Wayne State University
Life Science Exterior Wall System Stabilization
WSU Project Number 006-253400
Prevailing Wage Work

FOR:
Board of Governors
Wayne State University
Detroit, Michigan

Owner’s Agent:
Valerie Kreher, Senior Buyer
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720 / 313-577-3747 fax
ab4889@wayne.edu and copy ab3577@wayne.edu

Owner's Representative:
Robert Jacobs, Project Manager
Facilities Planning & Management
Design & Construction Services
5454 Cass
Wayne State University
Detroit, Michigan 48202

Consultant:
Desai Nasr Consulting Engineers
6765 Daly Road
West Bloomfield, MI 48322

August 19, 2015
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Division 0 - Bidding Requirements, Contract Forms, and Conditions of the Contract</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>00005 Information for Bidders</td>
<td>00005-1 thru 00005-2</td>
<td></td>
</tr>
<tr>
<td>00100 Instructions to Bidders</td>
<td>00100-1 thru 00100-5</td>
<td></td>
</tr>
<tr>
<td>00250 Notice of Pre-Bid Conference</td>
<td>00250-1 thru 00250-2</td>
<td></td>
</tr>
<tr>
<td>00300 Form of Proposal &amp; Qualification Statement</td>
<td>00300-1 thru 00300-7</td>
<td></td>
</tr>
<tr>
<td>00410 Prevailing Wage Rate Schedule</td>
<td>00410-1 thru 00410-3</td>
<td></td>
</tr>
<tr>
<td>00420 KPI Reporting</td>
<td>00420-1 thru 00420-3</td>
<td></td>
</tr>
<tr>
<td>00430 Payment Package Document Requirements</td>
<td>00430-1</td>
<td></td>
</tr>
<tr>
<td>00440 Contractor’s Performance Evaluation</td>
<td>00440-1</td>
<td></td>
</tr>
<tr>
<td>00500 Agreement between Contractor and Owner for Construction</td>
<td>00500-1 thru 00500-9</td>
<td></td>
</tr>
<tr>
<td>00510 Form of Guarantee</td>
<td>00510-1</td>
<td></td>
</tr>
<tr>
<td>00700 General Conditions (A.I.A. A-201)</td>
<td>00700-1</td>
<td></td>
</tr>
<tr>
<td>00800 WSU Supplementary General Conditions of the Contract for Construction</td>
<td>00800-1 thru 00800-12</td>
<td></td>
</tr>
<tr>
<td>00850 Drawings</td>
<td>00850-1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Division 1 - General Requirements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01000 General Requirements</td>
<td>01000-1 thru 01000-9</td>
<td></td>
</tr>
<tr>
<td>01010 Summary of Work (Includes Scope of Work)</td>
<td>01010-1</td>
<td></td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS – DESAI/ NASR CONSULTING ENGINEERS & NIAGARA MURANO**

<p>| 01100 Summary                                                                    | 01100-1 thru 01100-4     |
| 01210 Allowances                                                                | 01210-1 thru 01200-2     |
| 01230 Alternates                                                                | 01230-1 thru 01230-2     |
| 01400 Quality Requirements                                                      | 01400-1 thru 01400-6     |
| 01420 Reference                                                                 | 01420-1 thru 01420-2     |
| 01500 Temporary Facilities and Controls                                          | 01500-1 thru 01500-4     |
| 01510 Construction Air Quality                                                  | 01510-1 thru 01510-4     |
| 01600 Product Requirements                                                      | 01600-1 thru 01600-8     |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>01610</td>
<td>Request for Substitution Form</td>
<td>01610-1 thru 01610-4</td>
</tr>
<tr>
<td>01770</td>
<td>Closeout Procedures</td>
<td>01770-1 thru 01770-4</td>
</tr>
<tr>
<td>02220</td>
<td>Selective Demolition</td>
<td>02220-1 thru 02220-4</td>
</tr>
<tr>
<td>05120</td>
<td>Structural Steel</td>
<td>05120-1 thru 05120-6</td>
</tr>
<tr>
<td>05400</td>
<td>Cold Formed Metal Framing</td>
<td>05400-1 thru 05400-4</td>
</tr>
<tr>
<td>06100</td>
<td>Rough Carpentry</td>
<td>06100-1 thru 06100-4</td>
</tr>
<tr>
<td>06160</td>
<td>Sheathing</td>
<td>06160-1 thru 06160-6</td>
</tr>
<tr>
<td>07210</td>
<td>Building Insulation</td>
<td>07210-1 thru 07210-6</td>
</tr>
<tr>
<td>07250</td>
<td>Weather Barrier</td>
<td>07250-1 thru 07250-6</td>
</tr>
<tr>
<td>07461</td>
<td>Engineered Cement Siding</td>
<td>07461-1 thru 07461-6</td>
</tr>
<tr>
<td>07620</td>
<td>Sheet Metal Flashing &amp; Trim</td>
<td>07620-1 thru 07620-6</td>
</tr>
<tr>
<td>07920</td>
<td>Joint Sealants</td>
<td>07920-1 thru 07920-6</td>
</tr>
<tr>
<td>07920S</td>
<td>Joint Sealant Schedule</td>
<td>07920S-1 thru 07920S-2</td>
</tr>
<tr>
<td>09260</td>
<td>Gypsum Board Assemblies</td>
<td>09260-1 thru 09260-8</td>
</tr>
<tr>
<td>09511</td>
<td>Acoustical Panel Ceilings g</td>
<td>09511-1 thru 09511-6</td>
</tr>
<tr>
<td>09651</td>
<td>Resilient Tile Flooring</td>
<td>09651-1 thru 09651-1</td>
</tr>
<tr>
<td>09653</td>
<td>Resilient Wall Base and Accessories</td>
<td>09653-1 thru 09653-2</td>
</tr>
<tr>
<td>09912</td>
<td>Painting</td>
<td>09912-1 thru 09912-8</td>
</tr>
</tbody>
</table>
INFORMATION FOR BIDDERS

OWNER: Board of Governors
Wayne State University

PROJECT: Life Science Exterior Wall System Stabilization
Project No. 006-253400

LOCATION: Wayne State University
5000 Gullen Mall
Detroit, Michigan 48202

OWNER’S AGENT: Valerie Kreher, Senior Buyer
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720 / 313-577-3747 fax
ab4889@wayne.edu & copy ab3577@wayne.edu

OWNER’S REPRESENTATIVE: Robert Jacobs, Project Manager
Facilities Planning & Management
Design & Construction Services
Wayne State University
5454 Cass Avenue
Detroit, Michigan 48202

Architect: Desai Nasr Consulting Engineers
6765 Daly Road
West Bloomfield, MI 48322

SPECIAL NOTE: Right to reject any and all proposals, either in whole or in part and to waive any irregularities therein is reserved by the Owner.

BIDS ADVERTISED: August 19, 2015

BIDDING: Bidding documents may be obtained by vendors from the University Purchasing Web Site at http://www.forms.procurement.wayne.edu/Adv_bid/Adv_bid.html beginning August 25, 2015. When visiting the Web Site, click on the "Construction" link in green. Copies of the RFP will not be available at the pre-proposal meeting.

MANDATORY Pre-Bid Conference: 2:00 pm, local time, September 2, 2015 to be held at Wayne State University – 5700 Cass Ave. / AAB, Conference Room 4002, Detroit, MI, 48202. Late Arrivals may not be permitted to submit bids.

OPTIONAL Second Walk Through: (if needed) To be determined at the conclusion of the pre-bid conference, by those in attendance.

DUE DATE FOR QUESTIONS: Due Date for questions shall be September 4, 2015 at 12:00 Noon. All questions must be reduced to writing and emailed to the attention of Valerie Kreher, Senior Buyer at ab4889@wayne.edu, copy to Cynthia Branch, Buyer at: ab3577@wayne.edu.

Bids Due: Sealed proposals for lump-sum General Contract will be received at the office of the Procurement & Strategic Sourcing located at 5700 Cass Avenue, Suite 4200, Detroit, MI 48202 on September 10, 2015, until 2:00 p.m. (local time).

No public bid opening will be held.

Bid Qualification Meeting: Bidders must be available for bid prequalification meeting the day following the bid opening. The lowest qualified bidder will be contacted and requested to meet with Facilities Planning & Management at their office located at 5454 Cass Avenue, Detroit, MI 48202. During the prequalification, the Vendor must provide a Project Schedule and a Schedule of Values, including a list of Contractor’s suppliers, subcontractors and other
An unsigned contract will be given to the successful Contractor at the conclusion of the Pre Award meeting, if all aspects of the bid are in order. The Contractor has 5 business days to return the contract to the Project Manager for University counter signature. The contractor must also submit a Performance Bond as outlined above and a Certificate of Insurance in the same 5 business day period. In the event the Contractor fails to return the documents in this 5 day period, the University reserves the right to award the contract to the next most responsive bidder.

All available information pertaining to this project will be posted to the Purchasing web site at http://www.forms.procurement.wayne.edu/Adv_bid/Adv_bid.html. Information that is not posted to the website is not available/not known.
INSTRUCTIONS TO BIDDERS

OWNER: Board of Governors
Wayne State University

PROJECT: Life Science Exterior Wall System Stabilization
Project No. 006-253400

LOCATION: Wayne State University
5000 Gullen Mall,
Detroit, Michigan 48202

OWNER'S AGENT: Valerie Kreher, Senior Buyer
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720 / 313-577-3747 fax
ab4889@wayne.edu & copy ab3577@wayne.edu

1. PROPOSALS

A. The Purchasing Agent will receive sealed Proposals for the work as herein set forth at the place and until the time as stated in the "Information for Bidders", a copy of which is bound herewith in these specifications. No public bid opening will be held.

B. Proposals shall be for a lump-sum General Contract for the entire work of the Project as provided in the Form of Proposal.

C. Proposals shall be submitted in duplicate on forms furnished with the Bidding documents. The forms must be fully filled out in ink or typewritten with the signature in longhand, and the completed forms shall be without alterations, interlineations, or erasures. Forms shall contain no recapitulations of the work to be done. Each proposal shall be delivered in an opaque sealed envelope, marked "PROPOSAL" AND SHALL BEAR THE NAME OF THE PROJECT AND THE NAME OF THE BIDDER. Proposals submitted by telephone or telegraph will not be accepted. Modifications by telephone or telegraph to previously submitted proposals will not be accepted.

D. (revised 5-29-2009) All base bids must be conforming to the detailed specifications and drawings provided by the University, including any Addenda issued. Voluntary Alternates will only be considered if the Contractor has also submitted a conforming base bid. Any stipulation of voluntary alternates or qualifications contrary to the Contract requirements made by the Bidder in or accompanying his proposal as a condition for the acceptance of the Contract will not be considered in the award of the Contract and will cause the rejection of the entire Proposal.

E. The competency and responsibility of Bidders will be considered in making the award. The Owner does not obligate himself to accept the lowest or any other bids. The Owner reserves the right to reject any and all bids and to waive any informalities in the Proposals.

2. PROPOSAL GUARANTEE (revised 3-22-2012)

A. A certified check or bank draft payable to the Owner, or satisfactory Bid Bond executed by the Bidder and Surety Company, in an amount equal to not less than five percent (5%) of the maximum proposal amount shall be submitted with each Proposal, which amount may be forfeited to the Board of Governors, Wayne State University, if the successful Bidder refuses to enter into a Contract within ninety (90) days from receipt of Proposals.

B. Bond must be issued by a Surety Company with an "A rating as denoted in the AM Best Key Rating Guide"
C. The bid deposit of all bidders except the lowest three will be returned within three (3) days after the bids are opened. After the formal Contract and bonds are approved, the bid deposit will be returned to the lowest three bidders, except when forfeited.

D. Bid bonds shall be accompanied by a Power of Attorney authorizing the signer of the bond to do so on behalf of the Surety Company.

E. Withdrawal of Proposals is prohibited for a period of ninety (90) days after the actual date of opening thereof.

3. **CONTRACT SECURITY (revised 3-22-2012)**

A. The successful Bidder will be required to furnish a Performance Bond and Labor and Material Payment bond in an amount equal to 100% of the contract award amount, and include such cost in the Proposal, complying with the laws of the State of Michigan. The graduated formula no longer applies.

B. Performance Bond and Labor and Material Payment Bond shall be from a surety company acceptable to the Owner and made payable as follows:

1. A bond for 100% of the contract award amount to the Board of Governors of Wayne State University, and guaranteeing the payment of all subcontractors and all indebtedness incurred for labor, materials, or any cause whatsoever on account of the Contractor in accordance with the laws of the State of Michigan relating to such bonds.

2. A bond for 100% of the contract award amount to the Board of Governors of Wayne State University to guarantee and insure the completion of work according to the Contract.

C. The only acceptable Performance Bond shall be the AIA A312 – 2010.

D. Bond must be issued by a Surety Company with an “A rating as denoted in the AM Best Key Rating Guide”.

4. **BOND CLARIFICATION**

For bids below $50,000.00,

A. Bid bond will not be required.

B. Performance Bond will not be required.

5. **INSPECTION**

A. Before submitting his Proposal, each Bidder shall be held to have visited the site of the proposed work and to have familiarized himself as to all existing conditions affecting the execution of the work in accordance with the Contract Documents. No allowance or extra consideration on behalf of the Contractor will subsequently be made by reason of his failure to observe the Conditions or on behalf of any subcontractor for the same reason.

6. **EXPLANATION TO BIDDERS AND ADDENDA**

A. Neither the Owner nor Representative nor Purchasing Agent will give verbal answers to any inquiries regarding the meaning of drawings and specifications, and any verbal statement regarding same by any person, previous to the award, shall be unauthoritative.

B. Any explanation desired by Bidders must be requested of the Purchasing Agent in writing, and if explanation is necessary, a reply will be made in the form of an Addendum, a copy of which will be forwarded to each Bidder registered on the Bidders’ List maintained by Procurement & Strategic Sourcing.

C. All addenda issued to Bidders prior to date of receipt of Proposals shall become a part of these Specifications, and all proposals are to include the work therein described.

7. **INTERPRETATION OF CONTRACT DOCUMENTS**
A. If any person contemplating submitting a bid for the proposed Contract is in doubt as to the true meaning of any part of the drawings, specifications, or other Contract Documents, he may submit to the Purchasing Agent, a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the Contract Documents will be made by an addendum duly issued. A copy of such addendum will be mailed and delivered to each registered Bidder. Each proposal submitted shall list all addenda, by numbers, which have been received prior to the time scheduled for receipt of proposal.

8. SUBSTITUTION OF MATERIALS AND EQUIPMENT*

A. Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, or the like, it is so identified for the purpose of establishing a standard, and any material, article, or piece of equipment of other manufacturers or vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided that the material, article, or piece of equipment so proposed is, in the opinion of the Architect, of equal substance, appearance and function. It shall not be purchased or installed by the Contractor without the Architect's written approval.

9. TAXES

A. The Bidder shall include in his lump sum proposal and make payment of all Federal, State, County and Municipal taxes, including Michigan State Sales and Use Taxes, now in force or which may be enacted during the progress and completion of the work covered.

10. REQUIREMENTS FOR SIGNING PROPOSALS AND CONTRACTS

A. The following requirements must be observed in the signing of proposals that are submitted:

1. Proposals that are not signed by individuals making them shall have attached thereto a Power of Attorney, evidencing the authority to sign the Proposal in the name of the person for whom it is signed.

2. Proposals that are signed for partnership shall be signed by all of the partners or by an Attorney-in-Fact. If signed by an Attorney-in-Fact, there must be attached to the Proposal a Power of Attorney evidencing authority to sign the Proposal, executed by the partners.

3. Proposals that are signed for a corporation shall have the correct corporate name thereof and the signature of the President or other authorized officer of the corporation, manually written in the line of the Form of Proposal following the words "signed by". If such a proposal is signed by an official other than the President of the Corporation, a certified copy of resolution of the Board of Directors, evidencing the authority of such official to sign the bid, shall be attached to it. Such proposal shall also bear the attesting signature of the Secretary of the Corporation and the impression of the corporate seal.

11. QUALIFICATIONS OF BIDDERS

A. The Owner may request each of the three (3) low bidders to submit information necessary to satisfy the Owner that the Bidder is adequately prepared to fulfill the Contract. Such information may include past performance records, list of available personnel, plant and equipment, description of work that will be done simultaneously with the Owner's Project, financial statement, or any other pertinent information. This information and such other information as may be requested will be used in determining whether a Bidder is qualified to perform the work required and is responsible and reliable.

12. SPECIAL REQUIREMENTS

A. The attention of all Bidders is called to the General Conditions, Supplementary General Conditions, and Special Conditions, of which all are a part of the Specifications covering all work, including Subcontracts, materials, etc. Special attention is called to those portions dealing with Labor Standards, including wages, fringe benefits, Equal Employment Opportunities, and Liquidated Damages.

B. Prior to award of the project, the apparent low bidder will be required to produce a schedule of values which will include the proposed subcontractors for each division of work and whether the subcontractor is signatory...
or non-signatory. A contract will not be issued to the apparent low bidder until this document is provided. A contractor will have one week to produce this document. If the required document is not received within this time, the bidder will be disqualified.


A. The Proposal shall be deemed as having been accepted when a copy of the Contract (fully executed by both the vendor and the appropriate signatory authority for the University), with any/all Alternates, Addenda, and Pre-Contract Bulletins, as issued by the office or agent of the Owner has been duly received by the Contractor. After signing the Contracts, the Contractor shall then return all copies, plus any required bonds and certificates of insurance, to the office of the Owner’s Representative, at 5454 Cass, Wayne State University, Detroit, MI 48202. Construction will begin when the fully-executed contract has been returned to the Contractor.

14. TIME OF STARTING AND COMPLETION

A. It is understood that the work is to be carried through to substantial completion with the utmost speed consistent with good workmanship and to meet the established start and completion dates.

B. The Contractor shall begin work under the Contract without delay, upon receipt of a fully-executed contract from the Owner, and shall substantially complete the project ready for unobstructed occupancy and use of the Owner for the purposes intended within the completion time stated in the Contract.

C. The Contractor shall, immediately upon receipt of fully-executed contract, schedule his work and expedite deliveries of materials and performance of the subcontractors to maintain the necessary pace for start and completion on the aforementioned dates.

15. CONTRACTOR’S PERFORMANCE EVALUATION (2-2015)

In an effort to provide continuous process improvement regarding the construction of various university projects, Wayne State University is embarking upon a process of evaluating the contractor’s overall performance following the completion of work. At the conclusion of the construction project a subjective evaluation of the Contractor’s performance will be prepared by the Project Manager and the supervising Director of Construction. The evaluation instrument that will be used in this process is shown in Section 00440-01 - Contractor’s Performance Evaluation.

16. BIDDING DOCUMENTS

A. Bid specifications are not available at the University, but are available beginning August 19, 2015 through Wayne State University Procurement & Strategic Sourcing’s Website for Advertised Bids: http://www.forms.procurement.wayne.edu/Adv_bid/Adv_bid.html. The plans for this project can be viewed in advance and/or printed from the above website. Copies of the RFP will not be available at the pre-proposal meeting.

B. DOCUMENTS ON FILE (revised 12-2007)

1. Wayne State University Procurement & Strategic Sourcing’s Website.
All available information pertaining to this project will be posted to the Purchasing web site at http://www.forms.procurement.wayne.edu/Adv_bid/Adv_bid.html. Information that is not posted to the website is not available/not known.

2. Notification of this Bid Opportunity has been sent to DUNN BLUE (for purchase of Bid Documents only), DODGE REPORTS, REED CONSTRUCTION, CONSTRUCTION NEWS and the CONSTRUCTION ASSOCIATION OF MICHIGAN (CAM).

3. Please note: Effective December 1, 2007, bid notices will be sent only to those Vendors registered to receive them via our Bid Opportunities list serve. To register, to http://www.forms.procurement.wayne.edu/Adv_bid/Adv_bid.html, and click on the “Join our Listserv” link at the top of the page.
NOTICE OF MANDATORY PRE-BID CONFERENCE

PROJECT: Life Science Exterior Wall System Stabilization

PROJECT NOS.: WSU PROJECT NO. 006-253400

It is Mandatory that each Contractor proposing to bid on this work must attend a pre-bid conference at the following location:

Wayne State University
5700 Cass Ave. / AAB, Conference Room 4002
Detroit MI 48202

2:00 pm, local time, September 2, 2015

The purpose of this conference is to clarify the procedures, scope of work, and to identify any omissions and/or inconsistencies that may impede preparation and submission of representative competitive bids.

In the event that less than 4 individual contractor firms attend the pre-bid conference, the University reserves the right, at its sole discretion, to either reschedule the pre-bid conference or proceed and offer a second pre-bid conference date. (Attendance at only one pre-bid conference will be required).

An attendance list shall be prepared and minutes of the conference shall be furnished to all those attending.

Any clarifications or corrections that cannot be made at the conference will be by Addendum.

For your convenience a map of the University and appropriate parking lots can be downloaded and printed from: http://campusmap.wayne.edu/. Guest parking in any of the University student and guest lots is $7.00. A detailed list of Cash & Coin operated lots can be viewed at http://purchasing.wayne.edu/cash_and_credit_card_lots.php. Cash lots dispense change in quarters. Due to time constraints, Vendors are encouraged to avoid parking at meters on the street (especially blue "handicapped" meters).

All available information pertaining to this project will be posted to the Purchasing web site at http://www.forms.procurement.wayne.edu/Adv_bid/Adv_bid.html.

Information that is not posted to the website is not available/not known.
AGENDA

I. Welcome and Introductions
   A. Wayne State University Representatives
   B. Vendor Representatives
   C. Sign in Sheet- be sure to include your fax number and email address (LEGIBLY) on the sign in sheet.

II. Brief Overview of Wayne State University
   A. Purpose and Intent of RFP.
   B. Detailed review of the RFP and the requirements for a qualified response.
   C. Review of all pertinent dates and forms that are REQUIRED for a qualified response.

III. Vendor Questions/Concerns/Issues
   A. Questions that can be answered directly by the appropriate person in this meeting will be answered and both question and answer will be recorded in the minutes of the meeting.
   B. Questions that need to be researched will be answered and a nature of clarification will be emailed to the appropriate ListServ. See http://www.forms.purchasing.wayne.edu/Adv_bid/Adv_Bid_Listserve.html for a list of ListServ Bid Lists.
   C. Minutes will be emailed to all participants of the meeting within a reasonable amount of time. (be sure to include your email address(addresses on the sign in sheet)
   D. Questions and concerns that come up after this meeting are to be addressed to Valerie Kreher, Procurement & Strategic Sourcing. Discussion with other University members is seriously discouraged and could lead to disqualification from further consideration. All questions and answers will be recorded and emailed to all participants of the RFP.
   E. Due date for questions is September 4, 2015, 12:00 noon.

IV. Minimum Participation
   A. Pre-registration for the Pre-Bid meeting is required. In the event that we do not have four (4) or more eligible bidders pre-registered, the University reserves the right to postpone the Pre-bid meeting with up to 4 business hour notice.
   B. If less than 4 individual contractor firms attend the mandatory pre-bid meeting, the University reserves the right, at its sole discretion, to either reschedule the pre-bid conference or proceed and offer a second pre-bid conference date. (Attendance at only one pre-bid conference will be required).
   C. On the day of the bid opening, if less than 3 sealed bids are received, the University reserves the right, at its sole discretion, to rebid the project in an effort to obtain greater competition. If the specifications are unchanged during the rebid effort, any contractor who submitted a bid will be given the option of keeping its bid on file for opening after the second bid effort, or of having the bids returned to them unopened.

V. Proposal Due Date- September 10, 2015, 2:00 p.m.

VI. Final Comments

VII. Adjourn
VENDOR NAME

GENERAL CONTRACT - PROPOSAL FORM (revised 1 - 2011)

Please Note – Vendors must Pre-qualify themselves when responding to this bid opportunity. Our Prequalification questions can be found on page 4 of this section.

OWNER: Board of Governors
Wayne State University

PROJECT: Life Science Exterior Wall System Stabilization

PROJECT NO.: WSU PROJECT NO. 006-253400

PROJECT TYPE: General construction Work

PURCHASING AGENT: Valerie Kreher, Senior Buyer
WSU – Procurement & Strategic Sourcing
5700 Cass, Suite 4200
Detroit, Michigan 48202
313-577-3720/ 313-577-3747 fax
ab4889@wayne.edu & copy ab3577@wayne.edu

OWNER'S REPRESENTATIVE: Robert Jacobs, Project Manager
Design & Construction Services
Facilities Planning & Management
Wayne State University
5454 Cass Avenue
Detroit, Michigan 48202

TO: Board of Governors
Wayne State University
Detroit, Michigan

BASE PROPOSAL:
The undersigned agrees to enter into an Agreement to complete the entire work of the Life Science Exterior Wall System Stabilization project (WSU Project No. 006-253400) in accordance with the Bidding Documents for the following amounts April 2016 through July 2016:

$ Dollars

ALLOWANCE:
$10,000.00 Mechanical/ Electrical Allowance.

$10,000.00 Dollars

TOTAL BASE PROPOSAL WITH ALLOWANCE:

$ Dollars
ALTERNATES: The following alternates to the base proposal(s) are required to be offered by the respective bidder. The undersigned agrees that the following amounts will be added to or deducted from the base bid as indicated, for each alternate which is accepted.

ALTERNATES:
The undersigned agrees to enter into an agreement to complete the Alternate # 1 work of the Life Science Exterior Wall System Stabilization project and to provide all labor and material associated with the work in accordance with the Bidding Documents for the following amounts:

**ALTERNATE 1:** New 2 X 4 Acoustic ceiling system.

(select one) ADD ____________________________ $ _______ Dollars

or

DEDUCT ____________________________ $ _______ Dollars

**ALTERNATE 2:** New 2 X 4 Fluorescent lighting system.

(select one) ADD ____________________________ $ _______ Dollars

or

DEDUCT ____________________________ $ _______ Dollars

**ALTERNATE 3:** New VCT Floor.

(select one) ADD ____________________________ $ _______ Dollars

or

DEDUCT ____________________________ $ _______ Dollars

**ALTERNATE 4:** TOTAL BASE PROPOSAL WITH ALLOWANCE (Construction November 2015 thru February 2016):

(select one) ADD ____________________________ $ _______ Dollars

or

DEDUCT ____________________________ $ _______ Dollars

**LAWN REPLACEMENT:** The undersigned agrees that, in the event of existing lawn or landscaping damage, due to the Contractor's work, that has not been properly addressed and repaired to the satisfaction of the University, the University may repair/replace the lawn and/or landscaping, and that the expense will be at a unit cost of $10.00 per square yard for lawn, and landscaping at a rate of 1.5 times the cost of said repairs, the full cost of which shall be reimbursed by the contractor.

**CONTRACT CHANGE**
The undersigned agrees to the following pricing formula and rates.
ORDERS: (revised 4-01-2011) for changes in the contract work:

1. For subcontract work, Contractor’s markup for handling, overhead, profit and bonding on subcontractors sell price, shall not exceed 5%.

1.1. For subcontract work that is provided on a time and material basis, the subcontractor shall be permitted a single markup for handling, overhead, profit and bonding of 5%. When a markup is identified in the subcontractor’s hourly labor rate, additional markup on labor is not permitted.

1.1.1 For changes that are based upon a lump sum value, subcontractor shall provide all labor and material back-ups to ensure that duplicative charges are avoided and authorized mark-ups for OH&P can be confirmed.

2. For work by his own organization, Contractor’s markup for job* and general overhead, profit and bonding shall not exceed 5% of the net labor** and material costs.

Within 14 days of the project’s contract execution Contractor shall provide to the Owner; Subcontractor’s hourly labor rate breakdown details. This requirement shall extend to the lowest level of subcontractor participation.

* Job and general overhead includes supervision and executive expenses; use charges on small tools, scaffolding, blocking, shores, appliances, etc., and other miscellaneous job expenses.

** Net labor cost is the sum of the base wages, fringe benefits established by governing trade organizations, applicable payroll taxes, and increased expense for contractor's liability insurance (Workman's Compensation, P.L. and P.D.).

TIME OF COMPLETION: (revised 4-01-2011)
The Contract is expected to be fully executed on or about 25 calendar days after successful bidder qualification and recommendation of award. The undersigned agrees to start construction immediately after receipt of a fully executed contract, and to complete the work as follows:

Substantial Completion will be completed no later than July 1, 2016.

LIQUIDATED DAMAGES:
It is understood and agreed that, if project is not completed within the time specified in the contract plus any extension of time allowed pursuant thereto, the actual damages sustained by the Owner because of any such delay, will be uncertain and difficult to ascertain, and it is agreed that the reasonable foreseeable value of the use of said project by Owner would be the sum of $500.00, Five Hundred Dollars per day, and therefore the contractor shall pay as liquidated damages to the Owner the sum of $500.00, Five Hundred Dollars per day for each day's delay in substantially completing said project beyond the time specified in the Contract and any extensions of time allowed thereunder.

TAXES:
The undersigned acknowledges that prices stated above include all applicable taxes of whatever character or description. Michigan State Sales Tax is applicable to the work. Bidder understands that the Owner reserves the right to reject any or all bids and to waive informalities or irregularities therein.

ADDENDA:
The undersigned affirms that the cost of all work covered by the following Addenda are included in the lump sum price of this proposal.

Addendum No.____Date__________    Addendum No.____Date____________
Addendum No._____Date__________    Addendum No.____Date____________
Addendum No.____Date__________    Addendum No.____Date____________
Addendum No.____Date__________    Addendum No.____Date____________
Addendum No.____Date__________    Addendum No.____Date____________
Addendum No.____Date__________    Addendum No.____Date____________
CONTRACTOR'S PREQUALIFICATION STATEMENT & QUESTIONNAIRE:

Our Minimum Requirements for Construction Bids are:

WSU considers this project: General construction Work.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Small Project bid less than $50,000</th>
<th>Medium Project bid between $50,001 and $250,000</th>
<th>Large Project bid between $250,001 and $2 million</th>
<th>Very Large Project bid greater than $2 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMR Rating (Experience Modification Rating)</td>
<td>1.0 or Less</td>
<td>1.0 or Less</td>
<td>1.0 or Less</td>
<td>1.0 or Less</td>
</tr>
<tr>
<td>Bondable Vendor</td>
<td>N.A.</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Length of Time in Construction Business</td>
<td>2 Years</td>
<td>3 Years</td>
<td>5 Years</td>
<td>5 Years</td>
</tr>
<tr>
<td>Demonstrated Experience in Projects Similar in Scope and Price in the last 3 years</td>
<td>1 or more</td>
<td>1 or more</td>
<td>2 or more</td>
<td>3 or more</td>
</tr>
<tr>
<td>Unsuccessful Projects on Campus in last 3 years</td>
<td>None Allowed</td>
<td>None Allowed</td>
<td>None Allowed</td>
<td>None Allowed</td>
</tr>
<tr>
<td>Failure to comply with Prevailing Wage and/or Project Labor requirements</td>
<td>None Allowed</td>
<td>None Allowed</td>
<td>None Allowed</td>
<td>None Allowed</td>
</tr>
<tr>
<td>Withdrawn University Bid (with or without Bond forfeiture) within the last 3 years **</td>
<td>1 or less</td>
<td>1 or less</td>
<td>1 or less</td>
<td>1 or less</td>
</tr>
<tr>
<td>Company currently not in Chapter 11 of the US Bankruptcy Code</td>
<td>1 Year</td>
<td>2 Years</td>
<td>3 Years</td>
<td>3 Years</td>
</tr>
</tbody>
</table>

** Withdrawal of a bid is subject to the University suspension policy, for a period up to one year.

Contractors must complete the following information to determine their eligibility to participate in this bid. This information is required with your Bid to the University.

Failure to complete this form in its entirety will result in your bid being disqualified.

Check one of the following on the makeup of your company:

- Corporation
- Individual
- Partnership
- Joint Venture
- Other (Explain below):

__________________________

Diversity Classification: Please indicate the appropriate diversity classification for your company. The University recognizes the following groups as diverse or disadvantaged:

- Majority Owned
- Minority Business Enterprises (MBE)
• Women Business Enterprises (WBE) ____________
• Disabled Veteran Enterprises (DVBE) ____________
• Disabled Person Enterprises (DBE) ____________
• Veteran Owned Businesses (VBE) ____________
• Small Businesses per the US Small Business Administration (SBE) ____________
• Other (Please Explain): ____________

1. How many years has your organization been in business as a contractor? ________________
2. How many years has your organization been in business under its present business name? __________
3. List states in which your organization is legally qualified to do business. ________________
   
4. Provide the Name and Address of your Liability Insurance Carrier. _________________________
   
5. What is your current EMR Rating?
   The minimum requirement is an EMR Rating of 1.0 or less for all projects. Bidders with a rating higher than 1.0 understand that their bid may be disqualified, at the sole discretion of the University.
6. What percentage of work performed on projects are by company employees; excluding any hired subcontracting and outsourced relationships, for the bid submitted? _______ %
7. What percentage of work performed on your companies behalf are by subcontracted business relationships; disallowing 1099 contracting work forces, for the bid submitted? _______ %
8. Have you ever failed to complete any work awarded to you? If so, attach a separate sheet of explanation. Include the name of the Project, the customer, the dates of the work, and the amount of the contract?
9. Have you withdrawn a bid after a University bid opening and/or refused to enter into a contract with the University upon notification of award within the last 3 years? If so, state the Project Name and Number, and the date of bid submission below.
10. Has any officer or partner of your organization ever been an officer or partner of another organization that failed to complete a construction contract? If so, attach a separate sheet of explanation.
11. List the construction experience of the principals and superintendents of your company.
   
   Name: ___________________________ Title: ___________________________
   ___________________________________________________________________
   Name: ___________________________ Title: ___________________________
   ___________________________________________________________________
   Name: ___________________________ Title: ___________________________
   ___________________________________________________________________
   
   FORM OF PROPOSAL FOR THE GENERAL CONTRACT 00300 - 5
12. List the construction Projects, and approximate dates, when you performed work similar in Scope to this project.

<table>
<thead>
<tr>
<th>Project</th>
<th>Owner</th>
<th>Contract Amount</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. List the construction Projects, and approximate dates, when you performed work similar in Dollar Amount to this project.

<table>
<thead>
<tr>
<th>Project</th>
<th>Owner</th>
<th>Contract Amount</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. Is your Company “bondable”? Yes  No

15. What is your present bonding capacity?  $

16. Who is your bonding agent?

NAME: __________________________________________

ADDRESS: _______________________________________

PHONE: (_________)

CONTACT: _______________________________________

17. Does your company agree to provide financial reports to the University upon request? Failure to agree may result in disqualification of your bid. Yes No

18. Does your company agree that all of the Terms and Conditions of this RFP and Vendor’s Response Proposal become part of any ensuing agreement? Yes No

19. Does your company agree to execute a contract containing the clauses shown in Section 00500 “Agreement Between Contractor and Owner for Construction”? Yes No

   If “No”, clearly note any exceptions to any information contained in the contract documents and include with your proposal.

20. Did your company quote based upon Prevailing Wage Rates? Yes No

   Note: Contractors submitting proposals for this project may, at the discretion of the University, be required to submit references including contact information to be used to assist in the post bid evaluation process for the subject project.

ACKNOWLEDGEMENT OF

The undersigned has read and understands the minimum qualifications.
MINIMUM QUALIFICATIONS: for University construction projects, and has completed the Prequalification section completely and accurately. The undersigned understands that a contractor, who fails to meet the minimum qualifications in the category identified for this project, will be disqualified from consideration for the project.

ACCEPTANCE OF PROPOSAL: The undersigned agrees to execute a Contract, being the Wayne State University standard form titled "Agreement Between Contractor and Owner for Construction" (see section 00500 of the bid documents), provided that we are notified of the acceptance of our Proposal within sixty (60) days of the date set for the opening thereof.

The undersigned below understands that the bid will be disqualified if the Prequalification information above is not completed in its entirety.

NAME OF COMPANY: ____________________________________________
OFFICE ADDRESS: ______________________________________________
PHONE NUMBER: __________________________ DATE________________
FAX NUMBER: _________________________________________________
SIGNED BY: ___________________________________________________

_________________________  Signature

_________________________ (Please print or type name here)

TITLE ________________________________________________________
EMAIL ADDRESS: ____________________________________________

@ ____________________________________________________________

FORM OF PROPOSAL FOR THE GENERAL CONTRACT  00300 - 7
Wayne State University requires all project contractors, including subcontractors, who provide labor on University projects to compensate at a rate no less than prevailing wage rates.

The rates of wages and fringe benefits to be paid to each class of laborers and mechanics by each VENDOR and subcontractor(s) (if any) shall be not less than the wage and fringe benefit rates prevailing in Wayne County, Michigan, as determined by the United States Secretary of Labor. Individually contracted labor commonly referred to as “1099 Workers” and subcontractors using 1099 workers are not acceptable for work related to this project.

To maintain compliance with State of Michigan Ordinances, Certified Payroll must be provided for each of the contractor’s or subcontractor’s payroll periods for work performed on this project. Certified Payroll should accompany all Pay Applications. Failure to provide certified payroll will constitute breach of contract, and pay applications will be returned unpaid, and remain so until satisfactory supporting documents are provided.

A Prevailing Wage Rate Schedule has been issued from the State of Michigan that is enclosed in this section. Additional information can be found on the University Procurement & Strategic Sourcing’s web site at the following URL address:

http://purchasing.wayne.edu/vendors/wage-rates.php

If you have any questions, or require rates for additional classifications, please contact:

Michigan Department of Consumer & Industry Services,
Bureau of Safety and Regulation, Wage and Hour Division,
7150 Harris Drive,
P.O. Box 30476,
Lansing, Michigan 48909-7976

http://www.michigan.gov/dleg/0,1607,7-154-27673_27706---,00.html

Wayne State University's Prevailing Wage Requirements:

When compensation will be paid under prevailing wage requirements, the University shall require the following:

A. The contractor shall obtain and keep posted on the work site, in a conspicuous place, a copy of all current prevailing wage and fringe benefit rates.

B. The contractor shall obtain and keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each laborer and mechanic employed in connection with this contract.

C. The contractor shall submit a completed certified payroll document [U.S. Department of Labor Form WH 347] verifying and confirming the prevailing wage and benefits rates for all employees and subcontractors for each payroll period for work performed on this project. The contractor shall include copies of pay stubs for all employee or contract labor payments related to Wayne State University work. The certified payroll form can be downloaded from the Department of Labor website at http://www.dol.gov/whd/forms/wh347.pdf.

D. A properly executed sworn statement is required from all tiers of contractors, sub-contractors and suppliers which provide services or product of $1,000.00 or greater. Sworn statements must accompany applications for payment. All listed parties on a sworn statement and as a subcontractor must submit Partial or Full Conditional Waivers for the amounts invoiced on the payment application. A copy of the acceptable WSU Sworn Statement and Waiver will be provided to the awarded contractor.

E. Apprentices for a skilled trade must provide proof of participation in a Certified Apprenticeship Program and the level of hours completed in the program.
F. Daily project sign-in sheets and field reports for the project must be turned in weekly.

Note: Contractor invoices WILL NOT be processed until all listed certified payroll documents are received.

G. If the VENDOR or subcontractor fails to pay the prevailing rates of wages and fringe benefits and does not cure such failure within 10 days after notice to do so by the UNIVERSITY, the UNIVERSITY shall have the right, at its option, to do any or all of the following:

1. Withhold all or any portion of payments due the VENDOR as may be considered necessary by the UNIVERSITY to pay laborers and mechanics the difference between the rates of wages and fringe benefits required by this contract and the actual wages and fringe benefits paid.

2. Terminate this contract and proceed to complete the contract by separate agreement with another vendor or otherwise, in which case the VENDOR and its sureties shall be liable to the UNIVERSITY for any excess costs incurred by the UNIVERSITY.

3. Propose to the Director of Purchasing that the Vendor be considered for Debarment in accordance with the University’s Debarment Policy, found on our website at http://purchasing.wayne.edu/docs/appm28.pdf

Terms identical or substantially similar to this section of this RFP shall be included in any contract or subcontract pertaining to this project.

H. The current applicable prevailing wage rates as identified by the State of Michigan Department of Consumer & Industry Services, Bureau of Safety and Regulation, Wage and Hour Division are attached. Refer to item C above if additional information is required.

I. Prior to award of the project, the apparent low bidder will be required to produce a schedule of values which will include the proposed subcontractors for each division of work and whether the subcontractor is signatory or non-signatory. A letter of intent or contract will not be issued to the apparent low bidder until this document is provided. The apparent low bidder will have one week to produce this document. If the required document is not received within this time, the bidder will be disqualified, and the next low bidder will be required to provide this schedule of values.

SEE ATTACHED STATE PREVAILING WAGE INFORMATION
State of Michigan
WHPWRequest@michigan.gov

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400

Wayne County
Official 2015 Prevailing Wage Rates for State Funded Projects
Issue Date: 8/13/2015
Contract must be awarded by: 11/11/2015

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos &amp; Lead Abatement Laborer</td>
<td>Asbestos &amp; Lead Abatement Laborer</td>
<td>MLDC 10/1/2014</td>
<td>$40.25</td>
<td>$53.64</td>
<td>$67.03</td>
</tr>
<tr>
<td>Boilermaker</td>
<td>Boilermaker</td>
<td>BO169 2/17/2015</td>
<td>$54.70</td>
<td>$81.08</td>
<td>$107.45</td>
</tr>
</tbody>
</table>

Apprentice Rates:

- 1st 6 months: $40.31, $59.49, $78.67
- 2nd 6 months: $41.45, $61.21, $80.95
- 3rd 6 months: $42.57, $62.88, $83.19
- 4th 6 months: $43.69, $64.57, $85.43
- 5th 6 months: $44.81, $66.24, $87.67
- 6th 6 months: $48.63, $72.50, $96.36
- 7th 6 months: $49.32, $73.01, $96.69
- 8th 6 months: $51.58, $76.40, $101.21

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne
## Official 2015 Prevailing Wage Rates for State Funded Projects

### Issue Date: 8/13/2015
### Contract must be awarded by: 11/11/2015

#### Page 2 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bricklayer</td>
<td>BR1</td>
<td>Bricklayer, stone mason, pointer, cleaner,</td>
<td>10/15/2014</td>
<td>$52.43 $78.65 $104.86</td>
<td>H</td>
<td>D D D D Y</td>
</tr>
</tbody>
</table>

*Make up day allowed  comment*

Saturday for 5 day 8 hour week
Friday for 4 day 10 hour week
4 10s allowed M-TH

**Apprentice Rates:**

- First 6 months: $31.87 $47.81 $63.74
- 2nd 6 months: $33.72 $50.60 $67.44
- 3rd 6 months: $35.57 $53.37 $71.14
- 4th 6 months: $37.42 $56.14 $74.84
- 5th 6 months: $39.27 $58.92 $78.54
- 6th 6 months: $41.12 $61.70 $82.24
- 7th 6 months: $42.97 $64.46 $85.94
- 8th 6 months: $44.82 $67.24 $89.64

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenter</td>
<td>CA 687 D</td>
<td>Diver</td>
<td>6/25/2014</td>
<td>$64.65 $93.14 $121.63</td>
<td>X X H X X H H Y</td>
<td></td>
</tr>
</tbody>
</table>

*Make up day allowed  comment*

Saturday

---

**Official Request #: 1043**
**Requestor: Wayne State University**
**Project Description: Life Science Exterior Wall System Stabilization**

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

---

**County:** Wayne
### Official 2015 Prevailing Wage Rates for State Funded Projects

<table>
<thead>
<tr>
<th>Classification</th>
<th>Updated</th>
<th>Straight Time</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpet and Resilient Floor Layer, (does not include installation of prefabricated formica &amp; parquet flooring which is to be paid carpenter rate)</td>
<td>6/12/2014</td>
<td>$49.21</td>
<td>$70.18</td>
<td>$91.14</td>
<td>X X X X X D Y</td>
</tr>
<tr>
<td>Apprentice Rates:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st 6 months</td>
<td></td>
<td>$24.23</td>
<td>$32.71</td>
<td>$41.18</td>
<td></td>
</tr>
<tr>
<td>2nd 6 months</td>
<td></td>
<td>$28.25</td>
<td>$38.73</td>
<td>$49.22</td>
<td></td>
</tr>
<tr>
<td>3rd 6 months</td>
<td></td>
<td>$30.35</td>
<td>$41.88</td>
<td>$53.42</td>
<td></td>
</tr>
<tr>
<td>4th 6 months</td>
<td></td>
<td>$32.44</td>
<td>$45.02</td>
<td>$57.60</td>
<td></td>
</tr>
<tr>
<td>5th 6 months</td>
<td></td>
<td>$34.54</td>
<td>$48.17</td>
<td>$61.80</td>
<td></td>
</tr>
<tr>
<td>6th 6 months</td>
<td></td>
<td>$36.63</td>
<td>$51.31</td>
<td>$65.98</td>
<td></td>
</tr>
<tr>
<td>7th 6 months</td>
<td></td>
<td>$38.74</td>
<td>$54.48</td>
<td>$70.20</td>
<td></td>
</tr>
<tr>
<td>8th 6 months</td>
<td></td>
<td>$40.82</td>
<td>$57.59</td>
<td>$74.36</td>
<td></td>
</tr>
<tr>
<td>Carpenter</td>
<td>6/24/2014</td>
<td>$55.24</td>
<td>$79.04</td>
<td>$102.84</td>
<td>X X X X H D Y</td>
</tr>
<tr>
<td>Apprentice Rates:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st year</td>
<td></td>
<td>$33.82</td>
<td>$46.92</td>
<td>$60.00</td>
<td></td>
</tr>
<tr>
<td>3rd 6 months</td>
<td></td>
<td>$36.21</td>
<td>$50.49</td>
<td>$64.78</td>
<td></td>
</tr>
<tr>
<td>4th 6 months</td>
<td></td>
<td>$38.58</td>
<td>$54.05</td>
<td>$69.52</td>
<td></td>
</tr>
<tr>
<td>5th 6 months</td>
<td></td>
<td>$40.97</td>
<td>$57.64</td>
<td>$74.30</td>
<td></td>
</tr>
<tr>
<td>6th 6 months</td>
<td></td>
<td>$43.33</td>
<td>$61.17</td>
<td>$79.02</td>
<td></td>
</tr>
<tr>
<td>7th 6 months</td>
<td></td>
<td>$45.72</td>
<td>$64.77</td>
<td>$83.80</td>
<td></td>
</tr>
<tr>
<td>8th 6 months</td>
<td></td>
<td>$48.09</td>
<td>$68.32</td>
<td>$88.54</td>
<td></td>
</tr>
</tbody>
</table>

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Page 3 of 33
Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 8/13/2015
Contract must be awarded by: 11/11/2015

Page 4 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piledriver</td>
<td>CA687Z1P</td>
<td>6/24/2014</td>
<td>$55.24</td>
<td>$79.04</td>
<td>$102.84</td>
<td>X X H X H D Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$55.24</td>
<td>$79.04</td>
<td>$102.84</td>
<td>X X H X H D Y</td>
</tr>
</tbody>
</table>

Four 10s allowed Monday-Saturday; double time due when over 12 hours worked per day

Apprentice Rates:

| 1st 6 months | $33.82 | $46.92 | $60.00 |
| 2nd 6 months | $38.58 | $54.05 | $69.52 |
| 3rd 6 months | $43.33 | $61.17 | $79.02 |
| 4th 6 months | $48.09 | $68.32 | $88.54 |

Cement Mason

<table>
<thead>
<tr>
<th>Cement Mason</th>
<th>br1cm</th>
<th>10/15/2014</th>
<th>$50.05</th>
<th>$71.17</th>
<th>$92.28</th>
<th>X X H H D N</th>
</tr>
</thead>
</table>

Apprentice Rates:

| 1st 6 months | $29.13 | $39.45 | $49.77 |
| 2nd 6 months | $31.20 | $42.54 | $53.87 |
| 3rd 6 months | $35.31 | $48.67 | $62.01 |
| 4th 6 months | $39.46 | $54.85 | $70.23 |
| 5th 6 months | $41.52 | $57.91 | $74.30 |
| 6th 6 months | $45.67 | $64.10 | $82.52 |

Cement Mason

<table>
<thead>
<tr>
<th>Cement Mason</th>
<th>CE514</th>
<th>11/10/2011</th>
<th>$46.30</th>
<th>$64.89</th>
<th>$83.48</th>
<th>H H D H H D N</th>
</tr>
</thead>
</table>

Apprentice Rates:

| 1st 6 months | $26.77 | $36.07 | $45.36 |
| 2nd 6 months | $28.68 | $38.91 | $49.13 |
| 3rd 6 months | $32.50 | $44.59 | $56.66 |
| 4th 6 months | $36.32 | $50.26 | $64.19 |
| 5th 6 months | $38.24 | $53.11 | $67.98 |
| 6th 6 months | $42.06 | $58.79 | $75.51 |

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

### Page 5 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drywall</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drywall Taper</td>
<td>PT-22-D</td>
<td></td>
<td>9/5/2014</td>
<td>$44.41 $57.66 $70.91</td>
<td></td>
<td>H</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H D H D D D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four 10s allowed Monday-Thursday</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Make up day allowed</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Friday make-up day for bad weather or holidays</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- **First 3 months:** $31.16 $37.79 $44.41
- **Second 3 months:** $33.81 $41.76 $49.71
- **Second 6 months:** $36.46 $45.73 $55.01
- **Third 6 months:** $39.11 $49.71 $60.31
- **4th 6 months:** $40.43 $51.69 $62.95

<table>
<thead>
<tr>
<th><strong>Electrician</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside Wireman</td>
<td>EC-58-IW</td>
<td></td>
<td>10/2/2014</td>
<td>$58.91 $77.39 $95.87</td>
<td></td>
<td>H H H H H H D N</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- **0-1000 hours:** $36.73 $44.12 $51.51
- **1000-2000 hours:** $38.58 $46.89 $55.21
- **2000-3500 hours:** $40.43 $49.67 $58.91
- **3500-5000 hours:** $42.27 $52.44 $62.59
- **5000-6500 hours:** $45.97 $57.98 $69.99
- **6500-8000 hours:** $49.67 $63.53 $77.39

<table>
<thead>
<tr>
<th><strong>Sound and Communication Installer</strong></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound and Communication Installer</td>
<td>EC-58-SC</td>
<td></td>
<td>6/19/2015</td>
<td>$38.11 $51.23 $64.35</td>
<td></td>
<td>H H H H H H D N</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- **Period 1:** $24.99 $31.55 $38.11
- **Period 2:** $26.30 $33.52 $40.73
- **Period 3:** $27.62 $35.50 $43.37
- **Period 4:** $28.93 $37.46 $45.99
- **Period 5:** $30.25 $39.44 $48.63
- **Period 6:** $31.55 $41.39 $51.23

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Wayne

---

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

#### Page 6 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevator Constructor</td>
<td>Elevator Constructor</td>
<td>EL 36</td>
<td>$56.46</td>
<td>$94.99</td>
<td>D D D D D D D Y</td>
</tr>
<tr>
<td>Make up day allowed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLazier</td>
<td>Glazier</td>
<td>GL-357</td>
<td>$47.35</td>
<td>$65.97</td>
<td>$84.58</td>
</tr>
<tr>
<td>If a four 10 hour day workweek is scheduled, four 10s must be consecutive, M-F.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apprentice Rates:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Year Apprentice</td>
<td>$37.74</td>
<td>$58.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2nd Year Apprentice</td>
<td>$41.90</td>
<td>$66.94</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Year Apprentice</td>
<td>$43.98</td>
<td>$70.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4th Year Apprentice</td>
<td>$48.14</td>
<td>$78.96</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Heat and Frost Insulator

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
</table>

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Statewide

**Official Rate Schedule**  
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 8/13/2015
Contract must be awarded by: 11/11/2015

Page 7 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Updated</th>
<th>Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat and Frost Insulator and Asbestos Worker</td>
<td>Heat and Frost Insulators and Asbestos Workers</td>
<td>AS25</td>
<td>1/29/2014</td>
<td>$60.25</td>
<td>$76.00</td>
<td>$91.74</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ironworker</td>
<td>Fence, Sound Barrier &amp; Guardrail erection/installation and Exterior Signage work</td>
<td>IR-25-F1</td>
<td>2/24/2015</td>
<td>$34.65</td>
<td>$46.65</td>
<td>$58.65</td>
</tr>
</tbody>
</table>

Four 10s must be worked for a minimum of 2 consecutive weeks, Monday thru Thursday. All hours worked in excess of 10 will be paid at double time. All hours worked on the fifth day, comment

Four 10s must be worked for a minimum of 2 consecutive weeks. OVERTIME is different on a four 10 week. OT is 2x for hours beyond 10. All hours on fifth day, M-F require time and one half. Sat first 8 hours, 1.5, all hours after 8 require double time.

Apprentice Rates:

<table>
<thead>
<tr>
<th>Level</th>
<th>1st Year</th>
<th>2nd Year</th>
<th>3rd Year</th>
<th>4th Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>60% Level</td>
<td>$24.25</td>
<td>$25.55</td>
<td>$26.86</td>
<td>$28.15</td>
</tr>
<tr>
<td>65% Level</td>
<td>$24.25</td>
<td>$25.55</td>
<td>$26.86</td>
<td>$28.15</td>
</tr>
<tr>
<td>70% Level</td>
<td>$24.25</td>
<td>$25.55</td>
<td>$26.86</td>
<td>$28.15</td>
</tr>
<tr>
<td>75% Level</td>
<td>$24.25</td>
<td>$25.55</td>
<td>$26.86</td>
<td>$28.15</td>
</tr>
<tr>
<td>80% Level</td>
<td>$24.25</td>
<td>$25.55</td>
<td>$26.86</td>
<td>$28.15</td>
</tr>
<tr>
<td>85% Level</td>
<td>$24.25</td>
<td>$25.55</td>
<td>$26.86</td>
<td>$28.15</td>
</tr>
</tbody>
</table>

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 8/13/2015
Contract must be awarded by: 11/11/2015

Page 8 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siding, Glazing, Curtain Wall</td>
<td>IR-25-GZ2</td>
<td>6/5/2015</td>
<td>$47.16</td>
<td>$58.82</td>
<td>$70.48</td>
<td>X X H H H D D Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td>Friday</td>
<td></td>
</tr>
</tbody>
</table>

Apprentice Rates:
- Level 1: $30.23 | $36.84 | $43.43
- Level 2: $32.34 | $39.58 | $46.80
- Level 3: $34.46 | $42.33 | $50.19
- Level 4: $36.58 | $45.08 | $53.57
- Level 5: $38.69 | $47.82 | $56.95
- Level 6: $40.81 | $50.57 | $60.33

Pre-engineered Metal Work | IR-25-PE-Z1 | 6/3/2015 | $46.49 | $56.78 | $67.06 | X X H X X D Y |
| | | | Make up day allowed | comment | |

Apprentice Rates:
- 1st Year: $27.36 | $32.83 | $38.31
- 3rd 6 month period: $29.48 | $35.71 | $41.93
- 4th 6 month period: $31.61 | $38.60 | $45.58
- 5th 6 month period: $33.73 | $41.46 | $49.20
- 6th 6 month period: $35.86 | $45.24 | $54.62

Reinforced Iron Work | IR-25-RF | 6/3/2015 | $56.11 | $84.03 | $111.95 | H H D D D D N |
| | | | Make up day allowed | |

Apprentice Rates:
- Level 1: $36.76 | $54.83 | $72.88
- Level 2: $39.13 | $58.37 | $77.62
- Level 3: $41.49 | $61.92 | $82.34
- Level 4: $44.03 | $65.72 | $87.42
- Level 5: $46.56 | $69.53 | $92.48
- Level 6: $49.10 | $73.33 | $97.56

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Page 8 of 33
Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 8/13/2015
Contract must be awarded by: 11/11/2015

Page 9 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigging Work</td>
<td>IR-25-RIG</td>
<td>6/3/2015</td>
<td>$62.08</td>
<td>$92.78</td>
<td>$123.47</td>
<td>H H H H H D N</td>
</tr>
</tbody>
</table>

Apprentice Rates:

- Level 1 & 2: $37.38 $55.69 $74.01
- Level 3: $40.21 $59.94 $79.67
- Level 4: $43.03 $64.17 $85.31
- Level 5: $45.86 $68.42 $90.97
- Level 6: $48.69 $72.67 $96.63

Decking

IR-25-SD 6/5/2015 $54.04 $80.73 $107.42 X X H H H D D Y

4 tens may be worked Monday thru Thursday @ straight time. If bad weather, Friday may be a make up day. If holiday celebrated on a Monday, 4 10s may be worked Tuesday thru Friday. Work in excess of 12 hours per day must be paid @ double time.

Make up day allowed

- Friday for 4 tens M-Th
- Saturday for 5 eights M-F

Structural, ornamental, welder and pre-cast

IR-25-STR 6/3/2015 $62.21 $92.94 $123.67 H H H H H D D Y

4 tens may be worked Monday thru Thursday @ straight time. If bad weather, Friday may be a make up day. If holiday celebrated on a Monday, 4 10s may be worked Tuesday thru Friday. Work in excess of 12 hours per day must be paid @ double time.

Make up day allowed

Apprentice Rates:

- Levels 1 & 2: $36.79 $55.10 $73.42
- Level 3: $39.62 $59.35 $79.08
- Level 4: $42.44 $63.58 $84.72
- Level 5: $45.27 $67.83 $90.38
- Level 6: $48.10 $72.08 $96.04
- Level 7: $50.92 $76.30 $101.68
- Level 8: $53.75 $80.55 $107.34

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Page 9 of 33
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

#### Page 10 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Last Updated</th>
<th>Straight Time and a Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
</table>

#### Industrial Door erection & construction

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR-25-STR-D</td>
<td></td>
<td>6/19/2015</td>
<td>$42.54</td>
<td>$63.44</td>
<td>$84.34</td>
<td>H H H H H D Y</td>
</tr>
</tbody>
</table>

*Make up day allowed  comment*

Friday for bad weather when 4 tens scheduled for M-Th. If holiday celebrated on M, 4 tens may be worked T-F. Work in excess of 12 hours per day must be paid @ double time.

**Laborer**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>L33401-A-CC</td>
<td>Construction Laborer, Demolition Laborer, Mason Tender, Carpenter Tender, Drywall Handler, Concrete Laborer, Cement Finisher Tender, Concrete Chute, and Concrete Bucket Handler</td>
<td>7/15/2013</td>
<td>$43.54</td>
<td>$61.94</td>
<td>$80.33</td>
<td>H H H H H D Y</td>
</tr>
</tbody>
</table>

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. **Make up days may also include 8 Saturday**

**Apprentice Rates:**

- 0-1,000 work hours: $37.60, $53.03, $68.45
- 1,001 - 2,000 work hours: $38.79, $54.81, $70.83
- 2,001 - 3,000 work hours: $39.98, $56.60, $73.21
- 3,001 - 4,000 work hours: $42.35, $60.15, $77.95

**Signal Man (on sewer & caisson work), Air, Electric or Gasoline Tool Operator, Concrete Vibrator Operator, Acetylene Torch & Air Hammer Operator; Scaffold Builder, Caisson Worker**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>L33401-B-SB</td>
<td></td>
<td>7/16/2013</td>
<td>$43.80</td>
<td>$62.33</td>
<td>$80.85</td>
<td>H H H H H D Y</td>
</tr>
</tbody>
</table>

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. **Make up days may also include 8 Saturday**

---

**Official Request #: 1043**  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Wayne  
**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
## Official 2015 Prevailing Wage Rates for State Funded Projects

### Issue Date:
8/13/2015

### Contract must be awarded by:
11/11/2015

### Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnace Battery Heater Tender, Burning Bar &amp; Oxy-Acetylene Gun</td>
<td>L33401-D-HH</td>
<td>7/16/2013</td>
<td>$44.04</td>
<td>$62.69</td>
<td>$81.33</td>
<td>H H H H H H D Y</td>
<td></td>
</tr>
</tbody>
</table>

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.  
Make up day allowed  comment Saturday

| Expediter Man, Top Man and/or Bottom Man (Blast Furnace Work or Battery Work) | L33401-E-EX | 7/16/2013 | $44.79 | $63.81 | $82.83 | H H H H H H D Y |

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.  
Make up day allowed  comment Saturday

| Cleaner/Sweeper Laborer; Furniture Laborer | L33401-F-CL | 7/16/2013 | $38.09 | $53.76 | $69.43 | H H H H H H D Y |

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 hours of work on Saturdays @ straight time.  
Make up day allowed  comment Saturday

| Lansing Burner, Blaster & Powder Man; Air, Electric or Gasoline Tool Operator (Blast Furance Work or Battery Work) | L334C | 7/16/2013 | $44.29 | $63.06 | $81.83 | X X X H H H H H D Y |

<table>
<thead>
<tr>
<th>Official Request #:</th>
<th>1043</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requestor:</td>
<td>Wayne State University</td>
</tr>
<tr>
<td>Project Description:</td>
<td>Life Science Exterior Wall System Stabilization</td>
</tr>
<tr>
<td>Project Number:</td>
<td>WSU # 006-253400</td>
</tr>
<tr>
<td>County:</td>
<td>Wayne</td>
</tr>
</tbody>
</table>

Page 11 of 33
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

#### Page 12 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasterer Tender, Plastering Machine Operator</td>
<td>LPT-1</td>
<td>10/25/2013</td>
<td>$43.54</td>
<td>$61.94</td>
<td>$80.33 X X H H H D Y</td>
</tr>
</tbody>
</table>

If conditions beyond the employer/employee's control prevent one or more hours of working during Mon-Fri, the employer may choose to work up to 10 hour straight time weekdays. Work may be scheduled up to 10 hours per Mon-Fri for the purpose of reaching 40 hours @ straight time. Make up days may also include 8 Saturday

**Apprentice Rates:**

0 - 1,000 hours | $37.60 | $53.03 | $68.45  
1,001 - 2,000 hours | $38.79 | $54.81 | $70.83  
2,001 - 3,000 hours | $39.98 | $56.60 | $73.21  
3,001 - 4,000 hours | $42.35 | $60.15 | $77.95

**Laborer - Hazardous**

Class A performing work in conjunction with site preparation and other preliminary work prior to actual removal, handling, or containment of hazardous waste substances not requiring use of personal protective equipment required by state or federal regulations; or a laborer performing work in conjunction with the removal, handling, or containment of hazardous waste substances when use of personal protective equipment level "D" is required.

**Apprentice Rates:**

0-1,000 work hours | $37.60 | $53.03 | $68.45  
1,001-2,000 work hours | $38.79 | $54.81 | $70.83  
2,001-3,000 work hours | $39.98 | $56.60 | $73.21  
3,001-4,000 work hours | $42.35 | $60.15 | $77.95

---

**Official Request #: 1043**  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Wayne

---

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 8/13/2015
Contract must be awarded by: 11/11/2015

Page 13 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class B performing work in conjunction with the removal, handling, or containment of hazardous waste substances when the use of personal protective equipment levels &quot;A&quot;, &quot;B&quot; or &quot;C&quot; is required.</td>
<td>LHAZ-Z1-B</td>
<td>11/7/2014</td>
<td>$44.54</td>
<td>$63.44</td>
<td>$82.33</td>
<td>H H H H H D Y</td>
</tr>
</tbody>
</table>

*Make up day allowed comment*
4 10s allowed M-Th or T-F; inclement weather makeup day Friday

**Apprentice Rates:**

| 0-1,000 work hours | $38.36 | $54.17 | $69.97 |
| 1,001-2,000 work hours | $39.59 | $56.01 | $72.43 |
| 2,001-3,000 work hours | $40.83 | $57.87 | $74.91 |
| 3,001-4,000 work hours | $43.30 | $61.58 | $79.85 |

Laborer Underground - Tunnel, Shaft & Caisson

Class I - Tunnel, shaft and caisson laborer, dump man, shanty man, hog house tender, testing man (on gas), and watchman.

**Laborer Underground - Tunnel, Shaft & Caisson**

| LAUCT-Z1-1 | 9/6/2013 | $37.87 | $48.66 | $59.44 | X X X X X D Y |

**Apprentice Rates:**

| 0-1,000 work hours | $33.05 | $41.43 | $49.80 |
| 1,001-2,000 work hours | $34.02 | $42.88 | $51.74 |
| 2,001-3,000 work hours | $34.98 | $44.32 | $53.66 |
| 3,001-4,000 work hours | $36.91 | $47.21 | $57.52 |

Class II - Manhole, headwall, catch basin builder, bricklayer tender, mortar man, material mixer, fence erector, and guard rail builder.

**Apprentice Rates:**

| 0-1,000 work hours | $33.14 | $41.56 | $49.98 |
| 1,001-2,000 work hours | $34.10 | $43.00 | $51.90 |
| 2,001-3,000 work hours | $35.07 | $44.45 | $53.84 |
| 3,001-4,000 work hours | $37.01 | $47.37 | $57.72 |

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015  
**Page 14 of 33**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class III - Air tool operator (jack hammer man, bush hammer man and grinding man), first bottom man, second bottom man, cage tender, car pusher, carrier man, concrete man, concrete form man, concrete repair man, cement invert laborer, cement finisher, concrete shoveler, conveyor man, floor man, gasoline and electric tool operator, gunnite man, grout operator, welder, heading dinky man, inside lock tender, pea gravel operator, pump man, outside lock tender, scaffold man, top signal man, switch man, track man, tugger man, utility man, vibrator man, winch operator, pipe jacking man, wagon drill and air track operator and concrete saw operator (under 40 h.p.).</td>
<td>LAUCT-Z1-3 9/6/2013</td>
<td>$38.04 $48.91</td>
<td>$59.78</td>
<td>X X X X X X D Y</td>
<td></td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- **0-1,000 work hours**: $33.18 $41.62 $50.06  
- **1,001-2,000 work hours**: $34.15 $43.07 $52.00  
- **2,001-3,000 work hours**: $35.12 $44.53 $53.94  
- **3,001-4,000 work hours**: $37.07 $47.45 $57.84

| Class IV - Tunnel, shaft and caisson mucker, bracer man, liner plate man, long haul dinky driver and well point man. | LAUCT-Z1-4 9/6/2013 | $38.22 $49.18 | $60.14 | X X X X X X D Y |

**Apprentice Rates:**

- **0-1,000 work hours**: $33.32 $41.83 $50.34  
- **1,001-2,000 work hours**: $34.30 $43.30 $52.30  
- **2,001-3,000 work hours**: $35.28 $44.71 $54.26  
- **3,001-4,000 work hours**: $37.24 $47.71 $58.18

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Wayne

---

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
## Class V - Tunnel, shaft and caisson miner, drill runner, keyboard operator, power knife operator, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars)

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight Time and a Double Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAUCT-Z1-5</td>
<td>9/6/2013</td>
<td>$38.47</td>
<td>$49.56 $60.64 X X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $33.50 $42.10 $50.70
- 1,001-2,000 work hours: $34.50 $43.60 $52.70
- 2,001-3,000 work hours: $35.49 $45.09 $54.68
- 3,001-4,000 work hours: $37.48 $48.07 $58.66

## Class VI - Dynamite man and powder man.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight Time and a Double Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAUCT-Z1-6</td>
<td>9/6/2013</td>
<td>$38.80</td>
<td>$50.05 $61.30 X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $33.75 $42.47 $51.20
- 1,001-2,000 work hours: $34.76 $43.99 $53.22
- 2,001-3,000 work hours: $35.77 $45.51 $55.24
- 3,001-4,000 work hours: $37.79 $48.53 $59.28

## Class VII - Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes and flagstones.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight Time and a Double Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAUCT-Z1-7</td>
<td>9/6/2013</td>
<td>$32.08</td>
<td>$39.97 $47.86 X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $28.71 $34.91 $41.12
- 1,001-2,000 work hours: $29.38 $35.92 $42.46
- 2,001-3,000 work hours: $30.06 $36.94 $43.82
- 3,001-4,000 work hours: $31.41 $38.97 $46.52
## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

### Classification Last Updated Straight Time and a Half Double Time Overtime Provision

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
<th>Updated</th>
<th>Hourly</th>
<th>Half</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Landscape Laborer</strong></td>
<td>Landscape Specialist includes air, gas, and diesel equipment operator, skidsteer (or equivalent), lawn sprinkler installer on landscaping work where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintenance of landscape projects occurs. Sundays paid at time &amp; one half. Holidays paid at double time.</td>
<td>LLAN-Z1-A 6/26/2014</td>
<td>$28.58</td>
<td>$39.49</td>
<td>$50.39  X X H X X H D Y</td>
</tr>
</tbody>
</table>

| Skilled Landscape Laborer: small power tool operator, lawn sprinkler installers’ tender, material mover, truck driver when seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintaining of landscape projects occurs Sundays paid at time & one half. Holidays paid at double time. | LLAN-Z1-B 6/26/2014 | $24.36  | $33.16  | $41.95  X X H X X H D Y |

| **Marble Finisher**  | Marble Finisher A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday. | BR1-MF 10/20/2014 | $43.48  | $54.29  | $65.10  H H D H D D D Y |

### Apprentice Rates:

- **Level 1**: $19.04 $25.12 $31.20
- **Level 2**: $20.24 $26.92 $33.60
- **Level 3**: $27.01 $33.96 $40.90
- **Level 4**: $28.47 $36.14 $43.82
- **Level 5**: $29.99 $37.84 $45.70
- **Level 6**: $31.61 $39.86 $48.10
- **Level 7**: $33.30 $41.59 $49.87
- **Level 8**: $34.79 $43.48 $52.17

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Wayne

---

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

---

Page 16 of 33
## Official 2015 Prevailing Wage Rates for State Funded Projects

### Issue Date: 8/13/2015
### Contract must be awarded by: 11/11/2015

#### Page 17 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly</th>
<th>Double Overtime Hourly</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marble Mason</td>
<td>BR1-MM</td>
<td>10/17/2014</td>
<td>$50.29</td>
<td>$64.51</td>
<td>$78.72</td>
<td>H D H D D D Y</td>
</tr>
<tr>
<td>Apprentice Rates:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>$25.14</td>
<td>$32.65</td>
<td>$40.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>$28.20</td>
<td>$36.49</td>
<td>$44.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td>$33.41</td>
<td>$41.97</td>
<td>$50.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4</td>
<td>$36.15</td>
<td>$45.66</td>
<td>$55.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 5</td>
<td>$38.42</td>
<td>$48.17</td>
<td>$57.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 6</td>
<td>$42.07</td>
<td>$53.56</td>
<td>$65.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 7</td>
<td>$42.74</td>
<td>$54.38</td>
<td>$66.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 8</td>
<td>$43.67</td>
<td>$55.78</td>
<td>$67.88</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Operating Engineer | Crane with boom & jib or leads 120' or longer | EN-324-A120 | 6/12/2014 | $57.11 | $74.62 | $92.13 | X X H H D D D D Y |

*Double time after 12 hours M-F*

| Crane with boom & jib or leads 140' or longer | EN-324-A140 | 6/12/2014 | $57.93 | $75.85 | $93.77 | X X H H D D D D Y |

*Work in excess of 12 per day M-F shall be paid at double time.*

| Crane with boom & jib or leads 220' or longer | EN-324-A220 | 6/12/2014 | $58.23 | $76.30 | $94.37 | X X H H D D D D Y |

*Work in excess of 12 per day M-F shall be paid at double time.*

| Crane with boom & jib or leads 300' or longer | EN-324-A300 | 6/12/2014 | $59.73 | $78.55 | $97.37 | X X H H D D D D Y |

*Work in excess of 12 per day M-F shall be paid at double time.*
Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 8/13/2015
Contract must be awarded by: 11/11/2015

Page 18 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crane with boom &amp; jib or leads 400' or longer</td>
<td>EN-324-A400 6/12/2014</td>
<td>$61.23</td>
<td>$80.80</td>
<td>$100.37</td>
<td>X X H D D D Y</td>
<td></td>
</tr>
<tr>
<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressor or welding machine</td>
<td>EN-324-CW 6/12/2014</td>
<td>$46.26</td>
<td>$58.35</td>
<td>$70.43</td>
<td>X X H D D D Y</td>
<td></td>
</tr>
<tr>
<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forklift, lull, extend-a-boom forklift</td>
<td>EN-324-FL 6/12/2014</td>
<td>$53.57</td>
<td>$69.31</td>
<td>$85.05</td>
<td>X X H D D D D Y</td>
<td></td>
</tr>
<tr>
<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fireman or oiler</td>
<td>EN-324-FO 6/12/2014</td>
<td>$45.23</td>
<td>$56.80</td>
<td>$68.37</td>
<td>X X H D D D D Y</td>
<td></td>
</tr>
<tr>
<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular crane, job mechanic, concrete pump with boom</td>
<td>EN-324-RC 6/12/2014</td>
<td>$56.25</td>
<td>$73.33</td>
<td>$90.41</td>
<td>X X H D D D D Y</td>
<td></td>
</tr>
<tr>
<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular engineer, hydro-excavator, remote controlled concrete breaker</td>
<td>EN-324-RE 6/12/2014</td>
<td>$55.28</td>
<td>$71.88</td>
<td>$88.47</td>
<td>X X H D D D D Y</td>
<td></td>
</tr>
<tr>
<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Straight Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-999 hours</td>
<td>$44.32</td>
<td>$55.94</td>
<td>$67.55</td>
</tr>
<tr>
<td>1,000-1,999 hours</td>
<td>$45.99</td>
<td>$58.45</td>
<td>$70.89</td>
</tr>
<tr>
<td>2,000-2,999 hours</td>
<td>$47.64</td>
<td>$60.92</td>
<td>$74.19</td>
</tr>
<tr>
<td>3,000-3,999 hours</td>
<td>$49.30</td>
<td>$63.41</td>
<td>$77.51</td>
</tr>
<tr>
<td>4,000-4,999 hours</td>
<td>$50.96</td>
<td>$65.90</td>
<td>$80.83</td>
</tr>
<tr>
<td>5,000-5,999 hours</td>
<td>$52.62</td>
<td>$68.39</td>
<td>$84.15</td>
</tr>
</tbody>
</table>

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015  

#### Page 19 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly Provision</th>
<th>Double Time Provision</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Engineer - DIVER</strong></td>
<td>Diver/Wet Tender/Tender/Rov Pilot/Rov Tender</td>
<td>GLFD</td>
<td>$52.80 $79.20 $105.60 H H H H H D N</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operating Engineer - Marine Construction</strong></td>
<td>Diver/Wet Tender, Engineer (hydraulic dredge)</td>
<td>GLF-1</td>
<td>$65.00 $84.85 $104.70 X X H H H D Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Make up day allowed**

**Subdivision of county** all Great Lakes, islands therein, & connecting & tributary waters

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly Provision</th>
<th>Double Time Provision</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crane/Backhoe Operator, 70 ton or over Tug Operator, Mechanic/Welder, Assistant Engineer (hydraulic dredge), Leverman (hydraulic dredge), Diver Tender</td>
<td>GLF-2</td>
<td>2/12/2014</td>
<td>$63.50 $82.60 $101.70 X X H H H D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friction, Lattice Boom or Crane License Certification</td>
<td>GLF-2B</td>
<td>2/12/2014</td>
<td>$64.50 $84.10 $103.70 X X H H H D Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Make up day allowed**

**Subdivision of county** All Great Lakes, islands therein, & connecting & tributary waters

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly Provision</th>
<th>Double Time Provision</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs or more), Tug/Launch Operator, Loader, Dozer on Barge, Deck Machinery</td>
<td>GLF-3</td>
<td>2/12/2014</td>
<td>$59.30 $76.30 $93.30 X X H H H D Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Make up day allowed**

**Subdivision of county** All Great Lakes, islands therein, & connecting & tributary waters

---

Official Request #: 1043  
Requestor: Wayne State University  
Project Description: Life Science Exterior Wall System Stabilization  
Project Number: WSU # 006-253400  
County: Statewide

Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:**  8/13/2015  
**Contract must be awarded by:**  11/11/2015  

**Page 20 of 33**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight</th>
<th>Double</th>
<th>Overtime</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GLF-4</td>
<td>Deck Equipment Operator, (Machineryman/Fireman), (4 equipment units or more), Off Road Trucks, Deck Hand, Tug Engineer, &amp; Crane Maintenance 50 ton capacity and under or Backhoe 115,000 lbs or less, Assistant Tug Operator</td>
<td>2/12/2014</td>
<td>$53.60 $67.75 $81.90</td>
<td>X X H H H H D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Holiday pay = $96.05 per hour, wages &amp; fringes</td>
<td>Make up day allowed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subdivision of county</td>
<td>All Great Lakes, islands therein, &amp; connecting &amp; tributary waters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Operating Engineer Steel Work

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight</th>
<th>Double</th>
<th>Overtime</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EN-324-ef</td>
<td>Forklift, 1 Drum Hoist</td>
<td>9/5/2014</td>
<td>$58.16 $76.37 $94.58</td>
<td>H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EN-324-SW120</td>
<td>Crane w/ 120' boom or longer</td>
<td>9/5/2014</td>
<td>$60.86 $80.42 $99.98</td>
<td>H H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EN-324-SW120-O</td>
<td>Crane w/ 120' boom or longer w/ Oiler</td>
<td>9/5/2014</td>
<td>$61.86 $81.92 $101.98</td>
<td>H H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EN-324-SW140</td>
<td>Crane w/ 140' boom or longer</td>
<td>9/5/2014</td>
<td>$62.04 $82.19 $102.34</td>
<td>H H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EN-324-SW140-O</td>
<td>Crane w/ 140' boom or longer W/ Oiler</td>
<td>9/5/2014</td>
<td>$63.04 $83.69 $104.34</td>
<td>H H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EN-324-SW220</td>
<td>Boom &amp; Jib 220' or longer</td>
<td>9/5/2014</td>
<td>$62.31 $82.60 $102.88</td>
<td>H H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EN-324-SW220-O</td>
<td>Crane w/ 220' boom or longer w/ Oiler</td>
<td>9/5/2014</td>
<td>$63.31 $84.10 $104.88</td>
<td>H H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

### Page 21 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hourly</td>
<td></td>
<td>$105.88</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$84.85</td>
<td></td>
<td>$86.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$64.81</td>
<td></td>
<td>$66.31</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$63.81</td>
<td></td>
<td>$65.31</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$60.50</td>
<td></td>
<td>$61.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$53.15</td>
<td></td>
<td>$53.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$51.31</td>
<td></td>
<td>$51.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$49.81</td>
<td></td>
<td>$49.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$47.87</td>
<td></td>
<td>$47.87</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$49.81</td>
<td></td>
<td>$49.81</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$51.74</td>
<td></td>
<td>$51.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$53.62</td>
<td></td>
<td>$53.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$55.62</td>
<td></td>
<td>$55.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$57.56</td>
<td></td>
<td>$57.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$61.50</td>
<td></td>
<td>$61.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$61.43</td>
<td></td>
<td>$61.43</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$64.35</td>
<td></td>
<td>$64.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$67.24</td>
<td></td>
<td>$67.24</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$70.15</td>
<td></td>
<td>$70.15</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$73.07</td>
<td></td>
<td>$73.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$75.97</td>
<td></td>
<td>$75.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$81.38</td>
<td></td>
<td>$81.38</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$81.26</td>
<td></td>
<td>$81.26</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$84.56</td>
<td></td>
<td>$84.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$84.85</td>
<td></td>
<td>$84.85</td>
<td></td>
</tr>
</tbody>
</table>

### Apprentice Rates:

- **0-999 hours**: $47.87, $61.43, $75.00
- **1,000-1,999 hours**: $49.81, $64.35, $78.88
- **2,000-2,999 hours**: $51.74, $67.24, $82.74
- **3,000-3,999 hours**: $53.62, $70.15, $86.62
- **4,000-4,999 hours**: $55.62, $73.07, $90.50
- **5,000 hours**: $57.56, $75.97, $94.38

---

Official Request #: 1043  
Requestor: Wayne State University  
Project Description: Life Science Exterior Wall System Stabilization  
Project Number: WSU # 006-253400  
County: Wayne

---

[Official Rate Schedule]

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

---

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
<th>Updated</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoisting Operator, 2 Drum Hoist, &amp; Rubber Tire Backhoe</td>
<td>EN-324-SWHO 9/5/2014</td>
<td>$59.86</td>
<td>$78.92</td>
<td>$97.98 H H H D H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Make up day allowed</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>comment</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oiler</td>
<td>EN-324-SW 9/5/2014</td>
<td>$51.64</td>
<td>$66.59</td>
<td>$81.54 H H D H H D D Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Make up day allowed</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>comment</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tower Crane &amp; Derrick where work is 50' or more above first level</td>
<td>EN-324-SWTD50 9/5/2014</td>
<td>$61.59</td>
<td>$81.52$101.44 H H D H H D D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Make up day allowed</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>comment</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tower Crane &amp; Derrick 50' or more w/ Oiler where work station is 50' or more above first</td>
<td>EN-324-SWTD50-O 9/5/2014</td>
<td>$62.59</td>
<td>$83.02$103.44 H H D H H D D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Make up day allowed</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>comment</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 10s allowed M-Th with Friday makeup day because of bad weather</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Engineer Underground</td>
<td>Class I Equipment</td>
<td>EN-324A1-UC1 10/14/2014</td>
<td>$51.74</td>
<td>$66.98</td>
<td>$82.22 H H H H H D Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apprentice Rates:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-999 hours</td>
<td>$41.79</td>
<td>$52.45</td>
<td>$63.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,000-1,999 hours</td>
<td>$43.32</td>
<td>$54.75</td>
<td>$66.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,000-2,999 hours</td>
<td>$44.84</td>
<td>$57.03</td>
<td>$69.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3,000-3,999 hours</td>
<td>$46.36</td>
<td>$59.31</td>
<td>$72.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4,000-4,999 hours</td>
<td>$47.89</td>
<td>$61.61</td>
<td>$75.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5,000-5,999 hours</td>
<td>$49.41</td>
<td>$63.89</td>
<td>$78.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Class II Equipment</td>
<td>EN-324A1-UC2 10/14/2014</td>
<td>$47.01</td>
<td>$59.89</td>
<td>$72.76 H H H H H D Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Class III Equipment</td>
<td>EN-324A1-UC3 10/14/2014</td>
<td>$46.28</td>
<td>$58.79</td>
<td>$71.30 H H H H H D Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Official Request #: 1043</td>
<td>Requestor: Wayne State University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project Description: Life Science Exterior Wall System Stabilization</td>
<td>Project Number: WSU # 006-253400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>County: Wayne</td>
<td>Official Rate Schedule</td>
<td>Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

## Page 23 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and Half Hourly</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class IV Equipment</td>
<td>EN-324A1-UC4</td>
<td>10/14/2014</td>
<td>$45.71</td>
<td>$57.94</td>
<td>$70.16</td>
<td>H H H H H D Y</td>
</tr>
<tr>
<td>Master Mechanic</td>
<td>EN-324A1-UMM</td>
<td>10/14/2014</td>
<td>$51.99</td>
<td>$67.81</td>
<td>$83.63</td>
<td>H H H H H D</td>
</tr>
<tr>
<td>Painter</td>
<td>PT-22-P</td>
<td>10/8/2014</td>
<td>$42.82</td>
<td>$55.63</td>
<td>$68.43</td>
<td>H H D D D Y</td>
</tr>
</tbody>
</table>

### Apprentice Rates:

- **First 6 months**: $30.02  $36.43  $42.83
- **Second 6 months**: $33.86  $42.19  $50.51
- **Third 6 months**: $35.14  $44.11  $53.07
- **Fourth 6 months**: $36.42  $46.03  $55.63
- **Fifth 6 months**: $37.70  $47.95  $58.19
- **Final 6 months**: $38.98  $49.87  $60.75

### Pipe and Manhole Rehab

- **General Laborer for rehab work or normal cleaning and cctv work-top man, scaffold man, CCTV assistant, jetter-vac assistant**  
  TM247  4/17/2015  $28.20  $38.20  H H H H H H H N

- **Tap cutter/CCTV Tech/Grout Equipment Operator: unit driver and operator of CCTV; grouting equipment and tap cutting equipment**  
  TM247-2  4/17/2015  $32.70  $44.95  H H H H H H H N

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Statewide

---

**Official Rate Schedule**  
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Page 23 of 33
# Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

## Page 24 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CCTV Technician/Combo Unit Operator:</td>
<td>TM247-3</td>
<td>4/17/2015</td>
<td>$31.45</td>
<td>$43.07</td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>Boiler Operator:</td>
<td>TM247-4</td>
<td>4/17/2015</td>
<td>$33.20</td>
<td>$45.70</td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>Combo Unit driver &amp; Jetter-Vac Operator</td>
<td>TM247-5</td>
<td>4/17/2015</td>
<td>$33.20</td>
<td>$45.70</td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>Pipe Bursting &amp; Slip-lining Equipment Operator</td>
<td>TM247-6</td>
<td>4/17/2015</td>
<td>$34.20</td>
<td>$47.20</td>
<td>H</td>
</tr>
</tbody>
</table>

### Pipefitter

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Hourly</th>
<th>Half Time</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipefitter</td>
<td>PF-636</td>
<td>6/30/2014</td>
<td>$66.73</td>
<td>$87.93</td>
<td>$105.13</td>
</tr>
</tbody>
</table>

*comment*

Four 10s allowed during the week preceding, following and/or the week of a holiday.

### Apprentice Rates:

- 1st & 2nd periods: $26.93, $35.28, $42.28
- 3rd period: $28.93, $38.28, $46.28
- 4th period: $30.18, $40.16, $48.78
- 5th period: $31.43, $42.03, $51.28
- 6th period: $32.68, $43.90, $53.78
- 7th period: $33.93, $45.78, $56.28
- 8th period: $34.93, $47.28, $58.28
- 9th period: $35.93, $48.78, $60.28
- 10th period: $37.36, $50.92, $63.14

---

**Official Request #**: 1043  
**Requestor**: Wayne State University  
**Project Description**: Life Science Exterior Wall System Stabilization  
**Project Number**: WSU # 006-253400  
**County**: Wayne  

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasterer</td>
<td>Plasterer</td>
<td>BR1P</td>
<td>11/1/2012</td>
<td>$45.04</td>
<td>$67.56</td>
<td>$90.08</td>
<td>H H H H H H D N</td>
</tr>
<tr>
<td>Plasterer</td>
<td>Plasterer</td>
<td>PL67</td>
<td>9/8/2010</td>
<td>$44.72</td>
<td>$60.11</td>
<td>$75.50</td>
<td>H H X D D D D N</td>
</tr>
</tbody>
</table>

Apprentice Rates:
- 1st 6 months: $32.11, $48.17, $64.22
- 2nd 6 months: $33.40, $50.10, $66.80
- 3rd 6 months: $34.69, $52.04, $69.38
- 4th 6 months: $37.28, $55.92, $74.56
- 5th 6 months: $39.87, $59.81, $79.74
- 6th 6 months: $42.45, $63.68, $84.90

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

### Page 26 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plumber</td>
<td>Plumber</td>
<td>PL-98</td>
<td>7/18/2013</td>
<td>$64.45</td>
<td>$84.87</td>
<td>$101.29</td>
</tr>
<tr>
<td>comment</td>
<td>4 tens allowed M-Th or T-F; OT of time and one half required on 11th &amp; 12th hour of any ten hour days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apprentice Rates:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 1</td>
<td></td>
<td>$19.93</td>
<td>$26.43</td>
<td>$32.93</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 2</td>
<td></td>
<td>$23.90</td>
<td>$31.40</td>
<td>$38.90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 3</td>
<td></td>
<td>$30.60</td>
<td>$39.19</td>
<td>$47.77</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 4</td>
<td></td>
<td>$31.23</td>
<td>$40.13</td>
<td>$49.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 5</td>
<td></td>
<td>$32.39</td>
<td>$41.87</td>
<td>$51.35</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 6</td>
<td></td>
<td>$33.54</td>
<td>$43.59</td>
<td>$53.65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 7</td>
<td></td>
<td>$34.69</td>
<td>$45.32</td>
<td>$55.95</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 8</td>
<td></td>
<td>$35.86</td>
<td>$47.07</td>
<td>$58.29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 9</td>
<td></td>
<td>$37.01</td>
<td>$48.80</td>
<td>$60.59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Period 10</td>
<td></td>
<td>$38.16</td>
<td>$50.53</td>
<td>$62.89</td>
<td></td>
</tr>
</tbody>
</table>

| Roofer         | Commercial Roofer | RO-149-WOM | 8/18/2008 | $48.46 | $62.29 | $76.62 | H | H | D | H | H | D | N |
| Straight time is not to exceed ten (10) hours per day or forty (40) hours per week. |
| Make up day allowed |
| Apprentice Rates: | | | | | | |
| | Apprentice 1 | | $32.62 | $39.86 | $48.04 |
| | Apprentice 2 | | $36.80 | $44.80 | $53.30 |
| | Apprentice 3 | | $38.22 | $46.93 | $56.14 |
| | Apprentice 4 | | $39.25 | $48.48 | $58.20 |
| | Apprentice 5 | | $40.47 | $50.30 | $60.64 |
| | Apprentice 6 | | $41.87 | $52.40 | $63.44 |

| Sewer Relining | Class I-Operator of audio visual CCTV system including remote in-ground cutter and other equipment used in conjunction with CCTV | SR-I | 11/3/2014 | $42.76 | $57.75 | $72.74 | H | H | H | H | H | D | N |

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Statewide  

**Official Rate Schedule**  
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Page 26 of 33
## Official 2015 Prevailing Wage Rates for State Funded Projects

### Issue Date:
8/13/2015

### Contract must be awarded by:
11/11/2015

### Page 27 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class II-Operator of hot water heaters and circulation system; water jetters; and vacuum and mechanical debris removal systems and those assisting.</td>
<td>SR-II</td>
<td>11/3/2014</td>
<td>$41.23</td>
<td>$55.46</td>
<td>$69.68</td>
</tr>
</tbody>
</table>

**Sheet Metal Worker**

<table>
<thead>
<tr>
<th>Name</th>
<th>SHM-80</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 4 10 schedule may be worked, 4 consecutive days Monday thru Friday.</td>
<td>Sheet Metal Worker</td>
<td>9/9/2014</td>
<td>$61.83</td>
<td>$78.74</td>
<td>$95.65</td>
<td>H H D X H H D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

1. 1st & 2nd Periods Indentured after 6-11
   - $39.18 | $46.79 | $54.40
2. 3rd & 4th Periods Indentured after 6-11
   - $40.88 | $49.34 | $57.80
3. 5th & 6th Periods Indentured after 6-11
   - $42.56 | $51.86 | $61.16
4. 7th & 8th Periods Indentured after 6-11
   - $44.25 | $54.40 | $64.54
5. 9th & 10th Periods Indentured before 6-11
   - $51.92 | $64.44 | $76.96

**Siding and decking**

<table>
<thead>
<tr>
<th>Name</th>
<th>SHM-80-SD</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make up day allowed</td>
<td>Siding and decking</td>
<td>1/13/2014</td>
<td>$42.07</td>
<td>$54.28</td>
<td>$66.48</td>
<td>H H H H H H D Y</td>
</tr>
</tbody>
</table>

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

### Prevailing Wage Rate Schedule 00410 - 30

Official Request #: 1043  
Requestor: Wayne State University  
Project Description: Life Science Exterior Wall System Stabilization  
Project Number: WSU # 006-253400  
County: Wayne

#### Page 28 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Hourly</th>
<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprinkler Fitter</td>
<td>Sprinkler Fitter</td>
<td>SP 704</td>
<td>12/19/2014</td>
<td>$64.92</td>
<td>$86.15</td>
<td>$107.38</td>
<td>H H D D D D Y</td>
</tr>
</tbody>
</table>
| | | | | 4 ten hour days allowed Monday-Friday  
| | | | | Double time pay due after 12 hours worked M-F |

#### Apprentice Rates:

1st Period $28.29  
2nd Period $41.57  
3rd Period $43.69  
4th Period $45.81  
5th Period $47.94  
6th Period $50.06  
7th Period $52.18  
8th Period $54.30  
9th Period $56.43  
10th Period $58.55

| Terrazzo Finisher | BR1-TRF | 10/17/2014 | $43.97 | $55.03 | $66.08 | H H D D D Y |
| Terrazzo Finisher | | | | 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday. |

#### Apprentice Rates:

Level 1 $19.04  
Level 2 $20.24  
Level 3 $27.01  
Level 4 $28.47  
Level 5 $29.99  
Level 6 $31.61  
Level 7 $33.30  
Level 8 $34.79

---

Official Rate Schedule

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Page 28 of 33
# Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

## Page 29 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrazzo Worker</td>
<td>BR1-TRW</td>
<td>10/17/2014</td>
<td>$49.73</td>
<td>$63.67</td>
<td>$77.60</td>
<td>H H D D D D Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

### Apprentice Rates:

- **Level 1:** $25.14  
- **Level 2:** $28.20  
- **Level 3:** $33.41  
- **Level 4:** $36.15  
- **Level 5:** $38.42  
- **Level 6:** $42.07  
- **Level 7:** $42.74  
- **Level 8:** $43.67

<table>
<thead>
<tr>
<th>Tile Finisher</th>
<th>BR1-TF</th>
<th>10/17/2014</th>
<th>$43.50</th>
<th>$54.32</th>
<th>$65.14</th>
<th>H H D D D D Y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

### Apprentice Rates:

- **Level 1:** $19.04  
- **Level 2:** $20.24  
- **Level 3:** $27.01  
- **Level 4:** $28.47  
- **Level 5:** $29.99  
- **Level 6:** $31.61  
- **Level 7:** $33.30  
- **Level 8:** $34.79

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Wayne

---

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 8/13/2015  
**Contract must be awarded by:** 11/11/2015

---

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Hourly</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tile Layer</td>
<td>BR1-TL</td>
<td>10/17/2014</td>
<td>$49.68</td>
<td>$63.59</td>
<td>$77.50</td>
<td>H H D D D D Y</td>
</tr>
</tbody>
</table>

A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Level</th>
<th>Rate per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>$25.14</td>
</tr>
<tr>
<td>Level 2</td>
<td>$28.20</td>
</tr>
<tr>
<td>Level 3</td>
<td>$33.41</td>
</tr>
<tr>
<td>Level 4</td>
<td>$36.15</td>
</tr>
<tr>
<td>Level 5</td>
<td>$38.42</td>
</tr>
<tr>
<td>Level 6</td>
<td>$42.74</td>
</tr>
<tr>
<td>Level 7</td>
<td>$42.74</td>
</tr>
<tr>
<td>Level 8</td>
<td>$43.67</td>
</tr>
</tbody>
</table>

**Truck Driver**

- **on all trucks of 8 cubic yard capacity or less**  
  (exception dump trucks of 8 cubic yard capacity or over, tandem axle trucks, transit mix and semis, euclid type equipment, double bottoms and low boys)

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time Hourly</th>
<th>Double Time Hourly</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM-RB1</td>
<td>8/8/2013</td>
<td>$41.92</td>
<td>$37.85</td>
<td>H H H H H H H Y</td>
</tr>
</tbody>
</table>

- **of all trucks of 8 cubic yard capacity or over**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time Hourly</th>
<th>Double Time Hourly</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM-RB1A</td>
<td>8/8/2013</td>
<td>$41.30</td>
<td>$38.00</td>
<td>H H H H H H H Y</td>
</tr>
</tbody>
</table>

- **on euclid type equipment**  
  *Make up day allowed*

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time Hourly</th>
<th>Double Time Hourly</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM-RB1B</td>
<td>8/8/2013</td>
<td>$41.45</td>
<td>$38.23</td>
<td>H H H H H H H Y</td>
</tr>
</tbody>
</table>

---

Official Request #: 1043  
Requestor: Wayne State University  
Project Description: Life Science Exterior Wall System Stabilization  
Project Number: WSU # 006-253400  
County: Wayne

Official Rate Schedule:  
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Underground Laborer Open Cut, Class I

**Construction Laborer**

LAUC-Z1-1  
9/5/2013  
$37.72  
$48.43  
$59.14  
X  
X  
X  
X  
X  
X  
D  
Y

**Apprentice Rates:**

- 0-1,000 work hours: $32.94  
  $41.26  
  $49.58
- 1,001-2,000 work hours: $33.90  
  $42.70  
  $51.50
- 2,001-3,000 work hours: $34.85  
  $44.13  
  $53.40
- 3,001-4,000 work hours: $36.76  
  $46.99  
  $57.22

**Underground Laborer Open Cut, Class II**

Mortar and material mixer, concrete form man, signal man, well point man, manhole, headwall and catch basin builder, guard rail builders, headwall, seawall, breakwall, dock builder and fence erector.

LAUC-Z1-2  
10/25/2013  
$37.83  
$48.60  
$59.36  
X  
X  
X  
X  
X  
X  
D  
Y

**Apprentice Rates:**

- 0-1,000 work hours: $33.02  
  $41.38  
  $49.74
- 1,001-2,000 work hours: $33.98  
  $42.82  
  $51.66
- 2,001-3,000 work hours: $34.95  
  $44.27  
  $53.60
- 3,001-4,000 work hours: $36.87  
  $47.15  
  $57.44

**Underground Laborer Open Cut, Class III**

Air, gasoline and electric tool operator, vibrator operator, drillers, pump man, tar kettle operator, bracers, rodder, reinforced steel or mesh man (e.g., wire mesh, steel mats, dowel bars, etc.), cement finisher, welder, pipe jacking and boring man, wagon drill and air track operator and concrete saw operator (under 40 h.p.), windlass and tugger man, and directional boring man.

LAUC-Z1-3  
9/5/2013  
$37.88  
$48.67  
$59.46  
X  
X  
X  
X  
X  
X  
D  
Y

**Apprentice Rates:**

- 0-1,000 work hours: $33.06  
  $41.44  
  $49.82
- 1,001-2,000 work hours: $34.02  
  $42.88  
  $51.74
- 2,001-3,000 work hours: $34.99  
  $44.33  
  $53.68
- 3,001-4,000 work hours: $36.92  
  $47.23  
  $57.54

Official Request #: 1043
Requestor: Wayne State University
Project Description: Life Science Exterior Wall System Stabilization
Project Number: WSU # 006-253400
County: Wayne

Official Rate Schedule
Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
### Underground Laborer Open Cut, Class IV

*Underground Laborer Open Cut, Class IV*

**Name:** Underground Laborer Open Cut, Class IV  
**Description:** Trench or excavating grade man.  
**LAUC-Z1-4**  
**9/5/2013**  
**Last Updated:** 9/5/2013  
**Straight Time and a Half:** $37.96  
**Double Time:** $48.79  
**Overtime Provision:** $59.62  

**Apprentice Rates:**

- **0-1,000 work hours:** $33.12  
- **1,001-2,000 work hours:** $34.09  
- **2,001-3,000 work hours:** $35.06  
- **3,001-4,000 work hours:** $36.99

### Underground Laborer Open Cut, Class V

**Name:** Underground Laborer Open Cut, Class V  
**Description:** Pipe Layer  
**LAUC-Z1-5**  
**9/5/2013**  
**Last Updated:** 9/5/2013  
**Straight Time and a Half:** $38.02  
**Double Time:** $48.88  
**Overtime Provision:** $59.74

**Apprentice Rates:**

- **0-1,000 work hours:** $33.16  
- **1,001-2,000 work hours:** $34.14  
- **2,001-3,000 work hours:** $35.11  
- **3,001-4,000 work hours:** $37.05

### Underground Laborer Open Cut, Class VI

**Name:** Underground Laborer Open Cut, Class VI  
**Description:** Grouting man, top man assistant, audio visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work and the installation and repair of water service pipe and appurtenances.  
**LAUC-Z1-6**  
**9/5/2013**  
**Last Updated:** 9/5/2013  
**Straight Time and a Half:** $35.47  
**Double Time:** $45.06  
**Overtime Provision:** $54.64

**Apprentice Rates:**

- **0-1,000 work hours:** $31.25  
- **1,001-2,000 work hours:** $32.10  
- **2,001-3,000 work hours:** $32.94  
- **3,001-4,000 work hours:** $34.63

---

**Official Request #:** 1043  
**Requestor:** Wayne State University  
**Project Description:** Life Science Exterior Wall System Stabilization  
**Project Number:** WSU # 006-253400  
**County:** Wayne  

---

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.

Page 32 of 33
### Official 2015 Prevailing Wage Rates for State Funded Projects

#### Issue Date: 8/13/2015

#### Contract must be awarded by: 11/11/2015

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight Time and a Double Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>9/5/2013</td>
<td>$32.09 $39.99 $47.88 X X X X X X D Y</td>
</tr>
</tbody>
</table>

**Underground Laborer Open Cut, Class VII**

Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes, flagstones etc.

**Apprentice Rates:**

- **0-1,000 work hours**
  - Hourly: $28.72
  - Half Time: $34.93
  - Double Time: $41.14

- **1,001-2,000 work hours**
  - Hourly: $29.39
  - Half Time: $35.93
  - Double Time: $42.48

- **2,001-3,000 work hours**
  - Hourly: $30.07
  - Half Time: $36.95
  - Double Time: $43.84

- **3,001-4,000 work hours**
  - Hourly: $31.42
  - Half Time: $38.98
  - Double Time: $46.54
Key Performance Indicator Tracking
Sworn Statement Requirements

The University tracks its level of spend along a number of socio-economic categories. This includes its spend with Diverse organizations, its spend with Detroit based organizations, and its spend with Michigan based organizations. To assist with this, The University has the following requirements for submission of your bid and for Pay Applications submitted by the successful contractor.

Submission of Bid

1. **Diverse or disadvantaged prime contractor:** Please specify in your bid whether ownership of your company is a certified diverse or disadvantaged business, according to the categories listed previously in section 00300. In accordance with guidelines from the MMSDC and GL-WBC, the University considers a business to be diverse when it is at least 51% owned, operated, and controlled by one or more members of a diverse classification. Section 00300 has a place for this information on page 00300-3.

2. **Detroit based and Michigan Based contractor:** It is presumed that the contractor is headquartered at the location we submit our Purchase Orders to, and that it should be the same address as listed in Section 00300 at the signature line. If a supplier is headquartered elsewhere, please make note of this information, so we do not inaccurately include or exclude spend.

Pay Applications and Sworn Statements

1. **Applicability:** The University requires Sworn Statements with Pay Applications for all construction projects that use
   - Subcontractors greater than $1,000.00
   - Significant suppliers (those with a purchase value of $1,000 or more).

2. **Sworn Statements:** The Supplier must submit applicable monthly sworn statements to the Project Manager and the Buyer of Record, in the format shown on page 2 of Section 00420. Sworn Statements are “always required” for this project, and are to be submitted to (Project Manager), the project manager, and to Valerie Kreher, Senior Buyer.

3. **Inclusion:** Sworn Statements are to detail the inclusion of recognized diverse and disadvantaged groups in the following 2 categories; Subcontracts or Suppliers. The University recognizes the following groups as diverse or disadvantaged:
   - Minority Business Enterprises (MBE)
   - Women Business Enterprises (WBE)
   - Disabled Veteran Enterprises (DVBE)
   - Disabled Person Enterprises (DBE)
   - Veteran Owned Businesses (VBE)
   - Small Businesses per the US Small Business Administration (SBE)

4. A complete set of the University's Supplier Diversity Program, which includes complete definitions of each of the above, can be downloaded from our web site at [http://policies.wayne.edu/administrative/04-02-supplier-diversity.php](http://policies.wayne.edu/administrative/04-02-supplier-diversity.php).
STATE OF MICHIGAN  
COUNTY OF _____________________  } §  
_________________________________________________  being duly sworn, deposes and says that (s)he makes the Sworn Statement on behalf of ____________________, who is the Contractor for an improvement to the following described real property situated in ______________________ County, Michigan, and described as follows:

That the following is a statement of each subcontractor and supplier and laborer, for which laborer the payment of wages or fringe benefits and withholdings is due but unpaid, with whom ______________________ has subcontracted for performance under the contract with the Owner or lessee thereof, and that the amounts due to the persons as of the date thereof are correctly and fully set forth opposite their names, as follows. (Subcontracts or suppliers of values of less than $1,000 are omitted.)

<table>
<thead>
<tr>
<th>NO.</th>
<th>SUBCONTRACTOR (Name, Address, Telephone Number)</th>
<th>Supplier or Laborer Type of Entity *see below</th>
<th>TYPE OF IMPROVEMENT FURNISHED</th>
<th>TOTAL CONTRACT PRICE</th>
<th>CONTRACT CHANGE +/-</th>
<th>ADJUSTED CONTRACT AMOUNT</th>
<th>AMOUNT PAID TO DATE</th>
<th>AMOUNT CURRENTLY OWING</th>
<th>BALANCE TO COMPLETE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Type of Entity: MBE=Minority Business Enterprises; WBE=Women Business Enterprises; DVE=Disabled Veteran Enterprises; DPE=Disabled Person Enterprises; VBE=Veteran Owned Businesses; SBE=Small Businesses per the US Small Business Administration

Please attach additional sheets if the number of items exceeds the page limit.
That ___________________________________________ has not procured material from, or subcontracted with, any person other than those set forth above and owes no money for the improvement.

Deponent further says that ___________________________________________ makes the foregoing statement as a representative of ___________________________________________, for the purpose of representing to the owner or lessee of the above-described premises and his or her agents that the above-described property is free from claims of construction liens, or the possibility of construction liens, except as specifically set forth above and except for claims of construction liens by laborers which may be provided pursuant to section 109 of the construction lien act, Act No. 497 of the Public Acts of 1980, as amended, being section 570.1109 of the Michigan Compiled Laws.

Deponent Signature

WARNING TO DEPONENT: A PERSON, WHO WITH INTENT TO DEFRAUD, GIVES A FALSE STATEMENT IS SUBJECT TO CRIMINAL PENALTIES AS PROVIDED IN SECTION 110 OF THE CONSTRUCTION LIEN, ACT, ACT NO. 497 OF THE PUBLIC ACTS OF 1980, ASAMENDED, BEING SECTION 570.2220 OF THE MICHIGAN COMPILLED LAWS.

Deponent Signature

WARNING TO OWNER: AN OWNER OR LESSEE OF THE ABOVE-DESCRIBED PROPERTY MAY NOT RELY ON THIS SWORN STATEMENT TO AVOID THE CLAIM OF A SUBCONTRACTOR, SUPPLIER, OR LABORER WHO HAS PROVIDED A NOTICE OF FURNISHING OR A LABORER WHO MAY PROVIDE A NOTICE OF FURNISHING PURSUANT TO SECTION 109 OF THE CONSTRUCTION LIEN ACT TO THE DESIGNEE IS NOT NAMED OR HAS DIED.

ON RECEIPT OF THIS SWORN STATEMENT, THE OWNER OF LESSEE, OR THE OWNER'S OR LESSEE'S DESIGNEE, MUST GIVE NOTICE OF ITS RECEIPT, EITHER IN WRITING, BY TELEPHONE, OR PERSONALLY, TO EACH SUBCONTRACTOR, SUPPLIER AND LABORER WHO HAS PROVIDED A NOTICE OF FURNISHING UNDER SECTION 109 OR, IF A NOTICE OF FURNISHING IS EXCUSED UNDER SECTION 108 OR 108A, TO EACH SUBCONTRACTOR, SUPPLIER OR LABORER WHO HAS PROVIDED A NOTICE OF FURNISHING OR WHO IS NAMED IN THE SWORN STATEMENT MAKES A REQUEST, THE OWNER, LESSEE, OR DESIGNEE SHALL PROVIDE THE REQUESTER A COPY OF THE SWORN STATEMENT WITHIN 10 BUSINESS DAYS AFTER RECEIVING THE REQUEST.

WARNING TO DEPONENT: A PERSON, WHO WITH INTENT TO DEFRAUD, GIVES A FALSE STATEMENT IS SUBJECT TO CRIMINAL PENALTIES AS PROVIDED IN SECTION 110 OF THE CONSTRUCTION LIEN, ACT, ACT NO. 497 OF THE PUBLIC ACTS OF 1980, ASAMENDED, BEING SECTION 570.2220 OF THE MICHIGAN COMPILLED LAWS.

Subscribed and sworn to before me this _________ day of ____________________

Notary Public ________________________________________________

______________________________________________________________

County, Michigan - My commission expires: __________________________

Rev 4 06.05.15
WAYNE STATE UNIVERSITY
PAYMENT PACKAGE DOCUMENT REQUIREMENTS (Revised 7-23-2015):

Review and comply with Section 410 of Bid Front End Documents.
Review and comply with Article 15 of the Supplemental General Conditions.

PAYMENT APPLICATION - AIA document G702 & G703 (or equivalent) –Checklist:

- Correct Project Name – Found on your contract.
- Correct Project Number – Found on your contract.
- Purchase Order Number – Required prior to beginning work.
- Correct Application Number.
- Correct Period Reporting Dates – Applications support docs must be sequential and within application range.
- Approved & Executed Change Orders Listed. (Cannot invoice for unapproved Change Orders)
- Schedule of Values percentages and amounts match the approved Pencil Copy Review – Signed by the Architect, Contractor, and University Project Manager.
- Correct Dates – Back dating not accepted.
- Signed and Notarized.

SWORN STATEMENT – Checklist:

- List all contractors, sub-contractors, suppliers… ≥ $1000.00
- A sworn statement is required from every Sub Contractor on the job with a material purchase or sub-contract of $1,000 or more. (All tiers.)
- Purchase Order Number
- Dates – Back dating not accepted.
- Signed and Notarized.

CERTIFIED PAYROLL - Dept. of Labor Form WH-347 – Checklist: (Union and Non-Union)

- For every contractor & sub-contractors work, for each week within the application reporting period.
- Correct Project Number
- List ALL workers on-site.
- Make sure their addresses are listed.
- Social Security Numbers MUST be blackened out or listed in XXX-XX-1234 format.
- Work classifications based on the job specific Prevailing Wage Schedule descriptions. If you require rates for additional classifications, contact the Michigan Department of Consumer & Industry Services. [http://www.cis.state.mi.us/bwuc/bsr/wh/revised_rates/whc_tbl.htm](http://www.cis.state.mi.us/bwuc/bsr/wh/revised_rates/whc_tbl.htm)
- For any workers paid at the Apprenticeship rates - proof of enrolled program and current completion required.
- Rate of Pay verified against the Prevailing Wage Schedule with an hourly cost breakdown of fringes paid.
- Authorized signatures on affidavit.
- Dates – must represent the weeks within the application period.

APPLICATION PACKAGE SUPPORTING DOCUMENTATION –

- Copies of Pay Stubs for each Certified Payroll period reported may be required– (Social Security Numbers MUST be blackened out or listed in XXX-XX-1234 format. Pay stubs need to reflect claimed participation of fringes like Medical, Dental, Retirement or 1099 classification.)

- Proof of Ownership for any ‘Owner Operator’ contractors not wishing to claim their time on prevailing wage. – (Must list their hours and dates worked on the WH-347 Form and enter EXEMPT on the income brackets.) The Owner must provide copies of “DBA” registration form confirming status as exempt from prevailing wage requirements.
o **Proof of Stored Materials** – Bill of Lading, Delivery Receipts, Pictures, Certificate of Insurance or endorsement page specifically insuring stored material at location, and pictures with materials clearly separated and labeled for WSU. The University reserves the right to on-site verification of stored materials.

o **Partial Conditional Waivers** – The contractor shall provide covering the entire amount of the application. For non-bonded projects all sub-contractors must provide for all applications which they have a draw.

o **Partial Unconditional Waivers** – Must release amount paid for work and be delivered starting with application #2 and in no case after payment application #3, through all sequential applications for contractors, sub-contractors, and suppliers listed on the Sworn Statements.

o **Full Unconditional Waivers** – Must be delivered with final payment application, releasing all contractors, sub-contractors, suppliers listed on the sworn statements and any legitimate notice of furnishings reconciled.

**FINAL PAYMENT APPLICATION – Checklist:**
- Clear and concise As-Built drawings.
- Operation and Maintenance Manuals
- Process and training directions (if applicable).
- Warranty of work in accordance with project documents.
- Submittals log and samples installed on the job.
- Certificate of Substantial Completion
- Full Unconditional Waiver

The Project Manager may provide additional requirements as may apply to individual jobs

Revised 7-23-2015
Contractor Performance Evaluation

In an effort to provide continuous process improvement regarding the construction of various university projects, Wayne State University is embarking upon a process of evaluating the contractor's overall performance following the completion of work. At the conclusion of the construction project a subjective evaluation of the Contractor’s performance will be prepared by the Project Manager and the supervising Director of Construction. The evaluation instrument that will be used in this process is presented below:
## Contractor Evaluation Sheet

**Contractor Name:** ____________________________________  **Project Name:** ____________________________________

**Contractor's PM:** ____________________________________  **PM Name:** ____________________________________

**Superintendent:** ____________________________________  **Project Number:** ________________

**PO#:** ___________________

**Designer:** ____________________________________

### EVALUATION SCORING:
- 1 = Unacceptable
- 2 = Less than Satisfactory
- 3 = Satisfactory or Neutral
- 4 = Good
- 5 = Excellent

**Note:** Comments are REQUIRED if any score is less than 3. Write comments on the back of the evaluation.

<table>
<thead>
<tr>
<th>Field Management</th>
<th>Score</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Work Planning / Schedule:</td>
<td>1 2 3 4 5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>2) Compliance with Construction Documents:</td>
<td>1 2 3 4 5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>3) Safety Plan &amp; Compliance:</td>
<td>1 2 3 4 5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4) Compliance with WSU procedures:</td>
<td>1 2 3 4 5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>5) Effectiveness of Project Supervision:</td>
<td>1 2 3 4 5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>6) Project Cleanliness:</td>
<td>1 2 3 4 5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>7) Punch List Performance:</td>
<td>1 2 3 4 5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>8) Contractor Coordination with WSU Vendors:</td>
<td>1 2 3 4 5</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### Administrative Management

| 9) Construction Quality: | 1 2 3 4 5 | 8     |       |

<table>
<thead>
<tr>
<th>Administrative Management</th>
<th>Score</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>10) Responsiveness:</td>
<td>1 2 3 4 5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>11) Contractor communication:</td>
<td>1 2 3 4 5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>12) Contractor Professionalism:</td>
<td>1 2 3 4 5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>13) Subcontractor Professionalism:</td>
<td>1 2 3 4 5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>14) Compliance with Contract Requirements:</td>
<td>1 2 3 4 5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>15) Submittal/RFI Process:</td>
<td>1 2 3 4 5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>16) Close-out - Accuracy of Documents</td>
<td>1 2 3 4 5</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

### Invoice and Change Management

<table>
<thead>
<tr>
<th>Invoice and Change Management</th>
<th>Score</th>
<th>Weight</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>17) Change Management</td>
<td>1 2 3 4 5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>18) Applications for Payment</td>
<td>1 2 3 4 5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>19) Timely payment of Subs/Suppliers:</td>
<td>1 2 3 4 5</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total 100</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>20) Level of Self-Performance:</th>
<th>Low</th>
<th>Med</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>21) Would you work with this Contractor again?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>22) Would you work with this team again?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### One year follow up

| 23) Warranty Support: | 1 2 3 4 5 |

### Evaluator

**Signature:__________________________________  Date:____________________**

**Title:** ____________________________________

**Name:** ____________________________________

**Please Print  Rev. 2-17-2015 RGP**

---

**CONTRACTOR'S EVALUATION EVALUATION  00440 - 2**
We are providing the evaluation instrument at this time to allow the bidder’s to review and understand the criterion that the University’s project management team will use to evaluate the successful bidder’s performance at the conclusion of the project. It is the intent of the university to utilize the results of this evaluation to determine if it will continue to conduct business with the Contractor in future bidding opportunities.

The scoring range is between 100 to 500 points, with 100 being low and 500 being high. Each question has an associated ‘weight’ factor, and the higher the weight; the greater the importance of satisfactory performance on the final score. At the conclusion of the project, and after the Project Manager and the supervising Director has prepared their independent evaluation, the University’s project representative will meet with the Contractor to review the results. Acceptable contractor performance is essential to avoid having the University decline future work with the Contractor. An appeals process is available for Contractor disagreement with evaluation scores.

Contractors engaged in work are encouraged to maintain an open and regular dialog with the Design and Construction Department over the course of the construction project to ensure that the final evaluation is an accurate representation of the Contractor’s performance.
AGREEMENT BETWEEN THE UNIVERSITY AND CONTRACTOR
FOR CONSTRUCTION SERVICES

Executed as of the _____ day of __________, 2015 by and between:

The Board of Governors, Wayne State University
Detroit, Michigan 48202
(The University)

and

CONTRACTOR’S_NAME
CONTRACTOR’S_ADDRESS
regarding

PROJECT_NAME
PROJECT_LOCATION
CONTRACT_NUMBER
In consideration of the mutual covenants and conditions contained herein, the Parties agree as follows:

**Article 1 - Scope of Work**

1.1 This Agreement provides for "(Enter a one or two-sentence description of the project)". The documents listed in Article 4 fully define the scope of work.

1.2 The Contractor shall furnish all the labor, materials, equipment, services, and supervision to perform all the work shown on the drawings and specifications listed in Article 18, including any addenda issued during the bid phase, and approved change orders issued during the construction phase.

1.3 The Contractor shall notify the University in writing within five (5) calendar days when the Contractor discovers any condition that will affect the contract amount or the completion date.

**Article 2 - Time of Completion**

2.1 The work to be performed under this Agreement shall commence upon the Contractor's receipt of a fully-executed Agreement, and substantial completion shall be achieved by Month Day Year.

**Article 3 - The Contract Sum**

3.1 The University shall pay the Contractor a "lump sum/not-to-exceed (pick one)" amount of $$$$$$$ ("Amount in words 00" /100 dollars) for the performance of all work associated with the Contractor's Base Bid "and Alternates (List)".

3.2 The University may, at its sole discretion, during the life of the contract, award the following alternates at the amounts indicated: 
"(If section 3.2 is not used, delete all text and enter Deleted"

<table>
<thead>
<tr>
<th>Description</th>
<th>Alternate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.3 In the event additional work becomes necessary, the following unit prices will apply: 
"(If section 3.3 is not used, delete all text and enter Deleted"

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Unit Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

**Article 4 - The Contract Documents**

4.1 The Contract Documents shall consist of this Agreement, the drawings and specifications as listed in Article 18, the General Conditions of the Contract for Construction as defined by AIA Document A201 1970 Edition, except as otherwise provided herein, and Wayne State University's Supplementary General Conditions 1997 Edition.

4.2 For any inconsistencies found among or between these Contract Documents, the language contained in this Agreement shall prevail over all other documents and the Supplementary General Conditions shall prevail over the General Conditions. In the event of a conflict between
the Drawings and Specifications, the requirement for the higher quantity and/or higher quality shall prevail.

**Article 5 – Examination of Premises**

5.1 The Contractor acknowledges that the University provided the opportunity for a thorough examination of the project site and its surroundings and that the Contractor knows of no conditions preventing accomplishment of the full scope of work within the time and for the amount specified in this Agreement.

5.2 The University will deny all claims for additional time and/or cost for conditions that could have been reasonably discovered during such an examination.

**Article 6 - The Architect/Engineer**

6.1 The Architect/Engineer for this project is:

"(List the Architect and Engineer separately if appropriate)"

Architect's/Engineer's_Firm_Name
Street_Number_and_Street_Name
Suite_or_PO_Box
City, State, Zip
Phone_No._/FAX_No.

6.2 The University will appoint a Project Manager who will be the University’s point of contact for all matters of contract administration including, but not limited to, interpretation of documents, defining the scope of work, approving work schedules, and approving contract payments.

**Article 7 - Additional Work**

7.1 The University reserves the right to let other Agreements in connection with this work. The Contractor will afford other Contractors or the University's own workforce reasonable opportunity for the delivery and storage of their material and for the performance of their work and shall properly connect and coordinate its work with theirs.

7.2 If any part of the Contractor's work depends for proper execution or results upon the work of another Contractor or the University's own workforce, the Contractor shall inspect and promptly report to the University’s Project Manager any defects in such work that render it unsuitable for such proper execution and results. The Contractor’s failure to so inspect and report shall constitute an acceptance of the work of others as fit and proper for reception of the Contractor’s work and as a waiver of any claim or defense against the University or other contractor which relies in whole or in part upon the contention that such work was unsuitable for proper execution and resolution.

**Article 8 – Dispute Resolution**

8.1 Jurisdiction over all claims, disputes, and other matters in question arising out of or relating to this contract or the breach thereof, shall rest in the Court of Claims of the State of Michigan. No provision of this agreement may be construed as Wayne State University’s consent to submit any claim, dispute or other matter in question for dispute resolution pursuant to any arbitration or mediation process, whether or not provisions for dispute resolution are included in a document which has been incorporated by reference into this agreement. Specifically, all references to Arbitration contained in the General Conditions are superseded by this Article.
8.2 In any claim or dispute by the Contractor against the University, which cannot be resolved by negotiation, the Contractor shall submit the dispute in writing for an administrative decision by the University’s Vice President for Finance and Administration, within 30 days of the end of negotiations. Any decision of the Vice President shall be made within 45 days of receipt from the Contractor and is final unless it is challenged by the Contractor by filing a lawsuit in the Court of Claims of the State of Michigan within one year of the issuance of the decision. The Contractor agrees that appeal to the Vice President is a condition precedent to filing suit in the Michigan Court of Claims.

8.3 For purposes of this section, the “end of negotiations” shall be deemed to have occurred when:

8.3.1 Either party informs the other that pursuant to this section, negotiations are at an impasse; or

8.3.2 The Contractor submits the dispute in writing to the Vice President.

8.4 Unless otherwise agreed by the University in writing, and notwithstanding any other rights or obligations of either of the parties under any Contract Documents or Agreement, the Contractor shall continue with the performance of its services and duties during the pendency of any negotiations or proceedings to resolve any claim or dispute, and the University shall continue to make payments in accordance with the Contract Documents; however, the University shall not be required or obligated to make payments on or against any such claims or disputes during the pendency of any proceeding to resolve such claims or disputes.

**Article 9 - Termination for Convenience**

9.1 Upon thirty days written notice to the Contractor, the University may, without cause and without prejudice to any other right or remedy of the University, elect to terminate the contract. In such case, the Contractor shall only be paid (without duplication of any items), using a Close out Change Order, for the following:

9.1.1 For completed and acceptable work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

9.1.2 For expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted work, including fair and reasonable sums for overhead and profit on such expenses.

9.2 The Contractor shall not be paid on account of loss of anticipated profits or revenue, delay or disruption, or other economic loss arising out of or resulting from such termination. For purposes of this section, “fair and reasonable sums for overhead and profit” shall be determined by reference to Michigan law, without reference to principles used for such determinations in arbitration.

**Article 10 - Progress Payments**

10.1 On or before the 20th day of each month, the Contractor shall submit a written application for
payment, using form AIA G702, to the Architect/Engineer and the University’s Project Manager for review. The Architect/Engineer shall have ten (10) calendar days to accept or reject the Contractor’s application for payment. Acceptable applications for payment shall then be submitted to the University for Payment of authorized amount(s) within thirty (30) calendar days of receipt by the University’s Project Manager.

10.2 The application for payment shall contain a full schedule of values organized and sorted by subcontractor, by Construction Specifications Institute standard work categories, or in another format acceptable to the University.

10.3 Monthly progress payments shall show the percentage of work installed as of the date of the application, less amount previously installed and the amount due for the application period. The Contractor shall deduct a 10% retainage from the balance due for each progress payment and indicate the net amount due on each application.

10.4 When 50% of the work associated with this Agreement is installed, the Contractor shall not deduct additional retainage from the balance due from the University. When substantial completion is achieved and acknowledged by the Architect/Engineer, the Contractor and the University in writing, the University shall remit to the Contractor all but 2% of the retainage. The remaining 2% shall be retained by the University until the final payment is authorized and remitted to the Contractor.

Article 11 - Acceptance and Final Payments

11.1 Final payment shall be due thirty (30) days after the completion of the work, including all punch list items, provided the work is fully completed and the Agreement fully performed.

11.2 Upon receipt of written notice that the work is ready for final inspection and acceptance, the Architect/Engineer shall promptly inspect the work. When the Architect/Engineer concludes that the work is acceptable and the Agreement to be fully performed, the Architect/Engineer shall promptly issue a final certificate with an original signature, stating that the work provided is complete and acceptable and that the entire remaining balance found to be due the Contractor shall be remitted by the University once the final application for payment is received.

11.3 If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor and the Architect/Engineer so certifies, the University shall, upon certificate of the Architect/Engineer, and without terminating the Contract, make payments of the balance due for that portion of the work fully completed and accepted. Such payments shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

Article 12 - Non-Discrimination

12.1 The Contractor agrees that it will not discriminate against any employee or applicant for employment, to be employed in the performance of this Agreement, with respect to hire, tenure, terms, conditions or privileges of employment or any matter directly or indirectly related to employment, because of race, color, religion, sex, age, national origin, or ancestry. Breach of this covenant may be regarded as material breach of this Agreement.

12.2 The Contractor further agrees that it will, in all subcontracts relating to the performance of the work under this Agreement, provide in its subcontracts that the subcontractor will not discriminate against any employee or applicant for employment, to be employed in the performance of such contract, with respect to hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment because of race, sex, age, color, religion,
national origin or ancestry. Breach of this covenant may also be regarded as a material breach of this Agreement.

**Article 13 – Laborers and Mechanics**

13.1 All laborers and mechanics must be covered by Worker’s Compensation and Employer’s Liability Insurance as required by Federal and Michigan law. The Contractor shall also require all of its Subcontractors to maintain this insurance coverage.

13.2 The Contractor acknowledges and shall abide by the University’s prohibition on use of 1099 independent contractors and owner/ operator business entities. The Contractor shall ensure that all classifications of laborers and construction mechanics performing Work on the Project job site are employees of the Contractor or any Trade Contractor for any tier thereof, and that each worker is covered by workers compensation insurance.

**Article 14 - Prevailing Wages**

14.1 The Contractor and each subcontractor shall pay to each class of mechanics and laborers not less than the wage and fringe benefit rates prevailing in the Detroit Metropolitan Area, as determined by the Michigan Department of Licensing and Regulatory Affairs, Department of Wage and Hour. The Contractor shall post on site, in a conspicuous place, a copy of all applicable wage and benefit rates, and shall provide the University with a copy of the applicable wage and benefit rates.

14.2 The Contractor and each subcontractor shall keep an accurate record showing the name and occupation of and the actual benefits and wages paid to each laborer and mechanic employed in connection with this contract. The Contractor and each subcontractor shall make certified payroll records available to the University’s representatives upon request.

14.3 If a Contractor or subcontractor fails to pay the prevailing rates of wages and fringe benefits and does not cure such failure within ten (10) days after notice to do so by the University, the University shall have the right, at its option, to do any or all of the following:

14.3.1 Withhold all or any portion of payments due the Contractor as may be considered necessary by the University to pay laborers and mechanics the difference between the rates of wages and fringe benefits required by this Agreement and the actual wage and fringe benefits paid.

14.3.2 Terminate part or all of this Agreement or any subagreement and proceed to complete the Agreement or subagreement by separate agreement with another Contractor or otherwise, in which case the Contractor and its sureties shall be liable to the University for any excess costs incurred by the University.

14.4 The Contractor shall include terms identical or substantially similar to this section in any Agreement or subagreement pertaining to the project.

**Article 15 - Save Harmless**

15.1 The Contractor shall indemnify, defend and hold harmless the University, its agents and employees from any and all loss, damage, claims, and causes of action whatsoever, including all costs, expenses and attorneys’ fees arising out of Contractor’s performance of obligations under the terms and conditions of this agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the negligence of the University, its agents other than the Contractor, or its employees.
Article 16 - Liquidated Damages

16.1 It is understood and agreed that, if the project is not completed within the time specified in the Agreement plus any extension of time allowed pursuant thereto, the actual damages sustained by the University because of any such delay will be uncertain and difficult to ascertain, and it is agreed that the reasonable foreseeable value of the use of said project by the University would be the sum of $\text{Amount in words 00} /100$ dollars per day. Therefore, the Contractor shall pay as liquidated damages to the University the sum of $\text{Amount in words 00} /100$ dollars per day for each day's delay in substantially completing said project beyond the time specified in this Agreement and any extensions of time allowed thereunder.

"ENTER N/A FOR ABOVE AMOUNT IF NO LIQUIDATED DAMAGES"

Article 17 - Interpretation

17.1 This Agreement shall be interpreted and construed according to the laws of the State of Michigan.

17.2 If one part of this Agreement is found to be void by legal or legislative action, the remainder of the contract remains in full effect.

Article 18 - Drawings and Specifications

18.1 The Technical Specifications and the Project Manual dated SPECIFY_DATES, and the following List of Drawings represents the scope of work as defined in the Contract Documents from Article 4.

<table>
<thead>
<tr>
<th>Drawing No.</th>
<th>Description</th>
<th>Dated</th>
</tr>
</thead>
</table>
IN WITNESS WHEREOF the parties to these presents have hereunto set their hands as of the day and year first written above.

Signed, sealed and delivered
In the presence of:

CONTRACTOR'S NAME GOES HERE

By ____________________________________
Signature

____________________________________
Please print name here

____________________________________
Date signed

____________________________________
Title

Witness

THE BOARD OF GOVERNORS of WAYNE STATE UNIVERSITY

By ____________________________________
William R. Decatur, Vice President for Finance and Business Operations

____________________________________
Date signed

Form Contract Approved by OGC 06/13 - LG
Rev. 5-6.30.2014 formatting only RGP
Rev.6-1-15-2015 date changes only SS
Rev.7-7-1-2015 formatting, signatory only RGP
FORM OF GUARANTEE

PROJECT: Life Science Exterior Wall System Stabilization

OWNER: BOARD OF GOVERNORS, WAYNE STATE UNIVERSITY

CONTRACTOR: ____________________________________________

DATE: ________________________________________________

Know all men by these presents that, in consideration of my (our) having been awarded the Contract or Subcontract for complete furnishing and installation of:

Life Science Exterior Wall System Stabilization (006-253400)

For: Board of Governors, Wayne State University

In conformity with drawings and specifications prepared by Architect or Engineer, Desai Nasr Consulting Engineers, and known as the buildings indicated above, I (we) do hereby agree that, should I (we) be notified that the said work has proved faulty, etc., that I (we) will return to the buildings within three (3) working days of the receipt of such notice, and will furnish the necessary labor and material to repair such work to the satisfaction of the Owner and without cost to the Owner.

The Agreement shall remain in full force and effect for a one year period (DATE TBD)

WITNESS: ____________________________________________

signed: ____________________________________________

Subcontractor

by: ________________________________________________

address: ____________________________________________

city/state/zip: ____________________________________________

signed: ____________________________________________

General Contractor

by: ________________________________________________

(THIS FORM TO BE FILED IN DUPLICATE.)
GENERAL CONDITIONS (Revised 10-2009)

A. Although AIA Document A201 - Twelfth Edition (April 1970) - "General Conditions of the Contract for Construction" is not bound herein, it forms a part of these construction documents.

B. A reference copy of AIA Document A201 - Twelfth Edition (April 1970) - "General Conditions of the Contract for Construction" is on file at the following location:

Wayne State University
Finance & Facilities Management
Procurement & Strategic Sourcing
Academic / Administrative Services Building
5700 Cass Avenue
Detroit Michigan 48202
SUPPLEMENTARY GENERAL CONDITIONS

OF

THE CONTRACT FOR CONSTRUCTION

Facilities Planning & Management - Design & Construction Services

Wayne State University
WSU SUPPLEMENTARY GENERAL CONDITIONS
OF THE
CONTRACT FOR CONSTRUCTION

NOTE: The following items related to A.I.A. General Conditions, A.I.A. Document A-201 - Twelfth Edition (April 1970), by specific number being amended to. These items, as amendments, shall have precedence over the article being amended.

ARTICLE 1 - CONTRACT DOCUMENTS

1. DEFINITIONS

1.1 The Agreement

The Agreement executed by the Contractor and the Owner.

1.2 EXECUTION, CORRELATION, INTENT, AND INTERPRETATIONS

1.2.6 "General Conditions and "Supplementary General Conditions" apply with equal force to all Contractors, Subcontractors work, and extra work required under this Contract.

1.2.7 Precedence of Drawings and Specifications. The Agreement has precedence over WSU Supplementary General Conditions.

WSU Supplementary General Conditions have precedence over A.I.A. A-201 General Conditions of the Contract.

Specifications have precedence over drawings. Full-size drawings have precedence over scale drawings. Large-scale plans and details have precedence over small-scale plans and details. Figured dimensions have precedence over plans and elevations.

ARTICLE 2 - ARCHITECT

2.1 DEFINITION

2.1.1.1 The term Architect or Architect/Engineer as used in these specifications refers to Facilities Planning and Management - Design Services, and/or Consulting Architect/Engineer.

2.2 ADMINISTRATION OF THE CONTRACT

2.2.16 The Architect will assign Field Representatives to make periodic visits to the project for the purpose of assisting the Architect in carrying out his field responsibilities at the site. The duties, responsibilities and limitations of authority of any such Field Representative shall be as follows:

a. Explain Contract Documents: Assist the Contractor via the Contractor's Superintendent to understand the intent of the Contract Documents.

b. Observations: Conduct on-site observations and spot checks of the work in progress as a basis for determining conformance of the work, material, and equipment with the Contract Documents.

c. Additional Information: Obtain from the Architect, additional details or information, if and when required, at the job site for proper execution of the work.

d. Modifications: Consider and evaluate suggestions or modifications that may be submitted by the Contractor and report them with recommendations to the Architect for final decision.

e. Construction Schedule and Completion: Be alert to the completion, and report same to the Architect. When the construction work has been completed in accordance with the Contract Documents, advise the Architect that the work is ready for general inspection and acceptance.

f. Job Conferences: Attend and report to the Architect on all required conferences held at the job
g. Observe Tests: See that tests which are required by the Contract Documents are actually conducted; observe, record and report to the Architect all details relative to the test procedures; and advise the architect's office in advance of the schedules of tests.

h. Inspection by Others: If inspectors, representing local, state or federal agencies having jurisdiction over the project, visit the job site, accompany such inspectors during their trips through the project, record the outcome of these inspections, and report same to the Architect's office.

i. Shop Drawings: Do not permit the installation of any materials and equipment for which shop drawings are required unless such drawings have been duly approved and issued by the Architect.

j. Contractor's Requisitions for Payment: Review and make recommendations to the Architect for disposition.

k. List of Items for Correction: After substantial completion, make a list of items for correction before final inspection and check each item as it is corrected.

l. Owner's Occupancy of the Building: If the Owner occupies (to any degree) the building prior to actual completion of the work by the Contractor, be especially alert to possibilities of claims for damage to completed work prior to the acceptance of the building.

m. Owner Existing Operation: In the case of additions to or Demolitions of an existing facility, which must be maintained as an operational unit, be alert to conditions on the job site which may have an effect on the Owner's existing operation.

n. Limitations of Authority: Do not become involved in any of the following areas of responsibility unless specific exceptions are established by written instructions issued by the Architect.

   aa. Do not authorize deviations from the Contract Documents.

   bb. Avoid conducting any test personally.

   cc. Do not enter into the area of responsibility of the Contractor's field superintendent.

   dd. Do not expedite job for Contractor unless so instructed by the Architect.

   ee. Do not advise on or issue directions relative to any aspect of the building technique or sequence unless a specific technique or sequence is called for in the Specifications or by written instructions from the Architect.

   ff. Do not approve shop drawings or samples.

   gg. Do not authorize or advise the Owner to occupy the Project, in whole or in part, prior to the final acceptance of the building.

   hh. Do not issue a Certificate for Payment.

ARTICLE 3 - OWNER

3.5  OWNER'S RIGHT TO DO WORK

3.5.1 The Owner may exercise his right, which is hereby acknowledged by the Contractor, to let independent of the Contract for the work herein specified, any other work on the premises even if of like character and trades, and the Owner shall not be liable for any damage, loss or expense incurred by the Contractor through the fault of any other Contractor so employed by the Owner. The Contractor acknowledges the necessity of work by others, to be performed at approximately the same time as the work hereunder, and agrees to perform his work in full cooperation with the work of such other trades and/or Contractors, partially or entirely completed, by such other trades and/or Contractors, or by the Owner, when, in the opinion of the Architect, such access or use is necessary for the performance and completion of any portion or all of the work of others or of any work on the site.
3.6 OWNER'S ACCESS AND PARTIAL OCCUPANCY

3.6.1 The Owner shall have access to the work at all times, and at his election, may from time to time (prior to the stipulated contract completion date) occupy any of the units or parts of the project as the work in connection therewith is complete to such a degree as will, in the opinion of the Owner, permit their temporary or permanent use. The Owner, prior to any such partial occupancy, give notice to the Contractor thereof and such occupancy shall be upon the following terms:

a. Such occupancy shall not constitute an acceptance of work not performed in accordance with the Contract nor shall such occupancy relieve the Contractor of liability to perform any work by the Contract by not complete at the time of occupancy.

b. Except as otherwise provided by an agreement at the time of such partial occupancy, the Contractor shall be relieved of all maintenance costs on units or parts so occupied.

c. The Contractor shall not be responsible for wear and tear or damage resulting from partial occupancy.

d. The Owner shall assume risk of loss with respect to any unit or part so occupied.

e. The Contractor shall, if required by the Owner, furnish heat, light, water, or other such services to the units or parts occupied and the Owner shall make proper remuneration therefore to the Contractor.

3.6.2 The Contractor agrees that the Owner shall have the right, after seven (7) days' written notice to the Contractor, to place and install as much equipment and machinery during the progress of the work as is possible before the completion of the various parts of the work; and further agrees that such placing and installation of equipment shall not in any way evidence the completion of the work or any portion thereof, nor signify the Owner's acceptance of the work or any portion thereof. Should the Owner place or install such equipment and machinery with his own forces he shall be responsible for any damage to work of the Contractor caused by the Owner's work or workmen. Should the Owner have such placement or installation performed by another Contractor, then the Owner shall require said Contractor to be responsible for all such damage caused by his work, his workers, or his subcontractors.

ARTICLE 4 - CONTRACTOR

4.4 LABOR AND MATERIALS

4.4.3 All materials shall be so delivered, stored and handled to prevent the inclusion of foreign materials and the damage of materials by water or breakage. Packaged materials shall be delivered and stored in original packages until ready for use. Packages or materials showing evidence of water or other damage shall be rejected. All materials shall be of the respective qualities specified herein.

4.4.4 The Contractor shall be responsible for the proper care and protection of all his materials, equipment, etc., delivered at the site. Building materials, equipment, etc., may be stored on the premises subject to the approval of the Architect.

4.4.5 To insure timely availability of critical materials in case of national emergency, the Contractor may order his subcontractors to proceed with fabrication of the same earlier than required by normal sequence of construction. In the event storage facilities are not available on the site or at the source of fabrication, the Owner will endeavor to provide such storage space as may be available to care for same. Where this is necessary, the Contractor shall be paid for all stored material on the Owner's property or on the properties approved by the Owner upon approval of certified invoices. It shall be the Contractor's obligation to pay for all handling costs and damage to this material. The Contractor shall protect this property against damage.

4.6 TAXES

4.6.1 The Bidder shall include in his proposal and make payment of all Federal, State, County and Municipal taxes including Michigan State Sales and Use Taxes, now in force or which may be enacted during the progress and completion of the work covered.

4.7 PERMITS, FEES AND NOTICES
4.7.3 The Contractor shall pay highway or DPW fees for damages to sidewalks, streets, or other public property or to any public utilities.

4.7.4 Permits and licenses of a temporary nature necessary for the execution of the work shall be secured and paid for by the Contractor.

4.7.5 Except for the General Building Permit (which is not required), the Contractor shall secure and pay for all other required permits, including the following:

- Electrical - State of Michigan
- Plumbing - State of Michigan
- Mechanical - State of Michigan
- Elevator - City of Detroit

4.7.6 The Contractor shall secure certificates of inspection and of occupancy that may be required by authorities having jurisdiction over the work. These certificates shall be delivered to the Architect upon completion of the work.

4.9 SUPERINTENDENT

4.9.2 The Contractor shall give sufficient supervision to the work, using his best skill and attention. He shall carefully study and compare all drawings, specifications, and other instructions, and shall at once report to the Architect any error, inconsistency, or omission which he may discover, but he shall not be held responsible for their existence or discovery.

4.9.3 The Contractor's superintendent shall periodically inspect the entire project to make certain that all of the stipulations of all of the articles of the General Conditions are being observed.

4.12 DRAWINGS AND SPECIFICATIONS AT THE SITE

4.12.1.1 Refer to Paragraph 4.12.1 of A.I.A. General Conditions of the Contract for Construction. Modify the last sentence of this paragraph to read:

"The Drawings, marked to record all changes made during construction, shall be incorporated in the Contractor's 'Informational Package'."

4.12.2 As a basic and interim step for the fulfillment of the "Informational Package", accurate records of all non-structural underground and concealed work shall be kept, including, but not limited to, all piping, conduit, equipment, and drainage and tunnel work. In addition, such records shall be available for review during various steps of the project.

4.13 SHOP DRAWINGS AND SAMPLES

4.13.9 Immediately before and as a condition of substantial completion, the Contractor shall provide the Owner an "Informational Package" and instructional sessions on the operation, maintenance, and service of the facility. The "Informational Package" shall include:

1. One (1) set of transparency (sepia) of the approved shop drawings and descriptive material submitted during construction. Any shop documents unobtainable in sepia shall be supplied in three (3) sets.

2. One (1) set of transparency (sepia) of constructional shop drawings with all installation revisions incorporated to reflect the as-built condition. Examples of constructional shop drawings are dimensioned conduit, piping and ductwork layout drawings.

3. Three (3) sets of instructional manuals on the installation, operation, maintenance and
service of equipment and systems, including parts lists.

Examples of Specific Information Required:

1. Electrical
   a. Conduit layout of light, power, and special systems, indicating dimensionally the locations and size of runs; circuit grouping and conductor size and number in conduit runs.
   b. System description and elementary diagrams, connection and interconnection diagrams, and device internal diagrams.

2. Mechanical
   a. Piping and ductwork layout indicating dimensionally the location and size of the runs.
   b. Description and diagrams of control systems.

Following the submittal of the "Informational Package", the Contractor shall schedule and provide, at the Owner’s convenience, instructional sessions for Owner’s personnel to acquaint them with the operation, maintenance, and service of the system.

3. Elevators
   a. Elementary diagrams and description of sequence of operation of the system control components, connection and interconnection diagrams, and device internal diagrams.

ARTICLE 5 - SUBCONTRACTORS

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.3 Delete Article 5.2.3 in its entirety.

5.2.4 Delete Article 5.2.4 in its entirety.

ARTICLE 7 - MISCELLANEOUS PROVISIONS (Revised 6-13-2011)

7.5 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

7.5.1 The successful Bidder will be required to furnish a Performance Bond and Labor and Material Payment bond in an amount equal to 100% of the contract award amount, and include such cost in the Proposal, complying with the laws of the State of Michigan. The graduated formula no longer applies.

A. Performance Bond and Labor and Material Payment Bond shall be from a surety company acceptable to the Owner and made payable as follows:

   (1) A Labor and Material Payment bond for 100% of the contract award amount to the Board of Governors of Wayne State University, and guaranteeing the payment of all subcontractors and all indebtedness incurred for labor, materials, or any cause whatsoever on account of the Contractor in accordance with the laws of the State of Michigan relating to such bonds.

   (2) A Performance bond for 100% of the contract award amount to the Board of Governors of Wayne State University to guarantee and insure the completion of work according to the Contract.

B. The only acceptable Performance Bond shall be the AIA A312 – 2010.

C. The Contractor shall include with his bid evidence of his ability to obtain a Performance Bond in the amount of 100% of the bid amount, and in accordance with the terms and conditions outlined in this section. Such evidence shall be project specific and shall be submitted on a form provided by the Surety or Agent thereof.

7.7 ROYALTIES AND PATENTS
7.7.1 Indemnification and Hold Harmless *(Revised 2-2015)*.
To the fullest extent permitted by law, the Contractor shall hold harmless, defend, and indemnify the Board of Governors of Wayne State University, the University, the Architect and Architect's Consultants, and officers, employees, representatives and agents of each of them, from and against any and all claims or losses arising out of or alleged to be resulting from, or relating to (1) the failure of the Contractor to perform its obligations under the Contract or the performance of its obligation in a willful or negligent manner; (2) the inaccuracy of any representation or warranty by the Contractor given in accordance with or contained in the Contract Documents; and (3) any claim of damage or loss by any subcontractor, or supplier, or laborer against the University, the Architect or the Architect's consultants arising out of any alleged act or omission of the Contractor or any other subcontractor, or anyone directly or indirectly employed by the Contractor or any subcontractor.

The Contractor shall also be liable for and hereby agrees to pay, reimburse, fully indemnify and hold the University, the Architect and Architect's Consultants, harmless from and against all costs and expenses of every nature (including attorney fees and expenses incident thereto) incurred by the University in collecting the amounts due from the Contractor, or otherwise enforcing its rights, under the indemnification described in this Article.

7.9 INTEREST

7.9.1 Delete Article 7.9 in its entirety.

**ARTICLE 8 - TIME**

8.1 DEFINITIONS

8.1.3 The Date of Substantial Completion of the Work is the Date certified by the Architect when construction of the entire work is sufficiently complete, in accordance with the Contract Documents, so the Owner may occupy the Work for the use for which it is intended. It is the beginning date for the guarantees on all the Project Work.

8.3.5 LIQUIDATED DAMAGES

It is understood that if said Contract is not completed within the time specified in the Contract plus any extension of time thereto, the Contractor shall pay Liquidated Damages to the Owner as set forth in Article 11 of the Agreement between Contractor and Owner for Construction.

**ARTICLE 9 - PAYMENT AND COMPLETION**

9.3 PROGRESS PAYMENTS

9.3.1 On or before the 20th day of each month, the Contractor shall submit to the Architect on the Owner's Standard Form, a written application for payment showing the proportionate value of the work installed to date from which shall be deducted, a reserve of 10% and all previous payments, and the balance of the amount as approved by the Architect shall be due and payable to the Contractor on or about the 15th day of the succeeding month.

9.3.2.2 No payments will be made because of materials or equipment stored off the site, except as provided for in Subparagraph 4.4.5 of the Supplementary General Conditions or other special cases the Owner may approve.

9.6 FAILURE OF PAYMENT

9.6.1 Delete Article 9.6 in its entirety.

**ARTICLE 11 - INSURANCE (Revised 2-06-2015)**

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.2 The insurance required by Subparagraph 11.1.1 shall be written for not less than any limits of liability specified herein, or required by law, whichever is greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under Paragraph 4.18.
During the life of the Contract, the Contractor shall maintain the following types of insurance:

A. **General Requirements**

**Type of Insurance** | **Minimum Requirement**
--- | ---
Commercial General Liability (CGL) | $1,000,000 combined single limit per occurrence $2,000,000 aggregate Umbrella Liability per occurrence and in the annual aggregate of $5,000,000.

- Contractor shall maintain commercial general liability (CGL)
- CGL insurance shall be written on Insurance Services form CG 00 01 (or substitute form providing equivalent coverage) and shall cover liability arising from premises, operation, independent contractors, products-completed operation, and personal injury, contractual liability broad form property damage liability, products and completed operations coverage and X,C,U (explosion, collapse, underground) hazards.

- $1,000,000 combined single limit

Commercial Automobile Liability (CSL) (including hired and non-owned vehicles)

- $1,000,000 combined single limit

Workers' Compensation (Employers' Liability)

- Statutory-Michigan $500,000

Professional Liability insurance

- $500,000 Per Occurrence and in the Aggregate annually.

This limit shall be dedicated to the risks of Professional Liability and it shall not be combined with limits of any other coverages such as Environmental/Pollution General Liability, or Umbrella Liability unless otherwise approved by the Owner. Coverage shall be for the benefit of the Contracting or Design-Build entity, its principles, Employees, affiliates, agents, and partners—whether joint or several. It is presumed that this insurance will be Claims Made, and therefore must have a Retro-active date prior to the performance of any work for the Owner, whether or not such work is under contract or purchase order. This insurance will be placed with an insurer licensed to do business in the State of Michigan and rated no less than A X; by AM Best

B. **Maximum Acceptable Deductibles**

**Type of Insurance** | **Maximum Deductible**
--- | ---
Comprehensive General Liability | $5,000
Fire Legal Liability | $5,000
Comprehensive Automobile Liability | -0-
Workers' Compensation | -0-
Property - All Risk | $ 500

11.1.3 The Board of Governors, Wayne State University, shall be named as an additional insured but only with respect to accidents arising out of the performance of said contract. The contractor shall prepare a certificate of insurance which shall name the “Office of Risk Management; 5700 Cass Avenue” as the Wayne State University certificate holder.

11.1.3.1 The Contractor shall either 1) require each of his Subcontractors to procure and to maintain during the life of his subcontract, Subcontractors' Comprehensive General Liability, Automobile Liability and Property Damage Liability Insurance of the type and in the same amounts as specified in the Subparagraph, or 2) insure the activity of his subcontractors in his own policy.
11.2 OWNER'S LIABILITY INSURANCE

Delete Article 11.2 in its entirety.

11.3 PROPERTY INSURANCE

Delete Article 11.3 in its entirety and replace with the following:

11.3.1 The Contractor shall purchase and maintain property insurance upon the entire work at the site to the full insurable value thereof. This insurance shall include the interests of the Owner, the Contractor, Subcontractors, and sub-subcontractors in the work and shall insure against the perils of Fire, Extended Coverage, Vandalism, and Malicious Mischief.

11.3.2 The Owner and Contractor waive all rights against each other for damages caused by fires or other perils to the extent covered by insurance provided under Subparagraph 11.3.1. The Contractor shall require similar waivers by Subcontractors and sub-subcontractors in accordance with Clause 5.3.1.5.

11.3.3 Insurance must be issued by an insurance company with an “A rating as denoted in the AM Best Key Rating Guide”.

ARTICLE 12 - CHANGES IN THE WORK

12.1 CHANGE ORDERS

12.1.8 Percentage markups in pricing under Subparagraphs 12.1.3.1, 12.1.3.3, and 1.2.4 shall be as limited in the Contract Documents. Unit price of Subparagraph 12.1.3.2 shall represent total unit cost to the Owner and shall include the Contractor's markup for overhead and profit.

ARTICLE 14 - TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 If the work is stopped for a period of thirty days under any order of any court or other public authority having jurisdiction, or as a result of any act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the contract or a subcontractor or their agents or employees or other persons performing any of the Work under a contract with the contractor, then the contractor may, upon seven days' written notice to the Owner and the Architect, terminate the contract and recover from the Owner payment for all Work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment, and machinery, including reasonable profit and damages.

ARTICLE 15 - ADDITIONAL CONDITIONS

15.1 SUBSTITUTION OF MATERIALS AND EQUIPMENT

15.1.1 Whenever a material, article, or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, or the like, it is so identified for the purpose of establishing a standard, and any material, article, or piece of equipment of other manufacturers or vendors, which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or piece of equipment so proposed is, in the opinion of the Architect, of equal substance, appearance, and function. It shall not be purchased or installed by the Contractor without the Architect's written approval.

15.2 NON-DISCRIMINATION PROVISION AND WAGE AND HOUR ACT

15.2.1 During the performance of this contract, the Contractor agrees as follows:

15.2.1.1 The Contractor shall not discriminate against any employee or applicant for employment because of sex, race, creed, color, age, or national origin. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their sex, race, age, creed, color, or national origin.
15.2.1.2 Such action shall include but not be limited to, the following: employment; upgrading; demotion; or transfer; recruitment or recruitment advertising; layoff or terminations; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

15.2.1.3 The Contractor will, in all solicitations, or advertisements for employees, placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to sex, race, creed, color, age or national origin.

15.2.1.4 The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice advising the labor union or worker's representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of October 27, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

15.2.1.5 The Contractor will comply with all provisions of the Executive Order No. 11246 of October 27, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor or other government agency or authority having jurisdiction.

15.2.1.6 The Contractor will furnish all information and reports required by Executive Order No. 11246 of October 27, 1965, and by the rules, regulations, and orders of the Secretary of Labor or other government agency or authority having jurisdiction, and will permit access to his books, records, and accounts by the administrative agency and the Secretary of Labor for the purposes of investigation to ascertain compliance with such rules, regulations and orders.

15.2.1.7 In the event of the Contractor's noncompliance with the non-discrimination clauses of this contract, or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further University contracts or federally-assisted contracts in accordance with procedure authorized in Executive Order No. 11246 of October 27, 1965, or by rule, regulation, or order of the Secretary of Labor or other government agency or authority having jurisdiction.

15.2.1.8 The Contractor will include in the provisions of Subparagraph 15.2.1.1 through 15.2.1.8 in every subcontract or purchase order unless exempted by rules, regulations or orders of the President's Committee on Equal Employment Opportunity issued pursuant to Section 204 of Executive Order No. 11246 of September 14, 1965, so that provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event the Contractor becomes involved as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

15.3 COMPLIANCE WITH COPELAND ANTI-KICKBACK ACT AND REGULATIONS

15.3.1 The Contractor shall comply with the Copeland Anti-Kickback Act and Regulations of the Secretary of Labor (29CFR, Part 3) which are herein incorporated by reference.

15.4 PREVAILING WAGES

15.4.1 Contractors and subcontractors shall pay all mechanics and laborers, including apprentices and trainees, no less than the wage and fringe benefit rates prevailing in the locality in which the work is performed. Wage and fringe benefit rates are determined by the Federal Government Department of Labor.

15.4.2 Classifications not provided in the schedule shall be determined prior to the award of the contract and shall be no less than the wage and fringe benefit rates determined by the Federal Department of Labor.

15.4.3 Contractors and subcontractors shall adhere to the ratios of apprentices to journey workers as determined by the Federal Department of Labor.

15.4.4 Contractors and subcontractors shall keep a copy of the prescribed wage and benefit rates posted at the construction site in a conspicuous place.
15.4.5 Contractors and subcontractors shall keep an accurate record of the name, occupation, and the actual benefits paid to each mechanic or laborer for the contract. This record shall be made available for reasonable inspection by the Federal Department of Labor and the Owner.
The Technical Specifications dated **August 14, 2015** and the following List of Drawings represent the scope of work as defined in the Contract Documents from Article 4.

<table>
<thead>
<tr>
<th>Drawing No.:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1</td>
<td>Title Sheet, Location Plan, &amp; Code Review</td>
</tr>
<tr>
<td>A-100</td>
<td>First Level Phased Work Areas and Scope Synopsis</td>
</tr>
<tr>
<td>A-101</td>
<td>First Level Floor &amp; Reflected Ceiling / Clear Story Window Demolition Plans</td>
</tr>
<tr>
<td>A-102</td>
<td>First Level Existing Floor Plan &amp; Reflected Ceiling Plan ( New Work )</td>
</tr>
<tr>
<td>A-501</td>
<td>Existing First Floor Exterior Elevations Demo &amp; New Work</td>
</tr>
<tr>
<td>A-601</td>
<td>Sections &amp; Details</td>
</tr>
<tr>
<td>S-001</td>
<td>General Structural Notes</td>
</tr>
<tr>
<td>S-002</td>
<td>Special Inspection Schedules</td>
</tr>
<tr>
<td>S-101</td>
<td>Existing First Floor Plan</td>
</tr>
<tr>
<td>S-201</td>
<td>Sections &amp; Details</td>
</tr>
</tbody>
</table>

(End of Drawing List)
GENERAL REQUIREMENTS

GENERAL

A. CONTRACTOR'S RESPONSIBILITY

It is not the responsibility of the Architect/Engineer or Owner's Representative to notify the Contractor or subcontractors when to commence, to cease, or to resume work; nor in any way to superintend so as to relieve the Contractor of responsibility or of any consequences of neglect or carelessness by him or his subordinates. All material and labor shall be furnished at times best suited for all Contractors and subcontractors concerned, so that the combined work of all shall be properly and fully completed on the date fixed by the Contract.

The Contractor shall be responsible for all items contained in both the specifications and on the drawings for all trades. He shall be responsible for the proper division of labor according to current labor union agreements regardless of the division of responsibility implied in the contract documents.

B. CODES AND STANDARDS

Reference to standard specifications for workmanship, apparatus, equipment and materials shall conform to the requirements of latest specifications of the organization referenced, i.e., American Society for Testing Materials (ASTM), Underwriters Laboratories, Inc. (UL), American National Standards Institute, Inc. (ANSI), and others so listed in the Technical Specifications.

C. PERMITS, FEES AND NOTICES

See Supplementary General Conditions.

D. MEASUREMENTS

Before proceeding with each Work Item, Contractor shall locate, mark and measure any quantity or each item and report quantities to Engineer. If measured quantities exceed Engineer's estimate, Contractor shall obtain written authorization to proceed from Owner before executing Work required for that Work Item.

Measurement of quantities for individual Work Items will be performed by Contractor and reviewed by Engineer. Coordinate measurements with inspection as required in Section "Coordination."

Cost of Work included in Work Item for quantities as indicated in Contract Documents shall be included in Base Bid.

1. Additions to or deductions from lump sum price for quantities of each Work Item added to or deducted from Work respectively shall be at unit prices indicated in Bid Form and shall constitute payment or deductions in full for all material, equipment, labor, supervision and incidentals necessary to complete Work.

E. CONTRACTOR'S MEASUREMENTS

Before ordering material, preparing Shop Drawings, or doing any work, each Contractor shall verify, at the building, all dimensions which may affect his work. He assumes full responsibility for the accuracy of his figures. No allowance for additional compensation will be considered for minor discrepancies between dimensions on the drawings and actual field dimensions.

F. CONTINUITY OF SERVICE (Revised 3-26-2012)

Continuity of all existing services in the building shall be maintained throughout the construction period. Where it is necessary to tie into the existing electrical service, water or waste systems, it shall be done as directed by the Architect/Engineer. This Contract shall also provide temporary lines or bypasses that may be required to maintain continuous service in the building. All utility shutdowns must be approved by the Owners Representative / Project Manager, not less than 7 business days prior to the event, so that proper notification can be posted.

G. SUBMITTALS
All submittals (except Shop Drawings) and samples required by the Specifications shall be submitted in triplicate unless otherwise specified for a particular item under an individual Specification Section.

Each sample shall be clearly identified on a tag attached, showing the name of the Project Consultant, the project number and title, the names of the Contractor, manufacturer (and supplier if same is not the manufacturer), the brand name or number identification, pattern, color, or finish designation and the location in the work.

Each submittal shall be covered by a transmittal letter, properly identified with the project title and number and a brief description of the item being submitted.

Contractor shall be responsible for all costs of packing, shipping and incidental expenses connected with delivery of the samples to the Project Consultant or other designated address.

If the initial sample is not approved, prepare and submit additional sets until approval is obtained.

Materials supplied or installed which do not conform to the appearance, quality, profile, texture or other determinant of the approval samples will be rejected, and shall be replaced with satisfactory materials at the Contractor's expense.

H. GENERAL/STANDARD ELECTRONIC EQUIPMENT AND INFRASTRUCTURE REQUIREMENTS (Revised 11-2008)

1. Compliance with WSU Standards for Communications Infrastructure
   A. All applicable work, products, materials and methods shall comply with the latest version of the “WSU Standards for Communications Infrastructure” except as where noted.
   B. This document is available at the following website/URL: http://networks.wayne.edu/WSU-Communications-standards.pdf

2. Automation System Program Code
   A. All automation system uncompiled and compiled program codes, source codes, custom modules, graphical user interface screen shots and any other automation system programming data and material (Program Code) shall be provided to the UNIVERSITY in hard copy and on CD Rom in an unencrypted format acceptable to the UNIVERSITY.
   B. Copyright for the Program Code shall be assigned to the UNIVERSITY for purposes of system maintenance.

PROTECTION OF OCCUPANCY (Revised 3-2006)

A. FIRE PRECAUTIONS
   Take necessary actions to eliminate possible fire hazards and to prevent damage to construction work, building materials, equipment, temporary field offices, storage sheds, and other property.
   During the construction, provide the type and quantity of fire extinguishers and fire hose to meet safety and fire prevention practices by National Fire Protection Association (NFPA) Codes and Standards (available at http://www.nfpa.org/)
   In the event that construction includes “hot work”, the contractor shall provide the Owner’s Representative with a copy of their hot work policy, procedures, or permit program. No hot work activity (temporary maintenance, renovation, or construction by operation of a gas or electrically powered equipment which produces flames, sparks or heat that is sufficient to start a fire or ignite combustible materials) shall be performed until such documents are provided. During such operations, all highly combustible or flammable materials shall be removed from the immediate working area, and if removal is impossible, same shall be protected with flame retardant shield.
   Not more than one-half day’s supply of flammable liquids such as gasoline, spray paint and paint solvent shall be brought into the building at any one time. Flammable liquids having a flash point of 100 degrees F. or below which must be brought into the building shall be confined in an Underwriters Laboratories (UL) labeled safety cans. The bulk supply of flammables shall be stored at least 75 feet from the building and other combustible materials. Spigots on drums containing flammable
liquids are prohibited on the project site. Drums shall be equipped with approved vented pumps, and be grounded and bonded.

Only a reasonable working supply of combustible building materials shall be located inside the building.

All oil-soaked rags, papers, and other similar combustible materials shall be removed from the building at the close of each day's work, or more often if necessary, and placed in metal containers, with self-closing lids.

Materials and equipment stored in cardboard cartons, wood crates or other combustible containers shall be stored in an orderly manner and accessibly located, fire-fighting equipment of approved types shall be placed in the immediate vicinity of any materials or equipment stored in this type of crate or carton.

No gasoline, benzene, or like flammable materials shall be poured into sewers, manholes, or traps.

All rubbish shall be removed from the site and legally disposed of. Burning of rubbish, waste materials or trash on the site shall not be permitted.

The contractor shall be responsible for the conduct of employees relative to smoking and all smoking shall be in the area designated by the Architect/Engineer.

B. GENERAL SAFETY AND BUILDING PRECAUTIONS

Provide and maintain in good repair barricades, railings, etc., as required by law for the protection of the Public. All exposed material shall be smoothly dressed.

At dangerous points throughout the work environment provide and maintain colored lights or flags in addition to above guardrails.

Isolate Owner's occupied areas from areas where demolition and alteration work will be done, with temporary, dustproof, weatherproof, and fireproof enclosures as conditions may require and as directed by the Architect/Engineer.

Cover and protect furniture, equipment and fixtures to remain from soiling, dust, dirt, or damage when demolition work is performed in rooms or areas from which such items have not been removed.

Protect openings made in the existing roofs, floors, and other construction with weatherproof coverings, barricades, and temporary fire rated partitions to prevent accidents.

Repair any damage done to existing work caused by the construction and removal of temporary partitions, coverings, and barricades.

The Contractor will be held responsible for all breakage or other damage to glass up to the time the work is completed.

Provide protection for existing buildings, interior and exterior, finishes, walls, drives, landscaping, lawns (see below), etc. All damages shall be restored to match existing conditions to the satisfaction of the Architect/Engineer.

The Contractor and Owner will define the anticipated area of lawn damage at the project Pre-Construction Meeting. Whether the lawn is sparse or fully developed, any lawn damaged due to the Contractor's work will be replaced with sod by the University. The University's unit cost of $10.00 per square yard and landscaping at a rate of 1.5 times the cost of the sod repairs, the full cost of which will be assessed against the Contractor. At the completion of the project, a deductive Change Order reflecting this cost will be issued. The Contractor is to include an allowance in his bid for this corrective work.

C. INTERFERENCE WITH OWNER'S OPERATIONS

The Owner will be utilizing the Building Facilities to carry on his normal business operation during construction. The Contractor shall schedule performance of the work necessary to complete the project in such a way as to interfere as little as possible with the operation during construction. The Contractor shall schedule performance of the work necessary to complete the project in such a way as to interfere as little as possible with the operation of the Owner.
Work which will interfere with the Owner's occupancy, including interruptions to the Owner's mechanical and electrical services, and essentially noisy operations (such as jackhammering) shall be scheduled in advance. The schedule of alterations shall be approved by the Architect/Engineer and the work shall be done in accordance with the approved schedule.

It is understood that the work is to be carried through to completion with the utmost speed consistent with good workmanship and to meet the construction schedule.

The Contractor shall begin work under the Contract without delay upon receipt of the fully-executed contract and shall substantially complete the project ready for unobstructed occupancy and use of the Owner for the purposes intended within the completion time stated in the contract.

The Contractor shall, immediately upon award of contract, schedule his work and expedite deliveries of materials and performance of subcontractors to maintain the necessary pace to meet the construction schedule.

**CONTRACTOR'S REPRESENTATION AND COORDINATION**

A. **FIELD SUPERINTENDENT**

Contractor shall assign a full time project manager/superintendent for the duration of the project. This person shall be experienced and qualified in all phases of the work and shall be present at the site during Contractor's working hours. The project manager shall have Contractor's full authority to represent Contractor in all routine operations including payment, changes to the work, and scheduling. Contractor shall not re-assign this individual without prior written permission of the Owner.

B. **MEETINGS**

When directed by the Architect/Engineer, meetings shall be held for the purpose of coordinating and expediting the work. The invited contractors or subcontractors will be required to have qualified representatives at these meetings, empowered to act in their behalf.

C. **COORDINATION**

The Contractor shall also provide a staff adequate to coordinate and expedite the work properly and shall at all times maintain competent supervision of its own work and that of its subcontractors to insure compliance with contract requirements.

The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work under the Contractor.

D. **CONSTRUCTION SCHEDULE**

The Construction Schedule shall be prepared after the award of contract. Soon after, a pre-construction meeting is held with the Owner and the Architect/Engineer to determine the areas to which the Contractor will be allowed access at any one time.

The Contractor is alerted to the fact that areas in which he will be working will be occupied by students and employees of the University as well as the general public. The Contractor's access, to and from the project site, will be confined to limited areas so as not to unduly disrupt the normal activities of the University.

**TEMPORARY FACILITIES**

A. **GENERAL**

The following temporary facilities descriptions represent standard conditions. Verify accuracy with Architect/Engineer at time of bids.

B. **CONTRACTOR'S OFFICE**

Provide field offices as required. Locate temporary field offices on site where directed by Architect/Engineer.

Appearance and location of field offices shall be approved by the Architect/Engineer.
Provide for all other administrative facilities and storage off the Owner's property.

C. STORAGE OF MATERIALS

All materials shall be stored in areas designated by the Architect/Engineer. All stored materials shall be arranged for the minimum disruption to occupants and to allow full access to and throughout the building. Materials stored outdoors shall be neat and orderly and covered to prevent damage or vandalism.

D. PARKING

1. GENERAL

University parking regulations will be strictly enforced.

Maintain Owner's parking areas free of dirt and debris resulting from operations under the contract.

2. STANDING AND UNLOADING/LOADING VEHICLES

All Contractors are to call Wayne State University Public Safety at 577-2222, and give at least 24 hours advance notice that they have vehicles that must be at the job site.

Vehicles will be permitted at the project site only as long as the vehicles are needed for loading/unloading, and must be immediately moved upon completion.

All unauthorized and/or unattended standing vehicles will be subject to ticketing and removal by University Police. Towed vehicles may be reclaimed by calling 577-2222, and paying any assessed charges.

3. COMPLIMENTARY PARKING

There is no complimentary parking for Contractor's employee vehicles.

4. WAYNE STATE UNIVERSITY PUBLIC/STUDENT PARKING AREAS

Public Parking, on a first-come first-served basis is available. Contact the office of the One Card System, at 313.577.9513 for information on availability of parking on a contractual basis.

E. TOILET FACILITIES

The Owner's designated existing toilet facilities may be used by workers on the project. Contractor shall maintain such facilities in a neat and sanitary condition.

F. TELEPHONE USE

If required, the Contractor shall provide and pay for a temporary telephone within the building for his use and that of his subcontractors.

No use of the Owner's telephone (except pay telephones) will be permitted.

G. ACCESS DEVICES

The Contractor shall furnish and maintain temporary hoists, ladders, railings, scaffolds, runways, and the like as required for safe, normal access to the permanent construction until the permanent facilities are complete. Each trade shall furnish such additional means of access as may be required for the progress and completion of the work. Such temporary access devices shall meet all applicable local, state, and federal codes and regulations.

H. HEAT AND VENTILATION

Provide cold weather protection and temporary heat and ventilation as required during construction to protect the work from freezing and frost damage.
Provide adequate ventilation as required to maintain reasonable interior building air conditions and temperatures, to prevent accumulation of excess moisture, and to remove construction fumes.

Tarpaulins and other materials used for temporary enclosures. Coverings and protection shall be flameproofed.

I. WATER SERVICE

Sources of water are available at the site. The Owner will pay for reasonable amounts of water used for construction purposes.

The Contractor shall provide, at the earliest possible date, temporary connections to the water supply sources and maintain adequate distribution for all construction requirements. The Contractor shall protect sources against damage.

Methods of conveying this water shall be approved by the Architect/Engineer and shall not interfere with the Owner's operations.

J. ELECTRICAL SERVICES

All charges for reasonable amounts of electrical power energy used for temporary lighting and power required for this work will be paid by the Owner.

The Contractor shall provide and maintain any temporary electrical lighting and power required for this work. At the completion of the work, all such temporary electrical facilities shall be removed and disposed of by the Contractor.

Temporary lighting and power shall comply with the regulations and requirements of the National Electrical Code.

INSPECTIONS AND TESTS

The Architect/Engineer shall at all times have access to the work wherever it is in preparation or in progress and the Contractor shall provide proper facilities for such access and for observation.

No failure of the Architect/Engineer, during the progress of the work, to discover or reject materials or work not in accordance with the Contract Specifications and Drawings shall be deemed an acceptance thereof nor a waiver of defects therein. Likewise, no acceptance or waiver shall be inferred or implied due to payments made to contractor or by partial or entire occupancy of the work, or installation of materials that are not strictly in accordance with the Contract Specifications and Drawings.

Where tests are specifically called for in the Specifications, the Owner shall pay all costs of such tests and engineering services unless otherwise stated in the contract.

Where tests are not specifically called for in the Specifications, but are required by the Architect/Engineer or Consultant, the Owner shall pay all costs of such tests and engineering services unless the tests reveal that the workmanship or materials used by the Contractor are not in conformity with the Drawings, Specifications, and/or approved shop drawings. In such event, the Contractor shall pay for the tests, shall remove all work and materials so failing to conform and replace with work and materials that are in full conformity.

CLEAN-UP

The Contractor shall at all times keep the Owner's premises and the adjoining premises, driveways and streets clean of rubbish caused by the Contractor's operations and at the completion of the work shall remove all the rubbish, all of his tools, equipment, temporary work and surplus materials, from and about the premises, and shall leave the work clean and ready for use. If the contractor does not attend to such cleaning immediately upon request, the Architect/Engineer may cause such cleaning to be done by others and charge the cost of same to the Contractor.

The Contractor will be responsible for all damage from fire that originates in, or is propagated by, accumulations of rubbish or debris.

All rubbish and debris shall be disposed of off the Owner's property in an approved sanitary landfill site. No open burning of debris or rubbish will be permitted. Job site shall be left neat and clean at the completion of each day's operation.
PROJECT CLOSE-OUT

A. RECORD DRAWINGS

At beginning of job, provide one copy of Working Drawings, and record changes, between Working Drawings and "As Builts", including changes made by Addenda, Change Orders, Shop Drawings, etc. These shall be kept up to date. Update to indicate make of all mechanical and electrical equipment and fixtures installed. Keep these Record Prints in good condition and available for inspection by the Architect/Engineer.

Upon completion of the job, turn over to the Architect/Engineer Record Prints of Working Drawings showing all job changes.

B. OPERATING AND MAINTENANCE DATA

Prepare and furnish to the Architect/Engineer three (3) bound copies of "Operating and Maintenance Manual" on all equipment installed under this Contract.

Manual shall include copies of all Manufacturers’ "Operating and Service Instructions", including Parts List, Control Diagrams, Description of Control Systems, Operating, Electrical Wiring, and any other information needed to understand, operate and maintain the equipment. The names and addresses of all subcontractors shall be included. These instructions shall be custom-prepared for this job -- catalog cuts will not be accepted. Equipment shall be cross-referenced to Section of Specifications and to location shown and scheduled on drawings.


C. FINAL INSPECTION

Secure final inspections from the State of Michigan as soon as the work is completed and immediately submit such Certificates to the Architect/Engineer.

D. GUARANTEES (See Sections 00510 and 01781)

Guarantees on material and labor from the General Contractor and his subcontractors shall be as required in Sections 00510 and 01781.

E. SWORN STATEMENT AND WAIVER OF LIENS (revised 4-11-2012)

Prior to final payment, the General Contractor shall provide a Contractor's Sworn Statement and Full Unconditional Waivers of Liens from all subcontractors for material and labor and from all suppliers who provide materials exceeding $1,000. Sworn Statements and signed waivers from all Subcontractors must accompany Pay Applications or they will be returned for such documentation prior to approval.

ASBESTOS HAZARD

A. The contractor shall not start any work in any area that has not been inspected for asbestos by the Owner's Industrial Hygiene Department, or a qualified representative of the Owner and approval is given for work to be done. If asbestos is found, safety measures as recommended by the Owner's Industrial Hygiene Department, or a qualified representative of the Owner, shall be completed, or approval given for work to be done before work is started. The contractor shall not perform any asbestos removal or containment work under the contract.

KEYS

A. The Owner shall provide the contractor keys on loan to have access to the various spaces in order to complete the contract. Contractor will sign for and be responsible for each key on loan, returnable to Owner upon completion of the contract. In case of any lost keys, the Owner will backcharge the contract $250.00 for each core change. In the event that a Contractor wants access to a secured area, he shall give the Owner a minimum 48-hour notice.
SUMMARY OF WORK

PROJECT: Life Science Exterior Wall System Stabilization

WSU PROJECT NO.: 006-253400

PROJECT MANAGER: Robert Jacobs

1. EXAMINATION

The Contractor shall visit the site and become familiar with conditions under which he will be working. Also meet with the project manager and review site access, storage areas, etc.

2. Description of Work – Project includes Stabilize exterior wall system with supplemental supports and bracing using structural support steel, columns and channels along with clips to existing walls and concrete structure. Sequence of installation to be phased along with owner’s abatement schedule and occupancy. Building exterior glazing system is being replaced with a new metal stud framing gypsum and cement board infill. Work requires Architectural, Mechanical and Electrical demo and patch repairs. Contractor shall be responsible for all associated general requirements and conditions for security of building and boarding infills and clean up on a daily basis.

3. The building is located at

Wayne State University
5000 Gullen Mall
Detroit, Michigan 48202
DOCUMENT 00010- TABLE OF CONTENTS

DIVISION .... SECTION TITLE..................................................................................................Pages

INTRODUCTORY INFORMATION
00010........ Table of Contents .......................................................................................... 2
00011........ List of Drawings ............................................................................................. 2

WSU........ Balance of Division 00 Documents provided by Wayne State University...................
WSU........ Standards for Communications Infrastructure.....................................................

http://computing.wayne.edu/docs/wsud-communications-standards.pdf..............................

DIVISION 1 – GENERAL REQUIREMENTS
01100........ Summary ........................................................................................................ 4
01210........ Allowances ..................................................................................................... 2
01230........ Alternates ....................................................................................................... 2
01400........ Quality Requirements .................................................................................... 6
01420........ References .................................................................................................... 2
01500........ Temporary Facilities and Controls .................................................................. 4
01510........ Construction Air Quality ................................................................................ 4
01600........ Product Requirements ................................................................................... 8
01610........ Request for Substitution Form ........................................................................ 4
01770........ Closeout Procedures ...................................................................................... 4

DIVISION 2 – SITE CONSTRUCTION
02222........ Selective Demolition ...................................................................................... 4

DIVISION 3 – CONCRETE
No Sections

DIVISION 5 – STEEL
05120........ Structural Steel ............................................................................................ 6
05400........ Cold Formed Metal Framing ......................................................................... 4

DIVISION 6 – WOODS AND PLASTICS
06100........ Rough Carpentry .......................................................................................... 4
DIVISION 6 – WOODS AND PLASTICS CONTINUED

<table>
<thead>
<tr>
<th>Code</th>
<th>Section Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>06160</td>
<td>Sheathing</td>
<td>6</td>
</tr>
</tbody>
</table>

DIVISION 7 – THERMAL AND MOISTURE PROTECTION

<table>
<thead>
<tr>
<th>Code</th>
<th>Section Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>07210</td>
<td>Building Insulation</td>
<td>6</td>
</tr>
<tr>
<td>07250</td>
<td>Weather Barrier</td>
<td>6</td>
</tr>
<tr>
<td>07461</td>
<td>Engineered Cement Siding</td>
<td>6</td>
</tr>
<tr>
<td>07620</td>
<td>Sheet Metal Flashing &amp; Trim</td>
<td>6</td>
</tr>
<tr>
<td>07920</td>
<td>Joint Sealants</td>
<td>6</td>
</tr>
<tr>
<td>07920S</td>
<td>Joint Sealant Schedule</td>
<td>2</td>
</tr>
</tbody>
</table>

DIVISION 9 – FINISHES

<table>
<thead>
<tr>
<th>Code</th>
<th>Section Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>09260</td>
<td>Gypsum Board Assemblies</td>
<td>8</td>
</tr>
<tr>
<td>09511</td>
<td>Acoustical Panel Ceilings</td>
<td>6</td>
</tr>
<tr>
<td>09651</td>
<td>Resilient Tile Flooring</td>
<td>2</td>
</tr>
<tr>
<td>09653</td>
<td>Resilient Wall Base and Accessories</td>
<td>2</td>
</tr>
<tr>
<td>09912</td>
<td>Painting</td>
<td>8</td>
</tr>
</tbody>
</table>

DIVISION 10 – SPECIALTIES

No Sections

DIVISION 11 – EQUIPMENT

No Sections

DIVISION 12 – FURNISHINGS

No Sections

DIVISION 13 – SPECIAL CONSTRUCTION

No Sections

DIVISION 14 – CONVEYING EQUIPMENT

No Sections
DIVISION 15 -MECHANICAL

No Sections

DIVISION 16 -ELECTRICAL

No Sections
DRAWING LIST

ARCHITECTURAL:
T-1 TITLE SHEET, LOCATION PLAN, & CODE REVIEW
A-100 FIRST LEVEL PHASED WORK AREAS AND SCOPE SYNOPSIS
A-101 FIRST LEVEL FLOOR & REFLECTED CEILING / CLEAR STOREY WINDOW DEMOLITION PLANS
A-102 FIRST LEVEL EXISTING FLOOR PLAN & REFLECTED CEILING PLAN (NEW WORK)
A-501 EXISTING FIRST FLOOR EXTERIOR ELEVATIONS DEMO & NEW WORK
A-601 SECTIONS & DETAILS

STRUCTURAL:
S-001 GENERAL STRUCTURAL NOTES
S-002 SPECIAL INSPECTION SCHEDULES
S-101 EXISTING FIRST FLOOR PLAN
S-201 SECTIONS & DETAILS
THIS SHEET LEFT BLANK INTENTIONALLY
PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including the Standard and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS
A. Project Identification: The Project consists of stabilizing portions of the precast wall panels and adding structural steel supports to the Life Science Building located at the Wayne State University Main Campus in Detroit, Michigan.

1. Project Location: Wayne State University
   Life Science Building
   Exterior Wall System Stabilization
   5000 Gullen Mall
   Detroit, Michigan 48202

2. Owner: Wayne State University
   and the Board of Governors

B. Architect Identification: The Bid Documents, dated August 14, 2015, were prepared for the Project by:

   Niagara Murano Architecture
   2215 Cole Street
   Birmingham, Michigan 48009

   Desai Nasr Consulting Engineers – Structural
   6765 Daly Road
   West Bloomfield, MI 48322

C. Project Manager: The Wayne State University Design and Construction Services will appoint a Project Manager.

D. The Work consists of stabilizing the precast panels/ window wall assembly on the Life Science Building on the Wayne State University Main Campus.

1. The Work includes protecting the existing construction, selective demolition, shoring and adding structural steel supports, cutting and patching existing interior finishes, sealant, and window infill, support of engineered cement wall panels.

2. The Work also includes providing barricades and signage in work areas to prevent public access to construction zones.
3. Major aspects of the work include:
   a. Contractor shall visit the site and be familiar with existing conditions.
   b. Contractor to provide WSU and Consultant Team workplan identifying difficult details and showing an understanding for means, method sequences and procedures for carrying out construction work. Phasing of construction work will be required to complete new work.
   c. Installing structural steel supports and anchoring to existing floor, wall and beams.
   d. Remove interior finishes to access areas in ceiling that will require new work attachment points for new structural supports.
   e. Installing structural support assemblies per the structural drawings.
   f. Removing and replacing existing sealants at exterior precast panel bases at sidewalk.
   g. Some work will require after hour work, second shifts, weekend work, premium portion of wage to be authorized against allowance and coordination with WSU Project Manager.
   h. Painting existing finishes altered by new work.
   i. General contractor will maintain proper temperatures during the construction of new work and provide weather barriers to protect interior work.
   j. Coordination with Wayne State University Abatement Contractor is mandatory and must include wall bracing per phased areas of work.

1.3 CONTRACT
   A. Contract Type: A single prime contract based on a Stipulated Price as described in Owner's Bidding Instructions.

1.4 WORK SEQUENCE
   A. The Work shall be conducted in multiple phases. Refer to drawings for extent of phasing work. Phasing subject to change based on WSU requirements.

1.5 ALTERNATES
   A. Alternates included in project. Refer to Section 01230.

1.6 ALLOWANCES
   B. Allowances included in project. Refer to Section 01210.

1.7 SCHEDULE
   A. The Work shall be Start: October 2015.
   C. The Work shall be completed: December 2015.
   D. Refer to WSU Front End Documents.
1.8 USE OF PREMESIS

A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor’s use of premises is limited only by Owner’s right to perform work or to retain other contractors on portions of Project.

B. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period. Owner intends to occupy the Project upon completion of each phase of construction. Cooperate with Owner to minimize conflict and to facilitate Owner's operations. The General Contractor to work around WSU Occupancy Schedule and coordinate work tasks with Owner. Drilling, grinding and noisy activities must be coordinated in advance with WSU Project Manager.

C. Construction Operations: Limited to areas noted on Drawings.

D. Arrange use of site and premises to allow:
   1. Owner occupancy.
   2. Work by Owner.
   3. Use of site and premises by the public.

E. Provide access to and from site as required by law and by Owner:
   1. Emergency Building and Site Circulation and Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.

F. Utility Outages and Shutdown:
   1. Coordinate shutdowns and outages with Owner per Owner's General, Supplemental and Special Conditions.

1.9 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC’s “MasterFormat” numbering system.

1. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of sections in the Contract Documents.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or
subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

a. The words “shall”, “shall be”, or “shall comply with”, depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01100
PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements governing the following:

1. Lump-sum allowances.

B. See Division 1 Section "Unit Prices" for procedures for using unit prices.

C. See Division 1 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

1.2 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.3 SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.4 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.5 LUMP-SUM ARCHITECTURAL ALLOWANCE

A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner under allowance and shall include taxes, freight, and delivery to Project site.

B. Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner under allowance shall be included as part of the Contract Sum and not part of the allowance.
1.6 **LUMP-SUM ELECTRICAL-MECHANICAL ALLOWANCE**

A. Use the electrical mechanical allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance. The allowance will be used to move items in the ceiling that interfere with the structural stabilization work above the ceilings and walls.

B. Contractor's **overhead, profit, and related costs** for products and equipment ordered by Owner under the allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.

D. At Project closeout, credit unused amounts remaining in the electrical mechanical allowance to Owner by Change Order.

**PART 2 - PRODUCTS - Not included**

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 **PREPARATION**

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 **SCHEDULE OF ALLOWANCES**

A. Allowance No. 1 ELECTRICAL-MECHANICAL: $10,000.00:

1. TBD, Field Conditions: Work consists of furnishing all labor, materials, equipment, supervision, and incidentals necessary to perform miscellaneous mechanical and electrical demo and rerouting of existing piping and other hidden items exposed during progress of construction and as required to install new work. The allowance expenditure must be approved in advance by WSU, and all work must have required support documentation; signed daily work tickets for work completed during the construction phase of the project:

**END OF SECTION 01210.**
SECTION 01230
ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements governing Alternates.

1.3 DEFINITIONS

A. Definition: An alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

3. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.

4. The cost or credit of each alternate includes the cost of premiums for Labor and Material Payment Bonds and Performance Bonds.

1.4 PROCEDURES

A. Coordination: Modify or adjust affected adjacent Work as necessary to completely and fully integrate that Work into the Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.

B. Notification: Immediately following the award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate whether alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other Work of this Contract.

D. Schedule: A "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate.
PART 2 - PRODUCTS (NOT APPLICABLE TO THIS SECTION)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. ADD Alternate No. 1: Existing Ceiling Replacement Lobby 101, 102, and 103.
   1. Base Bid: Existing Ceilings and Lights remain.
   3. Field verify conditions prior to starting work.
      a. Remove existing metal ceiling and light fixtures in Lobby areas 101, 102, 103 and replace with new acoustic tile and suspension assembly.

B. ADD Alternate No. 2: New Light Fixtures Lobby areas 101, 102, and 103.
   1. Base Bid: NA.
   3. Field verify conditions prior to starting work.
      a. Provide new 2 x 4 florescent light fixtures by one of the following manufactures;
         1) Osram/Sylvania, General Electric, Phillips
         b. Wire fixtures to existing power source, circuits and switches.

C. ADD Alternate No. 3: New Resilient Flooring & Rubber Base Lobby areas 101, 102, and 103.
   1. Base Bid: Sealed Concrete Slab
   3. Field verify conditions prior to starting work.
      a. Provide new resilient tile flooring with new rubber base.

D. ADD Alternate No. 4: To Accelerate Construction Schedule.
   2. Provide cost to accelerate construction schedule to occur November 2015 through February 2016.

END OF SECTION 01230
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Standard and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.

2. Specified tests, inspections, and related actions do not limit Contractor’s quality-control procedures that facilitate compliance with the Contract Document requirements.

3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.

C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.4 DELEGATED DESIGN

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

1.5 SUBMITTALS

A. Qualification Data: For testing agencies specified in “Quality Assurance” Article to demonstrate their capabilities and experience. Include proof of qualification in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by design professional, indicating that products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
   1. Specification Section number and title.
   2. Description of test and inspection.
   3. Identification of applicable standards.
   4. Identification of test and inspection methods.
   5. Number of tests and inspections required.
   6. Time schedule or time span for tests and inspections.
   7. Entity responsible for performing tests and inspections.
   8. Requirements for obtaining samples.
   9. Unique characteristics of each quality-control service.

D. Reports: Prepare and submit certified written reports that include the following:
   1. Date of issue.
   2. Project title and number.
   3. Name, address, and telephone number of testing agency.
   4. Dates and locations of samples and tests or inspections.
   5. Names of individuals making tests and inspections.
   6. Description of the Work and test and inspection method.
8. Complete test or inspection data.

9. Test and inspection results and an interpretation of test results.

10. Ambient conditions at time of sample taking and testing and inspecting.

11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.

12. Name and signature of laboratory inspector.

13. Recommendations on retesting and reinspecting.

E. Permits, Licenses, and Certificates: For Owner’s records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer’s products that are similar in material, design, and extent to those indicated for this Project.

C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installation of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirement for specialists shall not supersede building codes and similar regulations governing the Work, not interfere with local trade-union jurisdictional settlements and similar conventions.

G. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.
H. Preconstruction Testing: Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.

1. Contractor responsibilities include the following:
   a. Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
   b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
   c. Fabricate and install test assemblies using installers who will perform the same tasks.
   d. When testing is complete, remove assemblies; do not reuse materials on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner’s responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.

2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.

3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.

1. Where services are indicated as Contractor’s responsibility, engage a qualified testing agency to perform these quality-control services.
   a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.

3. Where quality-control services are indicated as Contractor’s responsibility, submit a certified written report, in duplicate, of each quality-control service.

4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor’s responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Special Tests and Inspections: Owner will engage a testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner.

1. Testing agency will notify Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.

2. Testing agency will submit a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.

3. Testing agency will submit a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.

4. Testing agency will interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

5. Testing agency will retest and reinspect corrected work.

D. Manufacturer’s Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.

E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor’s responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.


1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.

3. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.

G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.

2. Incidental labor and facilities necessary to facilitate tests and inspections.

3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field-curing of test samples.

5. Delivery of samples to testing agencies.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.

1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.

2. Comply with Contract Document requirements for Division 1 Section “Cutting and Patching”.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor’s responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400
PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including the Standard and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 DEFINITIONS
A. General: Basic Contract definitions are included in the Conditions of the Contract.
B. “Approved”: The term “approved”, when used in conjunction with Architect’s action on Contractor’s submittals, applications, and requests, is limited to Architect’s duties and responsibilities as stated in the Conditions of the Contract.
C. “Directed”: Terms such as “directed”, “requested”, “authorized”, “selected”, “approved”, “required”, and “permitted” mean directed by Architect, requested by Architect, and similar phrases.
D. “Indicated”: The term “indicated” refers to graphic representations, notes, or schedules on Drawings; or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as “shown”, “noted”, “scheduled”, and “specified” are used to help the user locate the reference.
E. “Regulations”: The term “regulations” includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
F. “Furnish”: The term “furnish” means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
G. “Install”: The term “install” describes operations at Project site including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
H. “Provide”: The term “provide” means furnish and install, complete and ready for the intended use.
I. “Installer”: An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
J. The term “experienced”, when used with the term “installer”, means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1. Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter”. It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
K. “Project site” is the space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of Project. The extent of Project site is shown on the Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents, unless otherwise indicated.

C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to Architect for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.

E. Abbreviations and Names: Abbreviations and acronyms are frequently used in the Specifications and other Contract Documents to represent the name of a trade association, standards-developing organization, authorities having jurisdiction, or other entity in the context of referencing a standard or publication. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of these entities. Refer to Gale Research’s “Encyclopedia of Associations” or Columbia Books’ “National Trade & Professional Associations of the U.S.”, which are available in most libraries.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01420
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the General and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.

B. Temporary utilities include, but are not limited to, the following:

1. Sanitary facilities.
2. Temporary utilities
3. Air Quality Control during work.
4. Lighting.
5. Telephone service.
7. Waste removal facilities and services.
8. Field Office.
9. Vehicular access and parking.

C. The Owner will include, but are not limited to, the following:

1. Electrical power, consisting of connection to existing facilities.
2. Water supply, consisting of connection to existing facilities.

D. Security and protection facilities include, but are not limited to, the following:

1. Barricades and warning signs.
2. Fire protection during welding operations.

1.3 USE CHARGES

A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Architect and shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:

1. Owner’s construction forces.
2. Occupants of Project.
3. Architect.
4. Testing Agencies.
5. Personnel of authorities having jurisdiction.
B. Water Service: Use water from Owner’s existing water system without metering and without payment of use charges. Use trigger-operated nozzles for water hoses, to avoid waste of water.

C. Electric Power Service: Use electric power from Owner’s existing system without metering and without payment of use charges.

1.4 QUALITY ASSURANCE

A. Standards: Comply with ANSI A10.6, NECA’s “Temporary Electrical Facilities,” and NFPA 241.

1.5 PROJECT CONDITIONS

A. 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 2 – PRODUCTS

2.1 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 6 Section “Rough Carpentry.”

C. Water: Potable.

2.2 EQUIPMENT

A. General: Provide equipment suitable for use intended.

B. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agents 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.

C. Drinking Water Fixtures: Containerized, tap-dispenser, bottled-water drinking water units, including paper cup supply.

D. Electrical Outlets: Properly configures, NEMA-polarized outlets to prevent insertion of 110 to 120 V plugs into higher-voltage outlets; equipped with ground fault circuit interrupters, reset button, and pilot light.
E. Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 125-v ac, 20-A rating, and lighting circuits may be nonmetallic sheathed cable.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. Water Service: Use of Owner’s existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
   1. Provide rubber hoses as necessary to serve Project site. Use trigger-operated nozzles for water hoses, to avoid waste of water.

B. Sanitary Facilities:
   1. Toilets: Use of Owner’s existing toilet facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
   2. Drinking-Water Facilities: Provide bottle-water, drinking water units.

C. Ventilation and Humidity Control: 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.

D. Electric Power Service: Use of Owner’s existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.

E. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment.

F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations and traffic conditions.

G. Telephone Service shall include:
   1. Windows-based personal computer dedicated to project telecommunications, with necessary software and laser printer throughout construction period for common-use facilities used by all personnel engaged in construction activities.
   2. At telephone, post a list of important telephone numbers.
      a. Police Department.
      b. Ambulance services.
c. Contractor’s home office.
d. Architect’s office.
e. Engineer’s office.
f. Owner’s office.
g. Principal subcontractors’ field and home offices.

2. Provide an answering machine on superintendent’s telephone.

3.3 PROTECTION FACILITIES INSTALLATION

A. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project site.

B. Temporary Fire Protection:

1. Locate fire extinguishers where convenient and effective for their intended purpose; provide not less than one extinguisher.

2. Store combustible materials in containers in fire-safe locations.

3. Maintain unobstructed access to fire extinguishers, temporary fire-protection facilities, stairways and other access routes for firefighting. Prohibit smoking in hazardous fire-exposure areas.

4. Provide FIRE WATCH PROFESSIONAL during welding activities.

3.4 OPERATION, TERMINATION, AND REMOVAL

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.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Materials and facilities that constitute temporary facilities are the property of Contractor. Owner reserves the right to take possession of Project identification signs.

2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 Section “Closeout Procedures.”

END OF SECTION 01500
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Standard and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This Section includes requirements for construction air quality including exhaust mitigation on this Project.

B. Related Sections:

1. Air Handling Units.
2. Air Filters.
3. HVAC Ducts.

1.3 QUALITY ASSURANCE

A. Indoor Air Quality Reports: Review periodic Indoor Air Quality Reports provided by others and promptly comply with report recommendations.

B. Inspection and Maintenance: Periodically inspect project conditions to assure that indoor air quality measures are being implemented. Maintain indoor air quality measures to assure operational effectiveness.

PART 2 - PRODUCTS

2.1 AIR INFILTRATION

A. Provide air filters or filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 or as specified, whichever is greater.

PART 3 - EXECUTION

3.1 HVAC SYSTEM PROTECTION

A. Protect HVAC systems per Related Sections.

B. Ductwork Contamination: Provide professional cleaning for all ductwork contaminated with construction debris and dust.
3.2 SOURCE/POLLUTION CONTROL

A. Temporary Heat and Hazardous Exhaust: Provide temporary heaters that exhaust combustion air directly to the outside of the building, or that prevents hazardous exhaust levels within the construction area. Limit the use of exhaust producing equipment inside the construction area.

B. Assure exhaust fumes are not drawn into new and existing air intakes.

C. Volatile Organic Compounds (VOC) control: Limit the buildup of VOCs within the construction area by storing VOCs in tight containers, providing ventilation with outside air during installation of VOC emitting material. Locate pollutant sources in one designated area away from supply ducts, areas occupied by workers, and absorbent materials.

D. Smoking is prohibited in all Wayne State University buildings and grounds.

3.3 PATHWAY INTERRUPTION

A. Construction partitions: Provide air tight temporary construction partitions to separate completed areas from active construction areas.

B. Construction area pressurization: Provide temporary fans or portions of the permanent air handling system to maintain a negative pressure in the construction areas relative to adjacent completed spaces.

C. Provide construction entry mats at each entry to limit dirt and debris from entering the building.

3.4 HOUSEKEEPING

A. Perform daily housekeeping to prevent the accumulation and tracking of debris, dirt, dust, and moisture within the construction area. Coordinate activities of the various trades to organize work areas to assure that routine cleaning is effective.

B. Provide thorough cleaning of all building interior surfaces prior to HVAC filter replacement, testing and balancing, and commissioning activities.

3.5 SCHEDULING

A. Schedule high pollution activities that utilize high VOC level products such as paints, sealants, adhesives, caulking and cleaners to take place prior to installing highly absorbent materials such as ceiling tiles, carpet, fabric furniture, acoustic panels, insulation, and gypsum board.

B. Where practical, perform high VOC work during off-hours to minimize personnel exposure.

C. Coordinate schedule for installation of low-VOC products with temperature requirements.

D. Schedule delivery to minimize storage requirements of materials on the project site.

E. Where air testing or building flush-out procedures are required, provide adequate time to conduct these activities prior to building occupancy.
3.6 DIESEL EXHAUST MITIGATION

A. All diesel equipment utilized on the project site except delivery trucks shall be fueled with biodiesel B-20. In case of extreme cold weather, biodiesel B-5 is acceptable. Provide records of refueling receipts when requested by the owner.

B. All diesel equipment utilized on the project for more than ten workdays shall utilize exhaust after-treatment devices to reduce emission from diesel engines. Exhaust after treatment devices shall be either diesel oxidation catalyst type or diesel particulate filters. The required minimum percent reduction in emissions for either device shall be, PM: 20%, HC: 40%, CO: 10%.

END OF SECTION 01510
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Standard and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This Section includes the following administrative and procedural requirements: selection of products for use in Project; product delivery, storage, and handling; manufacturers’ standard warranties on products; special warranties; product substitutions; and comparable products.

B. Related Sections including the following:

1. Division 1 Section “References” for applicable industry standards for products specified.

2. Division 1 Section “Closeout Procedures” for submitting warranties for contract closeout.

3. Division 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term “product” includes the terms “material”, “equipment”, “system”, and terms of similar intent.

1. Named Products: Items identified by manufacturer’s product name, including make or model number or other designation, shown or listed in manufacturer’s published product literature that is current as of date of the Contract Documents.

2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.

3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. **Basis-of-Design Product Specification:** Where a specific manufacturer’s product is named and accompanied by the words “basis of design”, including make or model number or other designations, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties,
D. Manufacturer’s Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

E. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer’s warranty or to provide more rights for Owner.

1.4 SUBMITTALS

A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacture’s name and proprietary product names for each product.

1. Coordinate product list with Contractor’s Construction Schedule and the Submittals Schedule.

2. Form: Tabulate information for each product under the following column headings:
   a. Specification Section number and title.
   b. Generic name used in the Contract Documents.
   c. Proprietary name, model number, and similar designations.
   d. Manufacturer’s name and address.
   e. Supplier’s name and address.
   f. Installer’s name and address.
   g. Projected delivery date or time span of delivery period.
   h. Identification of items requiring early submittal approval for scheduled delivery date.

3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.

   a. At Contractor’s option, initial submittal may be limited to product selections and designations that must be established early in Contract period.

4. Completed List: Within 60 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.

5. Architect’s Action: Architect will respond in writing to Contractor within 15 days of receipt of completed product list. Architect’s response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect’s response, or lack of response, does not constitute a waiver of requirement that products comply with the Contract Documents.
B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use CSI Form 13.1A.

2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
   a. Statement indicating why specified material or product cannot be provided.
   b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
   c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
   d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
   e. Samples, where applicable or requested.
   f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
   g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
   h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
   i. Detailed comparison of Contractor’s Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer’s letterhead, stating lack of availability or delays in delivery.
   j. Cost information, including a proposal of change, if any, in the Contract Sum.
   k. Contractor’s certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
   l. Contractor’s waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect’s Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
a. Form of Acceptance: Change Order.

b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

C. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section “Submittal Procedures”. Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.

2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer’s written instructions.

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

3. Deliver products to Project site in an undamaged condition in manufacturer’s original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

5. Store products to allow for inspection and measurement of quantity or counting of units.

6. Store materials in a manner that will not endanger Project structure.

7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

8. Comply with product manufacturer’s written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.

9. Protect stored products from damage.
B. Storage: Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner’s construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer’s disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer’s Standard Form: Modified to include Project-specific information and properly executed.

2. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 1 Section “Closeout Procedures”.

PART 2 – PRODUCTS

2.1 PRODUCT OPTIONS

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.

3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

4. Where products are accompanied by the term “as selected”, Architect will make selection.

5. Where products are accompanied by the term “match sample”, sample to be matched is Architect’s.


7. Or Equal: Where products are specified by name and accompanied by the term “or equal” or “or approved equal” or “or approved”, comply with provisions in “Comparable Products” Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures: Procedures for product selection include the following:
1. Product: Where Specification paragraphs or subparagraphs titled “Product” name a single product and manufacturer, provide the product named.
   a. Substitutions may be considered, unless otherwise indicated.

2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled “Manufacturer” or “Source” name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.
   a. Substitutions may be considered, unless otherwise indicated.

3. Products: Where Specification paragraphs or subparagraphs titled “Products” introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.

4. Manufacturers: Where Specification paragraphs or subparagraphs titled “Manufacturers” introduce a list of manufacturer’s names, provide a product by one of the manufacturers listed that complies with requirements.
   a. Substitutions may be considered, unless otherwise indicated.

5. Available Products: Where Specification paragraphs or subparagraphs titled “Available Products” introduce a list of both products and manufacturers, provide one of the products listed or another product that complies with requirements. Comply with provisions in “Comparable Products” Article to obtain approval for use of an unnamed product.

6. Available Manufacturers: Where Specification paragraphs or subparagraphs titled “Available Manufacturers” introduce a list of manufacturers’ names, provide a product by one of the manufacturers listed or another manufacturer that complies with requirements. Comply with provisions in “Comparable Products” Article to obtain approval for use of an unnamed product.

7. Product Options: Where Specification paragraphs titled “Product Options” indicate that size, profiles, and dimensional requirements on Drawings are based on specific product or system, provide either the specific product or system indicated or a comparable product or system by another manufacturer. Comply with provisions in “Product Substitutions” Article.
   a. Substitutions may be considered, unless otherwise indicated.

8. Basis-of-Design Products: Where Specification paragraphs or subparagraphs titled “Basis-of-Design Product” are included and also introduce or refer to a list of manufacturers’ names, provide either the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in “Comparable Products” Article to obtain approval for use of an unnamed product.
   a. Substitutions may be considered, unless otherwise indicated.

9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches Architect’s sample. Architect’s decision will be final on whether a proposed product matches satisfactorily.
   a. If no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents on “substitutions” for selection of a matching product.
10. Visual Selection Specification: Where Specifications include the phrase “as selected from manufacturer’s colors, patterns, textures” or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.

   a. Standard Range: Where Specifications include the phrase “standard range of colors, patterns, textures” or similar phrase, Architect will select color, pattern, or texture from manufacturer’s product line that does not include premium items.

   b. Full Range: Where Specifications include the phrase “full range of colors, patterns, textures” or similar phrase, Architect will select color, pattern, or texture from manufacturer’s product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

A. Timing: Architect will consider requests for substitution if received within 60 days after commencement of the Work. Requests received after that time may be considered or rejected at discretion of Architect.

B. Conditions: Architect will consider Contractor’s request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

   1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner’s additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.

   2. Requested substitution does not require extensive revisions to the Contract Documents.

   3. Requested substitution is consistent with the Contract Documents and will produce indicated results.

   4. Substitution request is fully documented and properly submitted.

   5. Requested substitution will not adversely affect Contractor’s Construction Schedule.

   6. Requested substitution has received necessary approvals of authorities having jurisdiction.

   7. Requested substitution is compatible with other portions of the Work.

   8. Requested substitution has been coordinated with other portions of the Work.

   9. Requested substitution provides specified warranty.

   10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
2.3 COMPARABLE PRODUCTS

A. Where products or manufacturers are specified by name, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:

1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.

2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

3. Evidence that proposed product provides specified warranty.

4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.

5. Samples, if requested.

PART 3 – EXECUTION (Not Used)

END OF SECTION 01600
SECTION 01610
REQUEST FOR SUBSTITUTION FORM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 CONTRACT:

A. To: _________________________________________________ Date: ______________________

Project / Contract:_________________________________________________________________
Specified Item: ___________________________________________________________________
Provide Description:_______________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Proposed Substitution: _____________________________________________________________
Provide Description:_______________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

PART 2 – PRODUCTS

2.1 SUBSTITUTION

A. The undersigned proposes the above listed substitution in accordance with the provisions of Section 01600.

1. The data attached includes product description, specifications, drawings, performance and test data, certifications and product guarantees for evaluation of the proposed substitution. Applicable portions of the data are clearly identified. The product description includes composition and materials, basic use, applicable properties and standards, and limitations on its use.

2. Also, attached is a description of the changes to the Work required if the proposed substitution is accepted.
3. Also, attached a description of the differences between the proposed substitution and the specified or drawn item; and fully describe how the acceptance of the substitution will affect the project due to dimensional differences or differences in the relationship with architectural items / assemblies or differences in the relationship with the structural, mechanical, and electrical systems.

B. The undersigned declares that the following statements, except as may be modified on the attachments, are correct:

1. The proposed substitution does not affect dimensions on the Drawings.
2. The proposed substitution will have no adverse effect on other work of the Contract or the construction schedule.
3. The guarantee, maintenance and service provisions for the proposed substitution are the same, or better than the specified item.

C. The Contractor will declare that the use of the proposed substitution:

1. (___) Will result in a credit to the Owner of $__________________________.
2. (___) Will result in no change (monetarily or in time) to the Contract with the Owner.

D. The Contractor understands that they shall pay for the Architect’s reviewing time and all the extra time required to modify the drawings should new drawings or changes to the existing contract drawings be required due to the substitution.

E. The Contractor understands that:

1. The Architect’s Recommendation below does not modify the Contract.
2. The Owner's Comments below do not modify the Contract.

F. The completion of a properly executed Change Order shall ONLY modify the CONTRACT.
PART 3 – EXECUTION

3.1 SUBMITTAL

A. Submitted by: ___________________________________________________

   Signature of Officer

   Print Name and Title

   Company

   Company Address

   City and State

   Telephone Number

   Fax Number

B. Manufacturer of proposed substitution materials: __________________________

   Signature of Officer

   Print Name and Title

   Company

   Company Address

   City and State

   Telephone Number

   Fax Number

C. Architectural Recommendation:

   ( ___ ) Accept ( ___ ) Accept As Noted ( ___ ) Not Accept

   Firm: _____________________________________________________________

   Representative of Firm: _____________________________________________

   Remarks: _________________________________________________________
D. Owner's Comments:
Remarks: __________________________________________________________
__________________________________________________________________
__________________________________________________________________

E. Owner’s remarks, including apparent acceptance, do not modify the Contract

END OF SECTION 01610
SECTION 01770
CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Standard and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

B. Related Sections include the following:

1. Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
2. Division 1 Section "Photographic Documentation" for submitting Final Completion construction photographs and negatives.
3. Division 1 Section "Execution Requirements" for progress cleaning of Project site.
4. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
5. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
6. Division 1 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
7. Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs and photographic negatives, damage or settlement surveys, property surveys, and similar final record information.

6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.

8. Complete startup testing of systems.


10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

11. Advise Owner of changeover in heat and other utilities.

12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

13. Complete final cleaning requirements, including touchup painting.

14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

2. Results of completed inspection will form the basis of requirements for Final Completion.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."

2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

4. Submit pest-control final inspection report and warranty.

5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.

1. Organize list of spaces in sequential order.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
   a. Project name.
   b. Date.
   c. Name of Architect.
   d. Name of Contractor.
   e. Page number.

1.5 WARRANTIES

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

E. Provide Three (3) copies of documents listed above, plus an electronic version in PDF format.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

   a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
   b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
   c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
   d. Remove tools, construction equipment, machinery, and surplus material from Project site.
   e. Remove snow and ice to provide safe access to building.
   f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
   g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
   h. Sweep floors broom clean in unoccupied spaces.
   i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials.
   j. Remove labels that are not permanent.
   k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
   l. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
   m. Leave Project clean and ready for occupancy.

C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Demolition and removal of selected portions of Life Science Building.
   2. Ceilings, wall and flooring.
   3. Salvage of existing items to be reused or recycled.
   4. Refer to Drawings for shoring and bracing existing precast panels.
   5. Coordinate bracing of walls prior to the demolition of window assemblies. Note: Window and sill removal are by WSU Abatement Contractor.
   6. Flooring and base removal including mastic removal in area of Alternate No. 1 is by WSU Abatement Contractor.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 SUBMITTALS

A. Pre-demolition Photographs or Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by demolition operations.

B. Landfill Records: Indicate receipt and acceptance of wastes by a landfill facility licensed to accept wastes.

1.5 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having
jurisdiction.

C. Standards: Comply with ANSI A10.6 and NFPA 241.

1.6 PROJECT CONDITIONS

A. Owner will occupy portions of building immediately adjacent to demolition area. Conduct demolition so Owner's operations will not be disrupted.
   1. Comply with requirements specified in WSU Supplemental General Conditions.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with demolition.

D. Hazardous Materials: Hazardous materials will be encountered in the Work.
   1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and WSU Project Manager. Owner will remove hazardous materials under a separate contract.

E. Owner has the right of first refusal for all salvageable items to be demolished. Items, which the Owner declines shall be promptly removed from site.

F. Storage or sale of removed items or materials on-site is not permitted.

G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during demolition operations.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 EXAMINATION

A. Survey existing conditions and correlate with requirements indicated to determine extent of demolition required.

B. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly report to Architect.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during demolition operations.
SELECTIVE DEMOLITION

1. Comply with requirements for existing services/systems interruptions specified in WSU Supplemental General Conditions. **Seven (7) day notice is required.**

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct demolition and debris-removal operations to ensure minimum interference with roads, walks, and other adjacent occupied and used facilities. Protection of items to be in place and remain during work activities.
   1. Do not close or obstruct roads, walks, or other adjacent occupied or used facilities without permission from Owner.
   2. Protect existing site improvements, appurtenances, and landscaping to remain.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent areas to remain.
   1. Provide protection to ensure safe passage of people around demolition area and to and from occupied portions of building.
   2. Protect existing finish work that are to remain or that are exposed during demolition operations.
   3. Cover and protect items that have not been removed.

C. Temporary Partitions: Erect and maintain partitions and temporary enclosures to limit dust and dirt migration and to separate occupied areas from construction areas.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work as follows:
   1. Proceed with demolition systematically.
   2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
   3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
   5. Maintain adequate ventilation when using cutting torches.
   6. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers.
   3. Store items in a secure area until delivery to Owner.
   4. Transport items to Owner's storage area on-site.
   5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse.
   2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during demolition.

3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS
A. Remove all miscellaneous fasteners, anchors, and brackets, not required for the structural integrity of the precast seating units.

E. Remove all existing joint sealants at locations of new work.

3.7 PATCHING AND REPAIRS
A. General: Promptly repair damage to adjacent construction caused by demolition operations.
B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.

1. Completely fill holes and depressions in existing precast seating units that are to remain with and approved patching material applied according to manufacturer's written recommendations.

C. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.

3.8 DISPOSAL OF DEMOLISHED MATERIALS
A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.9 CLEANING
A. Clean adjacent areas, surfaces and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before demolition operations began.

END OF SECTION 02222
SECTION 05120
STRUCTURAL STEEL

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Steel framing, shoring and supports for existing exterior building precast units.
2. Installing and anchoring new steel to stabilize existing exterior precast panels.
4. Welding of new steel in selective area, including fire watch and air quality of space.
5. Shop and field testing welds and bolts.
6. Steel framing and supports for applications where framing and supports are not specified in other Sections, including channels, angles and plates.

B. Related Sections include the following:

1. Division 6 Section “Rough Carpentry”.

1.3 SUBMITTALS

A. Shop Drawings: Detail fabrication and erection of each metal fabrication indicated. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

1. Provide templates for anchors and bolts specified for installation under other Sections.

B. Mill Certificates: Signed by Manufacturers of stainless-steel sheet certifying that products furnished comply with requirements.

C. Welding Certificates: Copies of certificates for welding procedures and personnel.

D. Qualification Data: For firms and persons specified in “Quality Assurance” Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm experienced in producing metal fabrications similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

B. Welding: Qualify procedures and personnel according to the following:

1. ANSI/ AWS D1.1, “Structural Welding Code—Steel”.
3. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification. Each welder to be qualified in accordance with the requirements of the current “Structural Welding Code” of the American Welding Society ANSI/AWS D1.1.

1.5 PROJECT CONDITIONS

A. Field Measurements: Where metal fabrications are indicated to fit with other construction, verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Establish Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Allow for trimming and fitting.

1.6 COORDINATION

A. Coordinate installation of anchorages for metal fabrications. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in precast concrete. Deliver such items to Project site in time for installation.

PART 2 – PRODUCTS

2.1 METALS, GENERAL

A. Metal Surfaces, General: For metal fabrications exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

2.2 FERROUS METALS
A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M, FY+36 KSI.

B. Stainless-Steel Sheet, Strip, Plate, and Flat Bars: ASTM A 666, Type 304.

C. Stainless-Steel Bars and Shapes: ASTM A 276, Type 304.

D. Threaded Rods: ASTM F 1554 Grade 36, U.N.O.

E. Cast-in-Place Anchors in Concrete: Anchors of type indicated below, fabricated from corrosion-resistant materials capable of sustaining, without failure, the load imposed within a safety factor of 4, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.

F. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal allow welded.

2.3 FASTENERS

A. General: Provide Type 304 stainless-steel fasteners for exterior use. Select fasteners for type, grade, and class required.

B. Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.

C. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, with failure, a load equal to six times the load imposed when installed in unit masonry, and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.

1. Material: Alloy Group 1 or 2 stainless-steel bolts complying with ASTM F 593 and nuts complying with ASTM F 594.

D. Toggle Bolts: FS FF-B-588, tumble-wing type, class and style as needed.

2.4 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Shear and punch metals cleanly and accurately. Remove burrs.

C. Ease exposed edges to a radius of approximately 1/32 inch, unless otherwise indicated. Form bend-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.

3. Remove welding flux immediately.

4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

E. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

F. Cut, reinforce, drill, and tap metal fabrications as indicated to receive hardware, screws, and similar items.

G. Allow for thermal movement resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening up of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

H. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.

I. Remove sharp or rough areas on exposed surfaces.

2.5 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports that are not a part of structural-steel framework as necessary to complete the Work.

B. Fabricate units from structural-steel shapes, plates, and bars of welded construction, unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and similar items.

1. Fabricate units from slotted channel framing where indicated.

2. Where units are indicated anchored to concrete beams.

2.6 FINISHES, GENERAL

A. Comply with NAAMM’s “Metal Finishes Manual for Architectural and Metal Products” for recommendations for applying and designating finishes.

B. Finish metal fabrications after assembly.

2.7 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with applicable standard listed below:
1. ASTM A 123, for galvanizing steel and iron products.

2. ASTM A 153/A 153M, for galvanizing steel and iron hardware.

B. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface-preparation specifications and environmental exposure conditions of installed metal fabrications:

1. Interiors (SSPC Zone 1A): SSPC-SP 3, “Power Tool Cleaning”.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal fabrications to in-place construction. Include threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

D. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

E. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.

2. Obtain fusion without undercut or overlap.

3. Remove welding flux immediately.

4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

F. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.
3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers’ written instructions and requirements indicated on Shop Drawings, if any.

3.3 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

   1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 05120
PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Provide cold formed metal framing for building interior and exterior walls and where indicated. Include related anchors, fasteners, bracing, connectors deflection connections.

1.    Interior non bearing steel-stud walls.
2.    Interior structural studs - heavy gauge at existing windows.
3.    Steel-stud framing.

1.3 SUBMITTALS

A. Shop Drawings: Detail fabrication and erection of each cold formed metal framing member indicated. Include plans, elevations, sections, and details of their connections and accessory items.

1. Include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified Installer experienced in erecting cold formed metal framing similar to those indicated for this Project and with a record of successful in-service performance.

B. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer’s instructions.

C. Standards: AISI, Specification for Design of Cold-Formed Steel Structural Members.

D. Engineer Qualifications: Design Connections and structural elements under the direct supervision of a registered professional engineer.

E. Exterior Non-Load-Bearing, Curtain-Wall Framing: Horizontal deflection of 1/240 of the wall height.

F. Fabrication Tolerances: 1/8 inch in 10 feet.

G. Erection Tolerances: 1/16 inch.
1.5 PROJECT CONDITIONS

A. Field Measurements: Where steel studs are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Establish Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating steel joists without field measurements. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Allow for trimming and fitting.

1.6 COORDINATION

A. Coordinate installation of anchorages to beams, steel joists and walls. Furnish setting drawings, elevations, templates, and directions for installing anchorages, angles, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 – PRODUCTS

2.1 COLD FORMED METAL FRAMING

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer’s instructions.

B. Standards: AISI, Specification for Design of Cold-Formed Steel Structural Members.

C. Fabrication Tolerances: 1/8 inch in 10 feet.

D. Erection Tolerances: 1/16 inch.

E. Steel Sheet: ASTM A 653/A, structural steel, G6D zinc coating, Grade 33 for minimum uncoated steel thickness of 43 mil and less; Grade 50 for minimum uncoated steel thickness of 54 mil and greater.

F. Framing: Manufacturer’s standard steel studs, of web depths indicated, with stiffened flanges, complying with ASTM C 955, and as follows:

1. Minimum Uncoated-Steel Thickness: 43 mil.
3. Track: Manufacturer’s standard U-shaped steel track, unpunched, with straight flanges, complying with ASTM C 955, manufacturer’s standard flange width, and minimum uncoated-steel thickness matching steel studs.
4. Finish: Galvanized, ASTM A 525, G6D.

G. Framing Accessories:

1. Supplementary framing.
2. Bracing, bridging, and solid blocking.
3. Web stiffeners.
5. Deflection track and vertical side clips
7. Reinforcement plates.
8. Anchors, clips, and fasteners.

F. Structural Framing: Manufacturer’s standard structural steel studs, of web depths indicated, with stiffened flanges.
   1. Gauge: DEA specifications, refer to drawings.
   2. Track: Manufacturer’s standard U-shaped steel track, unpunched, with straight flanges, complying with ASTM C 955, manufacturer’s standard structural flange width, and minimum uncoated steel thickness matching steel studs.
   3. Finish: Galvanized, ASTM A 525, G6D.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. Fabricate and install cold formed metal framing members in compliance with manufacturer’s requirements and recommendations. Provide anchorage devices and fasteners where necessary for securing metal decks to in-place construction. Include anchorage to concrete angles, beams, steel joists and other structural steel components.

B. Fitting and Placement: Perform fitting required for installing cold formed metal framing members. Set members accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

C. Provide temporary bracing or anchors in for items that are to be built into concrete, masonry, or similar construction. Brace existing deck at new construction.

D. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with a heavy coat of bituminous paint.

E. Install materials and systems in accordance with ASTM C 1007, manufacturer’s instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.

F. Comply with requirements of ASTM C 1007 for installation of steel studs and accessories and metal Lath/Steel Framing Association Lightweight Steel Framing Systems Manual.

G. Restore damaged components. Protect work from damage.

END OF SECTION 05400
SECTION 06100
ROUGH CARPENTRY

PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes the following:
   1. Fire Rated wood blocking in walls.
   2. Fire Rated veneer core plywood sheathing.
   3. Fire Rated wood framing.
   4. Traffic Barriers.
   5. Scaffolding.

1.3 DEFINITIONS
A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise indicated.
B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
   2. NLGA – National Lumber Grades Authority.
   3. RIS Redwood Inspection Service.
   4. SPIB – Southern Pine Inspection Bureau.
   5. WCLIB – West Coast Lumber Inspection Bureau.
   6. WWPA – Western Wood Products Association.

1.4 SUBMITTALS
A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
   1. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of
treated materials, both before and after exposure to elevated temperatures when tested according to
ASTM D 5516 and ASTM D 5664.

B.  Research/Evaluation Reports:  For the following, showing compliance with building code in effect for
Project:

1.  Fire-retardant-treated wood.

1.5  QUALITY ASSURANCE

A.  Testing Agency Qualifications:  An independent testing agency, acceptable to authorities having
jurisdiction, with the experience and capability to conduct the testing indicated, as documented according
to ASTM E 548.

B.  Source Limitations for Fire-Retardant-Treated Wood:  Obtain each type of fire-retardant-treated wood
product through one source from a single producer.

1.6  DELIVERY, STORAGE, AND HANDLING

A.  Stack lumber, plywood, and other panels; place s pacers between each bundle to provide air circulation.
Provide for air circulation around stacks and under coverings.

PART 2 – PRODUCTS

2.1  WOOD PRODUCTS, GENERAL

A.  Lumber:  DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber
Standards Committee Board of Review.

1.  Provide dressed lumber, S4S, unless otherwise indicated.

2.  Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch
nominal thickness or less, unless otherwise indicated.

B.  Wood Structural Panels:

1.  Plywood:  Either DOC PS 1 or DOC PS 2, unless otherwise indicated.

2.  Thickness:  As needed to comply with requirements specified by not less than thickness indicated.

Residential & Commercial”.

4.  Factory mark panels according to indicated standard.
2.2 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated, provide materials that comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.

1. Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516, for plywood.

2. Use treatment that does not promote corrosion of metal fasteners.

3. Use Interior Type A High Temperature (HT), unless otherwise indicated.

2.3 MISCELLANEOUS LUMBER (FIRE-RETARDANT-TREATED)

A. General: Provide lumber for support or attachment of other construction, including the following:

1. Blocking.

2. Nailers.

B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 19 percent maximum moisture content and any of the following species:

1. Mixed southern pine; SPIB.

2. Hem-fir or Hem-fir (north); NLGA, WCLIB, or WWPA.

3. Spruce-pine-fir (south) or Spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA.

4. Eastern softwoods; NELMA.

5. Northern species; NLGA.

6. Western woods; WCLIB or WWPA.

C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:

1. Mixed southern pine, No. 2 grade; SPIB.

2. Hem-fir or Hem-fir (north), Construction or 2 Common grade; NLGA, WCLIB, or WWPA.

3. Spruce-pine-fir (south) or Spruce-pine-fir, Construction or 2 Common grade; NELMA, NLGA, WCLIB, or WWPA.
4. Eastern softwoods, No. 2 Common grade; NELMA.
5. Northern species, No. 2 Common grade; NLGA.
6. Western woods, Construction or No. 2 Common grade; WCLIB or WWPA.

2.4 PLYWOOD BACKING PANELS (FIRE-RETARDANT-TREATED)
A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2 inch thick.

2.5 FASTENERS
A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for materials and manufacturer.
B. Nails, Brads, and Staples: ASTM F 1667.
C. Power-Driven Fasteners: CABO NER-272.
D. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
E. Bolts: Steel bolts complying with ASTM A 307, grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
F. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
   1. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL
A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
C. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.
D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:


E. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required.

END OF SECTION 06100
SECTION 06160 - SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
   A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
   A. This Section includes the following:
      1. Wall sheathing- fire rated veneer core.
      2. Building wrap.
      4. Flexible flashing at openings in sheathing.

   B. Related Sections include the following:
      1. Division 6 Section Rough Carpentry for plywood backing panels.

1.3 SUBMITTALS
   A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
      1. Include data for fire treatment from chemical treatment manufacturer and certification by treating plant that treated plywood complies with requirements. Indicate type of preservative used and net amount of preservative retained.
      2. For building wrap, include data on air-/moisture-infiltration protection based on testing according to referenced standards.

   B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
      1. Fire-retardant-treated veneer core plywood.
      2. Building wrap.

1.4 QUALITY ASSUARANCE
   A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for the years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer’s instructions.
1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack plywood and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS, GENERAL

A. Veneer Core (F.R.) Exterior Grade Plywood: unless otherwise indicated.

B. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

C. Factory mark panels to indicate compliance with applicable standard.

2.2 FIRE-RETARDANT-TREATED VENEER CORE PLYWOOD

A. General: Comply with performance requirements in AWPA C27.

   1. Use treatment that does not promote corrosion of metal fasteners.
   2. Use exterior type for exterior locations and where indicated.

B. Kiln-dry material after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Identify fire-retardant-treated plywood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.

D. Application: Treated veneer core plywood indicated on Drawings, and the following:

   1. Wall and soffit veneer core sheathing.
   2. Roof veneer core sheathing.
   3. Applications at grade.

2.3 WALL SHEATHING


   1. Span Rating: Not less than 16/0.
   2. Nominal Thickness: Not less than 3/4 inch.

2.4 FASTENERS

A. General: Provide stainless steel fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
1. For wall sheathing, provide **stainless steel fasteners** complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.


D. **Stainless Steel Screws** for Fastening Wood Structural Panels to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by **stainless steel** screw manufacturer for material being fastened.

2.5 WEATHER-RESISTANT SHEATHING PAPER

A. Building Paper: ASTM D 226, Type 1 (No. 15 asphalt-saturated organic felt), unperforated.

B. Building Paper: UBC Standard 14-1, Grade D water-vapor-permeable, kraft building paper.

C. Building Wrap: ASTM E 1677, Type I air retarder; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction.

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
2. Products: Subject to compliance with requirements, provide one of the following:
   
   a. Dow Chemical Company (The); Styrofoam Weathermate Plus Brand Housewrap.
   b. DuPont (E. I. du Pont de Nemours and Company); Tyvek, CommercialWrap.
   c. Ludlow Coated Products; Air Stop Housewrap.
   d. Pactiv, Inc.; GreenGuard Classic Wrap.
   e. Raven Industries Inc.; Rufco-Wrap.

3. Water-Vapor Permeance: Not less than 535 g through 1 sq. m of surface in 24 hours per ASTM E 96, Desiccant Method (Procedure A).

4. Allowable UV Exposure Time: Not less than three months.

D. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

2.6 SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

A. Provide Manufacturer’s recommended sheathing joint wrap recommended by sheathing manufacturer for application indicated, and complying with requirements for elastomeric sealants specified in Division 7 Section "Joint Sealants."
2.7 MISCELLANEOUS MATERIALS

A. Adhesives for Field Gluing Panels to Framing: Formulation complying with APA AFG-01, ASTM D 3498 that is approved for use with type of construction panel indicated by manufacturers of both adhesives and panels.

B. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.040 inch.

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
   c. MFM Building Products Corp.; Window Wrap.
   d. Polyguard Products, Inc.; Polyguard 300.
   e. Protecto Wrap Company; BT-20 XL, PS-45].

C. Primer for Flexible Flashing: Product recommended by manufacturer of flexible flashing for substrate.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:
   1. NES NER-272 for power-driven fasteners.
   2. Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

D. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.

E. Coordinate wall sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.
G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL WINDOW PANEL INSTALLATION


B. Fastening Methods: Fasten panels as indicated below:
   1. Wall / Window Sheathing:
      a. Screw to cold-formed metal framing.
      b. Space panels 1/8 inch apart at edges and ends.

3.3 WEATHER-RESISTANT SHEATHING-PAPER INSTALLATION

A. General: Cover sheathing with weather-resistant sheathing paper as follows:
   1. Cut back barrier 1/2 inch on each side of the break in supporting members at expansion- or control-joint locations.
   2. Apply barrier to cover vertical flashing with a minimum 4-inch overlap, unless otherwise indicated.

B. Building Paper: Apply horizontally with a 2-inch overlap and a 6-inch end lap; fasten to sheathing with galvanized staples or roofing nails.

C. Building Wrap: Comply with manufacturer's written instructions.
   1. Seal seams, edges, fasteners, and penetrations with tape.
   2. Extend into jambs of openings and seal corners with tape.

3.4 SHEATHING JOINT-AND-PENETRATION TREATMENT

A. Seal sheathing joints according to sheathing manufacturer's written instructions.
   1. Apply elastomeric sealant to joints and fasteners and trowel flat. Apply sufficient quantity of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.

3.5 FLEXIBLE FLASHING INSTALLATION

A. Apply flexible flashing where indicated to comply with manufacturers written instructions.
   1. Prime substrates as recommended by flashing manufacturer.
2. Lap seams and junctures with other materials at least 4 inches, except that at flashing flanges of other construction, laps need not exceed flange width.
3. Lap flashing over weather-resistant building paper at bottom and sides of openings.
4. Lap weather-resistant building paper over flashing at heads of openings.
5. After flashing has been applied, roll surfaces with a hard rubber or metal roller to ensure that flashing is completely adhered to substrates.

3.6 PROTECTION

A. Protect sheathing by covering exposed exterior surface of sheathing with weather-resistant sheathing paper securely fastened to framing. Apply covering immediately after sheathing is installed.

END OF SECTION 06160
SECTION 07210
BUILDING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Cavity-wall insulation within window assembly.
   2. Concealed building insulation.
   3. Attachment devices.

1.2 PERFORMANCE REQUIREMENTS

A. Plenum Rating: Provide slag-wool-fiber/rock-wool-fiber insulation where indicated in window-wall plenums whose test performance is rated as follows for use in plenums as determined by testing identical products per "Erosion Test" and "Mold Growth and Humidity Test" described in UL 181, or on comparable tests from another standard acceptable to authorities having jurisdiction.

   1. Erosion Test Results: Insulation shows no visible evidence of cracking, flaking, peeling, or delamination of interior surface of duct assembly, after testing for 4 hours at air velocity.
   2. Mold Growth and Humidity Test Results: Insulation shows no evidence of mold growth, delamination, or other deterioration due to the effects of high humidity, after inoculation with Chaetomium globosium on all surfaces and storing for 60 days at 100 percent relative humidity in the dark.

1.3 SUBMITTALS

A. Product Data: For product indicated.

B. Samples for Verification: Full-size units for each type of exposed insulation indicated.

C. Product test reports.

D. Research/Evaluation Reports: For foam-plastic insulation.

1.4 QUALITY ASSURANCE

A. Retain ASTM test method below based on product and kind of fire-resistance characteristic specified for each product in Part 2. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per ASTM E 84 for surface-burning characteristics and other methods indicated with product, by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
1.5 DELIVERY AND STORAGE

A. Deliver materials to the site ready for use in the manufacturer's original and unopened containers and packaging, bearing labels as to type and brand. Delivered materials shall be identical to approved samples.

B. Store materials under cover in a dry and clean location, off the ground. Remove materials which are damaged or otherwise not suitable for installation and replace with acceptable materials.

C. Take every precaution to prevent the insulation from becoming wet, cover with tarps or other weather/watertight sheet goods.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
2. Products: Subject to compliance with requirements, provide one of the products specified.
3. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
4. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION

A. Manufacturers:

1. Fibrex Insulations Inc.
2. Owens Corning.
3. Thermafiber.

B. Unfaced, Slag-Wool-Fiber/Rock-Wool-Fiber Blanket Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

C. Where slag-wool-fiber/rock-wool-fiber blanket insulation is indicated by the following thicknesses, provide blankets in batt form with thermal resistances indicated:

1. 5-1/4 inches thick with a thermal resistance of 19 deg F x h x sq. ft./Btu at 75 deg F.
2. 6 inches thick with a thermal resistance of 22 deg F x h x sq. ft./Btu at 75 deg F.
3. Thicknesses shown on drawings.
2.3 AUXILIARY INSULATING MATERIALS

A. Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates indicated without damaging insulation and substrates.

2.4 INSULATION FASTENERS

A. Adhesively Attached, Spindle-Type Anchors: Plate or Angles formed from perforated galvanized carbon-steel sheet, 0.030 inch thick by 2 inches square, welded to projecting copper-coated steel spindle 0.105 inch in diameter and of length capable of holding insulation of thickness indicated securely in position with 1-1/2-inch- square or diameter self-locking washers complying with the following requirements:

1. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch thick galvanized steel sheet, with beveled edge for increased stiffness.

B. Insulation Standoff: Spacer fabricated from galvanized mild-steel sheet for fitting over spindle of insulation anchor to maintain air space indicated on drawings between face of insulation and substrate to which anchor is attached.

C. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates indicated without damaging insulation, fasteners, and substrates.

2.5 ACCESSORIES

A. Clips for Securing Insulation to Encountered Surfaces: Spindle anchor and washer type consisting of perforated metal plates with spindle welded to center and snap on washers. Spindle and washers shall receive a corrosion-resistant electro-zinc plating. Adhesives for securing clips in place shall be recommended by the approved clip manufacturer.

1. Acceptable Manufacturers
   a. Miracle Adhesives Corp.
   c. Midwest Fasteners

B. Adhesive for Bonding Insulation: The type recommended by the insulation manufacturer, and complying with fire-resistance requirements.

1. For bonding rigid polystyrene insulation to masonry or concrete, provide adhesive equal to "Foamgrab PS" made by Dacor Products Co. or equal made by ChemRex Inc. or Miracle Adhesives.

C. Protection Board: Premolded, semi-rigid asphalt/fiber composition board, 1/4" thick, formed under heat and pressure, standard sizes.
PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and application indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.

C. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

E. For preformed insulating units, provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.2 INSTALLATION OF PERIMETER INSULATION

A. On vertical surfaces, set insulation units in adhesive applied according to manufacturer's written instructions. Use adhesive recommended by insulation manufacturer.

3.3 INSTALLATION OF GENERAL BUILDING INSULATION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Seal joints between foam-plastic insulation units by applying adhesive, mastic, or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic, or sealant as recommended by insulation manufacturer.

C. Set vapor-retarder-faced units with vapor retarder in location indicated of construction, unless otherwise indicated.

1. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to surrounding construction to ensure airtight installation.

D. Install mineral-fiber insulation in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch clearance of insulation around recessed lighting fixtures.
4. For metal-framed wall cavities where cavity heights exceed 96 inches, support unfaced blankets mechanically and support faced blankets by taping stapling flanges to flanges of metal studs.
   a. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.

END OF SECTION 07210
PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Weather barrier membrane
B. Seam Tape
C. Flashing
D. Fasteners

1.2 REFERENCES

A. ASTM International
   1. ASTM C920; Standard Specification for Elastomeric Joint Sealants
   2. ASTM C1193; Standard Guide for Use of Joint Sealants
   3. ASTM D882; Test Method for Tensile Properties of Thin Plastic Sheeting
   4. ASTM D1117; Standard Guide for Evaluating Non-woven Fabrics
   5. ASTM E84; Test Method for Surface Burning Characteristics of Building Materials
   6. ASTM E96; Test Method for Water Vapor Transmission of Materials
   7. ASTM E1677; Specification for Air Retarder Material or System for Framed Building Walls
   8. ASTM E2178; Test Method for Air Permeance of Building Materials

B. AATCC – American Association of Textile Chemists and Colorists
   1. Test Method 127 Water Resistance: Hydrostatic Pressure Test

C. TAPPI
   1. Test Method T-410; Grams of Paper and Paperboard (Weight per Unit Area)
   2. Test Method T-460; Air Resistance (Gurley Hill Method)

1.3 SUBMITTALS

A. Refer to Section 01330 Submittal Procedures.
B. Product Data: Submit manufacturer current technical literature for each component.

C. Samples: Weather Barrier membrane, minimum 8-1/2 inches by 11 inch.

D. Quality Assurance Submittals
   1. Manufacturer Instructions: Provide manufacturer’s written installation instructions.

E. Closeout Submittals
   1. Refer to Section 01780 Closeout Submittals.

1.4 QUALITY ASSURANCE

A. Qualifications
   1. Installer shall have experience with installation of similar weather barrier assemblies under similar conditions.
   2. Installation shall be in accordance with manufacturer’s installation guidelines and recommendations.

1.5 DELIVERY, STORAGE AND HANDLING

A. Refer to Section 01600 Product Requirements.
B. Deliver weather barrier materials and components in manufacturer’s original, unopened, undamaged containers with identification labels intact.
C. Store weather barrier materials as recommended by system manufacturer.

1.6 SCHEDULING

A. Review requirements for sequencing of installation of weather barrier assembly with installation of windows, doors, louvers and flashings to provide a weather-tight barrier assembly.

PART 2 – PRODUCTS

2.1 MANUFACTURER
A. DuPont Building Innovations; 4417 Lancaster Pike, Chestnut Run Plaza 721, Wilmington, DE 19805; 1-800-44-TYVEK (8-9835); http://construction.TYVEK.com

2.2 MATERIALS

A. Basis of Design: Textured, spunbonded polyolefin, non-woven, non-perforated, weather barrier is based upon DuPont ™ Tyvek ® DrainWrap ™ and related assembly components.
B. Performance Characteristics:
   1. Air Penetration: 0.004 cfm/ft² at 75 Pa, when tested in accordance with ASTM E2178. Type I per ASTM E1677.
   2. Water Vapor Transmission: 50 perms, when tested in accordance with ASTM E96, Method B.
   3. Water Penetration Resistance: 210 cm when tested in accordance with AATCC Test Method 127.
   4. Basis Weight: 2.1 oz/yd², when tested in accordance with TAPPI Test Method T-410.
   5. Air Resistance: 300 seconds, when tested in accordance with TAPPI Test Method T-460.
   6. Tensile Strength: 30/30 lbs/in., when tested in accordance with ASTM D882, Method A.
   7. Tear Resistance: 7/9 lbs, when tested in accordance with ASTM D1117.
   8. Surface Burning Characteristics: Class A, when tested in accordance with ASTM E84. Flame Spread: 5, Smoke Developed: 25

2.3 ACCESSORIES

A. Seam Tape: 3 inch wide, DuPont™ Tyvek® Tape as manufactured by DuPont Building Innovations.

B. Fasteners:
   1. Tyvek® Wrap Caps, as manufactured by DuPont Building Innovations: #4 nails with large 1-inch plastic cap fasteners.
   2. Masonry tap-con fasteners with Tyvek® Wrap Caps as manufactured by DuPont Building Innovations: 2-inch diameter plastic cap fastener.

C. Sealants
   1. Refer to Section 07920 Joint Sealants.
   2. Provide sealants that comply with ASTM C920, elastomeric polymer sealant to maintain watertight conditions.
   3. Products:
      a. Tremco 830
      b. Tremco Butyl
      c. Sealants recommended by the weather barrier manufacturer

D. Adhesive:
   1. Provide adhesive recommended by weather barrier manufacturer.
   2. Products:
      a. Liquid Nails® LN-109
      b. Polyglaze® SM 5700
      c. Denso Butyl Liquid
      d. 3M High Strength 90
      e. Adhesives recommend by the weather barrier manufacturer.
E. Primer:
1. Provide flashing manufacturer recommended primer to assist in adhesion between substrate and flashing.
2. Products:
   a. 3M High Strength 90
   b. Denso Butyl Spray
   c. SIA 655
   d. Permagrip 105
   e. ITW TACC Sta’ Put SPH
   f. Primers recommended by the flashing manufacturer

F. Flashing
1. DuPont™ FlexWrap™, as manufactured by DuPont Building Innovations: flexible membrane flashing materials for window openings and penetrations.
2. DuPont™ StraightFlash™, as manufactured by DuPont Building Innovations: straight flashing membrane materials for flashing windows and doors and sealing penetrations and masonry ties, etc.
3. DuPont™ StraightFlash™ VF, as manufactured by DuPont Building Innovations: dual-sided, straight flashing membrane materials for brickmold and non-flanged windows and doors.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verify substrate and surface conditions are in accordance with weather barrier manufacturer recommended tolerances prior to installation of weather barrier and accessories.

3.2 INSTALLATION – WEATHER BARRIER

A. Install weather barrier over exterior face of exterior wall substrate in accordance with manufacturer recommendations.

B. Start weather barrier installation at a building corner, leaving 6-12 inches of weather barrier extended beyond corner to overlap.

C. Apply wrap with grooved surface pattern in vertical direction.

D. Install weather barrier in a horizontal manner starting at the lower portion of the wall surface with grooved surface pattern in vertical position. Maintain weather barrier plumb and level.

E. Extend bottom roll edge over sill plate 2” to 3”. Seal weather barrier with sealant or tape. Shingle weather barrier over back edge of weep screed. Seal weather barrier with sealant or tape to weep screed. Ensure weeps are not blocked.
F. Subsequent layers shall overlap lower layers a minimum of 6 inches horizontally in a shingling manner.

G. Window and Door Openings: Extend weather barrier completely over openings.

H. Weather Barrier Attachment:
   1. Wood Frame Construction: Attach weather barrier to studs through exterior sheathing. Secure using weather barrier manufacturer recommended fasteners, space 12 -18 inches vertically on center along stud line, and 24 inch on center, maximum horizontally.
   2. Masonry Construction: Attach weather barrier to masonry. Secure using weather barrier manufacturer recommended fasteners, space 12 -18 inches vertically on center and 24 inches maximum horizontally. Weather barrier may be temporarily attached to masonry using recommended adhesive, placed in vertical strips spaced 24 inches on center, when coordinated on the project site.
   
I. Apply 4 inch by 7 inch piece of DuPont™ StraightFlash™ to weather barrier membrane prior to the installation cladding anchors.

3.3 SEAMING

A. Seal seams of weather barrier with seam tape at all vertical and horizontal overlapping seams.

B. Seal any tears or cuts as recommended by weather barrier manufacturer.

3.4 OPENING PREPARATION (for use with flanged windows)

A. Cut weather barrier membrane in a modified “I-cut” pattern.
   1. Cut weather barrier horizontally along the bottom of the header.
   2. Cut weather barrier vertically 2/3 of the way down from top center of window opening.
   3. Cut weather barrier diagonally from bottom of center vertical cut to the left and right corners of the opening.
   4. Fold side and bottom weather barrier flaps into window opening and fasten.

B. Cut a head flap at 45-degree angle in the weather barrier membrane at window head to expose 8 inches of sheathing. Temporarily secure weather barrier membrane flap away from sheathing with tape.

3.5 FLASHING

A. Cut 9-inch wide DuPont™ FlexWrap™ a minimum of 12 inches longer than width of sill rough opening. Apply primer to sheathing as recommended by manufacturer.
B. Cover horizontal sill by aligning DuPont™ FlexWrap™ edge with inside edge of sill. Adhere to rough opening across sill and up jambs a minimum of 6 inches. Secure flashing tightly into corners by working in along the sill before adhering up the jambs.

C. Fan DuPont™ FlexWrap™ at bottom corners onto face of wall. Firmly press in place. Mechanically fasten fanned edges.

D. On exterior, apply continuous bead of sealant to wall or backside of window mounting flange across jambs and head. Do not apply sealant across sill.

E. Install window according to manufacturer’s instructions.

F. Apply 4-inch wide strips of DuPont™ StraightFlash™ at jambs overlapping entire mounting flange. Extend jamb flashing 1-inch above top of rough opening and below bottom edge of sill flashing.

G. Apply 4-inch wide strip of DuPont™ StraightFlash™ as head flashing overlapping the mounting flange. Head flashing should extend beyond outside edges of both jamb flashings.

H. Position weather barrier head flap across head flashing. Adhere using 4-inch wide DuPont™ StraightFlash™ over the 45-degree seams.

I. Tape head flap in accordance with manufacturer recommendations

J. On interior, install backer rod in joint between frame of window and flashed rough framing. Apply sealant around entire window to create air seal. Apply sealant in accordance with sealant manufacturer’s instructions and ASTM C 1193.

3.6 PROTECTION

A. Protect installed weather barrier from damage.

END OF SECTION 07250
SECTION 07461
ENGINEERED CEMENT SIDING

PART 1 GENERAL

1.1 SECTION INCLUDES
A. Fiber cement panels and accessories, Engineered.
B. Factory-finished fiber cement panels, with batten trim, moulding and accessories, Engineered for Climate Siding.
C. Cement panels and accessories by other manufacturer’s meeting equal performance specifications.

1.2 RELATED SECTIONS
A. Section 06100 - Rough Carpentry: Metal Framing and bracing.
B. Section 06100 - Rough Carpentry: Sheathing.
C. Section 07210 - Insulation: Exterior wall insulation.

1.3 REFERENCES
A. ASTM C1186 - Standard Specification for Flat Fiber-Cement Sheets
C. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.

1.4 SUBMITTALS
A. Submit under provisions of Section 01300.
B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.
C. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the scope of the standard details and specifications provided by the manufacturer.
D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 4 by 6 inches, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Minimum of 2 years experience with installation of similar products.

B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work.
   4. Approved mock-up may be used in final built construction.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.

C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

A. Product Warranty: Limited, non-pro-rated product warranty.
   1. HardiePanel for 30 years. (Basis of Design)

B. Product Warranty: Limited, product warranty.
   1. Hardie Panel for 15 years. (Basis of Design)

C. Finish Warranty: Limited product warranty against manufacturing finish defects.
   1. When used for its intended purpose, properly installed and maintained according to published installation instructions. The product material will not peel; will not crack; and will not chip. Finish warranty includes the coverage for labor and material.

D. Workmanship Warranty: Application limited warranty for 2 years.
PART 2 PRODUCTS

2.1 MANUFACTURERS

A. BASIS OF DESIGN. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 26300 La Alameda Suite 400; Mission Viejo, CA 92691; Toll Free Tel: 866-274-3464; Tel: 949-367-4980; Email: request info (info@jameshardie.com); Web: www.jameshardiecommercial.com

B. Substitutions: Products of EQUAL performance and appearance.

C. Requests for approval of equal substitutions will be considered in accordance with provisions of Section 01600.

2.2 SIDING

A. Fiber Cement Panel requirement for Materials:
   1. Fiber-cement Siding - complies with ASTM C 1186 Type A Grade II.
   2. Fiber-cement Siding - complies with ASTM E 136 as a noncombustible material.
   3. Fiber-cement Siding - complies with ASTM E 84 Flame Spread Index = 0, Smoke Developed Index = 5.
   6. Florida State Product Approval FL10477.
   7. Miami Dade County, Florida Notice of Acceptance 08-0514.11.
   8. Texas Department of Insurance Product Evaluation EC-55.

B. Window Infill with Panels: As manufactured by James Hardie Building Products, Inc.
   1. Type: ½ inch thick by length (field verify height and width) with Smooth texture.

C. Trim:
   1. HardieTrim ½” x 3 inch vertical battens as manufactured by James Hardie Building Products, Inc.

2.3 FASTENERS

A. Wood Framing Fasteners:
   1. Stainless steel screws with washers equally spaced around panel.
   2. Length and diameter of fastener to withstand Michigan Building Code wind loads.

2.4 FINISHES

A. Factory Primer: Provide factory applied universal primer.

B. Factory Finish: Refer to Exterior Finish Schedule.
   2. Definition: Factory applied finish; defined as a finish applied in the same facility and company that manufactures the siding substrate.
3. Process:
   a. Factory applied finish by fiber cement manufacturer in a controlled environment within the fiber cement manufacturer's own facility utilizing a multi-coat, heat cured finish within one manufacturing process.
   b. Each finish color must have documented color match to delta E of 0.5 or better between product lines, manufacturing lots or production runs as measured by photospectrometer and verified by third party.

4. Protection: Factory applied finish protection such as plastic laminate that is removed once siding is installed

5. Accessories: Complete finishing system includes pre-packaged touch-up kit provided by fiber cement manufacturer. Provide quantities as recommended by manufacturer.

6. Color selected by architect.

C. Factory Finish Color for Panel (Submit PHYSICAL SAMPLES for final selection by ARCHITECT):
   1. Alpine Frost JH50-10.
   5. Harris Cream JH80-10.
   7. Light Mist JH70-10.
  10. Soft Green JH60-10.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

C. Nominal 2 inch by 4 inch wood framing selected for minimal shrinkage and complying with local building codes, including the use of water-resistive barriers or vapor barriers where required. Minimum 1-1/2 inches face and straight, true, of uniform dimensions and properly aligned.
   1. Install water-resistive barriers and claddings to dry surfaces.
   2. Repair any punctures or tears in the water-resistive barrier prior to the installation of the siding.
   3. Protect siding from other trades.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
C. Install a water-resistive barrier is required in accordance with local building code requirements.

D. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.

E. Install Engineered for ClimateTM HardieWrapTM weather barrier in accordance with local building code requirements.

F. Use HardieWrapTM Seam Tape and joint and laps.

G. Install HardieWrapTM flashing, and HardieWrapTM Flex Flashing

3.3 INSTALLATION - HARDIEPLANK HZ5 LAP SIDING AND ARTISAN HZ5 LAP SIDING

A. Install materials in strict accordance with manufacturer's installation instructions.

B. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's installation instructions.

C. Align vertical joints of the planks over framing members.

D. Maintain clearance between panel and adjacent material.

E. Wind Resistance: Where a specified level of wind resistance is required Hardieplank lap siding is installed to framing members and secured with fasteners described in Table No. 2 in National Evaluation Service Report No. NER-405.

F. Locate splices at least 12 inches away from window and door openings.

3.4 INSTALLATION - HARDIETRIM

A. Install materials in strict accordance with manufacturer's installation instructions. Install flashing around all wall openings.

B. Fasten through trim into structural framing or code complying sheathing. Fasteners must penetrate minimum 3/4 inch or full thickness of sheathing. Additional fasteners may be required to ensure adequate security.

C. Place fasteners no closer than 3/4 inch and no further than 2 inches from side edge of trim board and no closer than 1 inch from end. Fasten maximum 16 inches on center.

D. Maintain clearance between trim and adjacent finished grade.

E. Allow 1/8 inch gap between trim and siding.

F. Seal gap with high quality, paint-able caulk.

G. Shim frieze board as required to align with corner trim.

H. Fasten through overlapping boards. Do not nail between lap joints.
3.5 FINISHING

A. Factory Finish siding with a minimum one coat high quality, alkali resistant primer and one coat of either, 100 percent acrylic or latex or oil based, exterior grade topcoats or two coats high quality alkali resistant 100 percent acrylic or latex, exterior grade topcoat within 90 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.

B. Finish factory primed siding with a minimum of one coat of high quality 100 percent acrylic or latex or oil based exterior grade paint within 180 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

C. All Touch-up to be completed with factory colored touch-up kits, to be supplied by manufacture.

END OF SECTION 07461
SECTION 07620
SHEET METAL FLASHING AND TRIM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Metal flashing and Counter flashing at Window infill.
2. Exterior wall flashing.
3. Sheet metal accessories.

1.3 SUBMITTALS

A. Submit for approval samples, shop drawings, product data.

1.4 QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for the years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer’s instructions.

PART 2 – PRODUCTS

2.1 METALS

A. Sheet Metal Flashing and Trim:

1. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, No. 2D finish.
   a. Counter flashing and Flashing Receivers: 0.0156 inch (28 gage) thick.
   b. Wall Flashing: 0.0156 inch (28 gage) thick.

a. copings: 0.0396 inch (20 gage) thick.
b. Fascia/Gravel Stop: 0.0276 inch (24 gage) thick.

   a. Parapet Scuppers: 0.0320 inch (20 gage) thick.
   b. Closures: 0.0400 inch (18 gage) thick.
   c. Window Sill Flashing: 0.0320 inch (20 gage) thick.
   d. Color: Match Existing.

B. Fabricated Units: Compliance with SMACNA Sheet Metal Manual.


D. Auxiliary Materials:
   1. Solder compatible with metal.
   2. Bituminous isolation coating.
   3. Mastic and elastomeric sealants.
   5. Polyethylene underlayment.
   6. Reglets and metal accessories.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. Fastening to In-Place Construction: Provide exterior grade veneer core plywood and fasten plywood where necessary for securing to in-place construction.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing flashing, fascia, gutters and downspouts, exterior wall flashing and expansion joints.

C. Fit exposed connections accurately together to form hairline joints.

3.2 INSTALLATION

A. Provide work to sized, shapes and profiles indicated. Install work to comply with quality standards referenced. Back prime work and install plumb, level and straight with tight joints; scribe work to fit.
B. Install materials and systems in accordance with manufacturer’s instructions and approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.

C. Comply with manufacturer’s requirements for cutting, handling, fastening and working materials.


E. Install materials and systems in accordance with manufacturer’s instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

F. Copings: Anchor to resist uplift and outward forces according to recommendations in FMG Loss Prevention Data sheet 1 – 49.

G. Restore damaged components and finishes. Clean and protect work from damage.

END OF SECTION 07620
SECTION 07920
JOINT SEALERS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes the following:
   1. Provide joint sealers at interior and exterior vertical and horizontal joints.

1.3 SUBMITTALS
A. Submit for approval samples, product data.
   1. Samples for Initial Selection for Standard Colors: For each type and color of joint sealant scheduled for color selection by Architect, provide Manufacturer’s color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
   2. Samples for Verification of Color Match: For each type and color of joint sealant scheduled to match other materials or surfaces, provide Samples with joint sealants in ½-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

1.4 QUALITY ASSURANCE
A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer’s instructions.
B. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

PART 2 – PRODUCTS

2.1 MATERIALS
A. Single-Component Mildew-Resistant Neutral-Curing Silicone Elastomeric Joint Sealant:
1. **Products**
   a. Pecora Corporation; 898
   b. Tremco: Tremsil 600 White.

2. **Type and Grade:** ASTM C 920, S (single component) and NS (nonsag).
3. **Class:** 25.
4. **Use Related to Exposure:** NT (nontraffic).
5. **Uses Related to Joint Substrates:** M, G, A, and O as applicable to joint substrates indicated.

**B. Multicomponent Nonsag Urethane Elastomeric Joint Sealant:**

1. **Products:**
   a. Bostik Findley; Chem-Calk 500.
   b. Pacific Polymer, Inc.; Elsto-Thane 227R Type II (Gun Grade).
   c. Polymeric Systems Inc.; PSI-270
   d. Tremco; Dymeric.

2. **Type and Grade:** ASTM C 920, M (multicomponent) and NS (nonsag).
3. **Class:** 25.
4. **Use Related to Exposure:** NT (nontraffic).
5. **Uses Related to Joint Substrates:** M, G, A, and O as applicable to joint substrates indicated.

**C. Multicomponent Pourable Urethane Elastomeric Joint Sealant:**

1. **Products:**
   b. Meadows, W.R., Inc.; POURTHANE.
   c. Pacific Polymer, Inc.; Elasto-Thane 227 High Shore Type I (Self Leveling) or Elasto-Thane 227 Type I (Self Leveling).
   d. Pecora Corporation; Urexpan NR-200.
   e. Polymeric Systems Inc.; PSI-270SL.
   g. Tremco; THC-901, THC-900, or Vulkem 245.

2. **Type and Grade:** ASTM C 920, M (multicomponent) and P (pourable).
3. **Class:** 25.
4. **Use Related to Exposure:** T (traffic).
5. **Uses Related to Joint Substrates:** M, A, and O as applicable to joint substrates indicated.

**D. Single-Component Nonsag Urethane Elastomeric Joint Sealant:**

1. **Products:**
   b. Pecora Corporation; Dynatrol I-XL.
   c. Polymeric Systems Inc.; Flexiprene 1000 or PSI-901.
E. Single-Component Pourable Urethane Elastomeric Joint Sealant:

1. Products:
   a. Bostik Findley; Chem-Calk 950.
   b. Pecora Corporation; Urexypan NR-201.
   e. Tremco; Tremflex S/L or Vulkem 45.

F. Acrylic-Based Solvent-Release Joint Sealant: Comply with ASTM C 1311 or FS TT-S-00230.

2. Tremco; Mono 555.


1. Bostik Findley; Bostk 300.
2. Fuller, H.B. Company; SC-0296 or SC-0288.
3. Pecora Corporation; BC-158.
5. Sonneborn, Division of ChemRex Inc.; Sonneborn Multi-Purpose Sealant.
6. Tremco; Tremco Butyl Sealant.

H. Latex Sealant: Comply with ASTM C 834, Type P, Grade NF.

1. Bostik Findley; Chem-Calk 600.
4. Sonneborn, Division of ChemRex Inc.; Sonolac.
5. Tremco; Tremflex 834.

I. Acoustical Sealant for Exposed and concealed Joints: Manufacturer’s standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following:

1. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

2. Products:
   a. Pecora Corporation; AC-20 FTR Acoustical and Insulation Sealant.
J. Auxiliary Materials:

1. Plastic foam joint fillers.
2. Elastomeric Tubing backer rods.
3. Bond breaker tape.
4. Primer.
5. Cleaners for Nonporous Surfaces.
6. Masking Tape.

PART 3 – EXECUTION

3.1 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants.

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant.
   a. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.

2. Remove laitance and form-release agents from concrete.
   a. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate test or prior experience. Apply primer to comply with joint-sealant manufacturer’s written instructions. Confin primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Making Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION

A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

B. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

G. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

END OF SECTION 07920
## Exteriar Traffic Joints

| Control and expansion joints in standard gray concrete | Urethane | Standard |
| Joints between standard gray concrete paving & building walls & other vertical surfaces | Urethane | Standard |

## Exteriar Non-Traffic Joints

| Building expansion joints in unit masonry | Preformed Foam w/Silicone cover | Match mortar |
| Control and expansion joints in cast-in-place concrete | Urethane | Standard |
| Control and expansion joints in architectural concrete | Urethane | Custom |
| Joints between precast architectural concrete | Urethane | Match precast concrete |
| Control and expansion joints in cast stone | Urethane | Custom |
| Control and expansion joints in decorative unit masonry | Urethane | Match mortar |
| Control and expansion joints in unity masonry (unfinished) | Urethane | Match mortar |
| Control and expansion joints in EIFS systems | Urethane | Match surface color |
| Joints between prefinished metal panels | Urethane or Silicone | Match metal |
| Joints between metal flashings (concealed) | Butyl | Standard |
| Joints between prefinished metal flashings (exposed) | Urethane or Silicone | Match metal flashings |
| Joints between unfinished metal flashings (exposed) | Urethane or Silicone | Standard |
| Perimeter joints around frames of field painted metal frames | Acrylic (Paintable) | Standard |
| Perimeter joints around frames of prefinished metal doors and windows | Butyl | Match metal frames |
| Setting bed for flashing receivers | Butyl | Standard |
| Setting bed for thresholds & sills | Butyl | Standard |

## Interior Traffic Joints

| Control and expansion joints in concrete slabs (concealed) | None required | N/A |
| Control and expansion joints in standard gray concrete slabs (exposed) | Urethane | Standard |
| Control and expansion joints in tile (in toilet rooms and kitchens) | Mildew Resistant Silicone | Match grout |
| Control and expansion joints in tile (not in toilet rooms and kitchens) | Urethane | Match grout |

## Interior Non-Traffic Joints

| Control and expansion joints in cast-in-place concrete | Urethane | Standard |
| Control and expansion joints in decorative units masonry | Urethane | Match mortar |
| Control and expansion joints in cast stone | Urethane | Custom |
| Control and expansion joints in unit masonry (to be painted) | Urethane (paintable) | Standard |
| Control and expansion joints in unit masonry (unfinished) | Urethane | Standard |
| Control and expansion joints in tile (in toilet rooms and kitchens) | Mildew Resistant Silicone | Match grout |
| Control joints & gaps in acoustic walls and partitions | Acoustic (paintable) | Standard |
| Control joints in gypsum board ceilings and partitions | Acrylic (paintable) | As selected |
| Joints between plastic laminate casework items | Silicone | Match plastic laminate |
| Joints between wood casework and woodwork items (transparent finish) | Silicone | Custom |
JOINT SEALANT SCHEDULE

<table>
<thead>
<tr>
<th>Perimeter joints around frames of field painted metal frames</th>
<th>Acrylic (Paintable)</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perimeter Joints around frames of prefinish metal doors and windows</td>
<td>Urethane or Silicone</td>
<td>Match metal frames</td>
</tr>
<tr>
<td>Joints between plumbing fixtures &amp; adjoining walls, floors, &amp; counters</td>
<td>Mildew Resistant Silicone</td>
<td>As selected</td>
</tr>
</tbody>
</table>

Provide sealants as follows:

A. Type:
   1. Provide Type M (multicomponent) sealants where required to achieve color match indicated and where specifically indicated.
   2. Provide Type S (single component) or Type M (multicomponent) sealants elsewhere.

B. Grade:
   1. Provide Grade P (pourable) or Grade NS (nonsag) sealants at horizontal joints.
   2. Provide Grade NS (nonsag) sealants at vertical and non-horizontal joints.

C. Use Related To Exposure:
   1. Provide Use T (traffic) at horizontal traffic surfaces.
   2. Provide Use NT (nontraffic) at vertical and horizontal non-traffic surfaces.

D. Colors of Exposed Joint Sealants:
   1. Where a color is indicated “standard,” provide standard color as selected by Architect from manufacturers full range for this characteristic.
   2. Where color is indicated “custom” or to match a building component, provide a custom Color that complies with requirements and matches said building component. Standard colors will be considered provided the color match is accurate. Architect’s decision will be final on whether a proposed product matches satisfactorily.
SECTION 09260
GYPSUM BOARD ASSEMBLIES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes the following:
   1. Interior gypsum wallboard.
   2. Fire rated gypsum wallboard.

1.3 DEFINITIONS
A. Gypsum Board Terminology: Refer to ASTM C 11 for definitions of terms for gypsum boards assemblies not defined in this Section or in other referenced standards.

1.4 SUBMITTALS
A. Product Data: For each type of product indicated.
B. Shop Drawings: Show locations, fabrication, and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other units of Work.
C. Samples: For the following products:
   1. Trim Accessories: Full-size sample in 12-inch-long length for each trim accessory indicated.

1.5 QUALITY ASSURANCE
A. Fire-Test-Response Characteristics: For gypsum board assemblies with fire-resistance ratings, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.

B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes. Stack gypsum panels flat to prevent sagging.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer’s written recommendations, whichever are more stringent.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Steel Framing and Furring:
   a. Clark Steel Framing Systems.
   b. Consolidated Systems, Inc.
   d. Dietrich Industries, Inc.
   e. MarinoWare; Division of Ware Ind.
   g. Unimast, Inc.

2. Gypsum Boards and Related Products:
   a. American Gypsum Co.
   b. G-P Gypsum Corp.
   c. National Gypsum Company.
   d. United States Gypsum Co.
2.2 STEEL SUSPENDED CEILING AND SOFFIT FRAMING

A. Components, General: Comply with ASTM C 754 for conditions indicated.

B. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch-diameter wire, or double strand of 0.0475-inch-diameter wire.

C. Hanger Attachments to Concrete: As follows:
   1. Anchors: Fabricated from corrosion-resistant materials with holes or loops for attaching hanger wires and capable of sustaining, without failure, a load equal to 5 times that imposed by construction as determined by testing according to ASTM E 488 by a qualified independent testing agency.
      a. Type: Postinstalled, expansion anchor.
   2. Power-Actuated Fasteners: Suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other devices for attaching hangers of type indicated, and capable of sustaining, without failure, a load equal to 10 times that imposed by construction as determined by testing according to ASTM E 1190 by a qualified independent testing agency.

D. Hangers: As follows:
   1. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162-inch diameter.

E. Carrying Channels: Cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538 inch, a minimum 1/2-inch-wide flange, with ASTM A 653/A 653M, G60, hot-dip galvanized zinc coating.
   1. Depth: 1-1/2-inches.

   1. Cold Rolled Channels: 0.0538-inch bare steel thickness, with minimum 1/2-inch-wide flange, 3/4 inch deep.
   2. Steel Studs: ASTM C 654.
      a. Minimum Base Metal Thickness: 0.0312 inch.
      b. Depth: As indicated.
a. Minimum Base Metal Thickness: 0.0312 inch.

4. Resilient Furring Channels: 1/2-inch-deep members designed to reduce sound transmission.
   a. Configuration: Asymmetrical, with face attached to single flange by a slotted leg (web).

G. Grid Suspension system for Interior Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following.
      b. Chicago Metallic Corporation; Drywall Furring 660 System.
      c. USG Interiors, Inc; Drywall Suspension System.

2.3 STEEL PARTITIONS

A. Components, General: As follows:
   1. Comply with ASTM C 754 for conditions indicated.

B. Steel Studs and Runners: ASTM C 645.
   1. Minimum Base Metal Thickness: 0.0312 inch.
   2. Depth: As indicated.

C. Deep-Leg Deflection Track: ASTM C 645 top runner with 2-inch-deep flanges.

D. Proprietary Deflection Track: Steel sheet top runner manufactured to prevent cracking of gypsum board applied to interior partitions resulting from deflection of structure above; in thickness indicated for studs and in width to accommodate depth of studs.
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
      a. Delta Star, Inc, Superior Metal Trim; Superior Flex Track System (SFT).
      b. Metal-Lite, Inc.; Slotted Track.

E. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
   1. Minimum Base Metal Thickness: 0.0312 inch.
F. Cold-Rolled Channel Bridging: 0.0538-inch bare steel thickness, with minimum 1/2-inch-wide flange.
   1. Depth: 1-1/2 inches.

2.4 INTERIOR GYPSUM WALLBOARD

A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicted.

   1. Types:
      b. Thickness: Moisture Resistant
      c. Long Edges: Tapered.
      d. Location: Vertical surfaces, unless otherwise indicted.

2.5 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.
   1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.
   2. Shapes:
      a. Cornerbead: Use at outside corners.
      b. Bullnose Bead: Use where indicated.
      c. LC-Bead: J-shaped; exposed long flange receives joint compound; use at exposed panel edges.
      d. L-Bead: L-shaped; exposed long leg receives joint compound; use where indicated.
      e. U-Bead: J-shaped; exposed short flange does not receive joint compound; use where indicated.
      f. Expansion (Control) Joint: Use where indicated.

B. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.
WAYNE STATE UNIVERSITY
LIFE SCIENCE EXTERIOR WALL
SYSTEM STABILIZATION
WSU Project No.: 006-253400
DNCE Project No.:  8424-00
NM Project No.:  14116.0

1. Available Manufacturers: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
   a. Fry Reglet Corp.
   b. Gordon, Inc.
   c. MM Systems Corporation.
   d. Pittcon Industries.

2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221, alloy 6063-T5.

3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.

2.6 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475.

B. Joint Tape:

   1. Interior Gypsum Wallboard: Paper.

C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

   1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.

   2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.

      a. Use setting-type compound for installing paper-faced metal trim accessories.

   3. Fill Coat: For second coat, use setting-type, sandable topping compound.

   4. Finish Coat: For third coat, use setting-type, sandable topping compound.

2.7 ACOUSTICAL SEALANT

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following.

   1. Acoustical Sealant for Exposed and Concealed Joints:

      a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.

B. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

2.8 AUXILLARY MATERIALS
A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer’s written recommendations.
B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
   1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
D. Isolation Strip at Exterior Walls:
   1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), nonperforated.
   2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

PART 3 – EXECUTION
3.1 EXAMINATION
A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLING STEEL FRAMING, GENERAL
A. Installation Standards: ASTM C 754, and ASTM C 840 requirements that apply to framing installation.
B. Install supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support fixtures, equipment services, furnishings, or similar construction. Comply with details indicated and with gypsum board manufacturer’s written recommendations or, if none available, with United States Gypsum’s “Gypsum Construction Handbook”.
C. Isolate steel framing from building structure at locations indicated to prevent transfer of loading imposed by structural movement.
   1. Isolate ceiling assemblies where they abut or are penetrated by building structure.
2. Isolate partition framing and wall furring where it abuts structure, except at floor. Install slip-type joints at head of assemblies that avoid axial loading of assembly and laterally support assembly.
   a. Use deep-leg deflection track where indicated.
   b. Use proprietary deflection track where indicated.
   c. Use proprietary firestop track where indicated.

D. Do not bridge building control and expansion joints with steel framing or furring members. Frame both sides of joints independently.

3.3 INSTALLING STEEL SUSPENDED CEILING AND SOFFIT FRAMING

A. Suspend ceiling hangers from building structure as follows:

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.

3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail.

4. Secure hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.

5. Do not support ceilings directly from permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.

6. Do not attach hangers to steel deck tabs.

7. Do not attach hangers to steel roof deck. Attach hangers to structural members.

8. Do not connect or suspend steel framing from ducts, pipes, or conduit.

B. Installation Tolerances: Install steel framing components for suspended ceilings so members for panel attachment are level to within 1/8 inch in 12 feet measured lengthwise on each member and transversely between parallel members.

C. Sway-brace suspended steel framing with hangers used for support.
D. Wire-tie furring channels to supports, as required to comply with requirements for assemblies indicated.

E. Install suspended steel framing components in sizes and spacings indicated, but not less than that required by the referenced steel framing and installation standards.

   1. Hangers: 48 inches o.c.
   2. Carrying Channels (Main Runners): 48 inches o.c.
   3. Furring Channels (Furring Members): 16 inches o.c.

F. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.

3.4 INSTALLING STEEL PARTITIONS

A. Install tracks (runners) at floors, ceilings, and structural walls and columns where gypsum board assemblies abut other construction.

   1. Where studs are installed directly against exterior walls, install asphalt-free or foam-gasket isolation strip between studs and wall.

B. Installation Tolerance: Install each steel framing and furring member so fastening surfaces vary not more than 1/8 inch from the plane formed by the faces of adjacent framing.

C. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.

   1. Cut studs 1/2 inch short of full height to provide perimeter relief.
   2. For fire-resistance-rated and STC-rated partitions that extend to the underside of floor/roof slabs and decks or other continuous solid-structure surfaces to obtain ratings, install framing around structural and other members extending below floor/roof slabs and decks, as needed to support gypsum board closures and to make partitions continuous from floor to underside of solid structure.

       a. Terminate partition framing at suspended ceilings where indicated.

D. Install steel studs and furring at the following spacings:

   2. Multilayer Construction: 16 inches o.c., unless otherwise indicated.

E. Install steel studs so flanges point in the same direction and leading edge or end of each panel can be attached to open (unsupported) edges of stud flanges first.
F. Frame door openings to comply with GA-600 and with gypsum board manufacturer’s applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

1. Install two studs at each jamb, unless otherwise indicated.

2. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint.

3. Extend jamb studs through suspended ceilings and attach to underside of floor or roof structure above.

G. Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

3.5 APPLYING AND FINISHING PANELS, GENERAL

A. Gypsum Board Application and Finishing Standards: ASTM C 840 and GA-216.

B. Install ceiling board panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install gypsum panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

F. Attach gypsum panels to framing provided at openings and cutouts.

G. Form control and expansion joints with space between edges of adjoining gypsum panels.

H. Cover both faces of steel stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.

2. Fit gypsum panels around ducts, pipes, and conduits.

3. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow 1/4- to 3/8-inch-wide joints to install sealant.
I. Isolate perimeter of non-load-bearing gypsum board partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch-wide spaces at these locations, and trim edges with U-bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

J. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer’s written recommendations.
   1. Space screws a maximum of 12 inches o.c. for vertical applications.

3.6 PANEL APPLICATION METHODS
   A. Single-Layer Application:
      1. On ceilings, apply gypsum panels before wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
      2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
         a. Stagger abutting end joints not less than one framing member in alternate courses of board.

   B. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.7 INSTALLING TRIM ACCESSORIES
   A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer’s written instructions.

3.8 FINISHING GYPSUM BOARD ASSEMBLIES
   A. General: Treat gypsum boards joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
   B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
   C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
   D. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
      1. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at panel surfaces that will be exposed to view, unless otherwise indicated.

END OF SECTION 09260
PART 1 - GENERAL

1.1 SUMMARY
A. Extent of acoustical ceilings is indicated on Drawings and schedules.
B. Types of acoustical ceiling products include the following:
   1. Acoustical lay-in panels of the following types:
      a. Humidity-Tolerant acoustic panels.
   2. Suspended grid systems, specialty trim and accessories.
   5. New lighting fixtures wired to existing power circuits.

1.2 SUBMITTALS
A. Product Data: Submit manufacturer's literature, including certification by a recognized independent testing laboratory, indicating compliance with requirements.

1.3 QUALITY ASSURANCE
A. Standards: Comply with the following:
   3. Surface Burning Characteristics: Flame spread: 25 or less; smoke developed: 50 or less; per ASTM E 84. UL listed and marked.
B. Source Limitations: Obtain each type of acoustic panel and related grid system from one source and by a single manufacturer.

1.4 PROJECT CONDITIONS
A. Do not install ceilings until ambient temperature and humidity conditions can be continuously maintained at values near those intended for final occupancy.
B. Building areas to receive ceiling shall be free of construction dust and debris.
PART 2 - PRODUCTS

2.3 2 X 4 FOOT ACOUSTIC PANELS-FIRECODE

A. Smooth textured surface, humidity-tolerant, mineral composition panels with washable surface, and as follows:
   1. Surface: Smooth Textured, soil resistant, humidity and mold/mildew resistant, non-perforated.
   2. Edges: Square Edge
   3. Grid: 15/16
   5. LR: Not less than .86.
   6. NRC: Not less than .70.
   7. CAC: Not less than 35.
   9. Manufacturer/Style: Provide one of the following:
      a. Armstrong World Industries, Inc.
      b. Celotex
      c. U.S. Gypsum.
   10. Related Suspension Grid: Panel Suspension System in compliance with requirements of "Suspension Systems" Article of this Section.
      a. Provide specialty trim systems where indicated on Drawings and where required.

2.2 SUSPENSION SYSTEMS

A. Suspension Systems, General: As required to support acoustical units, electrical and mechanical fixtures and other components as indicated, including anchorages, hangers, runners, cross runners, splines, clips, moldings, fasteners and other members, devices and accessories. Comply with requirements of ASTM C 635.
   1. Hanger Wire: Not less than 12 gage (0.106 inch) galvanized steel.
   2. Type: Exposed Direct-Hung Steel Suspension System

B. Moisture-Resistant 15/16-inch Panel Suspension System: Suspension system with G60 hot-dip galvanized exposed faces with rolled, painted, aluminum caps.
   1. Face Width: 15/16-inch wide.
   2. Product/Manufacturer: Provide the following:
      c. "Donn ZXLA"; U.S. Gypsum.

2.3 ACOUSTICAL SEALANT

A. Available Products:
   1. Acoustical Sealant for Exposed and Concealed Joints:
      a. Pecora Corp; AC-20 FTR Acoustical and Insulation Sealant.
PART 3 - EXECUTION

3.1 INSTALLATION
A. Comply with ASTM C636 and seismic design requirements indicated, per manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
B. Layout: Balance ceiling borders on opposite sides, using more-than-half width acoustical units, except where otherwise dimensioned or indicated.
   1. Tolerance: 1/8 inch in 12 feet level tolerance.
C. Suspension System: Secure to building structure, free from contact with objects within the ceiling plenum, with hangers spaced 48 inches on center along supported members; provide hangers not more than 8 inches from ends of each member.
   1. Where interference with ducts or suspended equipment prevents direct connection of suspension elements to building structure, provide steel channel members (Unistrut or equivalent) hung from structural members with threaded rods with appropriate fasteners; and adequately sized for suspension system capacity. Secure suspension system to steel channels. Connection to ductwork or equipment is not permitted.
   2. Do not fasten ceiling suspension members to metal roof deck.
D. Rabbeted Panels: Rabbet panel edges that have been field cut to fit non-modular suspension grid shapes at room perimeter, columns, and similar obstructions. Use router or other factory-approved rabbeting method.
E. Edge Moldings: Secure to substrate with screw anchors spaced 16 inch on center. Set with concealed bead of acoustical sealant. Miter corner joints. Cope exposed flanges of intersecting suspension members for flush intersections.
F. Provide hold-down clips at each acoustic panel in systems indicated for Animal Facility application. Install in accordance with manufacturer's recommendations for an air pressure uplift-resistant installation.

3.2 SPECIALTY TRIM INSTALLATION
A. Exposed Edge and Perimeter Trim System: Install units in accordance with manufacturer's printed instructions for specific Project application.

3.3 CLEANING AND REPAIR
A. Clean suspension grid and panels. Remove and replace panels and grid that are defective, or that have been damaged.
B. Touch-up paint field-cut edges of factory painted tile that are exposed to view in finished installation, including horizontal and vertical surfaces at perimeter of ceilings where panels are cut for rabbeted edge molding.
SECTION 09651
RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 DESCRIPTION
This section specifies the installation of solid vinyl tile flooring, vinyl composition tile flooring and accessories.

1.2 RELATED WORK
A. Color and pattern and location in room finish schedule: SCHEDULE FOR FINISHES.
B. Resilient Base: Section 09653.

1.3 SUBMITTALS
A. Submit in accordance with SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
B. Manufacturer's Literature and Data:
   1. Description of each product.
   2. Resilient material manufacturers recommendations for adhesives, underlayment, primers and polish.
   3. Application and installation instructions.
C. Samples:
   1. Tile: (12 inches by 12 inches) for each type, pattern and color.
   2. Edge Strips: (6 inches) long, each type.
   3. Feature Strips: (6 inches) long.
D. Shop Drawings:
   1. Layout of patterns shown on the drawings.
   2. Edge strip locations showing types and detail cross sections.
E. Test Reports:
   1. Abrasion resistance: Depth of wear for each tile type and color and volume loss of tile, certified by independent laboratory.
   2. Tested per ASTM F510.

1.4 DELIVERY
A. Deliver materials to the site in original sealed packages or containers, clearly marked with the manufacturer's name or brand, type and color, production run number and date of manufacture.
B. Materials from containers which have been distorted, damaged or opened prior to installation will be rejected.

1.5 STORAGE
A. Store materials in weathertight and dry storage facility.
B. Protect from damage from handling, water, and temperature.

1.6 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society for Testing and Materials (ASTM):
   D4078-02 (2008).............................Water Emulsion Floor Finish
   E648-10...........................................Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source
   E662-09...........................................Specific Optical Density of Smoke Generated by Solid Materials
   E1155-96 (R2008)...........................Determining Floor Flatness and Floor Levelness Numbers
   F510-93 (R 2008)...........................Resistance to Abrasion of Resilient Floor Coverings Using an Abrader with a Grit Feed Method
   F710-08 ...........................................Preparing Concrete Floors to Receive Resilient Flooring
   F1066-04 (R2010)...........................Vinyl Composition Floor Tile
   F1344-10 .......................................Rubber Floor Tile
   F1700-04 (R2010)...........................Solid Vinyl Floor Tile

C. Resilient Floor Covering Institute (RFCI):
   IP #2 ................................................Installation Practice for Vinyl Composition Tile (VCT)

D. Federal Specifications (Fed. Spec.):
   SS-T-312 ...........................................Tile Floor: Asphalt, Rubber, Vinyl and Vinyl Composition

PART 2 - PRODUCTS

2.1 GENERAL

A. Furnish product type, materials of the same production run and meeting following criteria.

B. Use adhesives, underlayment, primers and polish recommended by the floor resilient material manufacturer.

C. Critical Radiant Flux: 0.45 watts per sq. cm or more, Class I, per ASTM E 648.

D. Smoke density: Less than 450 per ASTM E662.


F. Architect to select resilient floor from Manufacturer’s standard colors. WSU standard will be basis of selection.
2.2 VINYL COMPOSITION TILE
   A. ASTM F1066, Composition 1, //Class I (solid color)// Class 2 (through pattern) //, 300 mm (12 inches) square, 3 mm (1/8 inch) thick.
   B. Color and pattern uniformly distributed throughout thickness.

2.3 SOLID VINYL-TILE
   A. ASTM F1700, 300 mm (12 by 12 inches) square, 3 mm (1/8 inch) thick, homogenous throughout.
   B. Color and Pattern uniformly distributed throughout thickness.
   C. Where solid vinyl tiles are specified, seek products with recycled content.

2.5 ADHESIVES
   A. Comply with applicable regulations regarding toxic and hazardous materials Green Seal (GS-36) for commercial adhesive.
   B. Use low-VOC adhesive during installation. Water based is preferred over solvent based adhesives. Henry 430 is preferred WSU adhesive.

2.6 PRIMER (FOR CONCRETE SUBFLOORS)
   As recommended by the adhesive and tile manufacturer.

2.7 LEVELING COMPOUND (FOR CONCRETE FLOORS)
   A. Provide cementitious products with latex or polyvinyl acetate resins in the mix.
   B. Determine the type of underlayment selected for use by the condition to be corrected.

2.8 POLISH AND CLEANERS
   A. Cleaners RFCI CL-1.
   B. Polish: ASTM D4078.

2.9 EDGE STRIPS
   A. 28 mm (1-1/8 inch) wide unless shown otherwise.
   B. Bevel from maximum thickness to minimum thickness for flush joint unless shown otherwise.
   C. Extruded aluminum, mill finish, mechanically cleaned:
      1. Drill and counter sink edge strip for flat head screws.
      2. Space holes near ends and approximately 225 mm (9 inches) on center between.

2.10 SCREWS
   Stainless steel flat head screw.

PART 3 - EXECUTION

3.1 PROJECT CONDITIONS
   A. Maintain temperature of materials a minimum of 22 °C (70 °F,) for 48 hours before installation.
B. Maintain temperature of rooms where work occurs between 21 °C and 27 °C (70 °F and 80 °F), for at least 48 hours, before, during and after installation.

C. Do not install flooring until building is permanently enclosed and wet construction in or near areas to receive tile materials is complete, dry and cured.

3.2 SUBFLOOR PREPARATION

A. Verify that concrete slabs comply with ASTM F710. At existing slabs, determine levelness by F-number method in accordance with ASTM E1155. Overall value shall not exceed as follows:

   FF30/FL20

B. Correct conditions which will impair proper installation.

C. Fill cracks, joints and other irregularities in concrete with leveling compound:

   1. Do not use adhesive for filling or leveling purposes.
   2. Do not use leveling compound to correct imperfections which can be corrected by spot grinding.
   3. Trowel to smooth surface free of trowel marks, pits, dents, protrusions, cracks or joints.

D. Clean floor of oil, paint, dust, and deleterious substances: Leave floor dry and cured free of residue from existing curing or cleaning agents.

E. Concrete Subfloor Testing:

   Determine Adhesion and dryness of the floor by bond and moisture tests as recommended by RFCI manual MRP.

F. Perform additional subfloor preparation to obtain satisfactory adherence of flooring if subfloor test patches allows easy removal of tile.

G. Prime the concrete subfloor if the primer will seal slab conditions that would inhibit bonding, or if priming is recommended by the tile or adhesive manufacturers.

H. Preparation of existing installation shall include the removal of existing resilient floor and existing adhesive. Do not use solvents to remove adhesives.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions for application and installation unless specified otherwise.

B. Mix tile from at least two containers. An apparent line either of shades or pattern variance will not be accepted.

C. Tile Layout:

   1. If layout is not shown on drawings, lay tile symmetrically about center of room or space with joints aligned.
   2. No tile shall be less than 150 mm (6 inches) and of equal width at walls.
   3. Place tile pattern in the same direction; do not alternate tiles.
D. Trim tiles to touch for the length of intersections at pipes and vertical projections, seal joints at pipes with waterproof cement.

E. Application:
   1. Apply adhesive uniformly with no bare spots.
      a. Conform to RFC1-TM-6 for joint tightness and for corner intersection unless layout pattern shows random corner intersection.
      b. More than 5 percent of the joints not touching will not be accepted.
   2. Roll tile floor with a minimum 45 kg (100 pound) roller. No exceptions.
   3. The Resident Engineer may have test tiles removed to check for non-uniform adhesion, spotty adhesive coverage, and ease of removal. Install new tile for broken removed tile.

F. Installation of Edge Strips:
   1. Locate edge strips under center line of doors unless otherwise shown.
   2. Set resilient edge strips in adhesive. Anchor metal edge strips with anchors and screws specified.
   3. Where tile edge is exposed, butt edge strip to touch along tile edge.
   4. Where thin set ceramic tile abuts resilient tile, set edge strip against floor file and against the ceramic tile edge.

3.4 CLEANING AND PROTECTION
A. Clean adhesive marks on exposed surfaces during the application of resilient materials before the adhesive sets. Exposed adhesive is not acceptable.
B. Keep traffic off resilient material for a minimum 72 hours after installation.
C. Clean and polish materials in the following order:
   1. For the first two weeks sweep and damp mopped only.
   2. After two weeks, scrub resilient materials with a minimum amount of water and a mild detergent.
      Leave surface clean and free of detergent residue.
   3. Apply polish to the floors in accordance with the polish manufacturer's instructions.
D. When construction traffic occurs over tile, cover resilient materials with reinforced kraft paper properly secured and maintained until removal is directed by Resident Engineer. At entrances and where wheeled vehicles or carts are used, cover tile with plywood, hardboard, or particle board over paper, secured and maintained until removal is directed by Resident Engineer.
E. When protective materials are removed and immediately prior to acceptance, replace any damage tile, re-clean resilient materials, lightly re-apply polish and buff floors.

3.6 LOCATION
A. Unless otherwise specified or shown, install tile flooring, on floor under areas where casework, laboratory and pharmacy furniture and other equipment occurs, except where mounted in wall recesses.
B. Extend tile flooring for room into adjacent closets and alcoves.

END OF SECTION 09651
SECTION 09653
RESILIENT WALL BASE AND ACCESSORIES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including the Standard and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

A. This Section includes the following:
   1. Resilient cove base (4 inches height).

B. Related Sections include the following:
   1. At locations of new Steel stabilization work.

1.3 SUBMITTALS

A. Product Data: Product indicated.

B. Samples: In manufacturer’s standard sizes, but not less than 3 inches long, of each product color and pattern specified.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualifies installer who has specialized in installing resilient products similar to those required for this Project.

B. Fire-test Response Characteristics: Provide product identical to those tested for fire-exposure behavior per test method indicated by a testing and inspecting agency acceptable to authorities having jurisdiction.
   1. Critical Radiant Flux: 0.45 W/sq cm or greater when tested per ASTM E 648.
   2. Smoke Density: Maximum specific optical density of 450 of less when tested per ATM 662.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to Project site in manufacturer’s original, unopened cartons and containers. Each bearing names product and manufacturer, Project identification, and shipping and handling instructions.

B. Store products in dry spaces protected from the weather, with ambient temperature maintaining between 50 and 90 deg F.

C. Move products into spaces where they will be installed at least 48 hours before installation.
1.6 PROJECT CONDITIONS

A. Maintain a temperature of not less than 70 deg F or more than 95 deg F in spaces to receive resilient products for at least 48 hours before installation, during installation, and for at least 48 hours after installation. After post installation period, maintain a temperature of not less than 55 deg F or more than 95 deg F.

B. Do not install products until they are at the same temperature as the space where they are to be installed.

C. Coordinate resilient product installation with other construction to minimize possibility of damage and soiling during remainder of construction period. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements of WSU.

2.2 RESILIENT WALL BASE


2.3 INSTALLATION ACCESSORIES

A. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.

PART 3 – EXECUTION

3.1 PREPARATION

A. General: Comply with manufacturer’s written installation for preparing substrates indicated to receive resilient products.

B. Clean substrates to be covered immediately before installing resilient products. Do not proceed with installation until conditions have been corrected.

3.2 INSTALLATION

A. General: Install resilient products according to manufacturer’s written installation instructions.

B. Apply resilient wall base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

1. Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned. Adhere tightly to surfaces.

END OF SECTION 09653
SECTION 09912
PAINTING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Standard and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes surface preparation and field painting of exposed interior items and surfaces.

1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

B. New work to receive paint finish. Existing surfaces adjacent to new work to receive new paint finish.

C. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, building steel frames and structural supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.

D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

1. Prefinished items include the following factory-finished components:

a. Architectural woodwork.

b. Finished mechanical and electrical equipment.

c. Light fixtures.

2. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:

a. Furred areas.

b. Ceiling plenums.

c. Pipe spaces.

d. Duct shafts.

3. Finished metal surfaces include the following:
a. Anodized aluminum.
b. Stainless steel.
c. Chromium plate.
d. Copper and copper alloys.
e. Bronze and brass.

4. Operating parts include moving parts of operating equipment and the following:
   a. Valve and damper operators.
   b. Linkages.
   c. Sensing devices.
   d. Motor and fan shafts.

5. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

E. Related Sections include the following:
1. Division 5 Section “Metal Fabrications” for shop priming ferrous metal.
2. Division 9 Section “Gypsum Board Assemblies” for surface preparation of gypsum board.

1.3 DEFINITIONS
A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 850-degree meter.
2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
3. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

1.4 SUBMITTALS
A. Product Data: For each paint system indicated. Include block fillers and primers.
1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer’s catalog number and general classification.

2. Manufacturer’s Information: Manufacturer’s technical information, including label analysis and instructions for handling, storing, and applying each coating material.

B. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.

1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.

2. Provide a list of materials and applications for each coat of each Sample. Label each Sample for location and application.

C. Qualification Data: For Applicator.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer’s original, unopened packages and containers bearing manufacturer’s name and label and the following information:

1. Product name or title of material.

2. Product description (generic classification or binder type).

3. Manufacturer’s stock number and date of manufacture.

4. Contents by volume, for pigment and vehicle constituents.

5. Thinning instructions.

6. Application instructions.

7. Color name and number.

8. VOC content.
B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient
temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and
residue.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.7 PROJECT CONDITIONS

A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50
and 90 deg F.

B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between
45 and 95 deg F.

C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures
less than 5 deg F above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and
heated within temperature limits specified by manufacturer during application and drying periods.

1.8 EXTRA MATERIALS

A. Furnish extra paint materials from the same production run as the materials applied and in the quantities
described below. Package with protective covering for storage and identify with labels describing contents.
Deliver extra materials to Owner.

1. Quantity: Furnish Owner with an additional 5 percent, but not less than 1 gal. or 1 case, as
appropriate, of each material and color applied.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the
Work include, but are not limited to, products listed in other Part 2 articles.

B. Manufacturers’ Names: Shortened versions (shown in parentheses) of the following manufacturers’ names are
used n other Part 2 articles:

1. Benjamin Moore & Co.
2. ICI Paints (Devoe Coatings and Dulux Paints).
4. O’Leary Paint Co.
5. PPG Industries, Inc.
7. Sherwin-Williams Co.
2.2 PAINT MATERIALS, GENERAL

A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer’s best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer’s product identification will not be acceptable.

1. Proprietary Names: Use of manufacturer’s proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer’s material data and certificates of performance for proposed substitutions.

C. Colors: As indicated by manufacturer’s designations.

2.3 INTERIOR PRIMERS

A. Interior Gypsum Board Primer: Factory-formulated latex-based primer for interior application.


2. Sherwin-Williams; PrepRite 200 Latex Wall Primer B28W200 Series: Applied at a dry film thickness of not less than 1.6 mils.


1. Benjamin Moore; Moore’s IMC Alkyd Metal Primer No. M06: Applied at a dry film thickness of not less than 2.0 mils.

2. Sherwin-Williams; Kem Kromik Universal Metal Primer B50NZ6/B50WZ1: Applied at a dry film thickness of not less than 3.0 mils.

C. Interior Zinc-Coated Metal Primer: Factory-formulated galvanized metal primer.

1. Benjamin Moore; Moore’s IMC Acrylic Metal Primer No. M04: Applied at a dry film thickness of not less than 2.0 mils.

2. Sherwin-Williams; Galvite HS B50WZ30: Applied at a dry film thickness of not less than 3.0 mils.

2.4 INTERIOR FINISH COATS

A. Interior Flat Acrylic Paint: Factory-formulated flat acrylic-emulsion latex paint for interior application.

1. Benjamin Moore; Moorcraft Super Spec Latex Flat No. 275: Applied at a dry film thickness of not less than 1.2 mils.
2. Sherwin-Williams; ProMar 200 Interior Latex Flat Wall Paint B30W200 Series: Applied at a dry film thickness of not less than 1.4 mils.


1. Benjamin Moore; Moorcraft Super Spec Latex Eggshell Enamel No. 274: Applied at a dry film thickness of not less than 1.3 mils.


C. Interior Semigloss Acrylic Enamel: Factory-formulated semigloss acrylic-latex enamel for interior application.


2. Sherwin-Williams; ProMar 200 Interior Latex Gloss Enamel B21W201: Applied at a dry film thickness of not less than 1.5 mils.

E. Interior Semigloss Alkyd Enamel: Factory-formulated semigloss alkyd enamel for interior application.


F. Interior Full-Gloss Alkyd Enamel for Wood and Metal Surfaces: Factory-formulated full-gloss alkyd interior enamel.


2.5 EXTERIOR PAINT SYSTEMS

A. General: Provide the following paint systems for various substances, as indicated.

B. Ferrous Metal:

1. Full-Gloss, Alkyd-Enamel Finish: 2 finish coats over rust-inhibitive primer.
a. Primer: Rust-inhibitive metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.3 mils (0.033 mm).
   i) S-W: Kem Kromik Metal Primer B50N2/B50W1.

b. First and Second Coats: Full-gloss, exterior, alkyd enamel applied at spreading rate recommended by manufacturer to achieve a total dry film thickness of not less than 3.0 mils (0.076 mm).
   i) S-W: Industrial Enamel B-54/B-54Z Series.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application. Comply with procedures specified in PDCA P4.
   1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
   2. Start of painting will be construed as Applicator’s acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
   1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

3.2 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
   1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
   1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer’s written instructions for each particular substrate condition and as specified.
   1. Provide barrier coats over incompatible primers or remove and reprime.
2. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC’s recommendations.
   a. Blast steel surfaces clean as recommended by paint system manufacturer and according to SSPC-SP 6/NACE No. 3.
   b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
   c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as shop coat.

3. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

D. Material Preparation: Mix and prepare paint materials according to manufacturer’s written instructions.
   1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
   2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and stain material before using.
   3. Use only thinners approved by paint manufacturer and only within recommended limits.

E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

A. General: Apply paint according to manufacturer’s written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
   1. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
   2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
   3. Provide finish coats that are compatible with primers used.
   4. The term “exposed surfaces” includes areas visible when permanent or built-in fixtures, grilles, convector covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.

6. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.

7. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.

8. Sand lightly between each succeeding enamel or varnish coat.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer’s written instructions, sand between applications.

2. Omit primer over metal surfaces that have been shop primed and touchup painted.

3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.

4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer’s written instructions.

1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.

2. Rollers: Use rollers of carpet, velvet-back, or high pile sheep’s wool as recommended by manufacturer for material and texture required.

3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer’s recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of entire system as recommended by manufacturer.

E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in occupied spaces.

F. Mechanical items to be painted include, but are not limited to, the following:
1. Uninsulated metal piping.

2. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.

3. Duct, equipment, and pipe insulation having “all-service jacket” or other paintable jacket material.

4. Mechanical equipment that is indicated to have a factory-primed finish for field painting.

G. Electrical items to be painted include, but are not limited to, the following:

1. Switchgear.

2. Panelboards.

3. Electrical equipment that is indicated to have a factory-primed finish for field painting.

H. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.

I. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

J. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.

1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.5 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide “Wet Paint” signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.6 INTERIOR PAINT SCHEDULE
A. Concrete and Masonry (Other Than Concrete Unit Masonry): Provide the following paint systems over interior concrete and brick masonry substrates:

1. Semigloss Acrylic-Enamel Finish: Two finish coats over a primer.
   b. Finish Coats: Interior semigloss acrylic enamel.

B. Gypsum Board: Provide the following finish systems over interior gypsum board surfaces:

1. Flat Acrylic Finish: Two finish coats over a primer.
   a. Primer: Interior gypsum board primer.
   b. Finish Coats: Interior flat acrylic paint.
2. Semigloss Acrylic-Enamel Finish: Two finish coats over a primer.
   a. Primer: Interior gypsum board primer.
   b. Finish Coats: Interior semigloss acrylic enamel.

C. Ferrous Metal: Provide the following finish systems over ferrous metal:

1. Full-Gloss Acrylic-Enamel Finish: Two finish coats over a primer.

D. Zinc-Coated Metal: Provide the following finish systems over interior zinc-coated metal surfaces:

1. Semigloss Acrylic-Enamel Finish: Two finish coats over a primer.
   b. Finish Coats: Interior semigloss acrylic enamel.
2. Full-Gloss Acrylic-Enamel Finish: Two finish coats over a primer.

E. All-Service Jacket over Insulation: Provide the following finish system on cotton or canvas insulation covering:

1. Flat Acrylic Finish: Two finish coats. Add fungicidal agent to render fabric mildew proof.
a. Finish Coats: Interior flat latex-emulsion size.

END OF SECTION 09912