
- ✓ Stretching may help prevent injury. Preparing your muscles and joints for activity can protect you from injury, especially if your muscles or joints are tight.

STRETCHING ESSENTIALS

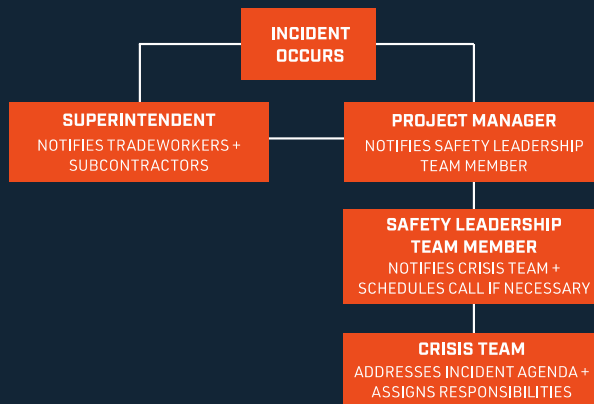
- ✓ Target major muscle groups. When you're stretching, focus on your calves, thighs, hips, lower back, neck and shoulders. Also, stretch muscles and joints that you routinely use at work or play.
- ✓ Warm up first. Stretching muscles when they're cold increases your risk of injury, including pulled muscles. Warm up by walking while gently pumping your arms.
- ✓ Hold each stretch for a minimum of 15-20 seconds. It takes time to lengthen tissues safely. Hold your stretches for at least 15-20 seconds and up to 60 seconds for additional flexibility. That can seem like a long time, so keep an eye on your watch. Then repeat the stretch on the other side.
- ✓ Don't bounce. Bouncing as you stretch can cause small tears in the muscle. These tears can leave scar tissue as the muscle heals, which tightens the muscle even further – making you less flexible and more prone to pain.
- ✓ Focus on a pain-free stretch. Expect to feel tension while you're stretching. If it hurts, you've gone too far. Back off to the point where you don't feel any pain, then hold the stretch.
- ✓ Relax and breathe freely. Don't hold your breath while you're stretching.

Resource: Stretching: Focus on flexibility. <http://www.mayoclinic.com/health/stretching/HQ01447>



CRISIS INCIDENT MANAGEMENT

COMMUNICATION FLOW



MEDIA PROTOCOL

The Crisis Team will direct the flow of information and communication to necessary individuals. The CRISIS TEAM will manage all media inquiries in the event of an incident or crisis. In the event that the media does contact the jobsite directly, the following statement should be used until more information is gathered:

"We are aware of an incident on [project name] site, however we do not have verifiable information at this time. Please give us time to gather facts and take care of our responsibilities. We will provide an update then. Thank you for your cooperation."

The COMMUNICATIONS Crisis Team member will provide the Project Team with further statements to issue to the media - upon request - as information is gathered and confirmed.

RESPONSIBILITIES

SAFETY LEADERSHIP TEAM MEMBER RESPONSIBILITIES

- **FIND OUT** - What happened? Who was involved and what firm do they work for? What hospital was the injured person taken to? What time did it happen and where?
- **NOTIFY** Crisis Team.
 - Executive Leadership
 - Business Unit VP
 - Project Director
 - Risk Management
 - Legal
 - Project Team
 - VP of Branding + Communications
 - Client/Business Partners
- **SCHEDULE** Conference Call within one hour of notification with Crisis Team.
- **DO NOT** speak to media. Issue generic statement upon request and work with Communications for more specific statements as information is gathered.
- **DRAFT** Incident Report ([Attachment L in Barton Malow Safety Manual](#)).
- **PROVIDE** information for Leadership to Communicate with Company within 24 hours of incident.
- **FOLLOW-UP** with Crisis Team upon conclusion of incident.

PROJECT TEAM RESPONSIBILITIES

- **CALL 911** or appropriate emergency phone number.
- **INSTRUCT** Superintendent or Project Safety Professional to address project site safety needs.
- **DISCONNECT** camera on jobsite.
- **SECURE** Project Site & Set-up Temporary Safety & Egress Access.
- **ENACT** Site Specific Emergency Preparedness Protocols. Notify Safety Leadership Team Member of Incident.
- **INSTRUCT** Barton Malow project team not to make any statements to the media or other workers. DO NOT SEND EMAILS, PHOTOS OR TEXT MESSAGES TO ANYONE OTHER THAN SAFETY LEADERS.
- **CONTACT** the Owner regarding the incident and meet in person to discuss next steps.
- **CONTACT** Trade Contractor Representative of injured tradesperson. DO NOT GIVE MEDICAL UPDATE - LEAVE THAT TO MEDICAL PROFESSIONAL.
- Consider when notifying: Time of Day, Layout of Jobsite, Number of Workers on-site and Size of Project Footprint.



SCOTT WAGNER
Senior Safety Director
248.914.0283
scott.wagner@bartonmalow.com



DANIEL ORTEGA
Senior Safety Manager
248.732.9555
daniel.ortega@bartonmalow.com



MARK WASHBURN
Senior Safety Manager
248.915.8887
mark.washburn@bartonmalow.com



Attachment AR

REQUEST FOR DEMO REMOVAL/RELOCATION SUBMITTAL

Contractor: _____ Date: _____

Work Area: _____

Description: _____

Work to be
Performed: _____

Items Identified: _____

Removal/Relocate: _____

Disconnects

	Yes	No	N/A	Comments
Gas:				
Water:				
Plumbing:				
HVAC:				
Communication				
Fire-protection:				
Electrical:				
Air:				
Lead Survey:				
Asbestos:				
Concerns:				
Dust Enclosures:				
Reviewed Drawings:				
Layouts Verified:				
Other:				

Completed Sign off

Barton Malow _____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____



Attachment AS

RESPIRATOR MEDICAL EVALUATION QUESTIONNAIRE (RMEQ)

EMPLOYEE: Barton Malow allows you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. A Barton Malow supervisor is available if you need assistance, but to maintain your confidentiality, your completed questionnaire shall only be reviewed by a Licensed Health Care Practitioner (LHCP). You will be provided with information on how this questionnaire will be sent or delivered to the health care professional who will review it.

Part A. Section 1. (Mandatory) Every employee selected to use any type of respirator must provide the following information (please print).

Date: _____

Name: _____

Job title: _____

Date of Birth: _____ Gender: Male ☐ Female ☐

Height: _____ Weight: _____

A phone number where the health care professional can reach you (if needed):
() _____

The best time to phone you at this number: _____

Below is the contact information for the Health Care Professional that will review this questionnaire. You may write it down for your records or ask for it at any time and it will be provided to you.

Check the type of respirator you will use (you can check more than one category):

- a. ☐ R, or P disposable respirator (filter-mask, non-cartridge type only).
- b. ☐ Other type (for example, half or full-face type, powered-air purifying, supplied-air, self-contained breathing apparatus).

Have you ever worn a respirator (check one)? Yes ☐ No ☐

If "yes," what type(s)? _____

Part A. Section 2. (Mandatory) Every employee selected to use any type of respirator must answer questions 1 through 9 below (please check "yes" or "no").

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month?Yes ☐ No ☐

2. Have you ever had any of the following conditions?

- a. Seizures (fits)Yes ☐ No ☐
- b. Diabetes (sugar disease)Yes ☐ No ☐
- c. Allergic reactions that interfere with your breathingYes ☐ No ☐
- d. Claustrophobia (fear of closed-in places)Yes ☐ No ☐
- e. Trouble smelling odorsYes ☐ No ☐

3. Have you ever had any of the following pulmonary or lung problems?

- a. AsbestosisYes ☐ No ☐
- b. SilicosisYes ☐ No ☐
- c. AsthmaYes ☐ No ☐
- d. Pneumothorax (collapsed lung)Yes ☐ No ☐
- e. Chronic bronchitis.....Yes ☐ No ☐
- f. Lung cancer.....Yes ☐ No ☐
- g. Emphysema.....Yes ☐ No ☐
- h. Broken ribs.....Yes ☐ No ☐
- i. Pneumonia.....Yes ☐ No ☐
- j. Any chest injuries or surgeries.....Yes ☐ No ☐
- k. TuberculosisYes ☐ No ☐
- l. Any other lung problem that you have been told about.....Yes ☐ No ☐

4. Do you currently have any of the following symptoms of pulmonary or lung illness?

- a. Shortness of breathYes ☐ No ☐
- b. Shortness of breath when walking fast on level ground or walking up a slight hill or inclineYes ☐ No ☐
- c. Shortness of breath when walking with other people at an ordinary pace on level ground.....Yes ☐ No ☐
- d. Have to stop for breath when walking at your own pace on level ground.....Yes ☐ No ☐
- e. Shortness of breath when washing or dressing yourselfYes ☐ No ☐
- f. Shortness of breath that interferes with your jobYes ☐ No ☐
- g. Coughing that produces phlegm (thick sputum)Yes ☐ No ☐
- h. Coughing that wakes you early in the morningYes ☐ No ☐
- i. Coughing that occurs mostly when you are lying down.....Yes ☐ No ☐
- j. Coughing up blood in the last month.....Yes ☐ No ☐
- k. WheezingYes ☐ No ☐
- m. Chest pain when you breathe deeplyYes ☐ No ☐
- n. Any other symptoms that you think may be related to lung problemsYes ☐ No ☐

5. Have you ever had any of the following cardiovascular or heart problems?

- a. Heart attackYes ☐ No ☐
- b. StrokeYes ☐ No ☐
- c. Angina.....Yes ☐ No ☐
- d. Heart failureYes ☐ No ☐
- e. Swelling in your legs or feet (not caused by walking).....Yes ☐ No ☐
- f. Heart arrhythmia (heart beating irregularly).....Yes ☐ No ☐
- High blood pressureYes ☐ No ☐

h. Any other heart problems that you have been told aboutYes ☐ No ☐

6. Have you *ever* had any of the following cardiovascular or heart symptoms?

- a. Frequent pain or tightness in your chestYes ☐ No ☐
- b. Pain or tightness in your chest during physical activityYes ☐ No ☐
- c. Pain or tightness in your chest that interferes with your job.....Yes ☐ No ☐
- d. In the past 2 years, have you noticed your heart skipping or missing a beat.....Yes ☐ No ☐
- e. Heartburn or indigestion that is not related to eating.....Yes ☐ No ☐
- f. Any other symptoms that you think may be related to heart or circulation problems.....Yes ☐ No ☐

7. Do you *currently* take medication for any of the following problems?

- a. Breathing or lung problemsYes ☐ No ☐
- b. Heart troubleYes ☐ No ☐
- c. Blood pressureYes ☐ No ☐
- d. Seizures (fits)Yes ☐ No ☐

8. If you have used a respirator, have you *ever* had any of the following problems? (If you have *never* used a respirator continue to question 9)

- a. Eye irritationYes ☐ No ☐
- b. Skin allergies or rashesYes ☐ No ☐
- c. AnxietyYes ☐ No ☐
- d. General weakness or fatigueYes ☐ No ☐
- e. Any other problem that interferes with your use of a respirator Yes ☐ No ☐

9. Would you like to discuss your answers with the health care professional who will review this questionnaire?Yes ☐ No ☐

Questions 10 to 15 are ONLY for use of either a full-face respirator or a self-contained breathing apparatus (SCBA).

10. Have you ever lost vision in either eye temporarily or permanently?Yes ☐ No ☐
11. Do you currently have any of the following vision problems?
- a. Wear contact lenses.....Yes ☐ No ☐
 - b. Wear glasses.....Yes ☐ No ☐
 - c. Color blindYes ☐ No ☐
 - d. Any other eye or vision problemYes ☐ No ☐
12. Have you ever had an injury to your ears, including a broken ear drum?Yes ☐ No ☐
13. Do you currently have any of the following hearing problems?
- a. Difficulty hearing.....Yes ☐ No ☐
 - b. Wear a hearing aidYes ☐ No ☐
 - c. Any other hearing or ear problemYes ☐ No ☐
14. Have you ever had a back injury?.....Yes ☐ No ☐
15. Do you currently have any of the following musculoskeletal problems?
- a. Weakness in any of your arms, hands, legs, or feetYes ☐ No ☐
 - b. Back painYes ☐ No ☐
 - c. Difficulty fully moving your arms and legs.....Yes ☐ No ☐
 - d. Pain or stiffness when you lean forward or backward at the waist.....Yes ☐ No ☐
 - e. Difficulty fully moving your head up or downYes ☐ No ☐
 - f. Difficulty fully moving your head side to sideYes ☐ No ☐
 - g. Difficulty bending at your knees.....Yes ☐ No ☐
 - h. Difficulty squatting to the ground.....Yes ☐ No ☐
 - i. Climbing a flight of stairs or a ladder carrying more than 25 pounds Yes ☐ No ☐
 - j. Any other muscle/skeletal problem that interferes with using a respiratorYes ☐ No ☐

Part B. Section 1. The health care professional who will review this questionnaire may add these questions and any other questions not listed at their discretion.

1. In your present job are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen?.....Yes ☐ No ☐
 - a. If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you are working under these condition?Yes ☐ No ☐
2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals?
.....Yes ☐ No ☐

a. If "yes," name the chemicals if you know them:

3. Have you ever worked with any of the materials, or under any of the conditions listed below:?

- | | | |
|--|------------------------------|-----------------------------|
| a. Asbestos | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| b. Coal (for example, mining) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| c. Silica (e.g., sandblasting) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| d. Iron | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| e. Tungsten/cobalt (grinding or welding this material) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| f. Tin | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| g. Dusty environments | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| h. Beryllium | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| i. Any other hazardous exposures | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| j. Aluminum | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

If "yes," describe these exposures:

4. List any second jobs or side businesses you have:

5. List your previous occupations:

6. List your current and previous hobbies:

7. Were you ever in the military services?.....Yes ☐ No ☐

- a. If "yes" were you exposed to biological or chemical agents (either in training or combat)?Yes ☐ No ☐

8. Have you ever worked on a HAZMAT team?.....Yes ☐ No ☐

9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications)?Yes ☐ No ☐

a. If "yes," name the medications if you know them:

Part B. Section 2. TO BE COMPLETED BY BARTON MALOW REPRESENTATIVE. Supplemental information for the health care professional.

10. Will the employee use any of the following items with your respirator(s)?

- a. HEPA filtersYes ☐ No ☐
- b. Canisters (i.e., gas masks)Yes ☐ No ☐
- c. CartridgesYes ☐ No ☐

11. How often will the employee use the respirator(s)? (Mark "yes" or "no" for all answers that apply.)

- a. Escape only (no rescue).....Yes ☐ No ☐
- b. Less than 2 hrs. per dayYes ☐ No ☐
- c. Emergency rescue only.....Yes ☐ No ☐
- d. 2 to 4 hrs. per dayYes ☐ No ☐
- e. Less than 5 hrs. per weekYes ☐ No ☐
- f. Over 4 hrs. per dayYes ☐ No ☐

12. When the employee uses the respirator(s), is their work effort:

- a. Light (less than 200 kcal per hour):.....Yes ☐ No ☐

If "yes," how long does this period last during the average shift? _____ hrs. _____ mins.

Examples of light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while controlling machines.

- b. Moderate (200 to 350 kcal per hour):.....Yes ☐ No ☐

If "yes," how long does this period last during the average shift? _____ hrs. _____ mins.

Examples of moderate work effort are sitting while nailing or filing; driving a truck, drilling, nailing performing assembly work, or transferring a moderate load (about 35 pounds) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 pounds) on a level surface.

- c. Heavy (above 350 kcal per hour):Yes ☐ No ☐

If "yes," how long does this period last during the average shift? _____ hrs. _____ mins.

Examples of heavy work are lifting a heavy load (about 50 pounds) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8 degree grade about 2 mph, climbing stairs with a heavy load (about 50 pounds).

13. Will the employee wear protective clothing and/or equipment (other than the respirator) when using their respirator? Yes ☐ No ☐

If "yes," describe this protective clothing and/or equipment:

14. Will they be working in hot conditions (temps more than 77 degrees F)? Yes ☐ No ☐

15. Will they be working in humid conditions?..... Yes ☐ No ☐

16. Describe the work they will be doing while using their respirator(s):

17. Describe any special or hazardous conditions they might encounter when using a respirator(s) (for example, confined spaces, life threatening gases):

18. Provide the following information, if you know it, for each toxic substance that they will be exposed to when using their respirator(s):

Name of the first toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the second toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of the third toxic substance: _____

Estimated maximum exposure level per shift: _____

Duration of exposure per shift: _____

Name of any other toxic substances that they will be exposed to while using a respirator:

Describe any special responsibilities they will have while using their respirator(s) that may affect the safety and well-being of others (i.e., rescue, security):



Attachment AT

RESPIRATOR USER AUTHORIZATION + TRAINING RECORD

EMPLOYEE INFORMATION

Employee Name: _____ Project: _____
Job Title / Role: _____ Employee D.O.B.: _____

RESPIRATOR MEDICAL EVALUATION

☐ Approved ☐ Approved with Restrictions (Specify) _____ ☐ Not Approved
Date of Evaluation: _____ Evaluation Expiration (per employee's age): _____

RESPIRATOR INFORMATION

Type/Make/Model/Size	Filter/Filtering Element	Date Assigned

Anticipated Respirator Use (hours per day & times per week): _____

Recommended Frequency of filter or cartridge disposal/change

☐ Every _____ Hours ☐ Every _____ Days ☐ Other (Specify) _____

RESPIRATOR FIT TEST (If Applicable – Only for Tight Fitting Respirators)

Date of Fit Test: _____ Fit Test Conducted By: _____

Result: ☐ Pass ☐ Fail

RESPIRATOR USER TRAINING (Check each upon completion of training)

- ☐ Respiratory hazard, signs, symptoms, health effects, and how to identify each.
- ☐ Why a respirator is needed
- ☐ Limits and capabilities of a respirator, and physical/medical conditions that may affect safe use
- ☐ Purpose of the medical evaluation and fit testing
- ☐ Proper donning, fit, adjustment, use, cleaning, maintenance and storage of respirator
- ☐ How does improper fit or incorrect use of respirator compromise safety?
- ☐ Use of respirators in emergency situations and how to correct basic respirator malfunctions
- ☐ How to report problems, issues, or questions about respirator or hazard

ACKNOWLEDGEMENT

Respirator User Signature: _____ Date: _____

Trainer Signature: _____ Date: _____

Supervisor's Risk Assessment Form		
Project Name:	Location:	
Date:	Supervisor's Name:	
Stages	Information	
1. Identify the Task	Task:	
	Location:	
	Timing:	
2. Select a MEWP	Classification:	
3. Risk Assessment & Mitigation	Use this section to assess risk, identify control measures and safety protocol. Communicate the risk assessment and mitigation measures to operators, occupants and affected workers.	
Is the operator properly trained and occupant familiarized with the equipment? Occupants must be familiarized by operator on PFAS and anchor points, how their actions can affect stability, any site-specific hazards, how to use MEWPS accessories (if needed) and emergency rescue procedures?	Yes <input type="checkbox"/>	All operators are trained on equipment used within 3 years and have a license issued from Barton Malow. The trained operator will familiarize all occupants on their responsibilities and safety requirements Comments: _____
Will the MEWP adequately reach the work area?	Yes <input type="checkbox"/>	The height needed is: _____ Type of lift (scissor or boom): _____
Surface & soil conditions have sufficient strength to withstand all floor/ground load forces imposed by the MEWP in all configurations. See operator's manual.	Yes <input type="checkbox"/>	A placard on the lift that provides weight. List weight restrictions: _____
Pedestrian traffic where the lift will be operated is properly barricaded or controlled by trained spotters	Yes <input type="checkbox"/>	No one allowed under booms or work platforms Name of spotter if used: _____
Public roadways, spotter, signal person	Yes <input type="checkbox"/>	Proper training needed for flaggers. High visibility vests worn as required.
Precautions for other moving equipment, conveyors, etc are in-place. Traffic control, barricades, LOTO equipment, etc.	Yes <input type="checkbox"/> N/A <input type="checkbox"/>	List the preventative measures needed: _____ _____
Overhead obstructions and crushing hazards are identified or will not pose a hazard.	Yes <input type="checkbox"/>	List hazard & list preventative measures needed: _____ _____
Ramps and other sloped surfaces that could affect the vehicle's stability are identified and protected.	Yes <input type="checkbox"/>	List proper procedure: _____ _____

Drop-offs or holes, including those concealed by water, ice, mud, etc are identified or protected	Yes <input type="checkbox"/>	List measures needed: _____
Housekeeping, is adequate for safe use	Yes <input type="checkbox"/>	Comments: _____
Bumps or floor obstructions are identified or protected	Yes <input type="checkbox"/>	Comments: _____
Hazardous environmental locations where the vehicle will be operated are identified.	Yes <input type="checkbox"/>	Hazard(s): _____
	N/A <input type="checkbox"/>	Location(s): _____
Electrocution hazards, MEWP operators will stay 20 feet away or notify power company to Lock Out power. Operators will not exceed minimum approach distance. Refer to Operators Manual	Yes <input type="checkbox"/>	Hazards: _____
	N/A <input type="checkbox"/>	Location(s): _____
Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust has been checked and does not pose a health or safety concern	Yes <input type="checkbox"/>	Location(s): _____
	N/A <input type="checkbox"/>	Type of monitoring needed: _____
Wind and weather conditions - lightning, wind limited to manufacturers' requirements	Yes <input type="checkbox"/>	Comments: _____
	N/A <input type="checkbox"/>	
Other possible unsafe conditions		

If any of the above conditions change, STOP and revise risk assessment.

4. Emergency Rescue	The following protocol will be used to safely rescue workers from an elevated work platform.
Rescue Types	Options
Self-rescue – by person involved	Main option: _____
	Back up option: _____
Assisted rescue – by other(s) in the work area	Main option: _____
	Back up option: _____
Technical rescue – by emergency services	Main Option: _____

**Rescue planning for your site may require a more comprehensive plan. If there are any concerns regarding adequate emergency response planning, please reach out to your supervisor or safety professional*

CONFIDENTIALITY

All personal or medical information provided and discussed by Barton Malow personnel regarding the specific injured/ill worker will be held in confidence and not disclosed to anyone other than those with a legitimate need to know. It is our policy to treat our team members with dignity and respect at all times. Every effort will be made to maintain the privacy and confidentiality of our team members if they sustain an injury or illness.

Team member Receipt Acknowledgement

I, _____, hereby acknowledge the receipt of a copy of Barton Malow's Return to Work policy. I have read and familiarized myself with the contents, and I understand my responsibility for adhering to this policy. I agree to abide by the Barton Malow policy.

Team Member Signature & Date

Dear Healthcare Provider:

Barton Malow is very interested in the health and well-being of our team members. To that end, we have instituted several workplace standards that will keep team members at work more safely and streamline the regulatory paperwork. Barton Malow has a Temporary Transitional Return to work process that allows for accommodations for most restrictions so that the patient/team member may continue to work. Additionally, as prescription medications affect OSHA recordability, we are also concentrating on that aspect of treatment. We would appreciate your help and cooperation in the following areas:

1. Assist us in returning our team members back to work on a transitional basis with restrictions as opposed to being totally restricted from work for moderate problems. We are prepared to assign light duty work consistent with required restrictions.
2. Complete the attached form, identify the patient's work restrictions, and/or what the team member can do.
3. Use non-prescription strengths of anti-inflammatories and analgesics versus prescription strength medications, when consistent with the patient's medical needs.

We appreciate the high quality of medical care that you provide and do not wish to compromise the medical treatment, but when the situation allows for flexibility, we ask that you assist us with the above requests. If any treatment questions arise, please contact me directly.

Sincerely,

Debbie Drouillard, CWCP
Workers' Compensation Specialist
Email: Debbie.Drouillard@bartonmalow.com
Phone: (248) 436-5488
Fax: (248) 436-5489



Attachment AW
**HEALTHCARE PROVIDER'S
LETTER AND STATEMENT**

Healthcare Provider's Statement - Patient Functional Capacity (Part A)

Team member Name: 	Occupation: 	Claim No:
--	--	--

To The Healthcare Provider: Barton Malow has a comprehensive Return to Work (RTW) process that allows team members to RTW in many situations. Please consider Transitional, Modified, or Alternative employment opportunities when estimating the period of disability for your patient. Barton Malow's transitional work process is defined as the temporary period of time when the team member initially comes back to work until the time when they are fully functional in their job. This process allows for a maximum of 12 calendar weeks.

Return to Work Status – Completed by Healthcare Provider

- ☐ Return to **"Full Duty"** (Team member can return to work in their regular working role with no restrictions)
☐ Return to **"Transitional Work"** (Team member can return to work with restrictions, modifications, reduced hours, or alternative job duties).

- Transitional Work may begin _____ Transitional Work is projected to last until _____
- Estimated return to full duty date _____
- Next Follow-up Appointment is scheduled for: _____

☐ The injured worker is unable to work in any capacity at this time

Please complete the following items based on your estimated clinical evaluation of this team member's functional capacity. See attached job description and physical demands analysis. **(Circle full capacity for each activity & check boxes)**

Based on an 8-hour workday	Total Hours/Day	Continuously/Unlimited	Intermittently (list amount/hr)
A. Sitting	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>
B. Standing	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>
C. Walking	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>
D. Hand Use Right	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>
E. Hand Use Left	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>
F. Data Entry PC use	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>
G. Simple Grasping	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>
H. Power Grasping	0 1 2 3 4 5 6 7 8	<input type="checkbox"/>	<input type="checkbox"/>

Minutes/total time per 8 hour work day		Occasional 30 mins. to 2.5 hours/day	Frequent 2.5 to 5.25 hours/day	Continuously More than 5.25 hours/day	Never 0%
I. Lifting	0-10 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	11-20 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	21-50 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	50-100 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Carrying	0-10 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	11-20 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	21-50 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	50-100 lbs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Occasional	Frequent	Continuously	Never
K. Bending/Stooping (at waist)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L. Neck Flexion/Extension		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M. Squat/Crouch/Kneeling/Crawling		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N. Climbing stairs/ladder/incline		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
O. Reaching at shoulder level		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P. Reaching above shoulder level		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q. Pushing/Pulling		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Attachment AW

HEALTHCARE PROVIDER'S LETTER AND STATEMENT

Healthcare Provider's Statement - Patient Functional Capacity (Part B)

Team member Name:	Occupation:	Claim No:
-------------------	-------------	-----------

(Check boxes based on capacity to tolerated conditions below)

Item	Environmental Conditions	Yes	No
A.	Driving cars, trucks, forklifts and other equipment?	<input type="checkbox"/>	<input type="checkbox"/>
B.	Working around equipment and machinery?	<input type="checkbox"/>	<input type="checkbox"/>
C.	Walking on uneven ground?	<input type="checkbox"/>	<input type="checkbox"/>
D.	Exposure to excessive noise?	<input type="checkbox"/>	<input type="checkbox"/>
E.	Exposure to extremes in temperature, humidity or wetness?	<input type="checkbox"/>	<input type="checkbox"/>
F.	Exposure to dust, gas, fumes, or chemicals?	<input type="checkbox"/>	<input type="checkbox"/>
G.	Working at heights?	<input type="checkbox"/>	<input type="checkbox"/>
H.	Operation of foot controls or repetitive foot movement?	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Healthcare Provider Name (Print Name):

Date Form Completed:

Healthcare Provider Signature:

License No.:

If you have any specific questions regarding Barton Malow's RTW process or would like additional information, please contact the Workers' Compensation Specialist

PLEASE RETURN THIS COMPLETED FORM TO:

Debbie Drouillard, CWCP
Workers' Compensation Specialist
Email: Debbie.Drouillard@bartonmalow.com
Phone: (248) 436-5488
Fax: (248) 436-5489

- Or -

Barton Malow
26500 American Drive
Southfield, MI 48034
Phone: (248) 436-5500
Email: RMHelpDesk@bartonmalow.com

Transitional Duty – Return to Work Agreement

Employee Name: _____

I understand that I am returning to work with restrictions as outlined by the attached physician document. I further understand that it is my responsibility to stay within these restrictions and will not deviate from them while at work or outside of work. If I believe I am assigned work outside of my restrictions or outside of my capabilities by a coworker or any level of management, I will stop and notify my supervisor immediately. If my supervisor is not available, below are two additional contacts either of whom I should notify:

(please print name)_____
(please print name)**Employee:**

My supervisor and I have discussed my work duties and my work restrictions. I agree to abide by these restrictions, follow my treatment plan and keep my supervisor updated on my appointment schedule. I agree to notify my supervisor after each medical appointment to provide an update on my capabilities and discuss my transitional duty work options.

I understand that all Barton Malow policies, including attendance, punctuality and call off procedures, will apply as usual during this transitional work period. I also understand restrictions apply to work, home and leisure activity.

Employee's Signature_____
Date**Supervisor:**

I have reviewed the work restrictions and I will not assign work outside of these restrictions.

Supervisor's Signature_____
Date

This agreement shall be in effect until the physician of record feels that you are physically capable of resuming regular work, and that work continues to be available.

Non-acceptance of Position:

I have read and understand the work restrictions outlined and I am rejecting the transitional duty position offered to me. I understand my workers' compensation benefits and employment may be impacted by this decision since work is available within my capabilities and I have been released as outlined.

Employee's Signature: _____ Date: _____

**SECTION 017123
FIELD ENGINEERING AND LAYOUT**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Layout of the Work

1.02 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Submit in addition to items required in Section 017000 - Execution and Closeout Requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. Notify Owner's Representative, Barton Malow Builders and IDS of any discrepancies immediately in writing before proceeding to lay out the work. Locate and protect existing benchmarks and base line. Preserve permanent reference points during construction.
- B. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify existing conditions.

3.02 LAYOUT OF THE WORK

- A. Maintain field office files, drawings, specifications, and record documents.
- B. Each Contractor shall be responsible for the layout and engineering of its own Work from the established points and lines given by a State of Michigan registered surveyor.
- C. Each Contractor is responsible for detailed and accurate layout of its own and its Subordinate Parties' Work to dimension from the principal lines, grades, and levels set forth in the Contract Documents or the principal lines, grades and levels provided by a State of Michigan registered surveyor. Each Contractor shall make provisions to preserve all control points, such as monuments, stakes, benchmarks, or other datum points, and shall replace at its own cost any of these which might be lost or displaced through its neglect.
- D. Contractors shall examine the conditions under which the Work is to be installed, shall take field measurements and verify field conditions, and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Any errors, inconsistencies, omissions, discrepancies, or conditions detrimental to proper performance of the Work that are discovered shall be reported to Barton Malow Builders and IDS at once. Contractors are not to proceed until the required corrections are accomplished.
- E. The exactness of grades, elevations, dimensions, or locations given on any Drawings issued by Architect or the work installed by other contractors, is not guaranteed by Barton Malow Builders, Architect/Engineer, or Owner. The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions, and locations. In all cases of interconnection of its Work with existing or other Work, it shall verify at the site all dimensions relating to such existing or other Work. Any errors due to the Contractor's failure to verify all such grades, elevations, dimensions, or locations shall be promptly rectified by the Contractor without any additional cost to the Owner or Barton Malow Builders.
- F. As the Work progresses, the Contractor shall prepare layout drawings showing the exact locations of Work under its Contract as a guide to all trades. Prior to any installation, the separate Contractors shall exchange layout drawings and coordinate the Work and be subject to verification by all subsequent Contractors.

- G. As Work under each Agreement commences, the condition of preceding Work under other agreements shall be verified and accepted by each subsequent Contractor when appropriate. Verification may, at Contractors discretion, include a joint review by the subsequent Contractor, previous contractor(s), and to Barton Malow Builders and IDS note any corrective Work required, damage to previous Work, verification of elevations, tolerances, levels and plumbness, critical dimensions, surface conditions, and similar items affecting the Work under the Contract Documents and particularly items which prevent acceptance by the subsequent Contractors. The verification review procedures and findings shall be documented in writing by subsequent Contractors, signed by all parties, and copies provided to the Barton Malow Builders and IDS. Any corrective work necessary to satisfy requirements of the Contract Documents shall be performed promptly by the previous Contractor to prevent delay to the work under the subsequent Contracts. After corrective work is accomplished the subsequent Contractor shall furnish written acceptance of the work as noted above. Barton Malow Builders, Architect/Engineer, or Owner participation in a joint review under this paragraph shall in no event be deemed to constitute approval of any layout or other Work that fails to comply with the Contract Documents.
- H. Each Contractor shall be responsible to take such field measurements as may be required to determine the size of ordered material. In the event "guaranteed dimensions" are required, the Contractor shall promptly advise other Contractors through Barton Malow Builders by use of drawings, templates or mock-ups of the required conditions.
- I. All Work, and in particular, piping, ducts, conduit and similar items, shall be neatly and carefully laid out to provide the most useful space utilization and the most orderly appearance. Except as otherwise indicated or directed, piping and similar Work shall be installed as conditions reasonably permit, located to prevent interference with other Work or with the use of the spaces. Before Contractor installs a valve in an exposed location, it must make all efforts to install it in an accessible, concealed location. Contractors shall carefully plan the layout and review any questionable installations with Barton Malow Builders and IDS.
- J. The Owner or Barton Malow Builders may utilize a registered land surveyor to verify alignment and layout of certain portions of the Work. If that Work is out of tolerance or incorrect, the installing Contractor will be responsible for prompt correction of the Work to comply with the Contract Documents, along with all expenses incurred by Owner or Barton Malow Builders in such verification process, including, but not limited to, the cost for the surveying services, as well as the additional time expended by Barton Malow Builders personnel at standard billing rates.

3.03 CLOSEOUT ACTIVITIES

- A. See Section 017800 - Closeout Submittals, for closeout submittals.
- B. See Section 017900 - Demonstration and Training, for additional requirements.

END OF SECTION 017123

**SECTION 017419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Owner may decide to pay for additional recycling, salvage, and/or reuse based on Landfill Alternatives Proposal specified below.
- E. Methods of trash/waste disposal that are not acceptable are:
 - 1. Burning on the project site.
 - 2. Burying on the project site.
 - 3. Dumping or burying on other property, public or private.
 - 4. Other illegal dumping or burying.
 - 5. Incineration, either on- or off-site.
- F. Regulatory Requirements: Each Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED REQUIREMENTS

- A. Section 011000 - Use of Premises: List of items to be salvaged from the existing building for relocation in project or for Owner.
- B. Section 013000 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.
- C. Section 015000 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.
- D. Section 016000 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.
- E. Section 017000 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.
- F. Section 311000 - Site Clearing: Handling and disposal of land clearing debris.

1.03 DEFINITIONS

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitable, corrosive, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitable, corrosive, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.

- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.
- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 015000 for additional requirements related to trash/waste collection and removal facilities and services.
- B. See Section 016000 for waste prevention requirements related to delivery, storage, and handling.
- C. See Section 017000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

END OF SECTION 017419

**SECTION 017800
CLOSEOUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.
- D. Attic Stock

1.02 RELATED REQUIREMENTS

- A. Section 007200 - General Conditions and 007300 - Supplementary Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 013000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 017000 - Execution and Closeout Requirements: Contract closeout procedures.
- D. Section 017900 - Demonstration and Training : Contract training procedures as defined in contract documents.
- E. Individual Product Sections: Specific requirements for operation and maintenance data.
- F. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Each submittal shall show Contractor's review stamp signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information are in accordance with the requirements of the work and Contract Documents.
- B. Each submittal register item shall be accompanied with a submittal cover sheet. The form must be filled out in its entirety for each respective register item and placed as the first page for the PDF uploaded to the register item in Box .
- C. Identify: Project, Contractor, Subcontractor or supplier, pertinent drawing and detail number, and specification section number and article/paragraph, as appropriate, on each copy.
- D. If a submittal register item is missing, notify Barton Malow Builders so it can be added to the system for your team to attach appropriate PDFs for submission.
- E. In general, all submittals, except color, physical samples, or mockups, are to be created in a PDF document form and uploaded to their respective register number in Box so it can be electronically reviewed by all parties necessary. Scanned copies of submittals will not be accepted.
- F. All submittals will be reviewed electronically, and the Contractor will be notified in Box when the review is complete. The status will be noted both on the PDF and in the Box system assigned to the item.
- G. Follow all other Submittal procedures as outlined in section 013000 - Administrative Requirements.
- H. All closeout submittals less final warranties are to be submitted within 60 days of the punch list.
- I. Provide hard copies if required by Contract Documents, or if requested by Barton Malow Builders.
- J. Quality Assurance:
 - 1. Preparation of data shall be done by personnel:
 - a. Trained and experienced in maintenance and operation of described products.
 - b. Familiar with requirements of this Section.

- c. Skilled as technical writer to the extent required to communicate essential data.
 - d. Skilled as draftsman competent to prepare required drawings.
- K. Types of Closeout Submittals
 - 1. Project Record Documents (As-Built):
 - a. Submit documents to Barton Malow Builders upon completion of each respective scope of work as required in Contract Documents
 - b. Deliver Record Documents via: Redline PDF or AutoCAD.
 - 2. Operation and Maintenance Data:
 - a. When applicable, submit O&M Data when submitting initial product data for each respective product
 - b. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed Architect/Engineer approved documents within 30 days prior acceptance for turnover.
 - c. Prepare data in the form of an electronic instruction manual for use by the Owner.
 - d. Cover Sheet: Identify each submittal with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS.". Ensure the cover sheet contains the following information:
 - 1) Identity of general subject matter covered in the manual and all designations from the contract documents.
 - 2) Identity of separate structures and/or equipment as applicable.
 - 3. Warranties and Bonds:
 - a. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 14 days after acceptance.
 - b. Make other submittals within 14 days after Date of Substantial Completion, prior to final Application for Payment.
 - c. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 14 days after acceptance, listing the date of acceptance as the beginning of the warranty period.
 - d. If the project Team's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of Barton Malow Builders.
 - e. When the Contract Documents require Contractor, or Subcontractor and a Subordinate Party to execute a Special Warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a sample warranty to Barton Malow Builders for approval prior to final execution.
 - f. The Contractor's Guarantee form can be obtained by your Construction Manager Representative. Prepare a written document utilizing the appropriate form, ready for execution by Contractor and its Subordinate Party(ies).
 - 1) Refer to Divisions 2 through 34 Sections for specific content requirements and particular requirements for submitting Special Warranties.
 - 2) Submit sample warranties for all items as required by the Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Each Contractor shall be responsible to maintain at the job site one copy (either electronic or hard copy) of:
 - 1. Current Record Drawings (As-Built).
 - 2. Record Project Manual
 - 3. Addenda
 - 4. Reviewed/Approved Shop Drawings

5. Change Orders
 6. Other modifications to Contract
 7. Field test report records
 8. Affidavits
- B. Make documents available for inspection by the Owner, Barton Malow Builders and the Architect.
- C. Store record documents separate from documents used for construction.
- D. Do not use project record documents for construction purposes.
- E. Record information concurrent with construction progress.
- F. Failure to maintain documents up-to-date will be cause for withholding payments to Contractor.
- G. Maintain documents in clean, dry, legible condition.
- H. At the outset of the project, obtain from the Architect through the Barton Malow Builders, at no charge to the Contractor, one complete set of electronic Contract Documents (via Box) including:
1. Technical Specifications with all addenda.
 2. One complete set of prints of all Drawings.
- I. Record Drawings:
1. Label each document "Project Record".
 2. Do not permanently conceal any work until required information has been recorded.
 3. Contractor may at his option enter required information on a "working set" and then at completion of Project transfer the information to final submitted "Project Record" set
 4. Legibly mark each item to record actual construction including:
 - a. Measured depths of foundations in relation to survey data.
 - b. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - c. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - d. Field changes of dimension and detail.
 - e. Changes made by PCO- Notice to Proceed.
 - f. Details not on original Contract drawings.
- J. Technical Specifications and Addenda:
1. Contractor shall legibly mark up each section to record:
 - a. Manufacturer, trade name, catalog number and Supplier of each product and item of equipment actually installed.
 - b. Changes made by PCO- Notice to Proceed.
 - c. Other items not originally specified.
- K. Conversion of Schematic Layouts:
1. Arrangement of conduits, circuits, piping, ducts and similar items are in most cases shown schematically on the Drawings.
 2. Contractor shall legibly mark to record actual construction:
 - a. Dimensions accurate to within 1" of the center of items shown schematically.
 - b. Identify each item, for example, "cast iron drain", "galvanized water", etc.
 - c. Identify location of each item, for example, "under slab", "in ceiling plenum", "exposed", etc.
 3. The Owner, Architect or Barton Malow Builders may waive requirements of schematic layout conversion, when in their opinion, it serves no beneficial purpose. Do not, however, rely on waivers being issued except as specifically issued by the Barton Malow Builders in written form.

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Contractor, Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- E. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.
 - 1. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent sections of the Technical Specifications.
- F. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems in accordance with the requirements in 017900 - Demonstration and Training.
 - 1. Submit electronic copies of completed Architect/Engineer approved operation and maintenance manuals at least 30 days before execution and have hard copies on hand for use in demonstrations and instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each architectural Product, Applied Material, and Finish:
 - 1. Manufacturer's data, giving full information on products.
 - a. Product data, with catalog number, size, composition, and color and texture designations.
 - b. Information for re-ordering custom manufactured products.
 - 2. Instructions for Care and Maintenance and preventative maintenance:
 - a. Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
 - 3. Moisture protection and weather-exposed products:
 - a. Include product data listing applicable reference standards, chemical composition, and details of installation.
 - b. Provide recommendations for inspections, maintenance, and repair.
 - 4. Additional information as specified in individual product specification sections.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. Content, for each unit of equipment and system, as appropriate:
 - 1. Description of unit or system, and component parts.
 - a. Identify function, normal operating characteristics, and limiting conditions.
 - b. Include performance curves, with engineering data and tests.
 - c. Complete nomenclature and model number of replaceable parts.
 - 2. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
 - 3. Operating Procedures:
 - a. Include start-up, break-in, and routine normal operating instructions and sequences.
 - b. Include regulation, control, stopping, shut-down, and emergency instructions.
 - c. Include summer and winter operating instructions.

- d. Include any special operating instructions.
 - 4. Maintenance Requirements:
 - a. Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
 - 5. Provide servicing and lubrication schedule, and list of lubricants required.
 - 6. Include manufacturer's printed operation and maintenance instructions.
 - 7. Include sequence of operation by controls manufacturer.
 - 8. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
 - a. Predicted life of parts subject to wear.
 - b. Items recommended to be stocked as spare parts.
 - 9. Provide control diagrams by controls manufacturer as installed.
 - 10. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
 - 11. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
 - 12. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
 - 13. Include test and balancing reports.
 - 14. Additional Requirements: As specified in individual product specification sections.
- B. Content, for each electric and electronic system, as appropriate:
- 1. Description of unit or system, and component parts.
 - a. Identify function, normal operating characteristics, and limiting conditions.
 - b. Include performance curves, with engineering data and tests.
 - c. Complete nomenclature and model number of replaceable parts.
 - 2. Panelboard Circuit Directories:
 - a. Provide electrical service characteristics, controls, and communications; typed.
 - 3. Include color coded wiring diagrams as installed.
 - 4. Operating Procedures:
 - a. Routine and Normal operating instructions
 - b. Sequences required
 - c. Special operating instructions
 - 5. Maintenance and Preventative Maintenance Procedures:
 - a. Routine operations.
 - b. Guide to "trouble-shooting".
 - c. Disassembly, repair and re-assemble.
 - d. Adjustment and checking.
 - 6. Include manufacturer's printed operation and maintenance instructions.
 - 7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 - 8. Other data as required under pertinent sections of specifications.
- C. Prepare and include additional data when the need for such data becomes apparent during instruction of Owner's personnel.
- D. Additional requirements for operating and maintenance data: Reference sections of Technical Specifications.

3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

- C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 3 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Electronic searchable CD of all O&M information in PDF format (refer to 013000 - Administrative Requirements) should be provided for initial review and approval. Hard copies (number of copies as directed by Barton Malow Builders and/or project specifications) should be provided after approval of electronic copies.
- E. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- F. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Contractors, Subcontractors, & Other Subordinate Parties Contractors, Subcontractors, HESuppliers, and other Subordinate Parties, with names of responsible parties.
- G. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- H. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- I. Text: Manufacturer's printed data, or typewritten data.
- J. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
 - 1. Supplement product data with drawings as necessary to clearly illustrate:
 - a. Relations of component parts or equipment and systems.
 - b. Control and flow diagrams.
 - 2. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
- K. Arrangement of Contents: Organize each volume in parts as follows:
 - 1. Project Directory.
 - 2. Table of Contents, of all volumes, and of this volume.
 - 3. Operation and Maintenance Data: Arranged by system, then by product category.
 - a. Source data.
 - b. Product data, shop drawings, and other submittals.
 - c. Operation and maintenance data.
 - d. Field quality control data.
 - e. Copy of each warranty, bond and service contract issued
 - 1) Provide information sheet for Owner's personnel, give:
 - (a) Proper procedures in event of failure.
 - (b) Instances which might affect validity of warranties or bonds.
 - 4. Design Data: To allow for addition of design data furnished by Manufacture or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

3.06 WARRANTIES AND BONDS

- A. This section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers' standard warranties on products and special warranties:
 - 1. Refer to General Conditions for terms of the Contractor's period and obligations for Correction of the Work.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and Contractors required to countersign special warranties with the Contractor.

- C. Obtain warranties and bonds, executed in duplicate by responsible Contractors, suppliers, and manufacturers, within 14 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until date of Owner Equipment Acceptance is determined.
- D. Definitions:
 - 1. **Standard Product Warranties:** are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by manufacturer to Owner
 - 2. **Special Warranties:** are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.
- E. Deliver all written warranties and guarantees required by the Contract Documents with the Owner and Barton Malow Builders named as beneficiaries. All warranties shall include labor, equipment, materials and incidentals per warranty called out per specification section, shall be signed by the manufacturer or Contractor as the case may be, and countersigned by the Contractor. All written warranties shall be addressed to the Owner and delivered to Barton Malow Builders upon completion of the Project, before or with the submission of Request for Final Payment.
- F. In addition to all other warranties set forth in the Contract Documents or imposed by applicable law, Contractor warrants to Owner and Barton Malow Builders that the Work will be free from defects and performed in strict conformity with the requirements of the Contract Documents. This warranty survives the termination of the Agreement and shall only be extinguished by limitation periods imposed by applicable law and shall not be limited by any other provisions contained in the Agreement, including any provisions or time periods related to Contractor's obligation to correct defective Work.
- G. Contractor, upon signing the Agreement, shall obtain and forward to Barton Malow Builders any and all Standard Product Warranties for products, materials and systems covered under its Agreement. The Manufacturer's warranties do NOT relieve the Contractor from its warranty obligations under the Contract Documents.
- H. Special Warranties shall become effective on a date of Owner Acceptance for equipment or systems and Substantial Completion for products and materials of the entire Project or portions thereof as agreed upon by the Project Team. As additional Work is accepted, separate warranties for those specific portions of the Work shall be issued and properly dated. Issuance of warranties for a portion of the Work shall in no way become the basis for Application for Final Payment.
- I. If for any reason, the Bidder cannot warrant any part of the Work using products, materials, or construction methods that have been specified or shown, it shall notify Barton Malow Builders in writing at least ten (10) days before the bid submission date, giving reasons together with the names of products and data on substitutions it can guarantee. Should the Bidder fail to so notify Barton Malow Builders within this time period, it will be bound to all warranties and guarantees as set forth in the Contract Documents.
- J. Related Damages and Losses: In correcting Work that has been rejected as defective or otherwise failing to conform to the Contract Documents, whether before or after Substantial Completion, Contractor shall bear all related costs, including, but not necessarily limited to, the cost to correct the Work, the cost to correct all other Work that has been damaged by the defective or non-conforming Work, or that is damaged in the process of correcting the defective or nonconforming Work, and the cost of all additional testing and inspections and compensation for the Architect/Engineer, Barton Malow Builders, or Owner's services and expenses made necessary thereby.
- K. Reinstatement of Warranty: When Work covered by a warranty with a specific time period has failed and has been corrected by Contractor, the warranty shall be reinstated for a time period equal to the original warranty.

- L. Express warranties are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available to the Owner or Barton Malow Builders under the law. Express warranty periods shall not be interpreted as limitations on the time in which Owner or Barton Malow Builders may enforce Contractor's duties and obligation or their rights and remedies under the Agreement and applicable law.
 - 1. Rejection of Warranties: The Owner, Architect/Engineer, and Construction Manager reserve the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- M. Where the Contract Documents require a Special Warranty, or similar commitment on the Work or part of the Work, the Owner, Architect/Engineer, and Construction Manager reserve the right to refuse to accept the Work, until the Contractor presents evidence that the entities required to countersign such commitments are willing to do so.
- N. Manual: Bind in commercial quality 8-1/2 by 11 inch (216 by 279 mm) three D side ring binders with durable plastic covers.
 - 1. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor, Subcontractor, and Equipment supplier; and name of responsible company principal.
 - 2. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
 - 3. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Contractor, Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

END OF SECTION 017800

**SECTION 017900
DEMONSTRATION AND TRAINING**

PART 1 GENERAL

1.01 SUMMARY

- A. Procedures for demonstration of equipment operation and instruction of Owner's personnel where indicated in specific specification sections. This will be coordinated through Barton Malow Builders.
- B. Training of Owner personnel in operation and maintenance is required for:
 - 1. Items specified in individual specification sections.

1.02 RELATED REQUIREMENTS

- A. Section 017800 - Closeout Submittals: Operation and maintenance manuals.
- B. Section 019113 - General Commissioning Requirements: Additional requirements applicable to demonstration and training.
- C. Other Specification Sections: Additional requirements for demonstration and training.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures; except:
 - 1. Submit preliminary schedule/agenda to Barton Malow Builders for Architect's and Owner's approval, listing three separate times and dates for demonstration of each item of equipment and each system, at least 2 weeks or as required prior to proposed dates for Owner's choosing.
 - 2. Submit 1 electronic copy of reports within one week after completion of demonstrations, that demonstrations and instructions have been satisfactorily completed.
 - a. Provide time and date of each demonstration.
 - b. Hours devoted to demonstration.
 - c. Provide list of persons present in the form of a sign-in sheet
 - 3. When preparing the submittal, be sure to include video recording of actual training with the aforementioned documentation.
- B. Training Reports:
 - 1. Identification of each training session, date, time, and duration.
 - 2. Sign-in sheet showing names and job titles of attendees.
 - 3. List of attendee questions and written answers given, including copies of and references to supporting documentation required for clarification; include answers to questions that could not be answered in original training session.
- C. Video Recordings: Submit digital video recording of each demonstration and training session for Owner's subsequent use.
 - 1. Format: DVD Disc.
 - 2. Label each disc and container with session identification and date.

1.04 QUALITY ASSURANCE

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
 - 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
 - 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.
- B. When specified in individual Sections, require manufacturer to provide authorized representative to demonstrate operation of equipment and systems, instruct Owner's personnel, and provide written report that demonstrations and instructions have been completed.

SF25-003 Driving Pad and Storage

- C. Barton Malow Builders or Owner will provide list of personnel to receive instructions, and will coordinate their attendance at agreed-upon times.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PREPARATION

- A. Provide substantiating information that verifies equipment has been inspected and put into operation; testing, adjusting, and balancing has been performed; and equipment and systems are fully operational.
- B. Submit copies of completed approved operation and maintenance manuals (017800 - Closeout Submittals) at least 2 weeks before execution and have at hand for use in demonstrations and instructions.

3.02 DEMONSTRATION - GENERAL

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
- B. Demonstrations conducted during Functional Testing need not be repeated unless Owner personnel training is specified.
- C. Demonstration may be combined with Owner personnel training if applicable.
- D. Operating Equipment and Systems: Demonstrate operation in all modes, including start-up, shut-down, seasonal changeover, emergency conditions, and troubleshooting, and maintenance procedures, including scheduled and preventive maintenance.
 - 1. Perform demonstrations within 2 weeks after O&M approval and acceptance.
 - 2. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
 - 3. Contractor shall document the testing, equipment start-up and training sessions as required using the following forms by contacting Construction Manager or in Box:
 - a. **Equipment/System Acceptance** - This form will be completed for each piece of equipment or system for each contract that requires operational testing and/or training before acceptance. This will document the date of testing, the equipment tested, names of personnel that witnessed the testing and acceptance.
 - b. **Owner Training Register** - This form will be completed for each contract that requires training to be provided to the Owner's personnel. This will document the date of training, type of training, names of the personnel trained, and acceptance of the training.
- E. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.
 - 1. Perform demonstrations within 2 weeks after O&M manual approval and acceptance.

3.03 TRAINING - GENERAL

- A. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.
- B. Conduct training on-site unless otherwise indicated.
- C. Contractor is responsible for camera recording the training sessions. The camera recording should be of professional quality and Barton Malow Builders should be provided with 1 copies of the in format required.
- D. Do not start training until Functional Testing is complete, unless otherwise specified.
- E. Training schedule will be subject to availability of Owner's personnel to be trained; Barton Malow Builders will compile and distribute the final schedule for the system demonstration, training, start-up, and turnover of all systems and equipment based on previous input provided by Contractors. Once final schedule has been distributed, failure to conduct sessions according to schedule will be cause for OCC and/or Barton Malow Builders for personnel "show-up" time.

SF25-003 Driving Pad and Storage

- F. Review of Facility Policy on Operation and Maintenance Data: During training discuss:
 - 1. The location of the O&M manuals and procedures for use and preservation; backup copies.
 - 2. Typical contents and organization of all manuals, including explanatory information, system narratives, and product specific information.
 - 3. Typical uses of the O&M manuals.
- G. Product- and System-Specific Training:
 - 1. Review the applicable O&M manuals.
 - 2. For systems, provide an overview of system operation, design parameters and constraints, and operational strategies.
 - 3. Review instructions for proper operation in all modes, including start-up, operation, control, adjustment, troubleshooting, servicing, shut-down, seasonal changeover and emergency procedures, and for maintenance, including preventative maintenance.
 - 4. Provide hands-on training on all operational modes possible and preventive maintenance.
 - 5. Emphasize safe and proper operating requirements; discuss relevant health and safety issues and emergency procedures.
 - 6. Discuss common troubleshooting problems and solutions.
 - 7. Discuss any peculiarities of equipment installation or operation.
 - 8. Discuss warranties and guarantees, including procedures necessary to avoid voiding coverage.
 - 9. Review recommended tools and spare parts inventory suggestions of manufacturers.
 - 10. Review spare parts and tools required to be furnished by Contractor.
 - 11. Review spare parts suppliers and sources and procurement procedures.
- H. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.
- I. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instructions
- J. Ensure proper notice is provided to Barton Malow Builders if attendees will need jobsite access for proper training.

END OF SECTION 017900