Wayne State University
State Hall Plaza Renovation
WSU Project Number 016-181850
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
rfpteam2@wayne.edu

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

Consultant:
Grissim Metz Andriese
300 East Cady Street
Northville, MI 48157

February 2, 2015
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INFORMATION FOR BIDDERS

OWNER: Board of Governors
Wayne State University

PROJECT: State Hall Plaza Renovation
Project No. 016-181850

LOCATION: Wayne State University
5143 Cass Avenue
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
rfpteam2@wayne.edu

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

Architect: Grissim Metz Andriese
300 East Cady Street
Northville, MI 48157

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: February 2, 2015

BIDDING: Bidding documents may be obtained by vendors from the University Purchasing Web Site at http://www.forms.purchasing.wayne.edu/Adv_bid/Adv_bid.html beginning February 2, 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: 10:00 a.m., local time, February 12, 2015 to be held at Wayne State University – 5143 Cass Avenue, State Hall 0117, 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 February 17, 2015 at 12:00 Noon. All questions must be reduced to writing and emailed to the attention of Valerie Kreher, Senior Buyer at rfpteam2@wayne.edu, copy to Robert Kuhn, Senior Buyer.

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 February 26, 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 qualifications.

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.purchasing.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: State Hall Plaza Renovation
Project No. 016-181850

LOCATION: Wayne State University
5143 Cass Avenue
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
rfpteam2@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 theses 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. 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. **BIDDING DOCUMENTS**

A. Bid specifications are not available at the University, but are available beginning **February 2, 2015** through Wayne State University Procurement & Strategic Sourcing’s Website for Advertised Bids: [http://www.forms.purchasing.wayne.edu/Adv_bid/Adv_bid.html](http://www.forms.purchasing.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.purchasing.wayne.edu/Adv_bid/Adv_bid.html](http://www.forms.purchasing.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.purchasing.wayne.edu/Adv_bid/Adv_bid.html, and click on the "Join our Listserve" link at the top of the page.
NOTICE OF MANDATORY PRE-BID CONFERENCE

PROJECT: State Hall Plaza Renovation,

PROJECT NOS.: WSU PROJECT NO. 016-181850

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
5143 Cass Avenue, State Hall 0117
Detroit MI  48202

10:00 a.m., local time, February 12, 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.

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.purchasing.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 February 17, 2015, 12:00 noon.

IV. Proposal Due Date- February 26, 2015, 2:00 p.m.

V. Final Comments

VI. 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: State Hall Plaza Renovation

PROJECT NO.: WSU PROJECT NO. 016-181850

PROJECT TYPE: General Construction, Landscape 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
rfpteam2@wayne.edu

OWNER'S REPRESENTATIVE: Nancy Milstein, 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 State Hall Plaza Renovation project (WSU Project No. 016-181850) in accordance with the Bidding Documents for the following amounts:

$ 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.

ALTERNATE NO. 1: Supported slab at entry to State Hall
The undersigned agrees to enter into an agreement to complete the Alternate # 1 work of the project and to provide all labor and material associated with the work in accordance with the Bidding Documents for the following amounts:
UNIT PRICING (as listed in the detailed specifications, section - __________).

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<th>Item No.</th>
<th>Description</th>
<th>Material cost</th>
<th>Installed cost</th>
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<tr>
<td>Unit Price 1</td>
<td>6&quot; Depth Reinforced Concrete Paving</td>
<td>$ /linear ft</td>
<td>$ /linear ft</td>
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<tr>
<td>Unit Price 2</td>
<td>6&quot; Depth Reinforced Exposed Aggregate Concrete Paving</td>
<td>$ /linear ft</td>
<td>$ /linear ft</td>
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<tr>
<td>Unit Price 3</td>
<td>Sod</td>
<td>$ /cubic yard</td>
<td>$ /cubic yard</td>
</tr>
<tr>
<td>Unit Price 4</td>
<td>Shredded bark mulch</td>
<td>$ /cubic yard</td>
<td>$ /cubic yard</td>
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<tr>
<td>Unit Price 5</td>
<td>Plant Mix</td>
<td>$ /cubic yard</td>
<td>$ /cubic yard</td>
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</table>

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 ORDERS: (revised 4-01-2011)
The undersigned agrees to the following pricing formula and rates 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 August 31, 2015.

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.

<table>
<thead>
<tr>
<th>Addendum No.</th>
<th>Date</th>
<th>Addendum No.</th>
<th>Date</th>
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<tbody>
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CONTRACTOR'S PREQUALIFICATION STATEMENT & QUESTIONNAIRE:

Our Minimum Requirements for Construction Bids are:

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<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>
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<tr>
<td>EMR Rating (Experience Modification Rating)</td>
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<td>Required</td>
<td>Required</td>
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<td>Length of Time in Construction Business</td>
<td>2 Years</td>
<td>3 Years</td>
<td>5 Years</td>
<td>5 Years</td>
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<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>
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<td>Unsuccessful Projects on Campus in last 3 years</td>
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<td>Failure to comply with</td>
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Wayne State University
State Hall Plaza Renovation
WSU Project No. 016-181850

Form of Proposal for the General Contract

Prevailing Wage and/or Project Labor requirements

| Withdrawn University Bid (with or without Bond forfeiture) within the last 3 years | 1 or less | 1 or less | 1 or less | 1 or less |
| Company currently not in Chapter 11 of the US Bankruptcy Code | 1 Year | 2 Years | 3 Years | 3 Years |

** 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)

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: ________________________________
____________________________________________________________________________

12. List the construction Projects, and approximate dates, when you performed work similar in Scope to this project.

Project: ___________________________ Owner: ____________________________
Contract Amount: ___________________ Date Completed: _______________________
Project: ___________________________ Owner: ____________________________
Contract Amount: ___________________ Date Completed: _______________________
Project: ___________________________ Owner: ____________________________
Contract Amount: ___________________ Date Completed: _______________________

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

Project: ___________________________ Owner: ____________________________
Contract Amount: ___________________ Date Completed: _______________________
Project: ___________________________ Owner: ____________________________
Contract Amount: ___________________ Date Completed: _______________________
Project: ___________________________ Owner: ____________________________
Contract Amount: ___________________ Date Completed: _______________________

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 MINIMUM QUALIFICATIONS: The undersigned has read and understands the 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: _______________________________________________ @
PREVAILING WAGE RATE SCHEDULE (revised 4-05-2010)

A. See also Page 00100-4 Section 12.B

B. 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.

C. 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.

D. 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

F. 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/w347.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
**Wayne County**

**Official 2015 Prevailing Wage Rates for State Funded Projects**

**Issue Date:** 1/21/2015

**Contract must be awarded by:** 4/21/2015

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**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: $49.53, $73.40, $97.26
- 7th 6 months: $49.32, $73.01, $96.69
- 8th 6 months: $51.58, $76.40, $101.21

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**Official Request #: 93**

**Requestor:** Wayne State University

**Project Description:** State Hall Plaza - Renovation

**Project Number:** 016-181850

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

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

**Classification**  
**Name**  
**Description**  
**Updated**  
**Straight Time and a Half Provision**

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**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

**Carpenter**

- **Diver CA 687 D**  
  - 6/25/2014  
  - $64.65  
  - $93.14  
  - $121.63 X X H X X H D Y

- **Apprentice Rates:**

  - **First 6 months**  
    - $37.74  
    - $55.61  
    - $72.48

- **2nd 6 months**  
  - $39.59  
  - $57.46  
  - $74.33

- **3rd 6 months**  
  - $41.44  
  - $59.31  
  - $77.18

- **4th 6 months**  
  - $43.29  
  - $61.16  
  - $79.03

- **5th 6 months**  
  - $45.14  
  - $63.01  
  - $80.97

- **6th 6 months**  
  - $46.99  
  - $64.86  
  - $82.82

- **7th 6 months**  
  - $48.84  
  - $66.71  
  - $84.67

- **8th 6 months**  
  - $50.69  
  - $68.56  
  - $86.52

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Official Request #: 93  
Requestor: Wayne State University  
Project Description: State Hall Plaza - Renovation  
Project Number: 016-181850  
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.

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## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015

**Contract must be awarded by:** 4/21/2015

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<table>
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<tr>
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<th>Name</th>
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<td>$49.21</td>
<td>$70.18</td>
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**Apprentice Rates:**

1st 6 months $24.23 $32.71 $41.18
2nd 6 months $28.25 $38.73 $49.22
3rd 6 months $30.35 $41.88 $53.42
4th 6 months $32.44 $45.02 $57.60
5th 6 months $34.54 $48.17 $61.80
6th 6 months $36.63 $51.31 $65.98
7th 6 months $38.74 $54.48 $70.20
8th 6 months $40.82 $57.59 $74.36

Carpenter CA687Z1 6/24/2014 $55.24 $79.04 $102.84 X X X H H D Y

four 10s allowed Mon-Sat; double time due when over 12 hours worked per day

*Make up day allowed comment Saturdays*

**Apprentice Rates:**

1st year $33.82 $46.92 $60.00
3rd 6 months $36.21 $50.49 $64.78
4th 6 months $38.58 $54.05 $69.52
5th 6 months $40.97 $57.64 $74.30
6th 6 months $43.33 $61.17 $79.02
7th 6 months $45.72 $64.77 $83.80
8th 6 months $48.09 $68.32 $88.54

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<tr>
<td></td>
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<td>10/2/2014</td>
<td>$37.48</td>
</tr>
<tr>
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<td>10/2/2014</td>
<td>$25.95</td>
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<td>$27.24</td>
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<td>10/2/2014</td>
<td>$28.51</td>
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<td>10/2/2014</td>
<td>$29.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10/2/2014</td>
<td>$31.07</td>
</tr>
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Official Request #: 93
Requestor: Wayne State University
Project Description: State Hall Plaza - Renovation
Project Number: 016-181850
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 5 of 33
### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015  

**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>EL 36</td>
<td>8/7/2007</td>
<td>$56.46</td>
<td>$94.99</td>
<td>D D D D D D D Y</td>
</tr>
<tr>
<td></td>
<td>Elevator Constructor</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Make up day allowed</td>
<td></td>
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<td></td>
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<td>Glazier</td>
<td>GL-357</td>
<td>10/2/2014</td>
<td>$47.35</td>
<td>$65.97</td>
<td>$84.58 H H H H H H D Y</td>
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<tr>
<td></td>
<td>If a four 10 hour day workweek is scheduled,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>four 10s must be consecutive, M-F.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>Apprentice Rates:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1st Year Apprentice $37.74 $58.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd Year Apprentice $41.90 $66.94</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>3rd Year Apprentice $43.98 $70.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4th Year Apprentice $48.14 $78.96</td>
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**Official Request #:** 93  
**Requestor:** Wayne State University  
**Project Description:** State Hall Plaza - Renovation  
**Project Number:** 016-181850  
**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:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

## Heat and Frost Insulator and Asbestos Worker

<table>
<thead>
<tr>
<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 Insulators and Asbestos Workers</td>
<td>1/29/2014</td>
<td>$60.25</td>
<td>$76.00</td>
<td>$91.74</td>
<td>H H H H H D Y</td>
</tr>
</tbody>
</table>

Four 10s must be worked for a minimum of 2 weeks consecutively, 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>Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Year</td>
<td>$46.08</td>
<td>$54.74</td>
<td>$63.40</td>
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<tr>
<td>2nd Year</td>
<td>$49.23</td>
<td>$59.46</td>
<td>$69.70</td>
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<tr>
<td>3rd Year</td>
<td>$50.80</td>
<td>$61.82</td>
<td>$72.84</td>
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<tr>
<td>4th Year</td>
<td>$53.95</td>
<td>$66.54</td>
<td>$79.14</td>
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## Ironworker

<table>
<thead>
<tr>
<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>Fence, Sound Barrier &amp; Guardrail</td>
<td>8/13/2014</td>
<td>$34.20</td>
<td>$46.45</td>
<td>$58.69</td>
<td>X X H X X H D Y</td>
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</tbody>
</table>

Four ten hour work days may be worked during Monday-Saturday.

### Apprentice Rates:

<table>
<thead>
<tr>
<th>Level</th>
<th>Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>60% Level</td>
<td>$23.04</td>
<td>$30.39</td>
<td>$37.73</td>
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<tr>
<td>65% Level</td>
<td>$24.37</td>
<td>$32.33</td>
<td>$40.29</td>
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<tr>
<td>70% Level</td>
<td>$25.70</td>
<td>$34.27</td>
<td>$42.84</td>
<td></td>
</tr>
<tr>
<td>75% Level</td>
<td>$27.02</td>
<td>$36.21</td>
<td>$45.39</td>
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<td>80% Level</td>
<td>$28.34</td>
<td>$38.13</td>
<td>$47.93</td>
<td></td>
</tr>
<tr>
<td>85% Level</td>
<td>$29.67</td>
<td>$40.08</td>
<td>$50.49</td>
<td></td>
</tr>
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</table>
### Siding, Glazing, Curtain Wall

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
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</thead>
<tbody>
<tr>
<td>IR-25-GZ2</td>
<td>9/4/2014</td>
<td>$46.41 $58.07 $69.73</td>
<td>X X H H H D D Y</td>
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<td></td>
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</table>

4 tens may be worked Monday thru Thursday @ straight time.

**Make up day allowed**

**Apprentice Rates:**

- **Level 1**: $29.48 $36.09 $42.68
- **Level 2**: $31.59 $38.83 $46.05
- **Level 3**: $33.71 $41.58 $49.44
- **Level 4**: $35.83 $44.33 $52.82
- **Level 5**: $37.94 $47.07 $56.20
- **Level 6**: $40.06 $49.82 $59.58

### Pre-engineered Metal Work

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
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<th>Straight Time</th>
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<tbody>
<tr>
<td>IR-25-PE-Z1</td>
<td>6/3/2014</td>
<td>$45.24 $55.53 $65.81</td>
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</table>

4 tens allowed M-Th with Saturday make up day

**Make up day allowed**

**Apprentice Rates:**

- **1st Year**: $26.11 $31.58 $37.06
- **3rd 6 month period**: $28.23 $34.46 $40.68
- **4th 6 month period**: $30.36 $37.35 $44.33
- **5th 6 month period**: $32.48 $40.21 $47.95
- **6th 6 month period**: $34.61 $43.99 $53.37

### Reinforced Iron Work

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time</th>
<th>Double Time</th>
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<tbody>
<tr>
<td>IR-25-RF</td>
<td>9/3/2014</td>
<td>$55.36 $82.91 $110.45</td>
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</table>

**Make up day allowed**

**Apprentice Rates:**

- **Level 1**: $36.01 $53.89 $71.75
- **Level 2**: $38.38 $57.43 $76.49
- **Level 3**: $40.74 $60.98 $81.21
- **Level 4**: $43.28 $64.78 $86.29
- **Level 5**: $45.81 $68.59 $91.35
- **Level 6**: $48.35 $72.39 $96.43

---

**Official Rate Schedule**

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<table>
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<th>Name</th>
<th>Description</th>
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<th>Double Time</th>
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<tr>
<td>Rigging Work</td>
<td>IR-25-RIG</td>
<td>9/3/2014</td>
<td>$61.33</td>
<td>$91.67</td>
<td>$122.00</td>
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<td></td>
</tr>
<tr>
<td>Level 1 &amp; 2</td>
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<td>$36.63</td>
<td>$54.59</td>
<td>$72.55</td>
<td></td>
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<tr>
<td>Level 3</td>
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<td></td>
<td>$39.46</td>
<td>$58.84</td>
<td>$78.21</td>
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<td></td>
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<tr>
<td>Level 4</td>
<td></td>
<td></td>
<td>$42.28</td>
<td>$63.07</td>
<td>$83.85</td>
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<tr>
<td>Level 5</td>
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<td>$45.11</td>
<td>$67.31</td>
<td>$89.51</td>
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<tr>
<td>Level 6</td>
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<td>$47.94</td>
<td>$71.56</td>
<td>$95.17</td>
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</table>

**Decking**  
IR-25-SD  
9/4/2014  
$53.29 $79.63 $105.96 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  
9/3/2014  
$61.46 $91.84 $122.21 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 $36.05 $54.01 $71.97
- Level 3 $38.88 $58.26 $77.63
- Level 4 $41.70 $62.49 $83.27
- Level 5 $44.53 $66.73 $88.93
- Level 6 $47.36 $70.98 $94.59
- Level 7 $50.18 $75.20 $100.23
- Level 8 $53.01 $79.46 $105.89

**Official Request #:** 93  
**Requestor:** Wayne State University  
**Project Description:** State Hall Plaza - Renovation  
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**County:** Wayne

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Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 1/21/2015
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<table>
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<tr>
<th>Classification</th>
<th>Name</th>
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<th>Straight Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
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<tbody>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Industrial Door erection &amp; construction</td>
<td>IR-25-STR-D 9/4/2014</td>
<td>$42.02</td>
<td>$62.68</td>
<td>$83.33 H H H H D D Y</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
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<tr>
<td>Laborer</td>
<td></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>L33401-A-CC 7/15/2013</td>
<td>$43.54</td>
<td>$61.94</td>
<td>$80.33 H H H H D D Y</td>
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<td>Make up day allowed comment</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Apprentice Rates:</td>
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<td></td>
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<tr>
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<td></td>
<td>0-1,000 work hours</td>
<td>$37.60</td>
<td>$53.03</td>
<td>$68.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,001 - 2,000 work hours</td>
<td>$38.79</td>
<td>$54.81</td>
<td>$70.83</td>
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<tr>
<td></td>
<td></td>
<td>2,001 - 3,000 work hours</td>
<td>$39.98</td>
<td>$56.60</td>
<td>$73.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,001 - 4,000 work hours</td>
<td>$42.35</td>
<td>$60.15</td>
<td>$77.95</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Signal Man (on sewer &amp; caisson work), Air, Electric or Gasoline Tool Operator, Concrete Vibrator Operator, Acetylene Torch &amp; Air Hammer Operator; Scaffold Builder, Caisson Worker</td>
<td>L33401-B-SB 7/16/2013</td>
<td>$43.80</td>
<td>$62.33</td>
<td>$80.85 H H H H D D Y</td>
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<tr>
<td></td>
<td></td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Saturday</td>
<td></td>
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Official Request #: 93
Requestor: Wayne State University
Project Description: State Hall Plaza - Renovation
Project Number: 016-181850
County: Wayne

Official Rate Schedule
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<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Updated</th>
<th>Straight Time and 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 7/16/2013</td>
<td>$44.04</td>
<td>$62.69</td>
<td>$81.33</td>
<td>H H H H H D Y</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expediter Man, Top Man and/or Bottom Man (Blast Furnace Work or Battery Work)</td>
<td>L33401-E-EX 7/16/2013</td>
<td>$44.79</td>
<td>$63.81</td>
<td>$82.83</td>
<td>H H H H H D Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaner/Sweeper Laborer; Furniture Laborer</td>
<td>L33401-F-CL 7/16/2013</td>
<td>$38.09</td>
<td>$53.76</td>
<td>$69.43</td>
<td>H H H H H D Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lansing Burner, Blaster &amp; Powder Man; Air, Electric or Gasoline Tool Operator (Blast Furnace Work or Battery Work)</td>
<td>L334C 7/16/2013</td>
<td>$44.29</td>
<td>$63.06</td>
<td>$81.83</td>
<td>X X H H H D Y</td>
</tr>
</tbody>
</table>

---

**Official Request #:** 93  
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**County:** Wayne

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### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
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#### Page 12 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Time</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</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.

*Make up day allowed comment*

**Apprentice Rates:**

- **Saturday**

<table>
<thead>
<tr>
<th>Work Hours Range</th>
<th>Straight Time</th>
<th>Half Time</th>
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</tr>
</thead>
<tbody>
<tr>
<td>0 - 1,000 hours</td>
<td>$37.60</td>
<td>$53.03</td>
<td>$68.45</td>
</tr>
<tr>
<td>1,001 - 2,000 hours</td>
<td>$38.79</td>
<td>$54.81</td>
<td>$70.83</td>
</tr>
<tr>
<td>2,001 - 3,000 hours</td>
<td>$39.98</td>
<td>$56.60</td>
<td>$73.21</td>
</tr>
<tr>
<td>3,001 - 4,000 hours</td>
<td>$42.35</td>
<td>$60.15</td>
<td>$77.95</td>
</tr>
</tbody>
</table>

#### 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.

*Make up day allowed comment*

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

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Work Hours Range</th>
<th>Straight Time</th>
<th>Half Time</th>
<th>Double Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
<td>$37.60</td>
<td>$53.03</td>
<td>$68.45</td>
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<tr>
<td>1,001-2,000 work hours</td>
<td>$38.79</td>
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<td>2,001-3,000 work hours</td>
<td>$39.98</td>
<td>$56.60</td>
<td>$73.21</td>
</tr>
<tr>
<td>3,001-4,000 work hours</td>
<td>$42.35</td>
<td>$60.15</td>
<td>$77.95</td>
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Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 1/21/2015
Contract must be awarded by: 4/21/2015

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<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>
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</thead>
<tbody>
<tr>
<td>Class B</td>
<td>LHAZ-Z1-B</td>
<td>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>11/7/2014</td>
<td>$44.54</td>
<td>$63.44</td>
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<td>Make up day allowed comment</td>
<td>4 10s allowed M-Th or T-F; inclement weather makeup day Friday</td>
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</table>

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

Labourer Underground - Tunnel, Shaft & Caisson

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

Apprentice Rates:

- 0-1,000 work hours: $37.87, $48.66, $59.44
- 1,001-2,000 work hours: $38.94, $48.88, $59.82
- 2,001-3,000 work hours: $39.90, $49.85, $60.84
- 3,001-4,000 work hours: $41.86, $52.35, $64.34

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: $36.91, $47.37, $57.72

Official Request #: 93
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Project Description: State Hall Plaza - Renovation
Project Number: 016-181850
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 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.).

Apprentice Rates:

<table>
<thead>
<tr>
<th>Work Hours</th>
<th>Hourly</th>
<th>Half Time</th>
<th>Double Overtime</th>
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</thead>
<tbody>
<tr>
<td>0-1,000</td>
<td>$33.18</td>
<td>$41.62</td>
<td>$50.06</td>
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<td>1,001-2,000</td>
<td>$34.15</td>
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<td>3,001-4,000</td>
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<td>$57.84</td>
</tr>
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</table>

Class IV - Tunnel, shaft and caisson mucker, bracer man, liner plate man, long haul dinky driver and well point man.

Apprentice Rates:

<table>
<thead>
<tr>
<th>Work Hours</th>
<th>Hourly</th>
<th>Half Time</th>
<th>Double Overtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000</td>
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## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

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<table>
<thead>
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<th>Classification</th>
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<th>Double Time</th>
<th>Overtime Provision</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>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)</td>
<td>LAUCT-Z1-5</td>
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<td>$49.56</td>
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<td></td>
<td>0-1,000 work hours</td>
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<td>2,001-3,000 work hours</td>
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<tr>
<td></td>
<td>Class VI - Dynamite man and powder man.</td>
<td>LAUCT-Z1-6</td>
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<td>0-1,000 work hours</td>
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<td>2,001-3,000 work hours</td>
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<td>$35.77</td>
<td>$45.51</td>
<td>$55.24</td>
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<td></td>
<td>3,001-4,000 work hours</td>
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<td>$37.79</td>
<td>$48.53</td>
<td>$59.28</td>
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<tr>
<td></td>
<td>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.</td>
<td>LAUCT-Z1-7</td>
<td>$32.08</td>
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<tr>
<td></td>
<td>0-1,000 work hours</td>
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<td>$28.71</td>
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<td>1,001-2,000 work hours</td>
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<td></td>
<td>2,001-3,000 work hours</td>
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<td>$30.06</td>
<td>$36.94</td>
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<td>3,001-4,000 work hours</td>
<td></td>
<td>$31.41</td>
<td>$38.97</td>
<td>$46.52</td>
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</tbody>
</table>

**Official Request #: 93**  
Requestor: Wayne State University  
Project Description: State Hall Plaza - Renovation  
Project Number: 016-181850  
County: Wayne
Official 2015 Prevailing Wage Rates for State Funded Projects

Issue Date: 1/21/2015
Contract must be awarded by: 4/21/2015

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<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>H</th>
<th>X</th>
<th>H</th>
<th>X</th>
<th>X</th>
<th>H</th>
<th>D</th>
<th>Y</th>
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</thead>
<tbody>
<tr>
<td>Landscape Laborer</td>
<td>LLAN-Z1-A</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>6/26/2014</td>
<td>$28.58</td>
<td>$39.49</td>
<td>$50.39</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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</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 Sunday paid at time & one half. Holidays paid at double time.

| Marble Finisher      | BR1-MF   | Marble Finisher                                                             | 10/20/2014 | $43.48 | $54.29 | $65.10 | H   | H   | D   | D   | D   | D   |

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

Apprentice Rates:

<table>
<thead>
<tr>
<th>Level</th>
<th>Straight Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>$19.04</td>
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</tr>
<tr>
<td>Level 2</td>
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<td>Level 4</td>
<td>$28.47</td>
<td>$36.14</td>
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<tr>
<td>Level 5</td>
<td>$29.99</td>
<td>$37.84</td>
</tr>
<tr>
<td>Level 6</td>
<td>$31.61</td>
<td>$39.86</td>
</tr>
<tr>
<td>Level 7</td>
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</tr>
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<td>Level 8</td>
<td>$34.79</td>
<td>$43.48</td>
</tr>
</tbody>
</table>

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## Official 2015 Prevailing Wage Rates for State Funded Projects

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<table>
<thead>
<tr>
<th>Classification</th>
<th>Name 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>
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<tbody>
<tr>
<td>Marble Mason</td>
<td>Marble Mason</td>
<td>10/17/2014</td>
<td>$50.29</td>
<td>$64.51</td>
<td>$78.72</td>
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<td>A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.</td>
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<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>Apprentice Rates:</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Level 1</td>
<td>$25.14</td>
<td>$32.65</td>
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<td>$43.67</td>
<td>$55.78</td>
<td>$67.88</td>
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<tr>
<td>Operating Engineer</td>
<td>Crane with boom &amp; jib or leads 120' or longer</td>
<td>6/12/2014</td>
<td>$57.11</td>
<td>$74.62</td>
<td>$92.13</td>
<td>X X H H D D D D Y</td>
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<tr>
<td></td>
<td>Double time after 12 hours M-F</td>
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<td></td>
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<tr>
<td></td>
<td>Crane with boom &amp; jib or leads 140' or longer</td>
<td>6/12/2014</td>
<td>$57.93</td>
<td>$75.85</td>
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<tr>
<td></td>
<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
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</tr>
<tr>
<td></td>
<td>Crane with boom &amp; jib or leads 220' or longer</td>
<td>6/12/2014</td>
<td>$58.23</td>
<td>$76.30</td>
<td>$94.37</td>
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<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
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<tr>
<td></td>
<td>Crane with boom &amp; jib or leads 300' or longer</td>
<td>6/12/2014</td>
<td>$59.73</td>
<td>$78.55</td>
<td>$97.37</td>
<td>X X H H D D D D Y</td>
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<td>Work in excess of 12 per day M-F shall be paid at double time.</td>
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</table>

Official Request #: 93  
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#### Classification Last Updated  Straight Time and a Half Double Time Overtime Provision

<table>
<thead>
<tr>
<th>Name Description</th>
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<th>Half Time</th>
<th>Double Time</th>
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<td><strong>Classification</strong></td>
<td></td>
<td>Hourly</td>
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<tr>
<td>Crane with boom &amp; jib or leads 400' or longer Work in excess of 12 per day M-F shall be paid at double time.</td>
<td>6/12/2014</td>
<td>$61.23</td>
<td>$80.80</td>
<td>$100.37</td>
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<tr>
<td>Compressor or welding machine Work in excess of 12 per day M-F shall be paid at double time.</td>
<td>6/12/2014</td>
<td>$46.26</td>
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<td>$70.43</td>
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</tr>
<tr>
<td>Forklift, lull, extend-a-boom forklift Work in excess of 12 per day M-F shall be paid at double time.</td>
<td>6/12/2014</td>
<td>$53.57</td>
<td>$69.31</td>
<td>$85.05</td>
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<tr>
<td>Fireman or oiler Work in excess of 12 per day M-F shall be paid at double time.</td>
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<td>$45.23</td>
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<td>$68.37</td>
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<tr>
<td>Regular crane, job mechanic, concrete pump with boom Work in excess of 12 per day M-F shall be paid at double time.</td>
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<td>Regular engineer, hydro-excavator, remote controlled concrete breaker Work in excess of 12 per day M-F shall be paid at double time.</td>
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<td>$71.88</td>
<td>$88.47</td>
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**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
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</thead>
<tbody>
<tr>
<td>0-999 hours</td>
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<td>1,000-1,999 hours</td>
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<td>2,000-2,999 hours</td>
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<td>3,000-3,999 hours</td>
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<td>4,000-4,999 hours</td>
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<td></td>
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<tr>
<td>5,000-5,999 hours</td>
<td>$52.62</td>
<td>$68.39</td>
<td>$84.15</td>
<td></td>
</tr>
</tbody>
</table>

Official Request #: 93  
Requestor: Wayne State University  
Project Description: State Hall Plaza - Renovation  
Project Number: 016-181850  
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:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

**Classification Last Straight Time and a Double Overtime**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Updated</th>
<th>Hourly</th>
<th>Half Time</th>
<th>Double</th>
<th>Overtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Engineer - DIVER</td>
<td>Diver/Wet Tender/Tender/Rov Pilot/Rov Tender</td>
<td>GLF D</td>
<td>4/2/2014</td>
<td>$52.80</td>
<td>$79.20</td>
<td>H H H H H D N</td>
</tr>
<tr>
<td>Operating Engineer - Marine Construction</td>
<td>Diver/Wet Tender, Engineer (hydraulic dredge)</td>
<td>GLF-1</td>
<td>2/12/2014</td>
<td>$65.00</td>
<td>$84.85</td>
<td>$104.70</td>
</tr>
</tbody>
</table>

- **Make up day allowed**
- **Subdivision of county** all Great Lakes, islands therein, & connecting & tributary waters

- **Crane/Backhoe Operator, 70 ton or over Tug Operator, Mechanic/Welder, Assistant Engineer (hydraulic dredge), Leverman (hydraulic dredge), Diver Tender**

- **Holiday pay = $120.80 per hour, wages &**

- **Make up day allowed**
- **Subdivision of county** All Great Lakes, islands therein, & connecting & tributary waters

- **Friction, Lattice Boom or Crane License Certification**

- **Holiday pay = $123.30**

- **Make up day allowed**
- **Subdivision of county** All Great Lakes, islands therein, & connecting & tributary waters

- **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**

- **Holiday pay = $110.30 per hour, wages &**

- **Make up day allowed**
- **Subdivision of county** All Great Lakes, islands therein, & connecting & tributary waters

---

**Official Request #:** 93  
**Requestor:** Wayne State University  
**Project Description:** State Hall Plaza - Renovation  
**Project Number:** 016-181850  
**County:** Statewide

---

**Official Rate Schedule**

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# Official 2015 Prevailing Wage Rates for State Funded Projects

## Issue Date: 1/21/2015

## Contract must be awarded by: 4/21/2015

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<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>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>GLF-4 2/12/2014</td>
<td>$53.60</td>
<td>$67.75</td>
<td>$81.90</td>
<td>X X H H H D Y</td>
</tr>
<tr>
<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>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**

- **Forklift, 1 Drum Hoist**
  - EN-324-ef 9/5/2014
  - Updated: 9/5/2014
  - Hourly: $58.16
  - Double Time: $94.58
  - Provision: H H H H D D Y
  - Make up day allowed
  - comment: 4 10s allowed M-Th with Friday makeup day because of bad weather

- **Crane w/ 120’ boom or longer**
  - EN-324-SW120 9/5/2014
  - Hourly: $60.86
  - Double Time: $99.98
  - Provision: H H H H D D Y
  - Make up day allowed
  - comment: 4 10s allowed M-Th with Friday makeup day because of bad weather

- **Crane w/ 120’ boom or longer w/ Oiler**
  - EN-324-SW120-O 9/5/2014
  - Hourly: $61.86
  - Double Time: $101.98
  - Provision: H H H D H H D D Y
  - Make up day allowed
  - comment: 4 10s allowed M-Th with Friday makeup day because of bad weather

- **Crane w/ 140’ boom or longer**
  - EN-324-SW140 9/5/2014
  - Hourly: $62.04
  - Double Time: $102.34
  - Provision: H H H H D D Y
  - Make up day allowed
  - comment: 4 10s allowed M-Th with Friday makeup day because of bad weather

- **Crane w/ 140’ boom or longer W/ Oiler**
  - EN-324-SW140-O 9/5/2014
  - Hourly: $63.04
  - Double Time: $104.34
  - Provision: H H H D H H D
  - Make up day allowed
  - comment: 4 10s allowed M-Th with Friday makeup day because of bad weather

- **Boom & Jib 220’ or longer**
  - EN-324-SW220 9/5/2014
  - Hourly: $62.31
  - Double Time: $102.88
  - Provision: H H H H D D Y
  - Make up day allowed
  - comment: 4 10s allowed M-Th with Friday makeup day because of bad weather

- **Crane w/ 220’ boom or longer w/ Oiler**
  - EN-324-SW220-O 9/5/2014
  - Hourly: $63.31
  - Double Time: $104.88
  - Provision: H H H D H H D
  - Make up day allowed
  - comment: 4 10s allowed M-Th with Friday makeup day because of bad weather

**Official Request #: 93**

- Requestor: Wayne State University
- Project Description: State Hall Plaza - Renovation
- Project Number: 016-181850
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### Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

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<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>Boom &amp; Jib 300’ or longer</td>
<td>EN-324-SW300</td>
<td>9/5/2014</td>
<td>$63.81</td>
<td>$84.85</td>
<td>$105.88</td>
<td>H H D H H D D Y</td>
</tr>
<tr>
<td>Make up day allowed</td>
<td>comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<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>
<td></td>
</tr>
</tbody>
</table>

| Crane w/ 300’ boom or longer w/ Oiler | EN-324-SW300-O | 9/5/2014 | $64.81 | $86.35 | $107.88 | H H D H H D D Y |
| Make up day allowed | comment |
| 4 10s allowed M-Th with Friday makeup day because of bad weather |

| Boom & Jib 400’ or longer | EN-324-SW400 | 9/5/2014 | $65.31 | $87.10 | $108.88 | H H D H H D D Y |
| Make up day allowed | comment |
| 4 10s allowed M-Th with Friday makeup day because of bad weather |

| Crane w/ 400’ boom or longer w/ Oiler | EN-324-SW400-O | 9/5/2014 | $66.31 | $88.60 | $110.88 | H H D H H D D Y |
| Make up day allowed | comment |
| 4 10s allowed M-Th with Friday makeup day because of bad weather |

| Crane Operator, Job Mechanic, 3 Drum Hoist & Excavator | EN-324-SWCO | 9/5/2014 | $60.50 | $79.88 | $99.26 | H H D H H D D Y |
| Make up day allowed | comment |
| 4 10s allowed M-Th with Friday makeup day because of bad weather |

#### 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: $53.68, $70.15, $86.62
- 4,000-4,999 hours: $55.62, $73.07, $90.50
- 5,000 hours: $57.56, $75.97, $94.38

| Crane Operator w/ Oiler | EN-324-SWCO-O | 9/5/2014 | $61.50 | $81.38 | $101.26 | H H D H H D D Y |
| Make up day allowed | comment |
| 4 10s allowed M-Th with Friday makeup day because of bad weather |

| Compressor or Welder Operator | EN-324-SWCO-W | 9/5/2014 | $53.15 | $68.86 | $84.56 | H H D H H D D Y |
| Make up day allowed | comment |
| 4 10s allowed M-Th with Friday makeup day because of bad weather |
### Official 2015 Prevailing Wage Rates for State Funded Projects

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<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></td>
<td>Hoisting Operator, 2 Drum Hoist, &amp; Rubber Tire</td>
<td>EN-324-SWHO</td>
<td>9/5/2014</td>
<td>$59.86</td>
<td>$78.92</td>
<td>$97.98 H H D H H D D Y</td>
</tr>
</tbody>
</table>

*Make up day allowed*  
4 10s allowed M-Th with Friday makeup day because of bad weather

|                | Oiler | EN-324-SWO | 9/5/2014 | $51.64 | $66.59 | $81.54 H H D H H D D Y |

*Make up day allowed*  
4 10s allowed M-Th with Friday makeup day because of bad weather

|                | Tower Crane & Derrick where work is 50' or more above first level | EN-324-SWTD50 | 9/5/2014 | $61.59 | $81.52$101.44 H H D H H D D |

*Make up day allowed*  
4 10s allowed M-Th with Friday makeup day because of bad weather

|                | Tower Crane & Derrick 50' or more w/ Oiler where work station is 50' or more above first | EN-324-SWTD50-O | 9/5/2014 | $62.59 | $83.02$103.44 H H D H H D D |

*Make up day allowed*  
4 10s allowed M-Th with Friday makeup day because of bad weather

### Operating Engineer Underground

**Class I Equipment**  
[EN-324A1-UC1](#) | 10/14/2014 | $51.74 | $66.98 | $82.22 H H H H H H D Y |

#### Apprentice Rates:

- 0-999 hours | $41.79 | $52.45 | $63.12  
- 1,000-1,999 hours | $43.32 | $54.75 | $66.18  
- 2,000-2,999 hours | $44.84 | $57.03 | $69.22  
- 3,000-3,999 hours | $46.36 | $59.31 | $72.26  
- 4,000-4,999 hours | $47.89 | $61.61 | $75.32  
- 5,000-5,999 hours | $49.41 | $63.89 | $78.36 |

**Class II Equipment**  
[EN-324A1-UC2](#) | 10/14/2014 | $47.01 | $59.89 | $72.76 H H H H H H D Y |

**Class III Equipment**  
[EN-324A1-UC3](#) | 10/14/2014 | $46.28 | $58.79 | $71.30 H H H H H H D Y |

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#### Page 23 of 33

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<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 IV Equipment</td>
<td>EN-324A1-UC4 10/14/2014</td>
<td></td>
<td>$45.71</td>
<td>$57.94</td>
<td>$70.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H H H H H H D Y</td>
<td></td>
</tr>
<tr>
<td>Master Mechanic</td>
<td>EN-324A1-UMM 10/14/2014</td>
<td></td>
<td>$51.99</td>
<td>$67.81</td>
<td>$83.63 H H H H H D</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H H H H H H D</td>
<td></td>
</tr>
<tr>
<td>Painter</td>
<td>PT-22-P 10/8/2014</td>
<td></td>
<td>$42.82</td>
<td>$55.63</td>
<td>$68.43</td>
</tr>
<tr>
<td></td>
<td>(8 hours of repaint work performed on Sunday shall be paid time &amp; one half rate)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Four 10s allowed Monday-Thursday with Friday makeup day if job down due to weather, holiday or other conditions beyond the control of the employer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Make up day allowed comment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fridays for bad weather or holidays</td>
<td></td>
<td></td>
<td></td>
<td></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

**Tap cutter/CCTV Tech/Grout Equipment**

- Operator: unit driver and operator of CCTV; grouting equipment and tap cutting equipment

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**Page 24 of 33**

<table>
<thead>
<tr>
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<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>CCTV Technician/Combo Unit Operator</td>
<td>TM247-3</td>
<td>unit driver and operator of cctv unit or combo unit in connection with normal cleaning and televising work</td>
<td>10/15/2012</td>
<td>$30.45</td>
<td>$41.57</td>
<td>H H H H H H H N</td>
</tr>
<tr>
<td>Boiler Operator</td>
<td>TM247-4</td>
<td>unit driver and operator of steam/water heater units and all ancillary equipment associated</td>
<td>10/15/2012</td>
<td>$32.20</td>
<td>$44.20</td>
<td>H H H H H H H N</td>
</tr>
<tr>
<td>Combo Unit driver &amp; Jetter-Vac Operator</td>
<td>TM247-5</td>
<td></td>
<td>10/15/2012</td>
<td>$32.20</td>
<td>$44.20</td>
<td>H H H H H H H N</td>
</tr>
<tr>
<td>Pipe Bursting &amp; Slip-lining Equipment Operator</td>
<td>TM247-6</td>
<td></td>
<td>10/15/2012</td>
<td>$33.20</td>
<td>$45.70</td>
<td>H H H H H H H N</td>
</tr>
</tbody>
</table>

**Pipefitter**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
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<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF-636</td>
<td>Pipefitter</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

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**County:** Wayne

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## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

### Page 25 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>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>Plasterer</td>
<td>BR1P</td>
<td>11/1/2012</td>
<td>$45.04</td>
<td>$67.56</td>
<td>$90.08</td>
<td>H</td>
<td>H H H H H D N</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>Saturday</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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

Plasterer (PL67) 9/8/2010: $44.72, $60.11, $75.50, H H X D D D N

**Apprentice Rates:**
- 1st 6 months: $29.33, $37.02, $44.72
- 2nd 6 months: $30.87, $39.34, $47.80
- 3rd 6 months: $32.41, $41.64, $50.88
- 4th 6 months: $35.49, $46.26, $57.04
- 5th 6 months: $38.56, $51.16, $63.76
- 6th 6 months: $41.64, $55.49, $69.34
## Official 2015 Prevailing Wage Rates for State Funded Projects

### Issue Date: 1/21/2015
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**Page 26 of 33**

<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>
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<tbody>
<tr>
<td><strong>Plumber</strong></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>
<td>H D D D Y</td>
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<td></td>
<td></td>
<td></td>
<td><strong>comment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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>
</tr>
<tr>
<td><strong>Apprentice Rates:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apprentice 1</td>
<td></td>
<td></td>
<td></td>
<td>$19.93</td>
<td>$26.43</td>
<td>$32.93</td>
</tr>
<tr>
<td></td>
<td>Apprentice 2</td>
<td></td>
<td></td>
<td></td>
<td>$23.90</td>
<td>$31.40</td>
<td>$38.90</td>
</tr>
<tr>
<td></td>
<td>Apprentice 3</td>
<td></td>
<td></td>
<td></td>
<td>$30.60</td>
<td>$39.19</td>
<td>$47.77</td>
</tr>
<tr>
<td></td>
<td>Apprentice 4</td>
<td></td>
<td></td>
<td></td>
<td>$31.23</td>
<td>$40.13</td>
<td>$49.03</td>
</tr>
<tr>
<td></td>
<td>Apprentice 5</td>
<td></td>
<td></td>
<td></td>
<td>$32.39</td>
<td>$41.87</td>
<td>$51.35</td>
</tr>
<tr>
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<td>Apprentice 6</td>
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<td></td>
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<td></td>
<td><strong>Straight time is not to exceed ten (10) hours per day or forty (40) hours per week. Make up day allowed</strong></td>
<td></td>
<td></td>
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<td><strong>Apprentice Rates:</strong></td>
<td></td>
<td></td>
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<tr>
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<td>$41.87</td>
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<td>$63.44</td>
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<tr>
<td><strong>Sewer Relining</strong></td>
<td>Class I-Operator of audio visual CCTV system</td>
<td>SR-I</td>
<td>11/3/2014</td>
<td>$42.76</td>
<td>$57.75</td>
<td>$72.74</td>
<td>H H H H H H D N</td>
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<tr>
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<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>including remote in-ground cutter and other equipment used in conjunction with CCTV</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Official Request #: 93**

Requestor: Wayne State University
Project Description: State Hall Plaza - Renovation

Project Number: 016-181850
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.
### Classification

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Half Time Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class II</td>
<td>Operator of hot water heaters and circulation system; water jetters; and vacuum and mechanical debris removal systems and those assisting.</td>
<td>11/3/2014</td>
<td>H H H H H H D N</td>
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<tr>
<td>Sheet Metal Worker</td>
<td></td>
<td>9/9/2014</td>
<td>H D X H H D Y</td>
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<tr>
<td>Siding and decking</td>
<td></td>
<td>1/13/2014</td>
<td>H H H H D Y</td>
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</tbody>
</table>

**Apprentice Rates:**

1st & 2nd Periods Indentured after 6-1-11

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>$39.18</td>
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<td>$51.92</td>
<td>$64.44</td>
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</table>

**Make up day allowed**

### Official Request #

- Official Request #: 93
- Requestor: Wayne State University
- Project Description: State Hall Plaza - Renovation
- Project Number: 016-181850
- 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: 1/21/2015
Contract must be awarded by: 4/21/2015

Page 28 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Time and a Half Time</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>
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</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 | $36.78 | $45.27
2nd Period | $41.57 | $51.12 | $60.68
3rd Period | $43.69 | $54.30 | $64.92
4th Period | $45.81 | $57.48 | $69.16
5th Period | $47.94 | $60.68 | $73.42
6th Period | $50.06 | $63.86 | $77.66
7th Period | $52.18 | $67.04 | $81.90
8th Period | $54.30 | $70.22 | $86.14
9th Period | $56.43 | $73.42 | $90.40
10th Period | $58.55 | $76.60 | $94.64

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

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 #: 93
Requestor: Wayne State University
Project Description: State Hall Plaza - Renovation
Project Number: 016-181850
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 28 of 33
## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

### Page 29 of 33

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Time</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
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<td>Terrazzo Worker</td>
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<td>Apprentice Rates:</td>
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<td>Level 1</td>
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<tr>
<td>Level 5</td>
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<td>$38.42</td>
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<tr>
<td>Level 6</td>
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<td></td>
<td>$42.07</td>
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<tr>
<td>Level 7</td>
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<td>$42.74</td>
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**Tile**

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<th>Name</th>
<th>Description</th>
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<th>Straight Time</th>
<th>Half Time</th>
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### 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 #:** 93  
**Requestor:** Wayne State University  
**Project Description:** State Hall Plaza - Renovation  
**Project Number:** 016-181850  
**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.

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## Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015  
**Page 30 of 33**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
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<th>Double Time Hourly</th>
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<tr>
<td></td>
<td></td>
<td>A 4 ten workweek may be worked Monday thru Thursday or Tuesday thru Friday.</td>
<td></td>
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</table>

### Apprentice Rates:

- **Level 1**  
  - $25.14  
  - $32.65  
  - $40.15

- **Level 2**  
  - $28.20  
  - $36.49  
  - $44.78

- **Level 3**  
  - $33.41  
  - $41.97  
  - $50.53

- **Level 4**  
  - $36.15  
  - $45.66  
  - $55.17

- **Level 5**  
  - $38.42  
  - $48.17  
  - $57.92

- **Level 6**  
  - $42.07  
  - $53.56  
  - $65.05

- **Level 7**  
  - $42.74  
  - $54.38  
  - $66.02

- **Level 8**  
  - $43.67  
  - $55.78  
  - $67.88

### Truck Driver

- **on all trucks of 8 cubic yard capacity or less (except dump trucks of 8 cubic yard capacity or over, tandem axle trucks, transit mix and semis, euclid type equipment, double bottoms and low boys)**  
  - **TM-RB1**  
    - 8/8/2013  
    - $41.92  
    - $37.85  
    - H H H H H H Y

- **of all trucks of 8 cubic yard capacity or over**  
  - **TM-RB1A**  
    - 8/8/2013  
    - $41.30  
    - $38.00  
    - H H H H H H Y

- **on euclid type equipment**  
  - **Make up day allowed**  
  - **TM-RB1B**  
    - 8/8/2013  
    - $41.45  
    - $38.23  
    - H H H H H H Y

---

**Official Request #: 93**  
**Requestor:** Wayne State University  
**Project Description:** State Hall Plaza - Renovation  
**Project Number:** 016-181850  
**County:** Wayne

**Official Rate Schedule**  
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<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Updated</th>
<th>Straight Time and Half Hourly Provision</th>
<th>Double Overtime Provision</th>
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<tbody>
<tr>
<td>Underground Laborer Open Cut, Class I</td>
<td>Construction Laborer</td>
<td>9/5/2013</td>
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<td>$48.43</td>
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**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Work Hours Range</th>
<th>Rate per Hour</th>
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<tbody>
<tr>
<td>0-1,000</td>
<td>$32.94</td>
</tr>
<tr>
<td>1,001-2,000</td>
<td>$33.90</td>
</tr>
<tr>
<td>2,001-3,000</td>
<td>$34.85</td>
</tr>
<tr>
<td>3,001-4,000</td>
<td>$36.76</td>
</tr>
</tbody>
</table>

| 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. | 10/25/2013 | $37.83 | $48.60 |

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Work Hours Range</th>
<th>Rate per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000</td>
<td>$33.02</td>
</tr>
<tr>
<td>1,001-2,000</td>
<td>$33.98</td>
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<tr>
<td>2,001-3,000</td>
<td>$34.95</td>
</tr>
<tr>
<td>3,001-4,000</td>
<td>$36.87</td>
</tr>
</tbody>
</table>

| 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. | 9/5/2013 | $37.88 | $48.67 |

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Work Hours Range</th>
<th>Rate per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000</td>
<td>$33.06</td>
</tr>
<tr>
<td>1,001-2,000</td>
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<td>2,001-3,000</td>
<td>$34.99</td>
</tr>
<tr>
<td>3,001-4,000</td>
<td>$36.92</td>
</tr>
</tbody>
</table>

Official Request #: 93
Requestor: Wayne State University
Project Description: State Hall Plaza - Renovation
Project Number: 016-181850
County: Wayne

Official Rate Schedule
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### Underground Laborer Open Cut, Class IV

Trench or excavating grade man.  

<table>
<thead>
<tr>
<th>Last Updated</th>
<th>Straight Time and Half Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/5/2013</td>
<td>$37.96 $48.79 $59.62</td>
<td>X X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $33.12 $41.53 $49.94
- 1,001-2,000 work hours: $34.09 $42.99 $51.88
- 2,001-3,000 work hours: $35.06 $44.44 $53.82
- 3,001-4,000 work hours: $36.99 $47.33 $57.68

### Underground Laborer Open Cut, Class V

Pipe Layer  

<table>
<thead>
<tr>
<th>Last Updated</th>
<th>Straight Time and Half Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/5/2013</td>
<td>$38.02 $48.88 $59.74</td>
<td>X X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $33.16 $41.59 $50.02
- 1,001-2,000 work hours: $34.14 $43.06 $51.98
- 2,001-3,000 work hours: $35.11 $44.51 $53.92
- 3,001-4,000 work hours: $37.05 $47.43 $57.80

### Underground Laborer Open Cut, Class VI

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.  

<table>
<thead>
<tr>
<th>Last Updated</th>
<th>Straight Time and Half Time</th>
<th>Overtime Provision</th>
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<tbody>
<tr>
<td>9/5/2013</td>
<td>$35.47 $45.06 $54.64</td>
<td>X X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $31.25 $38.73 $46.20
- 1,001-2,000 work hours: $32.10 $40.00 $47.90
- 2,001-3,000 work hours: $32.94 $41.26 $49.58
- 3,001-4,000 work hours: $34.63 $43.79 $52.96
# Official 2015 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/21/2015  
**Contract must be awarded by:** 4/21/2015

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Updated</th>
<th>Last Straight Time and Double Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underground Laborer Open Cut, Class VII</td>
<td>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.</td>
<td>9/5/2013</td>
<td>$32.09 $39.99 $47.88 X X X X X X D Y</td>
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</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $28.72 $34.93 $41.14
- 1,001-2,000 work hours: $29.39 $35.93 $42.48
- 2,001-3,000 work hours: $30.07 $36.95 $43.84
- 3,001-4,000 work hours: $31.42 $38.98 $46.54

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.
WAYNE STATE UNIVERSITY PAYMENT PACKAGE DOCUMENT REQUIREMENTS (Revised 5-06-2011):

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

AIA DOCUMENT G702 & G703 – (or facsimile thereof) Payment Application 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. (i.e. 1, 2, 3, etc.)
- Correct Period Reporting Dates – Applications support docs must be sequential and within application range.
- Approved & Executed Change Orders must be listed. (Cannot invoice for unapproved changes.)
- 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
- Contractor’s Sworn Statement amounts must coincide with Column “C” of the schedule of values document. Any unassigned or uncommitted value of contract shall be shown on an entry “Contractor – Unassigned” followed by the amount necessary to cause the „contracted to date” column of the sworn statement to equate with the schedule of value column totals.
- Current Date – Back dating not accepted.
- Signed and Notarized.

A Sworn Statement is required from every Sub Contractor on the job with a material purchase or sub-subcontract of $1,000 or more. (all the way down to the bottom tier)

DEPT. of LABOR FORM WH-347 – Certified Payroll Checklist:
(Union and Non-Union)
- For every contractor & sub-contractors work, for each week within the application for payment reporting period. (For every „boot” on the floor representing the weeks within the application period)
- Wayne State University Project Number – Found on your contract.
- List ALL workers who have worked on the project site.
- Make sure workers addresses are listed.
- NO Social Security Numbers, if present they 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. (Refer to Section 410 of Bid Front End Documents.)
  [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)
- Apprenticeship program status – proof of enrolled program and current completion required for any workers paid at Apprenticeship rates.
- Rate of Pay verified against the Prevailing Wage Schedule with an hourly costs breakdown of fringes paid. (Refer to attachment for State of Michigan instructions and example)
- Authorized signatures on affidavit.

APPLICATION PACKAGE SUPPORTING DOCUMENTATION – Must accompany all package reporting periods: (Union and Non-Union)
- Copies of Pay Stubs may be required for each Certified Payroll period reported – (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” (Sole Proprietor) contractors not claiming their time under prevailing wage act. – (Must list their hours and dates worked on the WH-347 Form and enter EXEMPT on the income brackets.). The Owner Operator must provide copies of “DBA” registration form confirming status as exempt from prevailing wage requirements.
o Proof of Stored Materials – (Detailed Bill of Sale, certificate of insurance or endorsement page specifically insuring the stored materials, pictures, when large value. WSU reserves the right to on site verification of material. Stored material must be separated from ordinary inventory and labeled for WSU project.

o Partial Unconditional Waivers – Must release the accumulated amount paid for work and be immediately provided, or provided with the subsequent application for payment. Waivers shall be provided for contractors, sub-contractors, and suppliers listed on the Sworn Statements. (This is required at all tiers)

o Full Unconditional Waivers – Prime Contractor must deliver fully executed Full Unconditional Waiver upon receipt of final payment. Full Unconditional waivers may be required of sub-contractors and suppliers in advance of final Contractor payment on bonded projects. This requirement shall be determined on a project-by-project basis. Full Unconditional waivers shall be required in advance of or at the time of final payment on all non-bonded projects from all subcontractors and suppliers listed on Sworn Statements, or who have provided a notice of furnishing.

o Partial Conditional Waivers – The Contractor shall provide a Partial Conditional Waivers covering the entire amount of the application for payment. For non-bonded Projects – A partial conditional waiver from all subcontractors must accompany any application for payment within which a subcontractor draw is included.

o Sworn Statements – Required for all Sub Contractors, and Sub-subcontractors (etc.) with any contracts or purchases exceeding $1,000.

**FINAL PAYMENT EXCHANGE – Checklist:**

- Clear and concise As-Built drawings.
- Operation and Maintenance Manuals.
- Required training must be completed (if applicable).
- Warranty of work in accordance with project documents.
- Certificate of Substantial Completion.
- Full Unconditional Waiver

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

Revised 5-6-2011
AGREEMENT BETWEEN THE UNIVERSITY AND CONTRACTOR FOR CONSTRUCTION SERVICES (rev 6-2013)

Executed as of the _____ day of __________, 2014 by and between:

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

and

CONTRACTOR’S_NAME
CONTRACTOR’S_ADDRESS

regarding

State Hall Plaza Renovation
5143 Cass Avenue
WSU Project No. 016-181850
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 Renovation of north entrance plaza at State Hall located at 5143 Cass Avenue. 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 August 31, 2015.

**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>Amount</th>
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<tbody>
<tr>
<td>Alternate #1</td>
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<td>Alternate #2</td>
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<tr>
<td>Alternate #3</td>
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</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>
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<tr>
<td>2.</td>
<td></td>
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<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)"

Grissim Metz Andriese
300 East Cady Street
Northville, MI 48157

(Artist 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 superceded 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 United States Department of Labor. 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 $500.00, Five hundred Dollars per day. Therefore, the Contractor shall pay as liquidated damages to the University 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 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 **February 2, 2015**, and the following List of Drawings represents the scope of work as defined in the Contract Documents from Article 4.

### DRAWINGS

<table>
<thead>
<tr>
<th>Drawing No.:</th>
<th>Description</th>
<th>dated</th>
</tr>
</thead>
<tbody>
<tr>
<td>L101</td>
<td>Existing Conditions/Demolition Plan</td>
<td>February 2, 2015</td>
</tr>
<tr>
<td>L201</td>
<td>Layout and Grading Plan</td>
<td>February 2, 2015</td>
</tr>
<tr>
<td>L401</td>
<td>Landscape Plan and Details</td>
<td>February 2, 2015</td>
</tr>
<tr>
<td>L501</td>
<td>Site Details</td>
<td>February 2, 2015</td>
</tr>
</tbody>
</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

_____________________________
Witnese

THE BOARD OF GOVERNORS of
WAYNE STATE UNIVERSITY

By__________________________________
Richard J. Nork, Vice President for
Finance and Facilities

____________________________________
Date signed

Form Contract Approved by  OGC 06/13 – LG
File_reference_here
FORM OF GUARANTEE

PROJECT: State Hall Plaza Renovation

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:

State Hall Plaza Renovation (016-181850)

For: Board of Governors, Wayne State University

In conformity with drawings and specifications prepared by Architect or Engineer, Grissim Metz Andriese, 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
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

1.1 DEFINITIONS

1.1.5 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
f. Job Conferences: Attend and report to the Architect on all required conferences held at the job site.

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 will, 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 The Contractor hereby agrees to indemnify, protect and save harmless the Architect and the Owner from and against any and all liability, loss or damage, and to reimburse the Owner and the Architect for any expenses, including legal fees and disbursements to which the Owner or the Architect may be put because of claims of litigation on account of infringement or alleged infringement of any letters patent or patent rights by reason of the work or materials, equipment, or other items used by the Contractor in its performance.

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 3-22-2012)

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

<table>
<thead>
<tr>
<th>Type of Insurance</th>
<th>Minimum Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Comprehensive General Liability</td>
<td>Bodily Injury $500,000 each person</td>
</tr>
<tr>
<td></td>
<td>Property Damage $500,000 each occurrence</td>
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<td></td>
<td>$1,000,000 aggregate</td>
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<td>$1,000,000 aggregate</td>
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<tr>
<td>2. Fire Legal Liability</td>
<td>Bodily Injury $500,000 each person</td>
</tr>
<tr>
<td></td>
<td>Property Damage $500,000 each occurrence</td>
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<td></td>
<td>$1,000,000 aggregate</td>
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<tr>
<td>3. Comprehensive Automobile Liability</td>
<td>Bodily Injury $500,000 each person</td>
</tr>
<tr>
<td>(including Hired and non-owned vehicles)</td>
<td>Property Damage $500,000 each accident</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>$1,000,000 aggregate</td>
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<td></td>
<td>$2,000,000 combined single limit (CSL)</td>
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<tr>
<td>4. Workers' Compensation (Employer's Liability)</td>
<td>Statutory - Michigan $100,000</td>
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<tr>
<td>5. Property - All Risk</td>
<td>In an amount sufficient to cover the total value of the contractor's property in the care, custody or control of WSU.</td>
</tr>
</tbody>
</table>

B. Maximum Acceptable Deductibles

<table>
<thead>
<tr>
<th>Type of Insurance</th>
<th>Maximum Deductible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive General Liability</td>
<td>$5,000</td>
</tr>
<tr>
<td>Fire Legal Liability</td>
<td>$5,000</td>
</tr>
<tr>
<td>Comprehensive Automobile Liability</td>
<td>-0-</td>
</tr>
<tr>
<td>Workers' Compensation</td>
<td>-0-</td>
</tr>
<tr>
<td>Property - All Risk</td>
<td>$500</td>
</tr>
</tbody>
</table>

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 **February 2, 2015** and the following List of Drawings represent the scope of work as defined in the Contract Documents from Article 4.

### DRAWINGS

<table>
<thead>
<tr>
<th>Drawing No.:</th>
<th>Description</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Cover Sheet</td>
<td></td>
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</tr>
<tr>
<td>L101</td>
<td>Existing Conditions/Demolition Plan</td>
<td>February 2, 2015</td>
</tr>
<tr>
<td>L201</td>
<td>Layout and Grading Plan</td>
<td>February 2, 2015</td>
</tr>
<tr>
<td>L401</td>
<td>Landscape Plan and Details</td>
<td>February 2, 2015</td>
</tr>
<tr>
<td>L501</td>
<td>Site Details</td>
<td>February 2, 2015</td>
</tr>
</tbody>
</table>
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: State Hall Plaza Renovation
WSU PROJECT NO.: 016-181850
PROJECT MANAGER: Nancy Milstein

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 Renovation of north entrance plaza at State Hall.

3. The building is located at
   Wayne State University
   5143 Cass Avenue
   Detroit, Michigan 48202
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PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:

A. This Section identifies each Alternate by number, and describes the basic changes to be incorporated into the Work, only when that Alternate is made a part of the Work by specific provisions in the Owner-Contractor Agreement.

B. Alternates schedules below are part of the Bidding Documents and will be considered in selection of Contractors and awarding contracts.

C. Unless otherwise provided, Owner will accept or reject alternate within sixty (60) days. Owner reserves the right to reject any or all Alternates.

1.3 ALTERNATES:

A. General:

1. The descriptions for each Alternate listed in the schedule are primarily scope definitions, and do not necessarily detail the full range of materials and processes needed to complete the work as required.

2. Refer to applicable specification sections (Divisions 2 through 16), and to applicable drawings, for specific requirements of the work, regardless of whether references are so noted in description of each alternative.

3. Coordinate pertinent related work and notify surrounding work as required to properly integrate the work under each Alternate, and to provide the complete construction required by Contract Documents.

4. Referenced sections of specifications stipulate pertinent requirements for products and methods to achieve the work stipulated under each Alternate.

B. Schedule:

1. No. 1 Concrete Replacement:

   a. Quote change in price to add demolition of existing concrete. Add installation of new concrete per plan and details. Refer to sheet L201.

PART 2 - PRODUCTS - Not Applicable

PART 3 - EXECUTION - Not Applicable

END OF SECTION 012300
SECTION 013323 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED:
   A. Submit Shop Drawings, Product Data and Samples required by the Contract Documents.

1.2 RELATED REQUIREMENTS:
   A. All applicable sections of the specification.
   B. Conditions of the Contract.
   C. Designate in the construction schedule, or in a separate coordinated schedule, the dates for submission and the dates that reviewed Shop Drawings, Product Data and Samples will be needed.

1.3 SHOP DRAWINGS:
   A. Drawings shall be presented in a clear and thorough manner.
      1. Details shall be identified by reference to sheet, detail, and schedule numbers shown on Contract Drawings.

1.4 PRODUCT DATA:
   A. Preparation:
      1. Clearly mark each copy to identify pertinent products of models.
      2. Show performance characteristics and capacities.
      3. Show dimensions and clearances required.
      4. Show wiring or piping diagrams and controls.
   B. Manufacturer’s Standard Schematic Drawings and Diagrams:
      1. Modify drawings and diagrams to delete information which is not applicable to the work.
      2. Supplement standard information to provide information specifically applicable to the work.

1.5 SAMPLES:
   A. Office Samples shall be of Sufficient Size and Quantity to Clearly Illustrate:
      1. Functional characteristics of the product, with integrally related parts and attachment devices.
      2. Full range of color, texture and pattern.

1.6 CONTRACTOR RESPONSIBILITIES:
   A. Review shop drawings, product data and samples prior to submission.
   B. Determine and Verify:
1. Field measurements
2. Field construction criteria
3. Catalog numbers and similar data
4. Conformance with specifications

C. Coordinate each submittal with requirements of the work and of the Contract Documents.

D. Notify the Owner's Representative in writing, at time of submission, of any deviations in the submittals from requirements of the Contract Documents.

E. Begin no fabrication or work which requires submittals until return of submittals with Owner's Representative or Architect's approval.

1.7 SUBMISSION REQUIREMENTS:

A. Make submittals promptly in accordance with approved schedule and in such sequence as to cause no delay in the work or in the work of any other Contractor.

B. Number of Submittals Required:

1. Shop Drawings: Submit the number of drawings that the Contractor requires, plus two (2) additional drawings that will be retained by the Owner’s Representative.
2. Product Data: Submit the number of copies that the Contractor requires, plus two (2) copies that will be retained by the Owner’s Representative.
3. Samples: Submit the number stated in each specification section.

C. Submittals Shall Contain:

1. The date of submission and the dates of any previous submissions.
2. The Project title and Parcel number.
4. The Names of:
   a. Contractor
   b. Supplier
   c. Manufacturer
5. Identification of the product, with the specification section number.
6. Field dimensions, clearly identified as such.
7. Relation to adjacent or critical features of the work or materials.
8. Applicable standards, such as ASTM or Federal Specification numbers.
10. Identification of revisions on resubmittals.
11. An 8” x 3” blank space for Contractor and Owner's Representative / Architect's stamps.
12. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria and coordination of the information within the submittal with requirements of the work and of Contract Documents.

1.8 RESUBMISSION REQUIREMENTS:

A. Make any corrections or changes in the submittals required by Owner's Representative and resubmit until approved.
B. Shop Drawings and Product Data:
   1. Revise initial drawings or data and resubmit as specified for the initial submittal.
   2. Indicate any changes which have been made other than those requested by the Owner's Representative.

C. Samples: Submit new samples as required for initial submittal.

1.9 DISTRIBUTION:
   A. Distribute reproduction of Shop Drawings and copies of Product Data which carry the Owner's Representative's or Architect's stamp of approval to:
      1. Job site file
      2. Record Documents file
      3. Other affected Contractors
      4. Subcontractors
      5. Supplier or Fabricator
   B. Distribute samples which carry the Owner's Representative's or Architect's stamp of approval as directed by the Owner's Representative or Architect.

1.10 OWNER'S REPRESENTATIVE OR ARCHITECT DUTIES:
   A. Review submittals with reasonable promptness and in accord with schedule.
   B. Affix stamp and initials or signature and indicate requirements for resubmittal, or approval of submittal.
   C. Return submittals to Contractor for distribution, or for resubmission.

PART 2 - PRODUCTS – Not Applicable

PART 3 - EXECUTION – Not Applicable

END OF SECTION 013323
PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, General and Supplemental Requirements, which are hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:

A. Extent of tree and plant protection is shown on drawings and by provisions of this Section.

B. Related Work Specified Elsewhere:

1. Section 024113: Site Demolition
2. Section 312500: Soil Erosion and Sedimentation Control

1.3 DEFINITIONS:

A. Protective Barrier: A temporary device installed during the full period of construction to protect existing vegetation from damage or disturbance.

B. Damage: Physical change to the site or its vegetation caused by equipment, materials, labor or grading operations which has occurred after onsite work operations have commenced.

C. Drip-Line: The outer perimeter of the plant canopy projected on the ground plane.

D. Existing Vegetation: Any existing tree, shrub or ground cover presently on site and which will remain.

E. Protection: Means of protecting existing site vegetation from trespass, damage or disturbance by use of barriers or other means necessary to prevent trespass, damage or disturbance.

1.4 SUBMITTALS:

A. Certification: Submit written certification by qualified Arborist that trees and plants indicated to remain have been protected during course of construction in accordance with recognized standards and that where damage did occur, trees and plants were promptly and properly treated. Indicate which damaged trees and plants (if any) are incapable of retaining full growth potential and are recommended to be replaced.

1.5 QUALITY ASSURANCE:

A. Arborist Qualifications: Engage a qualified Arborist who has successfully completed tree protection and trimming to perform the following work:

1. Remove branches from trees that are to remain if required.
2. Recommend procedures to compensate for loss of roots and perform initial pruning of branches and stimulation of root growth where removed to accommodate new construction.
3. Recommend procedures for excavation and grading work where adjacent to established plants.
4. Perform tree repair work for damage incurred by new construction.
1.6 PROJECT CONDITIONS:

A. Temporary Protection: Provide temporary fencing, barricades or other suitable guards located outside to protect trees and other plants that are to remain from damage.

B. Root Systems: Do not store construction materials, debris, or excavated material within drip line of trees to remain. Do not permit vehicles within drip line. Restrict foot traffic to prevent excessive compaction of soil over root systems within drip line.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Barriers: Plastic safety fence 4'-0" high.
   1. Support barriers with 6'-0" steel fence posts spaced not more than 8'-0" o.c.

B. Topsoil: See Section 329119 - Topsoil.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION:

A. Do not commence clearing operations prior to installing protective barriers.

B. Protect tree root systems from damage due to noxious materials caused by run-off or spillage during mixing, placement or storage of construction materials. Protect root systems from flooding, eroding or excessive wetting resulting from watering operations.

C. Do not allow fires under or adjacent to trees or other plants that are to remain.

D. Remove branches from trees that are to remain if required to clear new construction.
   1. Where directed by Architect extend pruning operations to restore natural shape of entire trees.
   2. Cut branches and roots, if required, with sharp pruning instruments; do not break or chop.

3.2 EXCAVATION AROUND TREES:

A. Excavate within proximity of trees only where indicated. Do not machine excavate within drip-line.

B. Where excavating for new construction is required within drip-line of trees, hand excavate to minimize damage to root systems. Provide sheeting at excavations if required. Use narrow-tine spading forks and comb soil to expose roots.
   1. Relocate roots in backfill areas wherever possible. If large, main lateral roots are encountered, expose beyond excavation limits as required to bend and relocate without breaking. If encountered immediately adjacent to location of new construction and relocation is not practical, cut roots approximately 3 inches back from new construction.

C. Do not allow exposed roots to dry out before permanent backfill is placed; provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in moist condition.
and temporarily support and protect from damage until permanently relocated and covered with earth.

D. Where trenching for utilities is required within drip-line, tunnel under or around roots by hand digging. Do not cut main lateral roots or tap roots; cut only small roots that interfere with installation of new work. Cut roots with sharp pruning instruments; do not break or chop.

E. Prune branches to balance loss to root system caused by damage or cutting of root system.

3.3 GRADING AND FILLING AROUND TREES:

A. Maintain existing grade within canopy drip line of trees unless otherwise indicated.

B. Lowering Grades: Where existing grade is above new finish grade shown around trees, gradually slope grade away from trees as recommended by Arborist. Do not reduce grade more than 6 inches beneath canopy of tree.

1. Prune branches to stimulate root growth and to compensate for loss of roots. Provide subsequent maintenance during the contract period as recommended by Arborist. Provide Owner with typed instructions as recommended by Arborist. Provide Owner with typed instructions for recommended long-range maintenance procedures to be followed after completion of construction operations.

C. Raising Grades:

1. Minor Fills: Where existing grade is 6 inches or less below elevation of finish grade shown, use topsoil fill material specified. Place in single layer and do not compact; hand grade to required finish elevations.

2. Moderate Fills: Where existing grade is more than 6 inches, but less than 12 inches below finish grade elevation, place a layer of drainage fill on existing grade before placing topsoil. Carefully place against trunk of tree approximately 2 inches above finish grade elevation and extend not less than 18 inches from tree trunk on all sides. For balance of area within drip-line perimeter, place drainage fill to an elevation 6 inches below grade and completely fill with a layer of topsoil to finish grade elevation. Do not compact drainage fill or topsoil layers; hand grade to required elevations.

3.4 REPAIR AND REPLACEMENT OF TREES:

A. Repair trees if damaged by construction operations. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.

B. Remove and replace dead and damaged trees that Arborist determines to be incapable of restoration to normal growth pattern.

1. Provide new trees of same size and species as those being replaced. Plant and maintain as acceptable to Architect and provisions stated in Section 320536 – Landscape Maintenance and Warranty Standards.

C. Maintain trees including fertilizing and watering.

3.5 DISPOSAL:

A. Burning removed trees and branches is not permitted on site.
B. Remove excess excavation, displaced trees and trimmings and dispose of off Owner’s property.

END OF SECTION 015639
PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

   A. Attention is directed to Bidding and Contract Requirements, General and Supplementary Requirements, which are hereby made a part of this Section.

1.2 WORK INCLUDED:

   A. Provide all labor, materials, necessary equipment and services to complete the subsurface investigation, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

   B. The subsurface investigation for conditions of the project site is the sole responsibility of the Contractor. In preparing the proposal, the Contractor shall make all subsurface or surface investigations necessary to provide proper background and knowledge to determine the nature and extent of work required.

   C. All known surface and subsurface data shown on the documents is based on drawings provided by Owner. Owner or Owner’s Representative makes no warranties or guarantees, as to the accuracy or completeness of the drawings nor concerning the nature of materials to be encountered on the site.

   D. Owner or Owner’s Representative provides no subsurface information, and makes no warranties or guarantees concerning the nature of materials to be encountered on the site.

   E. Related Work Specified Elsewhere:

      1. Section 024113: Demolition

PART 2 - PRODUCTS – Not Applicable

PART 3 - EXECUTION – Not Applicable

END OF SECTION 023000
PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, and to Supplemental General Conditions, hereby made a part of this Section.

1.2 WORK INCLUDED:

A. Provide all labor, materials, necessary equipment and services to complete the site demolition, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS."

B. Related Work Specified Elsewhere:
   1. Section 312500: Soil Erosion and Sedimentation Control
   2. Section 321213.40: Concrete Curbs and Paving
   3. Section 321313.13: Exposed Aggregate Concrete Paving

1.3 SUBMITTALS:

A. Permit of transport and disposal of debris if required.

B. Demolition procedures and operational sequences for review and acceptance by Owner.

1.4 QUALITY ASSURANCE:

A. Contractor Qualifications: Minimum of five (5) years experience in demolition of comparable nature.

B. Requirements of All Applicable Regulatory Agencies:
   1. All applicable Building Codes and other public Agencies having jurisdiction upon the work.

1.5 JOB CONDITIONS:

A. General:
   1. It shall be the contractor’s responsibility to verify all existing survey information including utility systems before any demolition or construction work occurs. Any discrepancies with the survey information shall be reported to the landscape architect and owner’s representative immediately.
   2. Erect barriers, fences, guard rails, enclosures and shoring to protect personnel, structures and utilities remaining intact.
   3. Existing trees to be removed within the limits of work shall be clearly identified with brightly colored ribbon.
   4. Contractor shall contact and coordinate with all applicable utility companies 72 hours in advance of any work.
   5. Contractor shall be responsible for making himself familiar with all underground utilities, pipes and structures. Contractor shall take sole responsibility for cost incurred due to damage and replacement of said utilities.
6. All existing conditions designated to remain within the new construction area shall be properly and adequately protected from damage during demolition operations and throughout construction. It shall be the responsibility of the contractor to restore to the original condition any of these existing items that are damaged or disturbed in any way.

7. Contractor shall limit all work and disturbance to within designated project areas. It shall be the responsibility of the contractor to restore to the original condition any damage or disturbance outside these limits.

8. Streets, sidewalks and adjacent property shall be protected throughout the work as required by local codes and regulations and approved by the owner.

9. All material specified to be removed shall be disposed of off-site per local codes and regulations.

10. Materials to be reused or salvaged shall be stored in an area designated by the owner’s representative for that purpose. All salvaged materials shall remain the property of the owner.

B. Maintain Traffic:

1. Ensure minimum interference with roads, streets, driveways, sidewalks and adjacent facilities.

2. Do not close or obstruct streets and sidewalks unless approved by the Owner.

3. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.

C. Dust Control:

1. Use all means necessary for preventing dust from demolition operations from being a nuisance to adjacent property owners. Methods used for dust control are subject to approval by the Architect prior to use and must comply with local ordinances and municipal requirements.

D. Burning:

1. On-site burning will not be permitted.

PART 2 - PRODUCTS - Not Applicable

PART 3 - EXECUTION

3.1 INSPECTION:

A. Verify that all items to be demolished are discontinued in use and ready for removal.

B. Do not commence work until all conditions and requirements of all applicable public agencies are complied with.

3.2 PREPARATION:

A. Notification: Notify the Owner at least three (3) full working days prior to commencing the work of this Section.

3.3 CLARIFICATION:

A. The drawings do not purport to show all objects existing on the site.
B. Before commencing the work of the section, verify with the Owner all objects to be removed and all objects to be preserved.

3.4 EXECUTION:

A. Stockpiled topsoil shall be stored on site and remain protected for redistribution under this contract.

B. All disturbed lawn areas shall be restored with 4” topsoil unless otherwise specified. Blend grades uniformly to meet.

C. Protect existing trees to remain with a 4’-0” height snow fence located at the drip line (as designated).

D. Grubbing shall include all weeds, shrubs, stumps and root systems of removed plant material, irrigation piping and any other irrigation materials within the limits of demolition. Grubbing shall be to the depths below proposed improvements indicated below:

1. Concrete Paving and Walkways – Total depth of paving and sub-base.
2. Lawn and other Planting Areas – Remove depth required for removal of stumps and roots over 2” in diameter.

E. Concrete pavement removals shall take place at the nearest joint to illustrated removal areas.

F. Full depth sawcuts shall be typical for all pavement removals.

G. Refer to layout plan for new pavement locations and dimensions, relative to existing pavement and turf removals.

3.5 SCHEDULING:

A. Schedule all work in a careful manner with all necessary consideration for the public and the Owner.

B. Avoid interference with the use of, and passage to and from adjacent facilities.

3.6 PROTECTION OF UTILITIES:

A. Preserve in operating condition all active utilities adjacent to or traversing the site and/or designated to remain.

3.7 OTHER DEMOLITION (IF APPLICABLE):

A. Removal of Debris: Remove all debris from the site and leave the site in a neat, orderly condition to the full acceptance of the Owner. No debris shall be left on the site overnight.

END OF SECTION 024113
SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.2 WORK INCLUDED:

A. Provide all labor, materials, necessary equipment, and services to complete the Joint Sealants work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS."

B. Related Work Specified Elsewhere:
   1. Section 321213.40: Concrete Curbs and Paving
   2. Section 321213.13: Exposed Aggregate Concrete Paving

1.3 SAMPLES AND CERTIFICATES:

A. Submit the Following Samples:

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<th>Description</th>
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<tr>
<td>3</td>
<td>6&quot; long</td>
<td>Filler for polyurethane</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Color sample charts</td>
</tr>
</tbody>
</table>

B. Submit the Following Certificates for Compliance:

<table>
<thead>
<tr>
<th>Description</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyurethane</td>
<td>Per Specifications (TT-S-00227E, Type Class A</td>
</tr>
<tr>
<td>(two components)</td>
<td>ASTM C-920, TYPE M, Grade P, Class 25</td>
</tr>
</tbody>
</table>

1.4 COOPERATION:

A. Work of this section shall be provided and coordinated as required through procedures of construction that will insure safety.

1.5 GUARANTEE:

A. Furnish written guarantee for all sealant work stating that said work shall be free from any defects of material and/or workmanship for a period of five (5) years, commencing on the date of final completion and acceptance.

B. Said Guarantee Shall Further State that Sealants are Guaranteed Against:

1. Adhesive or cohesive failure of sealants in joints where movement is under maximum of +25% extension or +25% compression for two component polyurethane base sealant.
2. Any crazing greater than 3 mils in depth developing on the surface of the sealant material.
3. Any staining of the surfaces adjacent to the joints, by the sealants, primers, or joint filler materials, by migration through the adjacent materials in contact with them.
4. Any puncture, abrasion or tear failure due to pedestrian or vehicular traffic in self-leveling polyurethane base sealant installed at traffic surfaces.
5. Any visible chalking or color change on the cured surface of the sealant.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER'S AND MATERIALS:

A. Multi component chemically curing, polyurethane base sealant shall be manufactured to meet the specified requirements by the following manufacturer:

1. Tremco Corp., Contact: Construction Technical Services, Telephone (216) 292-5000, Fax (216) 766-5535 or approved alternate.

B. Manufacturer's label shall indicate the expiration date of use of sealants or manufacturer shall otherwise attest to the date of manufacture. The period of time lapsed shall not be longer than six (6) months for polyurethane from the date of manufacturer to the date of usage on the job.

C. Primers where required shall be as recommended by the sealant manufacturer.

D. The color of sealants shall be as selected by Architect or as called for on drawings.

E. Bond-breakers where required shall be as recommended by the sealant manufacturer.

2.2 HORIZONTAL EXPANSION JOINTS: (Subject to Vehicular or Pedestrian Traffic):

A. Sealant at horizontal joints of self-leveling consistency, meeting or equal to requirements specified by the following manufacturer:

1. Tremco THC 900 or 901 multi-component chemically and polyurethane based sealant per Fed. Spec. TT-S-00227E, Type 1, Class A, ASTM C-920 Type M, Grade P, Class 25.

2.3 FILLER MATERIAL FOR HORIZONTAL JOINTS:

A. Filler material shall be a non-impregnated closed-cell, supporting type, compressible resilient, free from tar, asphalt, oil and other foreign substances. Filler shall be a closed-cell polyethylene foam, or isomeric polymer foam (polystyrene will not be allowed). Filler shape shall be such that sealant in joint is fully supported against puncture or pressure, but of design to prevent sealant from being forced out of joint by contraction. Filler shall have characteristics of not bonding with sealant, surface of filler. Filler shall be at least 25% wider than width of joint measured in field to which it is applied. Compression on such installed filler shall be sufficient so as to allow no displacement.

1. Closed-cell polyethylene joint filler foam backer rod material shall comply with ASTM D-1622.
2. Where joint design, or depth of joint will not permit the use of joint backing, a bondbreaker tape must be installed to prevent three-sided adhesion. An adhesive backed polyethylene tape should be used.

2.4 EXPANSION JOINT CAPS:

A. Removable expansion joint caps manufactured by:

1. Contie
2. Greenstreak
PART 3 - EXECUTION

3.1 JOINT DIMENSIONS:

A. The depth of a joint is defined as the distance from the outside face of the joint to closest point of joint filler, whether joint is rod shaped.

B. Minimum size of joint should be four times the anticipated movement. Minimum joint dimension is 3/8" (9.5mm) x 3/8" (9.5mm), to allow for adequate cleaning and priming.

C. For joints 1/2" (13mm) and wider, the depth of the sealant should be no more than 1/2" (13mm) deep.

D. Joints to receive sealants shall be never less than 1/4" depth by 1/4" width.

E. Joints larger than the above stated minimum dimensions shall be provided in accordance with manufacturer's standard printed specifications and recommendations.

F. The General Contractor shall determine and provide joints of dimensions as specified herein before.

3.2 JOINT INSPECTION:

A. Inspect all joints which are to receive work of this section and notify Architect of dimensions and/or any existing conditions which will prevent satisfactory installation and performance of the sealants.

B. Commencement of work on any joint shall be considered full acceptance of dimensions and condition of said joint.

C. Joints to be sealed shall be thoroughly cleaned of mortar or any other foreign material in an approved manner before any sealant materials are applied. Any coating from metal surfaces shall be removed by use of solvent recommended by manufacturer of metal. Solvent shall not be allowed to air dry without wiping.

D. Concrete and masonry surfaces shall be fully cured, free of release agents, curing compounds, loose aggregate and other surface treatments. Treated surfaces shall be tested for adhesion before proceeding with sealant work.

E. Joint spaces and surfaces shall be thoroughly dry before installation of sealant materials. Unless approved means of drying joint is employed, do not install sealant material when temperature is below 40 degrees F or during and after rain and fog. To test for free moisture, run paper towel or paper napkin through joint. Paper shall be completely dry. Any alkaline seepage from fresh concrete shall be washed away, surface dried.

3.3 GENERAL WORKMANSHIP AND APPLICATION:

A. Use thoroughly experienced workmen in the application and as per manufacturer's recommendations.

B. Primer shall be used as it comes from can, unadulterated. Apply as per manufacturer's printed directions and/or recommendations. Prime joints before insertion of joint filler material.
C. Fill joint with filler material so that depth and width of joint have relationships as noted hereinafter under "Joint Dimensions".

D. When installing rod stock filler, roll filler into joint. Rod filler in final position shall not be twisted.

E. Bond-breaker strip shall be used in joints where sufficient room for back-up does not exist.

F. In mixing sealant compound components, do not whip excessive air into said materials. Mix strictly as recommended by manufacturer.

G. Sealant materials shall be applied within "application life" recommended by manufacturer for prevailing temperature and humidity conditions. Do not retemper.

H. Protect exposed surfaces adjacent to joints to prevent permanent staining or other damage to adjacent work. Be fully responsible for any staining and/or other damage caused under work of this section to any adjacent work.

I. If manufacturer indicates there is any possibility of color of sealant material being changed by use of wetting agents while tooling, Contractor shall dry tool.

J. Joints shall be lightly tooled into place immediately after application, when necessary to give concave shaped surface.

K. Immediately after application of sealants, thoroughly clean adjacent surfaces which may have been soiled, as per sealant manufacturer recommendations. Leave work in neat and clean conditions to full satisfaction of Architect.

3.4 GENERAL PERFORMANCE:

A. Sealants: Except as otherwise indicated, joints are required to establish and maintain airtight and waterproof continuous seals on a permanent basis, within recognized limitations of wear and aging as indicated for each application. Failures of installed sealants to comply with these requirements will be recognized as failures of materials and workmanship.

END OF SECTION 079200
SECTION 129300 - SITE FURNISHINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:
   A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.2 WORK INCLUDED:
   A. Provide all labor, materials, necessary equipment and services to complete the Site Furnishings work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated on "NIC ITEMS."
   B. Included But Not Necessarily Limited to the Following:
      1. Benches
      2. Tables
      3. Bike racks

1.3 SUBMITTALS:
   A. Manufacturer's Data:
      1. Descriptive data of installation, methods, procedures and maintenance.
   B. Complete shop drawings for all items of work under this section indicating all details of fabrication and installation, including sizes, shapes, finishes, colors, thickness, material quality and all other related work applicable to the items of this section.

1.4 DELIVERY, STORAGE AND HANDLING:
   A. Deliver all materials with manufacturer's tags and labels intact.
   B. Store and handle so as to avoid damage.

PART 2 - PRODUCTS

2.1 BENCHES:
   A. Manufactured by Landscape Forms Inc. (800) 430-6209.
   B. Quantity: (3)
   C. Model: Plexus II Seating
      1. Support style – Straight
      2. Seat style – Straight backed
      3. Seat quantity – Four
      4. Arm options – End and Center arms
      5. Table option – No table
      6. Mounting – Surface mount
      7. Color – Silver (submit color chips for approval)
2.2 TABLES:

A. Manufactured by Landscape Forms Inc. (800) 430-6209

B. Quantity: (5)

C. Model: Carousel Table
   1. Style – Metal grid backless
   2. Seat quantity – (2) 3 seat – ADA compliant
      (3) 4 seat
   3. Table top style – Steelhead perforated (no umbrella hole)
   4. Mounting – Surface mounted
   5. Color – Silver (submit color chips for approval)

2.3 BIKES RACKS:

A. Manufactured by Landscape Forms Inc. (800) 430-6209

B. Quantity: (15)

C. Model: Bola Bike Rack

D. Material: Powder coated ASTM A513 Carbon Steel

E. Finish: Pangard II – Silver (submit color chips for approval)

F. Mounting: Embedded

PART 3 - EXECUTION

3.1 WORKMANSHP AND INSTALLATION:

A. Provide as indicated and detailed on the drawings, and as per manufacturer's standard printed specifications, installation instructions and recommendations.

B. Provide complete shop drawing and manufactured cut sheets on all manufactured items.

END OF SECTION 129300
SECTION 312216 - FINE GRADING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, and General and Supplemental Requirements which are hereby made a part of this section.

1.2 WORK INCLUDED:

A. Provide all labor, materials, necessary equipment and services to complete the Fine Grading work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

B. Related Work Specified Elsewhere:

1. Section 329223: Sodding
2. Section 329300: Plants

1.3 SITE INSPECTION:

A. The Contractor shall visit the site and acquaint himself with all existing conditions. The Contractor shall be responsible for his own subsurface investigations, as necessary, to satisfy requirements of this Section. All subsurface investigations shall be performed only under time schedules and arrangements approved in advance by the Landscape Architect or Owner's Representative.

1.4 EXISTING CONDITIONS:

A. Field verify drainage patterns onsite prior to any demolition. New improvements shall not impede existing drainage patterns.

B. Major demolition, site preparation and general site earthwork will be accomplished under another, earlier contract. Verify that contours and grades established under that Contract are within two-tenths (.2) of a foot of proposed grades shown on grading plans. Make whatever corrections and/or repairs necessary to make finish grades consistent with the requirements of the grading drawings and specifications.

1.5 UTILITIES:

A. Before starting site operations verify that earlier Contractors have disconnected all temporary utilities which might interfere with the fine grading work.

B. Locate all existing, active utility lines traversing the site and determine the requirements for their protection. Preserve in operating condition all active utilities adjacent to or transversing the site that are designated to remain.

C. Observe rules and regulations governing respective utilities in working under requirements of this section. Adequately protect utilities from damage, remove or relocate as indicated, specified or required. Remove, plug or cap inactive or abandoned utilities encountered in excavation. Record location of active utilities.
1.6 QUALITY ASSURANCE:

A. Requirements of all applicable building codes and other public agencies having jurisdiction upon the work.

B. Primary emphasis should be given to the aesthetic appearance of berming, as directed by the Landscape Architect or Owner's Representative. The Contractor shall employ skilled personnel and any necessary equipment to insure that finish grading is smooth, aesthetically pleasing, drains well and is ideal for receiving sod and plant materials.

PART 2 - MATERIALS

2.1 EXISTING SOIL:

A. Use imported soil unless otherwise directed by Owner's Representative, free from debris, sod, biodegradable materials and other deleterious materials. The Contractor shall insure that all soil has sufficient percolation and surface drainage to support grasses and plant material and that extreme compaction occurs only in areas to receive paving.

B. In areas to receive sod, verify that soil is scarified to depth of 3” and that soil contains enough organic matter to support and encourage rooting of sod and or establishment of seed.

PART 3 - EXECUTION

3.1 JOB CONDITIONS:

A. Dust Control: Use all means necessary to prevent dust from construction operations from being a nuisance to adjacent property owners and from damaging finish surfaces on adjacent building, paving, etc. Methods used for dust control are subject to approval by the Landscape Architect or Owner's Representative.

B. Burning: On-site burning will not be permitted.

C. Protection: Use all means necessary to protect curbs, gutters, sprinklers, utilities and vegetation designated to remain, and, in the event of damage, immediately make all repairs, replacements and dressings to damaged plants necessary to the approval of the Landscape Architect. Contractor shall incur all cost for the replacement of damaged objects and vegetation.

3.2 SCHEDULING:

A. Schedule all work in a careful manner with all necessary consideration for adjoining property owners and the public.

B. Coordinate schedule with other Contractors to avoid conflicts with their work.

3.3 EXCAVATION:

A. Excavate where necessary to obtain subgrades, percolation and surface drainage as required.

B. Materials to be excavated are unclassified.

C. Remove entirely any existing obstructions after approval by the Landscape Architect or Owner's Representative.
D. Remove from site and dispose of debris and excavated material not required.

3.4 GRADING:

A. The Contractor shall establish finished grades as shown on the landscape plan and as directed by the Architect, including areas where the existing grade has been disturbed by other work.

B. Finished grading shall be smooth, aesthetically pleasing, drain well and ready to receive sod and other plant material to full satisfaction of the Owner's Representative, Architect and Construction Manager.

3.5 COMPACTION:

A. Compact each layer of fill in designated areas with approved equipment to achieve a maximum density at optimum moisture, AASHTO T 180 - latest edition.

1. Under buildings, roadways, curbs, walks and other paved areas, compaction shall be to 95% of maximum density.
2. Under landscaped area, compaction shall not exceed 85% of maximum density.

B. No backfill shall be placed against any masonry or other exposed building surface until permission has been given by the Owner's Representative, and in no case until the masonry has been in place seven (7) days.

C. Compaction in limited areas shall be obtained by the use of mechanical tampers or approved hand tampers. When hand tampers are used, the materials shall be deposited in layers not more than four inches thick. The hand tampers used shall be suitable for this purpose and shall have a face area of not more than 100 square inches. Special precautions shall be taken to prevent any wedging action against masonry or other exposed building surfaces.

3.6 CORRECTION OF GRADE:

A. Bring to required grade levels areas where settlement, erosion or other grade changes occur. Adjust grades as required to carry drainage away from buildings and to prevent ponding around the buildings and on pavements.

B. Remove all rock or objectionable material larger than 1" in any direction prior to commencing landscaping.

C. Contractor shall be responsible for stabilizing grades by approved methods prior to landscaping, and shall be responsible for correction of grades as mentioned above, and clean up of any wash outs or erosion.

END OF SECTION 312216
SECTION 312500 - SOIL EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:
   A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:
   A. Extent of soil erosion and sedimentation control is shown on drawings.
   B. Related Work Specified Elsewhere:
      1. Section 023000: Subsurface Investigation
      2. Section 024113: Site Demolition

1.3 QUALITY ASSURANCE:
   A. Part 91, Soil Erosion and Sedimentation Control of the Natural Resource and Environmental Protection Act, Act 451 of the Public Acts of 1994, as amended, State of Michigan, requires that all site work be in compliance with the requirements of the Act and that a permit be obtained before starting work.
   B. Current edition of Michigan Department of Transportation (MDOT) "Standard Specifications for Highway Construction".
   C. Contractor shall pull permit and post an erosion control performance bond, as required, prior to any earth change.
   D. Continually inspect for soil erosion and sediment control compliance. Correct deficiencies within 24 hours.

PART 2 - PRODUCTS

2.1 MATERIALS:
   A. Provide materials as necessary to comply with MDOT Section 208 Soil Erosion and Sedimentation Control. All material proposed for use shall be subject to approval and modification by the Owner's Representative and the local enforcing agency.

PART 3 - EXECUTION

3.1 GENERAL:
   A. Comply with requirements of the Soil Erosion and Sedimentation Control Act.
   B. Install temporary erosion control measures before construction begins.
      1. Install all required erosion control filters over storm sewer structures, prior to demolition operation.
2. Schedule and perform construction operations so that preventative soil erosion control measures are in place prior to excavation in critical areas and temporary stabilization measures are in place immediately following backfilling operations.

C. Select borrow and fill disposal areas with full consideration for soil erosion and sediment control.

D. Take special precautions in the use of construction equipment to prevent situations that promote erosion.

E. If the site is over five acres or within 500’ of a lake or stream, then a national pollutant discharge elimination system (NPDES) permit for storm water discharge for the construction activities is required prior to any earth change.

F. Inlet filters are required at all catchbasins, existing and proposed.

G. Periodically remove collected silt and sedimentation as required where erosion control measures are implemented.

3.2 CLEANUP:

A. Remove temporary erosion control measures at completion of construction, unless otherwise directed by Architect to remain in place. Exercise caution during removal to minimize siltation of nearby drainage courses.

1. Remove any mud and soil tracked from site onto adjoining public streets, daily.

END OF SECTION 312500
SECTION 320536 - LANDSCAPE MAINTENANCE AND WARRANTY STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:

A. The requirements of this section include a one-year warranty period from date of acceptance of installation.

B. Related Work Specified Elsewhere:

1. Section 329119: Topsoil
2. Section 329223: Sodding
3. Section 329300: Plants

1.3 ACCEPTANCE OF INSTALLATION:

A. At the completion of all landscape installation, or pre-approved portions thereof, the Landscape Contractor shall request in writing an inspection for acceptance of installation in which the Landscape Contractor, Landscape Architect and Owner's Representative shall be present. After this inspection a "Punch List" will be issued by the Landscape Architect and/or Owner's Representative. After completion of punch list items, the Landscape Architect, Contractor and Owner's Representative shall re-inspect the project and upon satisfactory completion of punch list items, issue a written statement of acceptance of installation and establish the beginning of the project warranty period.

B. It is the responsibility of the Landscape Contractor to make the above written request for inspection of installation in a timely fashion. If there is plant material loss prior to the Landscape Contractor's written request for inspection of installation, the Landscape Contractor shall make all replacements of this dead material at no additional cost. These replacements are not considered to be the required one (1) replacement of dead plant material by the Landscape Contractor during the one (1) year project warranty period, as outlined below.

C. Landscape work may be inspected for acceptance in parts agreeable to Owner's Representative and Landscape Architect provided work offered for inspection is complete, including maintenance as required.

D. For work to be inspected for partial acceptance, supply a written statement requesting acceptance of this work completed to date.

1.4 PROJECT WARRANTY:

A. The project warranty period begins upon written acceptance of the project installation by Landscape Architect and Owner's Representative.

B. The Landscape Contractor shall guarantee trees, shrubs, ground cover bed and sodded areas through construction and for a period of one year after date of acceptance of installation against defects including death and unsatisfactory growth, except for defects resulting from neglect by
Owner, abuse or damage by others, or unusual phenomena or incidents which are beyond Landscape Contractor's control.

1.5 FINAL ACCEPTANCE:

A. At the conclusion of the project warranty period the Landscape Contractor shall request a project inspection for final acceptance in which the Landscape Contractor, Landscape Architect and Owner's Representative shall be present. After this inspection a "Punch List" will be issued by the Landscape Architect. Upon completion of all punch list items, the Landscape Architect and Owner's Representative shall reinspect the project and issue a written statement of final acceptance.

PART 2 - PRODUCTS  - Not Applicable

PART 3 - EXECUTION - Not Applicable

END OF SECTION 320536
SECTON 321213.40 - CONCRETE CURBS AND PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:
   A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental
      General Conditions, which are hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:
   A. Extent of concrete curbs, walks and paving is shown on drawings.
   B. Related Work Specified Elsewhere:
      1. Section 079200: Joint Sealants
      2. Section 311313.13: Exposed Aggregate Concrete Paving

1.3 SUBMITTALS:
   A. Product Data: Submit data for proprietary material and items, including reinforcement and
      forming accessories, admixtures, patching compounds, joint systems and others as requested
      by Landscape Architect.
   B. Laboratory Test Reports: Submit laboratory test reports for concrete materials and mix design
      test as specified.
      1. Submit proposed design mix for each type of concrete required.

1.4 QUALITY ASSURANCE:
   A. Codes and Standards: Comply with local governing regulations if more stringent than herein
      specified.
   B. Concrete Testing Service: Employ, at Contractor's expense a testing laboratory acceptable to
      the Architect to perform material evaluation tests and to design concrete mixes.
   C. Tests for Concrete Materials:
      1. For Portland Cement, sample cement and determine chemical and physical properties by
         methods of test of ASTM C-150.
      2. Submit written reports to the Landscape Architect for each material sampled and tested
         prior to the start of work. Provide the project identification name and number, date of
         report, name of Contractor, name of concrete testing service, source of concrete
         aggregates, material manufacturer and brand name for manufacturing materials, values
         specified in the referenced specification for each material and test results. Indicate
         whether or not material is acceptable for intended use.
      3. Certificates of material properties and compliance with specified requirements may be
         submitted in lieu of testing, when acceptable to the Landscape Architect. Certificates of
         compliance must be signed by the materials' producer and the Contractor.
1.5 JOB CONDITIONS:

A. Traffic Control:
   1. Maintain access for vehicular and pedestrian traffic as required for other construction activities.
   2. Utilize flagmen, barricades, warning signs and warning lights as required.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Forms:
   1. Steel, wood or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects.
   2. Use flexible spring steel forms or laminated boards to form radius bends as required.

B. Concrete Materials: See 2.2

C. Expansion Joint Materials: Refer to Section 079200 – Joint Sealants.

D. Anti-Spalling Compound: 50% (by volume) boiled linseed oil and 50% (by volume) commercial grade kerosene or mineral spirits.

E. Bonding Compound: Styrene butadiene or acrylic base, rewettable type.

2.2 CONCRETE MATERIALS:

A. Portland Cement: ASTM C-150, Type I
   1. Type III may be used for high early strength concrete.
   2. Use one brand of cement throughout project, unless otherwise acceptable to Landscape Architect.

B. Normal Weight Aggregates:
   1. General: ASTM C-33 and as herein specified.
      a. Local aggregates not complying with ASTM C-33, but which have shown by special test or actual service to produce concrete of adequate strength and durability may be used when acceptable to Architect.
   2. Fine Aggregates: Clean, sharp, natural sand free from loam, clay, lumps or other deleterious substances.
      a. Dune sand, bank run sand and manufactured sand are not acceptable.
   3. Coarse Aggregate: Clean, uncoated, processed aggregate containing no clay, mud, loam or foreign matter, as follows:
      a. Crushed stone, processed from natural rock or stone.
b. Washed gravel, either natural or crushed. Use of pit or bank run gravel not permitted.

c. Maximum Aggregate Size: Not larger than one-fifth of narrowest dimensions between sides of forms, one-third of depth of slabs, nor three-fourths of minimum clear spacing between individual reinforcing bars or bundles of bars.

d. Combined aggregate gradation for slabs and other designated concrete shall be 8% - 18% for large top size aggregates (1 1/2 inch) or 8% - 22% for smaller top size aggregates (1 inch or 3/4 inch) retained on each sieve below the top size and above the No. 100.

C. Water: Drinkable

D. Air-Entraining Admixture: ASTM C-260, certified by manufacturer to be compatible with other required admixtures.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. "AEA-92 or Air 40": Euclid Chemical Co.
   b. "Sika Aer": Sika Corp.
   c. "MB-VR or MB-AE": BASF Admixture Systems

E. Water-Reducing Admixture: ASTM C-494, Type A, and contain not more than 0.05% chloride ions.

1. Products: Subject to compliance with requirements provide one of the following:
   a. "Eucon WR-75 or Eucon WR 91": Euclid Chemical Co.
   b. "Possolith 322N": BASF Admixture Systems
   c. "Plastocrete 160": Sika Chemical Corp.

F. High-Range Water-Reducing Admixture (Superplasticizer): ASTM C-494, Type F or Type G and contain not more than 0.05% chloride ions.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. "Daracem 100 or AdvaFlow": W. R. Grace
   b. "Eucon 37/Eucon 1037, or Plastol Series": Euclid Chemical Co.
   c. "Rheobuild 1000 or Glenium Series": BASF Admixture Systems

G. Water-Reducing, Non-Chloride Accelerator Admixture: ASTM C-494, Type C or E, and not contain more chloride ions than are present in municipal drinking water. The admixture manufacturer must have long-term non-corrosive test data from an independent testing laboratory (of at least a year’s duration) using an acceptable accelerated corrosion test method such as that using electrical potential measures.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. "Accelguard 80/90 or NCA": Euclid Chemical Co.
   b. Pozzutec 20+: BASF Admixture Systems

H. Water-Reducing, Retarding Admixture: ASTM C-494, Type D, and contain not more than 0.05% chloride ions.

1. Products: Subject to compliance with requirements, provide one of the following:
a. "Pozzolith Retarder": Master Builders  
b. "Eucon Retarder 75 or Eucon Retarder 100": Euclid Chemical Co.  
c. "Plastiment": Sika Chemical Co.

I. Certification: Provide admixture manufacturer's written certification that chloride ion content complies with specified requirements.

J. Prohibited Admixtures: Calcium chloride thiocyanates or admixtures containing more than 0.05% chloride ions are not permitted.

K. Curing materials: Liquid membrane curing compound, ASTM C-309, Type I, Class A manufactured by W.R. Meadows ph. (800) 342-5976 or equal.

2.3 REINFORCING MATERIALS:

A. Reinforcing Bars: ASTM A-615, Grade 60. (Size as shown on drawings.)

B. Welded Wire Fabric: ASTM A-185 welded steel wire fabric, 6X6W2.9 X W2.9 or size as shown on drawings.

2.4 FORMS:

A. Contractor shall be responsible for design and engineering of formwork. Formwork shall comply with local code requirements and ACI 347, "Recommended Practice for Concrete Formwork".

B. Unless otherwise specified herein, concrete materials, mixing and placing shall conform to requirements of ACI 304 "Recommended Practice for Measuring, Mixing, and Placing Concrete".

C. Comply with ACI 318 Building Code Requirements for Reinforced Concrete for all fabrication and application or reinforcing.

2.5 PROPORTIONING AND DESIGN OF MIXES:

A. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301, Section 4.3.1. If trial batch method used, use an independent testing facility acceptable to Architect for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing, unless otherwise acceptable to Architect.

B. Submit written reports to Architect of each proposed mix for each class of concrete at least 15 days prior to start of work. Submit mix designs on the mix design submittal form included at the end of this specification. Do not begin concrete production until mixes have been reviewed by Architect.

C. Design mixes to provide normal weight concrete with the following properties and additives:

1. Exterior Concrete: 4000 psi 28-day compressive strength; W/Cm 0.45 (0.40 if reinforced), 6% ± 1.5% air content.

D. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results or other circumstances warrant; at no additional cost to Owner and as accepted by Architect. Laboratory test data for revised...
mix design and strength results must be submitted to and accepted by Architect before using in work.
E. Admixtures:

1. Use water-reducing admixture or high range water-reducing admixture (super plasticizer) in concrete as required for placement and workability.
2. Use non-chloride accelerating admixture in concrete slabs placed at ambient temperatures below 50 degrees F (10 degrees C).
3. Use high-range water-reducing admixture in pumped concrete, architectural concrete, fiber concrete and concrete with water/cementitious ratios below 0.50.
4. Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus-or-minus 1-1/2% within following limits:
   a. Concrete structures and slabs exposed to freezing and thawing, deicer chemicals or subjected to hydraulic pressure.
      1) 5.5% 1-1/2" maximum aggregate
      2) 6.0% 1" maximum aggregate
      3) 6.5% 3/4" maximum aggregate
      4) 7.0% 1/2" maximum aggregate
   b. Other Concrete (not exposed to freezing, thawing or hydraulic pressure): 2% to 4% air.
5. Use admixtures for water-reducing and set-control in strict compliance with manufacturer's directions.

F. Water-Cement Ratio: All concrete subject to freezing and thawing shall have a maximum water/cementitious ratio of 0.50 (4000 psi at 28 days or more). All concrete subjected to deicers and/or required to be watertight shall have a maximum water/cementitious ratio of 0.45 (4500 psi at 28 days or more). All reinforced concrete subjected to brackish water, salt spray or deicers shall have a maximum water/cementitious ratio of 0.40 (5000 psi at 28 days or more).

G. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:

1. Ramps, Slabs and Sloping Surfaces: Not more than 3".
2. Concrete Containing HRWR Admixture (super plasticizer): Not more than 9" after addition of HRWR to site verified 2"-3" slump concrete.
3. Other Concrete: Not more than 4".

2.6 CONCRETE MIXING:

A. Ready-Mix Concrete: Comply with requirements of ASTM C-94, and as herein specified:

1. During hot weather or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C-94 may be required.
   a. When air temperature is between 85 degrees F (30 degrees C) and 90 degrees F (32 degrees C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes and when air temperature is above 90 degrees F (32 degrees C), reduce mixing and delivery time to 60 minutes.
3.1 EXAMINATION:
   A. Examine the areas and conditions under which concrete curbs and paving are to be installed and notify the Landscape Architect in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 SURFACE PREPARATION:
   A. Remove loose material from the compacted subbase surface immediately before placing concrete.
   B. Proof-roll prepared subbase surface to check for unstable areas and the need for additional compaction. Do not begin paving work until such conditions have been corrected and are ready to receive paving.
   C. General: Control soil compaction during construction to provide the percentage of density specified for each area classification.
      1. Lawn or Unpaved Areas: Compact top 6" of subgrade and each layer of backfill or fill material at 85% maximum density for cohesive soils or 90% relative density for cohesionless material.
      2. Walkways: Compact top 6" of subgrade and each layer of backfill or fill material at 90% maximum density for cohesive soil or 95% relative density for cohesionless material.
   D. Percentage of Maximum Density Requirements: Compact soil to not less than following percentages of maximum dry density for soils which exhibit a well-defined moisture density relationship determined in accordance with ASTM D-1557; and not less than following percentages of relative density, determined in accordance with ASTM D-2049, for soils which will not exhibit well-defined moisture-density relationship.
   E. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or to layer of soil material. Apply water in such manner as to prevent free water from appearing on surface during or subsequent to compaction operations.
      1. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
      2. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing, until moisture content is reduced to satisfactory value.

3.3 FORM CONSTRUCTION:
   A. Set forms to the required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of the work and so that forms can remain in place at least 24 hours after concrete placement.
   B. Check completed formwork for grade and alignment to the following tolerances:
      1. Top of forms not more than 1/8" in 10’.
      2. Vertical face on longitudinal axis, not more than 1/4" in 10’.
C. Clean forms after each use and coat with form release agent as often as required to ensure separation from concrete without damage.

3.4 CONCRETE PLACEMENT:

A. Do not place concrete until subbase and forms have been checked for line and grade. Moisten subbase if required to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

B. Place concrete using methods which prevent segregation of the mix. Consolidate concrete along the face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement or side forms. Use only square faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing, dowels and joint devices.

1. Use bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Deposit and spread concrete in a continuous operation between transverse joints, as far as possible. If interrupted for more than 1/2 hour, place a construction joint.

3.5 JOINTS:

A. General: Construct expansion, weakened-plane (contraction) and construction joints true-to-line with face perpendicular to surface of the concrete. Construct transverse joints at right angles to the centerline, unless otherwise indicated.

1. When joining existing structure, place transverse joints to align with previously placed joints, unless otherwise indicated.

B. Weakened-Plane (Contraction) Joints: Provide weakened-plane (contraction) joints, sectioning concrete into areas as shown on drawings. Construct weakened-plane joints for a depth equal to at least 1/4 concrete thickness. Form weakened-plane joints in fresh concrete by grooving top portion with a recommended cutting tool and finishing edges with a jointer.

C. Construction Joints: Place construction joints at the end of all pours and at locations where placement operations are stopped for a period of more than 1/2 hour, except where such pours terminate at expansion joints. Use diamond dowels in construction joints of non-reinforced slabs on grade.

D. Expansion Joints: Provide premolded joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks and other fixed objects, unless otherwise indicated.

1. Extend joint fillers full-width and depth of joint, and not less than 1/2" or more than 1" below finished surface where joint sealer is indicated. If not joint sealer, place top joint filler flush with finished concrete surface.

2. Furnish joint fillers in one-piece lengths for the full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together.

3. Protect the top edge of the joint filler during concrete replacement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.
3.6 CONCRETE FINISHING:

A. After striking-off and consolidating concrete, smooth the surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust the floating to compare the surface and produce a uniform texture.

B. After completion of floating and when excess moisture or surface sheen has disappeared, complete surface finishing, as shown on drawings and as acceptable to Architect.

C. Do not remove forms for 24 hours after concrete has been placed. After removal, clean ends of joints and point-up any minor honeycomb areas. Remove and replace areas or sections with major defects, as directed by the Architect.

D. Work edges of slabs, back top edge of curb and formed joints with an edging tool and round to 1/2" radius, unless otherwise indicated. Eliminate tool marks on concrete surface. Install beveled sawcuts where indicated.

E. After completion of floating and when excess moisture or surface sheen has disappeared, complete surface finishing, as shown on drawings and as acceptable to Architect.

3.7 CONCRETE CURING AND PROTECTION:

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
   1. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting, keep continuously moist for not less than 7 days.
   2. Begin final curing procedures immediately following initial curing and before concrete has dried. Continue final curing for at least 7 days in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.

B. Curing Method: Perform curing of concrete by moist curing, by moisture-retaining cover curing and by combinations thereof, as herein specified. Use methods 1 or 2 where subsequent surface treatments will be applied to concrete.
   1. Provide Moisture Curing by Following Methods:
      a. Keep concrete surface continuously wet by covering with water.
      b. Continuous water-fog spray.
      c. Covering concrete surface with specified absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4” lap over adjacent absorptive covers.
   2. Provide Moisture-Cover Curing as Follows:
      a. Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3” and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproofing tape.
   3. Provide Membrane Forming Curing Compound:
a. Apply per manufacturer’s recommendation.

C. Curing Formed Surfaces: Cure formed concrete surfaces by moist curing with forms in place for full curing period or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.

D. Curing Unformed Surfaces: Cure unformed surfaces and other flat surfaces by use of moisture-retaining cover, unless otherwise directed.

E. Protective Sealer Finish: Apply protective sealer finish to concrete curbs and paving. Apply in accordance with manufacturer’s printed instructions at rates not less than those specified herein.

1. Prepare concrete surface as recommended.
2. Do not commence application until installation of sealants in pavement joints is complete.
3. Repair or replace sealant damaged by installation as acceptable to Architect.

F. Anti-Spalling Treatment: Apply compound to concrete surfaces not receiving protective sealer finish no sooner than 28 days after placement. Apply to clean, dry concrete free of oil, dirt and other foreign materials, in 2 sprayed applications. First application at rate of 40 yds. per gal.; second application, 60 sq. yds. per gal. Allow complete drying between applications.

3.8 REPAIRS AND PROTECTIONS:

A. Repair or replace broken or defective concrete as directed by the Landscape Architect.

B. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

C. Sweep concrete pavement and wash free of stains, discolorations, dirt and other foreign material just prior to final inspection.

3.9 QUALITY CONTROL TESTING DURING CONSTRUCTION:

A. This Contractor to employ a testing laboratory to perform tests and to submit test reports.

B. Sampling and testing for quality control curing placement of concrete may include the following, as directed by Landscape Architect.

1. Sampling Fresh Concrete: ASTM C-172, except modified for slump to comply with ASTM C-94.

   a. Water Content and Slump: Verify Water Content in accordance with AASHTO T-318 “Standard Method of Test for Water Content Using Microwave Oven Drying”. Test Slump in accordance with ASTM C-143; one test at point of discharge for each day's pour of each type of concrete; additional tests when concrete consistency seems to have changed.

   b. Air Content: ASTM C-173, volumetric method or ASTM C-231 pressure method; one for each day's pour of each type of air-entraining concrete.

   c. Concrete Temperature: Test hourly when air temperature is 40 degrees F (4 degrees C) and below, and when 80 degrees F (27 degrees C) and above; and each time a set of compression test specimens made.

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d. Compression Test Specimen: ASTM C-31; one set of 3 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.

e. Compressive Strength Tests: ASTM C-39; one set for each day's pour exceeding 5 cu. yds. plus additional sets for each 50 cu. yds. over and above the first 25 cu. yds. of each concrete class placed in any one day; one specimen tested at 7 days, one specimen tested at 28 days and one specimen retained in reserve for later testing if required.

f. When frequency of testing will provide less than 4 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

g. When total quantity of a given class of concrete is less than 50 cu. yd., strength test may be waived by Architect if, in his judgment, adequate evidence of satisfactory strength is provided.

h. When strength of field-cured cylinders is less than 85% of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.

i. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive by more than 500 psi.

C. Test results to be reported in writing to Landscape Architect and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-days test.

D. Nondestructive Testing: Impact hammer, sonoscope or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.

E. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Landscape Architect. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C-42 or by other methods as directed. Contractor shall pay for such tests conducted and any other additional testing as may be required, when unacceptable concrete is verified.

F. Non-Compliant Test Reports: All test reports indicating non-compliance should be e-mailed or faxed immediately to all parties on the test report distribution list. Copies shall be on different colored paper.

END OF SECTION 321213.40
SECTION 321313.13 – EXPOSED AGGREGATE CONCRETE PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:

A. Extend of exposed aggregate concrete work is shown on drawings.

B. Related Work Specified Elsewhere:

1. Section 079200: Joint Sealants
2. Section 321213.40: Concrete Curbs and Paving

1.3 SUBMITTALS:

A. Furnish samples, manufacturer's product data, test reports and materials' certifications as required in the reference sections for concrete joint fillers and sealers.

B. Provide a sample panel, 5'-0" x 5'-0" for review and approval by Landscape Architect prior to actual installation.

C. Additional sample panel shall be made, if required, to obtain approval.

D. The approved sample panel shall be kept on the job site for comparison with finished work.

1.4 QUALITY CONTROL:

A. Codes and Standards: Comply with local governing regulations if more stringent than herein specified.

B. Concrete Testing Service: Employ, at Contractor's expense a testing laboratory acceptable to the Architect to perform material evaluation tests and to design concrete mixes.

C. Tests for Concrete Materials:

1. For Portland Cement, sample cement and determine chemical and physical properties by methods of test of ASTM C-150.
2. Submit written reports to the Landscape Architect for each material sampled and tested prior to the start of work. Provide the project identification name and number, date of report, name of Contractor, name of concrete testing service, source of concrete aggregates, material manufacturer and brand name for manufacturing materials, values specified in the referenced specification for each material and test results. Indicate whether or not material is acceptable for intended use.
3. Certificates of material properties and compliance with specified requirements may be submitted in lieu of testing, when acceptable to the Landscape Architect. Certificates of compliance must be signed by the materials' producer and the Contractor.
PART 2 - PRODUCTS

2.1 FORM MATERIALS:
   A. Provide form materials with sufficient stability to withstand pressure of placed concrete without bow or deflection.
   B. Provide commercial formulation form-coating compounds that will not bond with, stain or adversely affect concrete surfaces.

2.2 REINFORCING MATERIALS:
   A. Reinforcing Bars: ASTM A-615, Grade 60. (Size as shown on drawings.)
   B. Welded Wire Fabric: ASTM A-185 welded steel wire fabric, 6X6W2.9 X W2.9 or size as shown on drawings.

2.3 CONCRETE MATERIALS:
   A. Portland Cement: ASTM C-150, Type I or III.
   B. Aggregate: ASTM C-33. Fines: Clean, natural sand 2NS. Course: Clean crushed stone, gravel or processed (6A), ¾” maximum size.
   C. Seeded Aggregate: Clean, washed, single size, uniform, rounded, free of deleterious material or staining substances, such as iron oxides and iron pyrites. Also free of flat or silver shaped particles. Color, stone size and actual aggregate to be selected by Landscape Architect and Owner. Submit aggregate samples for review.
   D. Water: Clean, fresh, drinkable.
   E. Air-Entraining Admixture: ASTM C-260, 6% - 7%.
   F. Water-Reducing Admixture: ASTM 494, Type A.
   G. Calcium Chloride will not be permitted in concrete, unless otherwise authorized in writing by Landscape Architect.
   H. Preformed joint filler strips shall be nonextruding and resilient nonbituminous type conforming to ASTM D-1752, Type I or II, 1/2 inch thick.
   I. Joint sealant shall be two-component, self-leveling polyurethane electrometric compound, as specified in Section 079200 – Joint Sealants.

2.4 PROPORTIONING AND DESIGN OF MIXES:
   A. Prepare design mixes in accordance with applicable provisions of ASTM C-94.
      1. Design Mix: 3500-4000 PSI, 28 day compressive strength with 6% - 7% air entrainment, maximum ¾” diameter aggregate and maximum 4’ slump.
      2. Design mix shall contain a minimum of 570 lbs. of Portland Cement per cubic yard and have a water cement ratio no greater than 0.53.
3. Use admixtures for water-reducing and set-control in strict compliance with the manufacturer’s directions.
4. Use amounts of admixtures as recommended by the manufacturer for climate conditions prevailing at the time of placing. Adjust quantities and types of admixtures as required to maintain quality control.

PART 3 - EXECUTION

3.1 EXAMINATION:

A. Examine the areas and conditions under which concrete curbs and paving are to be installed and notify the Landscape Architect in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected in an acceptable manner.

3.2 SURFACE PREPARATION:

A. Remove loose material from the compacted subbase surface immediately before placing concrete.

B. Proof-roll prepared subbase surface to check for unstable areas and the need for additional compaction. Do not begin paving work until such conditions have been corrected and are ready to receive paving.

C. General: Control soil compaction during construction to provide the percentage of density specified for each area classification.

D. Percentage of Maximum Density Requirements: Compact soil to not less than following percentages of maximum dry density for soils which exhibit a well-defined moisture density relationship determined in accordance with ASTM D-1557; and not less than following percentages of relative density, determined in accordance with ASTM D-2049, for soils which will not exhibit well-defined moisture-density relationship.

   1. Lawn or Unpaved Areas: Compact top 6” of subgrade and each layer of backfill or fill material at 85% maximum density for cohesive soils or 90% relative density for cohesionless material.

   2. Walkways: Compact top 6” of subgrade and each layer of backfill or fill material at 90% maximum density for cohesive soil or 95% relative density for cohesionless material.

E. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or to layer of soil material. Apply water in such manner as to prevent free water from appearing on surface during or subsequent to compaction operations.

   1. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.

   2. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing, until moisture content is reduced to satisfactory value.
FORM CONSTRUCTION:

A. Set forms to the required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of the work and so that forms can remain in place at least 24 hours after concrete placement.

B. Check completed formwork for grade and alignment to the following tolerances:
   1. Top of forms not more than 1/8" in 10'.
   2. Vertical face on longitudinal axis, not more than 1/4" in 10'.

C. Clean forms after each use and coat with form release agent as often as required to ensure separation from concrete without damage.

PLACING CONCRETE:

A. Concrete shall not be placed until subgrade and forms have been approved for line and grade.

B. Place concrete in one course, monolithic construction and consolidate by vibrator tamping along the face of the forms and at joints, to remove all voids and honeycomb.

C. Finishing operations shall not begin until surface water has disappeared or is removed in an approved manner. Applying dry cement as an absorptive material will not be permitted.

D. Retempered concrete or concrete which has partially hardened shall not be deposited.

E. Exposed, newly placed concrete shall be protected from rain, sleet or hail by the use of adequate coverings.

F. Do not allow the free fall of concrete to exceed 3 feet. Concrete shall be placed in accordance with ACI Standard 614, “Recommended Practice for Measuring, Mixing and Placing Concrete”.

G. Concrete shall be consolidated by suitable means to eliminate voids and pockets.

H. Cold or hot weather procedures shall be followed as required by ACI Standard Specifications 604 and 605, respectively.

I. The strike-off and screening operation shall be such that a level surface is obtained sufficiently below the final finish grade to allow for volume change due to the addition of the select aggregate and the finished exposed aggregate surface to be at finish grade.

AGGREGATE PREPARATION:

A. Prior to placing operation, all select aggregate that is to be exposed shall be washed thoroughly so that it is free of all dust, dirt, and clay particles. The aggregate shall be in a damp drained condition when it is placed on the surface of the slab. There must be sufficient select aggregate on hand to complete the job once it is started.

AGGREGATE SEEDING AND EMBEDMENT:

A. Immediately after screening and bull floating the base slab, sprinkle the aggregate by hand or shovel onto the slab surface until the surface is completely covered with a single layer of stone. Place aggregate as close together as possible to ensure a uniform appearance.
B. After evenly distributing the aggregate, tamp it into the fresh concrete with a wood float, darby, or straightedge. For final embedment, float the surface with a bull float or darby until mortar slightly covers all aggregate particles to about a 1/16 inch depth.

C. Continue floating until the moisture on the entire slab surface is uniform and there are no water pockets.

D. After aggregate embedment, the slab surface should look like freshly floated concrete and have no voids or imperfections.

E. When a surface retarder is used, aggregate exposure can be delayed for several hours. Because high temperatures increase the rate of concrete hardening, a surface retarder can also be useful in hot weather. After applying a retarder to the slab, keep the surface damp by covering it with plastic sheeting.

3.7 EXPOSING THE AGGREGATE:

A. Timing of aggregate exposure is critical. Wait until a foot placed on the slab surface does not leave an indentation, then lightly brush a small area of the slab with a medium to stiff nylon bristle broom to remove excess mortar. If aggregate dislodges easily, delay the operation.

B. Begin the exposure process by brushing the entire slab surface lightly with a broom to remove excess mortar. Next, brush the surface again then flush it with a fine spray of water from a hose or use a special broom with built-in water jets.

C. A common mistake is to flush the surface too early. Wait until the concrete is hard enough to retain the embedded aggregate and the mortar is still soft enough to be removed. Keep the surface damp at all times.

D. Continue brushing and spraying until the aggregate is exposed to the proper depth and the flush water runs clear. Don’t remove too much mortar from around the aggregate or it may dislodge in service. Generally, depth of exposure should not exceed one-third the aggregate diameter.

E. During and immediately after the exposing operation, finishers should avoid walking or kneeling on the slab surface because they might break the aggregate bond. If working on the slab, use knee boards, taking care not to slide or twist them as they move about.

3.8 CURING:

A. As soon as the washing operation ceases, the curing operation shall begin. The concrete shall be kept in a continuously wet condition by covering and continuous saturation or by ponding for 7 days when the temperature is between 50 degrees and 70 degrees F., and at least 5 days when the temperature is 70 degrees F. or higher.

3.9 ACID WASH:

A. After the slab is cured and no longer than two weeks after the concrete has been replaced, cement film shall be removed from the surface of the aggregate by an acid wash. Delaying the acid wash additional time is permissible, in fact, desirable. The slab shall be saturated with water, brushed free of standing water, and washed with a 5 to 10 percent solution of muriatic acid. Several flashings with clear water should follow the acid wash. The above procedure shall be followed until the surface matches the approved sample panel.
B. Protective Sealer Finish: Apply protective sealer finish to concrete curbs and paving under building. Apply in accordance with manufacturer’s printed instructions at rates not less than those specified herein.

3.10 REPAIRS AND PROTECTIONS:

A. Repair or replace broken or defective concrete as directed by the Architect.

B. Drill test cores where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland Cement bonded to pavement with epoxy resin grout.

C. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 14 days after placement. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.

D. Sweep concrete pavement and wash free of stains, discolorations, dirt and other foreign material just prior to final inspection.

END OF SECTION 321313.13
SECTION 328400 – IRRIGATION SYSTEM

PART 1--GENERAL

1.01 DESCRIPTION:

A. Irrigation system is to be fully automatic, using pop up sprinklers, drip tubing, and bubblers. Areas to be irrigated include all landscape areas as defined by the project limits.

B. The sprinkler system shall be constructed using the sprinklers, valves, piping, fittings, controllers, wiring, etc., of sizes and types as called for in these specifications. The system shall be constructed to grades and conform to areas and locations as shown on the drawings.

C. Unless otherwise specified or indicated on the drawings, the construction of the sprinkler system shall include the furnishing, installing and testing of all mains, laterals, risers and fittings, sprinkler heads, quick coupling valves, gate valves, control valves, controllers, electric wire, controls, drip tubing, drip zone valve kit, drip zone flush valve, enclosures and other necessary specialties and the removal and/or restoration of existing improvements, excavation and backfill, and all other work in accordance with plans and specifications as required for a complete system.

1.02 QUALITY ASSURANCE:

A. The Contractor shall maintain continuously a competent superintendent, satisfactory to the Owner, with authority to act for him in all matters pertaining to the work.

B. The Contractor shall coordinate his work with the other trades.

C. The Contractor shall confine his operations to the areas to be improved and to the areas allotted him by the Owner's representative for material and equipment storage.

D. The Contractor shall have a minimum of five years experience installing irrigation systems of comparable size and complexity.

1.03 SUBMITTALS:

A. Contractor shall submit with his proposal a complete irrigation plan for areas outlined under Section 1.01 and in conformance with provisions of these specifications. Drawings to be submitted to Owner's Representative for review.

B. Submit product information on all sprinkler heads, automatic valves, controllers, wire connectors, pipe and fittings to be used on the project prior to purchasing materials.

C. Upon irrigation system acceptance, submit written operating and maintenance instructions. Provide format and contents as directed by the Owner's Representative. Include instruction sheets and parts lists for all operating equipment.

D. Provide a reproducible irrigation system record drawing showing sprinkler heads, valves, drains and pipelines including quick coupler and automatic valves.

   1. Legibly mark drawings to record actual construction.

   2. Locate horizontal locations, with a minimum of two dimensions to permanent surface improvements, for each automatic, manual and quick coupling valve.
3. Identify field changes of dimension and detail and changes made by Change Order.

1.04 IRRIGATION PLAN REQUIREMENTS

A. General

The Contractor's submitted irrigation plan shall conform to all design parameters set forth in this document. Plans submitted which do not conform to all irrigation plan requirements are to be regarded as incomplete and will not be accepted.

B. Information Requirements

1. All plans shall be submitted at the same scale as the landscape plans, and shall contain appropriate scale designations and north arrows.

2. The irrigation Designer's name and phone number shall appear on the plans.

3. a. The irrigation plan shall include a run time chart which indicates the precipitation rate for that zone and the length of time each zone must operate to apply .2" of water.

   b. Show proposed weekly watering schedule (July), conforming to water window as described elsewhere in this document.

4. a. Each plan shall include a key indicating all equipment to be used on the project.

   b. Key shall differentiate between different sprinkler types, nozzle sizes, and arcs.

5. All zones must be identified with control timer designation, station number, gallonage, and automatic control valve size.

C. Design Parameters

1. The irrigation design shall be adapted to work in harmony with the landscape plan, grading plan, and other site features.

2. Protecting public safety and consideration of site aesthetics shall be incorporated into the design.

3. Overspray is prohibited on buildings, roads, drives, and other site features where overspray would be deemed objectionable.

4. Sprinklers shall be zoned into like groups based on the following:

   a. Zone based on differing types of plant materials: In all cases, lawns are to be zoned separately from shrub bed areas. Small flower beds may be zoned with lawn areas or zoned separately.

   b. The design shall have separate zoning for sprinklers with different precipitation rates.

   c. Zone according to exposure. South and west exposures may be zoned together; north and east exposures may be zoned together.

   d. Zone based on terrain where significant and/or reasonable to do so.
5. Conform to all codes and regulations, including State Health Codes as they apply to backflow prevention.

6. The irrigation design shall include the following system hydraulic design parameters.
   a. A maximum pressure differential within the mainline between the water source and furthest point on the mainline shall not exceed 20% of the static pressure downstream of the backflow preventer.
   b. Mainline pipe shall be sized to keep velocities below 5’ per second. Lateral pipe shall be sized to keep velocities below 6’ per second.

7. Sprinkler shall be spaced per manufacturer’s recommendation, allowing for 8 MPH wind. In no case shall sprinklers be spaced more than 60% of effective diameter.

1.05 DELIVERY, STORAGE, AND HANDLING:

A. Deliver irrigation system components in manufacturer’s original undamaged and unopened containers with labels intact and legible.

B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends, both threaded or plain.

C. Store and handle materials to prevent damage and deterioration.

D. Provide secure and locked storage for valves, sprinkler heads and similar components that cannot be immediately replaced, to prevent installation delays.

1.06 PROJECT CONDITIONS:

A. The bidder acknowledges that he has examined the site and specifications, and the submission of a drawing and proposal shall be considered evidence that examination has been made.

B. It is the Contractor’s responsibility to obtain the exact location of existing utilities and structures.

C. Contractor shall conduct his work so as to prevent interruption of service or damage to existing utilities and structures. The Contractor shall protect existing structures and utility services and be responsible for their replacement if damaged by him.

D. Final system layout shall be acceptable to Owner’s Representative.

1.07 CODES AND STANDARDS:

A. The entire installation shall fully comply with all local and state laws and ordinances and with all established codes applicable thereto.

B. Any permits for the installation of construction of the work included under this contract which are required by any of the legally constituted authorities having jurisdiction, shall be obtained and paid for by the Contractor, each at the proper time. He shall also arrange for and pay all costs in connection with any inspections and examinations required by these authorities.

C. In all cases where inspection of the sprinkler system work is required an/or where portions of the work are specified to be performed under the direction and/or inspection of the Owner's
Representative, the Contractor shall notify the Owner's Representative at least ten (10) days in advance of the time and such inspection and/or direction is required.

D. Any necessary re-excavation or alterations to the system needed because of failure of the Contractor to have the required inspections shall be performed at the Contractor's own expense.

1.09 OWNER'S ACCEPTANCE:

A. The completion of the contract will be accepted and Notice of Completion recorded only when the entire contract is completed to the satisfaction of the Owner's Representative.

B. Within ten (10) days of the Contractor's notification that the installation is complete, the Owner, or his Representative, will inspect the installation and if a final acceptance is not given, will prepare a "Punch List" which, upon completion by the Contractor, will signify acceptance by the Owner.

C. Final payment will not be made without the receipt of an accurate as-built drawing by the Owner's Representative.

1.10 WARRANTY

A. It shall be the Contractor's responsibility to ensure and guarantee satisfactory operation and coverage of the entire system and the workmanship and restoration of the area. The entire system shall be guaranteed to be complete and perfect in every detail for a period of one year from the date of its acceptance and he thereby agrees to repair or replace any such defects occurring within that year, free of expense to the Owner. System maintenance and adjustments shall be by the Owner.

B. Contractor is to guarantee that all trenches and other disturbed areas be free from heaving or settling more than one-quarter inch (1/4"). Should it become necessary to adjust the grade, regrade the trench and reseed. This no settlement clause shall extend over the entire period of guarantee of the job.

PART 2 -- PRODUCTS

2.01 MATERIALS

A. General:

1. All material to be incorporated in this system shall be new and without flaws or defect and quality and performance as specified. All material overages at the completion of the installation are the property of the Contractor and are to be removed from site.

2. The Contractor shall use materials as specified. Material other that specified will be permitted only after written application by the Contractor and written approval by the Owner's Representative. Substitutions will only be allowed when in the best interest of the Owner.

B. Pipe and Fittings:

1. Pipe sizes shall conform to those shown on the drawings. No substitutions of smaller pipe sizes will be permitted, but substitutions of larger size may be approved. All pipe damaged or rejected because of defects shall be removed from the site at the time of said rejection.
2. Provide pipe continuously and permanently marked with manufacturer's name or trademark, size, schedule and type of pipe, working pressure at seventy three (73) degrees Fahrenheit and National Sanitation Foundation (NSF) approval.

3. All piping shall be ASTM D2241, rigid, unplasticized Polyvinyl chloride, extruded from virgin parent material. Provide pipe homogeneous throughout and free from visible cracks, hole, foreign materials, blisters, wrinkles, and dents.

4. Pipe three (3") diameter and under shall be SDR 21, Class 200.

5. Pipe shall be solvent weld type.

6. PVC pipe fittings for sizes three inches (3") and smaller shall be ASTM D2466 schedule 40 PVC molded fittings suitable for solvent weld or slip joint ring-tite seal. All threaded PVC pipe fitting shall be ASTM D2467, Schedule 80 PVC.

7. Primer and solvent for use with PVC pipe to conform to ASTM D2564. Primer to be purple in color. Solvent to be appropriate for pipe and fitting type and weather conditions.

8. All above grade pipe shall be type "M" copper. Fittings shall be cast brass or wrought copper.

C. Control System

1. Control timers and automatic control valves shall be of the same manufacturer.

2. Control timers are existing. If control timers need replacement, submit cut sheets for replacement models to Owner's representative.

3. Control timers shall be grounded per manufacturers recommendations.

4. Control timers installed indoors shall be located in a room with direct outdoor access. Control timers are to be all mounted.

5. All control timers are to be hot wired to their electrical source and have their own circuit. All power wire and 24 volt wire not buried shall be installed within conduits.

6. Control valves shall be Rainbird PEB, Hunter ICV, or Toro P-220 automatic control valves, with PRS feature as required.

D. Control Wire and Connections

1. Control wire shall be Type UF, UL approved, for direct burial and shall be size fourteen (14) or larger, as noted on the plans. Conductor to be single strand soft annealed copper.

2. Twenty four volt (24 v) control wire to be black or red in color. Common wire to be white in color.

3. Low voltage wire connectors to be made using wire nuts and 3M Scotch-Loc, or 3M DBY connectors.

4. One hundred and twenty volt (120 v) or heavier splices made underground to be made using wire nuts and 3M brand Scotch-Lok.
E. Sprinkler Equipment:

1. All lawn spray sprinklers shall be Rainbird 1804-PRS, Hunter Pro Spray PRS30, pop up or Toro 570ZPR-4P, 4" pop up sprays with interchangeable matched precipitation rate nozzles.

2. All shrub, ground cover, or flower bed spray sprinklers shall be Rainbird 1812-PRS, Hunter Pro Spray PRS30, or Toro 570ZPR-12P, 12" pop up spray with interchangeable matched precipitation rate nozzles and extension risers as required.

3. All small rotary sprinklers shall be Rainbird 5000 Series, Hunter PGP or Toro T5 rotary sprinklers.

4. All medium rotary sprinklers (1" IPS) shall be Rainbird 7005, Hunter I-25 or Toro T7.

5. All shrub rotary sprinklers are to be Rainbird 5000 Shrub, Hunter PGS or Toro S-800 shrub.

6. All 12" pop up rotaries are to be Rainbird 5012, Hunter PGH or Toro T5 HP.

7. Quick coupling valves are to be Rainbird 5RC or Toro 474-01.

8. Backflow prevention shall be per the State of New Jersey Health Department current guidelines. Where an exterior backflow preventer installation is proposed, its location shall be approved by the Owner's Representative.

F. Manual Valves:

1. Manual drain valves shall be a three-quarter inch (3/4") angle pattern brass globe valve with soft disc.

2. Gate valves to be 200 #W.O.G. with solid wedge disc, conforming to Federal specifications for its class. Valves three inches (3") and smaller shall be gate valves, with iron body bronze mounted, non-rising stem, with threaded end connections for PVC pipe and have a two inches (2") square operating nut which turns to the left to open.

G. Valve Boxes

1. Valve Access Boxes to be tapered enclosure of rigid plastic material comprised of fibrous components chemically inert and unaffected by moisture, corrosion, and temperature changes. Provide lid of the same material, black in color. Boxes to be a minimum of the inches (10") wide and of minimum size required to permit access to the valve. Side walls to extend at least two inches (2") below the bottom of the valve body; use extensions as necessary. Manufacturer to be Ametek.

H. Subsurface Dripperline:

1. Dripperline to be manufactured by Netafim and be Techline CV.

2. Subsurface irrigation tubing shall be self-flushing, pressure compensating dripperline with internal check valve at each emitter. Dripperline shall consist of nominal sized one-half inch low density, linear polyethylene tubing with internal pressure compensating, continuously self-flushing, integral drip emitters. The emitters shall have the ability to independently regulate discharge rates, with an output pressure of 7 to 70 PSI and shall continuously clean themselves while in operation.
3. Dripperline shall be fed from a drip zone valve kit manufactured by Rainbird, Hunter, or Netafim.

4. Dripperline shall have emitters spaced 12" o.c. and each emitter shall have .5 - .6 GPH emitter output.

5. Header pipe for all dripperline shall be schedule 40 PVC, 1" size.

6. All fittings shall be manufactured for use with the subsurface irrigation tubing by the subsurface dripperline manufacturer.

7. All associated system equipment including air relief valves, flush valves, pressure regulating valves and filters shall be manufactured for use with the subsurface irrigation tubing by the subsurface dripperline manufacturer.

I. Accessories:

1. Drainage fill to be 1/2" x 3/4" washed pea gravel.

2. Fill shall be clean soil, free of stones larger than two inches (2") in diameter, foreign matter, organic material and debris.

3. Provide imported fill material as required to complete the work. Obtain rights and pay all costs for imported materials.

4. Suitable excavated materials removed to accommodate the irrigation system work may be used as fill material subject to the Owner's Representative's review and acceptance.

PART 3 -- EXECUTION

3.01 EXAMINATION:

A. Examine final grades and installation conditions. Do not start irrigation system work until unsatisfactory conditions are corrected.

3.02 PREPARATION:

A. Lay out and stake the location of each pipe run and all sprinkler heads and sprinkler valves. Obtain Owner's Representative's acceptance of layout prior to excavating, unless specifically waived.

3.03 EXCAVATING AND BACKFILLING:

A. Excavating shall be considered unclassified and shall include all materials encountered, except materials that cannot be excavated by normal mechanical means. Excavate trenches of sufficient depth and width to permit proper handling and installation of pipe and fittings. Excavate to depths required to provide two inch (2") depth of earth fill or sand bedding for piping when rock or other unsuitable bearing material is encountered.

B. Pipe pulling will be allowed for lateral pipe only, provided soil moisture content and other conditions are suitable to allow for full depth of bury with a minimum of stretching and scraping of the pipe. Owner reserves the right to determine suitability or conditions. If the pulling method is used, the pipe "plow" shall be a vibratory type.
C. Fill to match adjacent grade elevation with approved earth fill material. Place and compact fill in layers not greater than eight inch (8") depth.

D. Provide approved fine grained earth fill or sand to a point four inches (4") above the top of pipe, where soil conditions are rocky or otherwise objectionable.

E. Fill to within six inches (6") of final grade with approved excavated or borrow fill materials free of lumps or rocks larger than 2" in any dimension.

F. The top six inches (6") of backfill shall be topsoil, free of rocks, subsoil or trash. Any special soil mixture shall be replaced to the original condition it was prior to irrigation installation.

G. All mainline and continuously pressurized pipe is to be installed using open trenches. Polyethylene lateral pipe may be installed by "plowing" if soil conditions permit, and soils do not contain gravel, rock, construction debris or other potentially damaging material.

H. Install thrust block on the mainline pipe work in accordance with pipe manufacturer's written instructions.

3.04 UNDERGROUND PIPE:

A. Install plastic pipe in accordance with manufacturer's installation instructions and ASTM D2274, particularly as it applies to thermal expansion and contraction.

B. Store pipe such that it is protected from oil and grease and from prolonged exposure to sunlight and excessive heat.

C. Solvent welding shall be in strict accordance with manufacturer's recommendations and ASTM Standards D2564 and D2855, especially as they apply to ambient temperature.

D. Maintain interior free of dirt and debris. Close open ends of pipe by capping, taping or other acceptable method when pipe installation is not in progress, including overnight, to prevent entrance of foreign matter.

E. Pipe and fittings shall be handled in a manner to ensure delivery to the trench in sound, undamaged condition. If the coating of any pipe or fitting is damaged or if materials are in poor condition, it shall be repaired or replaced.

F. Allow joints to set at least twenty four hours before pressure is applied to the system.

G. Uncoil polyethylene pipe and insert fittings full depth. Secure polyethylene pipe to insert fittings with stainless steel clamps. Double clamp pipe one and one-quarter inch (1-1/4") diameter and larger.

H. All mainline and contiguously pressurized pipe is to be installed using open trench and backfill. Polyethylene later pipe may be installed by "plowing" if soil conditions permit, and soils do not contain gravel, rock, construction debris or other potentially damaging material.

I. Install thrust blocks on the mainline pipe work in accordance with pipe manufacturer's written instructions.

J. Minimum depth of cover over lateral pipe shall be twelve inches (12") and over mainline pipe shall be eighteen inches (18").
3.05 SPRINKLER INSTALLATION:

A. Install fittings and sprinkler heads in accordance with manufacturer's instructions, except as otherwise indicated.

B. Set sprinkler heads perpendicular to finished grades, except as otherwise indicated, and positions to prevent contact with grounds maintenance equipment. Locate sprinkler heads to assure proper coverage of indicated areas.

C. Provide pop-up spray heads and rotary sprinklers three-quarter inch (3/4") IPS or smaller with a two elbow swing joint riser as shown on details.

D. Provide all quick coupling valves and rotary sprinklers, one inch (1") IPS and larger with three elbow swing joint as shown on details. Use schedule 40 galvanized steel for quick coupling valves and schedule 80 PVC for sprinklers.

3.06 VALVE INSTALLATION:

A. Electric valve installation shall be as indicated on the details. All electrical and manual valves shall be enclosed in a minimum ten inch (10") width valve box. Add extensions as required to prevent soil settlement around the valve. Set box flush with finish grade and aligned with adjacent boxes and/or adjoining sitework.

B. Install valve access boxes on a suitable base of gravel to provide a level foundation at proper grade and to provide drainage of the access box. Support box with block or notch box to protect pipe under box.

3.07 DRAINS:

A. Although it is intended the system will be winterized using compressed air, the Contractor is to install manual drain valves at low points in the system to assist in winterization and service. Provide suitable outlet for connection of air compressor to system.

3.08 DRIPPERLINE INSTALLATION:

A. Install dripperline in accordance with manufacturers recommended installation procedures.

B. Prepare area for dripline installation by clearing soil surface of debris. Layout dripline in 12" rows. Stake dripline to prevent movement.

C. All dripperline shall be installed on grade but below mulch.

D. Install header pipe on drip zones per description on sections 3.4 of these specifications.

E. Each segment of dripperline is to be installed using pressure and exhaust PVC header pipe. "Snaking" of tubing back and forth throughout bed will not be accepted.

F. Valves for dripperline zones shall be drip kits complete with valve, pressure regulator and filter as are to be by the same manufacturer as the dripperline. Install inside 11" x 14" valve box.

G. Submit detail to Owner’s Representative and Landscape Architect for all pots or hanging baskets.
3.08 ELECTRICAL INSTALLATION:

A. Install electrical control wire in the pipe trenches wherever possible. Place wire in trench adjacent to or underneath mainlines but not above. Install wire with slack so as to provide for expansion and contraction. Expansion joints in wire may be provided at two hundred foot (200’) intervals by making 5-6 turns of the wire around a piece of half inch (1/2”) pipe. Where necessary to run wire in a separate trench, provide a minimum cover of twenty four inches (24”).

B. Provide minimum twenty four inch (24”) slack at remote control valves and at all wire splices to allow raising the valve bonnet or splice to the surface, without disconnecting the wire, for repair.

C. Connect each remote control valve to one station of a controller except as otherwise indicated. Where there is to be more than one valve per station, make required splice at the control timer.

D. Make splices only at valve, unless otherwise unavoidable. Locate all field splices on the as-built drawing.

3.09 FLUSHING AND TESTING:

A. After all new sprinkler piping and risers are in place and connected for a given section and all necessary division work has been completed, and prior to the installation of sprinkler heads, all control valves shall be opened and a full head of water used to flush out the system.

B. The sprinkler main shall be tested under normal water pressure for a period of twelve hours. If leaks occur, repair and repeat the test. Give Owner’s Representative twenty four hours notice prior to testing.

C. Testing of the system shall be performed after completion of each section or completion of the entire installation; and any necessary repairs shall be made, at the Contractor's expense, to put the system in good working order before final payment by the Owner.

D. Adjustment of the sprinkler heads and automatic equipment will be done by the Contractor upon completion of installation to provide optimum performance. Minor adjustments during the guarantee period will be made by the Owner.

3.10 CLEAN UP:

A. The Contractor shall keep the premises free from rubbish and debris at all times and shall arrange his material storage so as not to interfere with the Owner's operation of the job. Contractor shall remove and legally dispose of all unused material, rubbish and debris, including unsuitable excavated material from the site.

END OF SECTION 328400
SECTION 329119 - TOPSOIL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, General and Supplemental Requirements, which are hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:

A. Extent of Topsoil Work is shown on drawings and by provisions of this Section.

B. Topsoil for lawn work shall be as stripped from site or provided by Contractor from off-site sources free of herbicides.

C. Related Work Specified Elsewhere:

   1. Section 329223: Sodding
   2. Section 329300: Plants

1.3 QUALITY ASSURANCE:

A. Testing and Inspection: For supplied and/or stockpiled topsoil. Performed by a qualified independent testing laboratory, under the supervision of a Registered Professional Engineer, specializing in soils engineering. Obtain samples of stockpiled topsoil before completely stripping from the interior of stockpile.

B. Provide and pay for testing and inspection during topsoil operations. Laboratory shall be acceptable to the Landscape Architect.

   1. Recommended Testing Laboratory:
      A & L Great Lakes Laboratories, Inc.
      3505 Conestoga Drive
      Fort Wayne, IN 46808
      P: (260) 483-4759
      F: (260) 483-5274
      www.algreatlakes.com

C. Test representative material samples for proposed use.

D. Tests shall include:
   1. pH factor
   2. Lime requirement
   3. Mechanical analysis (P.K. Ca. mg) and cation ratios
   4. Percentage of organic content and loss by ignition
   5. Soil series classification
   6. Clay content
   7. Herbicide multi-residue test (MR-1)

E. Provide soil lab recommendations on type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring nutrients to satisfactory level for planting and soil lab recommendations regarding residue test results.
F. Submit test reports.

1.4 PROJECT CONDITIONS:

A. Known underground and surface utility lines are indicated on the civil drawings.

B. Protect existing trees, plants, lawns and other features designated to remain as part of the landscaping work.

C. Promptly repair damage to adjacent facilities caused by topsoil operations. Cost of repair at Contractor's expense.

D. Promptly notify the Landscape Architect of unexpected sub-surface conditions.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Topsoil: Supplied topsoil proposed for use must meet testing criteria results specified and conform to adjustments as recommended by soil test and Landscape Architect.

B. Provide screened topsoil as required to complete the job. Topsoil must meet testing criteria results specified. All processing, cleaning and preparation of this topsoil to render it acceptable for use is the responsibility of this Contractor.

C. Supplied topsoil shall be screened, fertile, friable and representative of local productive soil, capable of sustaining vigorous plant growth and screened free of clay lumps, subsoil, noxious weeds or other foreign matter such as stones greater than 1” in diameter in any dimension, roots, sticks and other extraneous materials: not frozen or muddy. pH of existing or supplied soil to range between 5.0 and 7.5. Adjusted to not more than 7.0 by additives as required by soil test. Topsoil shall contain not less than 3% and not greater than 10% organic matter. Clay content as determined by Bouyoucous Hydrometer Test shall range between 5 and 15 percent.

PART 3 - EXECUTION

3.1 EXAMINATION:

A. Examine rough grades and installation conditions. Do not start topsoil work until unsatisfactory conditions are corrected.

3.2 FINISH GRADING:

A. Perform topsoiling within contract limits, including adjacent transition areas, to new elevations, levels, profiles, and contours indicated. Provide uniform levels and slopes between new elevations and existing grades.

B. Grade surfaces to assure areas drain away from building structures and to prevent ponding and pockets of surface drainage.

C. Lawn Areas: Supply and spread topsoil to a minimum uniform depth of 4” or as noted. Remove clumps larger than 1” in diameter.

D. Grade lawn areas to a smooth, free draining even surface with a loose, moderately coarse texture ready to accept seed or sod.
E. For trees, shrubs, ground cover beds and backfill for beds see Section 329300 – Plants.

F. Provide earth crowning where indicated on drawings.

G. Crowning/mounding to be free flowing in shape and design, as indicated, and to blend into existing grades gradually so that toe of slope is not readily visible. Landscape Architect to verify final contouring before planting.

H. Regardless of finish grading elevations indicated, it is intended that grading be such that proper drainage of surface water will occur and that no low areas are created to allow ponding. Contractor to consult with Owner or Landscape Architect regarding minor variations in grade elevations before rough grading is completed.

3.3 CLEANING:

A. Upon completion of topsoiling operations, clean areas within contract limits, remove tools and equipment. Site shall be clear, clean, free of debris and suitable for site work operations.

END OF SECTION 329119
SECTION 329223 – SODDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:
A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:
A. Extent of sodded lawns is shown on drawings and by provisions of this Section.
B. Type of Work Required Includes the Following:
   1. Soil preparation
   2. Sodding lawns
C. Related Work Specified Elsewhere:
   1. Section 320536: Landscape Maintenance and Warranty Standards
   2. Section 329119: Topsoil
   3. Section 329300: Plants

1.3 SUBMITTALS:
A. Submit sod grower’s certification of grass species including special shade grown species. Identify source location.
B. Manufacturer’s certification of fertilizer.

1.4 QUALITY ASSURANCE:
A. Sod: Comply with American Sod Producers Association (ASPA) classes of sod materials.

1.5 DELIVERY, STORAGE AND HANDLING:
A. Cut, deliver and install sod within 24-hour period.
B. Do not harvest or transport sod when moisture content may adversely affect sod survival.
C. Protect sod from sun, wind and dehydration prior to installation. Do not tear, stretch or drop sod during handling and installation.

1.6 PROJECT CONDITIONS:
A. Work Notifications: Notify Landscape Architect at least 7 working days prior to start of sodding operation.
B. Protect existing utilities, paving and other facilities from damage caused by sodding operations.
C. Perform sodding work only after planting and other work affecting ground surface has been completed.
D. Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.

E. Provide hose and lawn watering equipment as required.

F. An irrigation system will be installed prior to sodding. Locate, protect and maintain the irrigation system during sodding operations. Repair irrigation system components damaged during sodding operations at this Contractor's expense.

1.7 WARRANTY:

A. Refer to Section 320536 – Landscape Maintenance and Warranty Standards.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Sod: An "approved" nursery grown blend of improved Kentucky Blue-grass varieties.
   
   1. Sod containing Common Bermudagrass, Quackgrass, Johnsongrass, Poison Ivy, Nutsedge, Nimblewill, Canada Thistle, Timothy, Bentgrass, Wild Garlic, Ground Ivy, Perennial Sorrel or Bromegrass weeds will not be acceptable.

B. Provide well-rooted, healthy sandy-loam topsoil grown sod, (submit grower and soil analysis for review). Sod shall be free of diseases, nematodes and soil borne insects. Peat grown sod is not acceptable. Provide sod uniform in color, leaf texture, density and free of weeds, undesirable grasses, stones, roots, thatch and extraneous material; viable and capable of growth and development when planted.

C. Furnish sod machine stripped in square pads or strips not more than 3'-0" long; uniformly 1" to 1-1/2" thick with clean-cut edges. Mow sod before stripping. Big roll sod is acceptable.

D. Fertilizer: Use a 1-2-1 NPK ratio SGN 100-210 starter fertilizer that is non injurious to turf with a sustained release of nitrogen to provide 10-16 weeks of fertility. Phosphorus and potassium amendments shall be industry standard. If soil test results show adequate phosphorus and potassium then NPK ratio shall be amended to 3-0-2. Lower rate to .1 lb N per week release, (see 3.2, F for application rates).

E. Ground Limestone: Containing not less than 85% of total carbonates and ground to such fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20 mesh sieve. Use if determined by soil tests to be necessary.

F. Stakes: Softwood, 3/4" x 8" long.

G. Water: Free of substance harmful to sod growth. Hoses or other methods of transportation furnished by Contractor.

H. Topsoil: Refer to Section 329119 – Topsoil.

PART 3 - EXECUTION

3.1 EXAMINATION:

A. Examine finish surfaces, grades, topsoil quality and depth. Do not start sodding work until unsatisfactory conditions are corrected.
3.2 PREPARATION:

A. Limit preparation to areas which will be immediately sodded. Spread topsoil, fine grade.

B. Treat lawn areas with "Round Up" by Monsanto, per label directions as required to kill existing vegetation prior to sodding.

C. Loosen topsoil of lawn areas to minimum depth of 3". Remove stones over 1" in any dimension and sticks, roots, rubbish and extraneous matter. (In athletic fields remove stones over 1/2" in any dimension. Refer to Section 329119 – Topsoil.)

D. Grade lawn areas to smooth, free draining and even surface with a loose, and uniformly fine texture. Roll and rake; remove ridges and fill depressions as required to drain.

E. Apply amendments as indicated by soil test, with rotary or drop spreader and incorporate in top 3 inches of soil. Soil test results must be forwarded to landscape architect.

F. Apply starter fertilizer at a rate to provide sustained fertility of .15 - .2 lbs. N per 1000 sf per week for 10-16 weeks. Available manufacturer (Polyon) or approved equal. Starter fertilizer may be part of phosphorus and potassium needs as indicated by soil test.

G. Dampen dry soil prior to sodding.

H. Restore prepared area to specified condition if eroded, settled or otherwise disturbed after fine grading and prior to sodding.

3.3 INSTALLATION:

A. Lay sod to form a solid mass with tightly-fitted joints. Butt ends and sides of sod strips. Do not overlay edges. Stagger strips to offset joints in adjacent course. Remove excess sod to avoid smothering of adjacent grass. Provide sod pad top flush with adjacent curbs, sidewalks, drains and seeded areas.

B. Do not lay dormant sod or install sod on saturated or frozen soil.

C. Install initial row of sod in a straight line, beginning at bottom of slopes, perpendicular to direction of the sloped area. Place subsequent rows parallel to and lightly against previously installed row.

D. Peg sod on slopes greater than 3 to 1 to prevent slippage at a rate of 2 stakes per yard of sod.

E. Water sod thoroughly with a fine spray immediately after laying.

F. Roll with light lawn roller to ensure contact with sub-grade.

G. Sod indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.

3.4 MAINTENANCE:

A. Refer to Section 320536 – Landscape Maintenance and Warranty Standards.
3.5 ACCEPTANCE:

   A. Refer to Section 320536 – Landscape Maintenance and Warranty Standards.

3.6 CLEANING:

   A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris and equipment. Repair damage resulting from sodding operations.
PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions hereby made a part of this Section.

1.2 DESCRIPTION OF WORK:

A. Extent of trees, shrubs and ground covers is shown on drawing and by provisions of this Section.

B. Type of Work Required Includes the Following:
   1. Soil preparation
   2. Trees, shrubs and ground covers
   3. Planting mixes
   4. Mulch and planting accessories
   5. Soil percolation tests

C. Related Work Specified Elsewhere:
   1. Section 320536: Landscape Maintenance and Warranty Standards
   2. Section 329119: Topsoil
   3. Section 329223: Sodding

1.3 SUBMITTALS:

A. Submit the Following Material Samples:
   1. Shredded bark mulch.
   2. Trees must be approved by 1 of 2 options at the discretion of the Landscape Architect:
      a. Landscape Architect field tag.
      b. Photographs of representative material. Trees not meeting the quality of approved representative sample will be rejected.
   3. One (1) gallon bag of plant mixture with approved topsoil compost blend.

B. Submit the Following Materials Certification:
   1. Topsoil source and test report.
   2. Plant fertilizer.
   3. Compost test results.

1.4 QUALITY ASSURANCE:

A. Plant names indicated; comply with "Standardized Plant Names" as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties not listed conform generally with names accepted by the nursery trade. Provide stock true to botanical name and legibly tagged.

B. Comply with sizing and grading standards of the latest edition of "American Standard for Nursery Stock." A plant shall be dimensioned as it stands in its natural position.

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C. All plants shall come from nurseries located in Zones 4 - 6 of the USDA Hardiness Zone Map unless approved by the Landscape Architect.

D. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work.

E. Provide percolation testing by filling plant pits with water and monitoring length of time for water to completely percolate into soil. Submit test results to Landscape Architect prior to starting work.

1.5 DELIVERY, STORAGE AND HANDLING:

A. Deliver fertilizer materials in original, unopened and undamaged containers showing weight, analysis and name of manufacturer. Store in manner to prevent wetting and deterioration.

B. Take all precautions customary in good trade practice in preparing plants for moving. Workmanship that fails to meet the highest standards will be rejected. Spray deciduous plants in foliage with an approved "Anti-Dessicant" immediately after digging to prevent dehydration. Dig, pack, transport and handle plants with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival. A copy of certificate shall be filed with the Landscape Architect. Protect all plants from drying out. If plants cannot be planted immediately upon delivery, properly protect them with soil, wet peat moss or in a manner acceptable to the Landscape Architect. Water heeled-in plantings as required to keep root system moist until planting. No plant shall be bound with rope or wire in a manner that could damage or break the branches.

C. Cover plants transported on open vehicles with a protective covering to prevent windburn.

D. Frozen or muddy topsoil is not acceptable.

1.6 PROJECT CONDITIONS:

A. Work Notification: Notify Architect at least 7 working days prior to installation of plant material.

B. Protect existing utilities, paving and other facilities from damage caused by landscaping operations. See AIA General Conditions.

C. A complete list of plants, including a schedule of sizes, quantities and other requirements is shown on the proposal form. In the event that quantity discrepancies or material omissions occur in the proposal form, Contractor shall notify the Landscape Architect during the proposal bidding process.

D. Locate, protect and maintain the existing irrigation system main lines during construction. Repair irrigation system components, damaged during planting operations, at this Contractor’s expense.

E. Perform percolation testing.

F. Verify availability of on-site water.

G. Concealed contingencies. Refer to AIA General Conditions.
PART 2 - PRODUCTS

2.1 MATERIALS:

A. Plants - General: Provide plants typical of their species or variety; with densely developed branches and vigorous, fibrous root systems free of insects and diseases and have a fully developed form without voids and open spaces. Plants shall be lush, without dry foliage or root balls, free of defects, disfiguring knots, sunscald, wind burn, broken branches, frost cracks or abrasions.

1. Balled and burlapped plants shall have natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock".
2. Cracked or mushroomed balls will not be accepted.
3. Trees to have clay or clay loam balls.
4. Sandy loam or sandy balls will not be accepted.
5. Plants planted in rows shall be matched in form, size, height and branching habit.
6. Plants larger than those specified in the plant list may be used when acceptable to the Landscape Architect. If the use of larger plants is acceptable, increase the spread of roots or root ball in proportion to the size of the plant.
7. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.
8. Shrubs and small plants shall meet the requirements for spread and height indicated on the proposal form.

B. All single trunk deciduous trees (including specimen stock), shade or ornamental trees, shall have straight trunks of healthy condition without mechanical damage, splits, frost cracks, scars, free of insects or disease.

1. Trees must have a straight central leader through crown of tree.
2. "V" crotch branching will not be accepted.
3. Tree crown to be uniform, symmetrical, plumb and characteristic of species.

C. All Evergreen trees (including specimen stock) shall have straight trunks of healthy condition without mechanical damage, splits, frost cracks, scars, free of insects or disease.

1. Trees must have a straight central leader from base to top of tree.
2. "V" crotch branching will not be accepted.
3. Trees to be uniform, symmetrical and plumb.
4. Trees must be unsheared and fully branched to ground.

D. Provide "specimen" plants with a special height, shape or character of growth. Landscape Contractor to tag specimen trees or shrubs at the source of supply. The Landscape Architect will inspect specimen selections at the source of supply for suitability and adaptability to selected location. When specimen plants cannot be purchased locally, provide sufficient photographs of the proposed specimen plants for approval. The Landscape Contractor shall inspect all plant material at source prior to Landscape Architect’s review. Landscape Contractor shall accompany Landscape Architect to nursery on final selection trip (if required).
E. Container-Grown Stock: Grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole.
   1. No plants shall be loose in the container.
   2. Container stock shall not be root bound.
   3. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.
   4. Single stemmed or thin plants will not be accepted.
   5. Side branches shall be generous, well twigged and the plant as a whole well bushed to the ground.
   6. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

F. Specimen Stock: All specimen designated plantings are to be nursery grown, fully developed, excellent quality and typical example of the species. Plants designated to be planted in rows must be matched, symmetrical and uniform in height, spread, caliper and branching density.
   1. Matched plantings should be obtained from same nursery and, preferably, from same row or line. All specimen material will be approved by Landscape Architect at nursery.

G. Topsoil for Planting Mix: Refer to Section 329119 - Topsoil.

H. Peat Moss: Brown to black in color, weed and seed free granulated raw peat.
   1. Provide ASTM D-2607 sphagnum peat moss with a PH below 6.0 for ericaceous plants.

I. Planting Mixture Type A (for shrubs and ornamental grasses): Standard planting backfill shall be a mixture of 3/4 topsoil, 1/4 compost. Add fertilizer Type "A" or as indicated by soil test to planting mixture per manufacturer's requirements. Follow planting details.

J. Planting Mixture Type B (for perennials, ground cover beds and Ericaceous plants): Planting backfill shall be a mixture of 3/4 topsoil, 1/4 compost. Adding fertilizer type "B" or as indicated by soil test to mixture per manufacturer requirements. Follow planting details.

K. Plant Fertilizer shall be:
   1. Legal and acceptable in the local community of the project and shall not be harmful to the public or wildlife when applied per manufacturer's instructions.
   2. Slow-release, SCU or IBDU fertilizers for turf, flowerbeds, and deep-root feeding shall be used unless approved otherwise.
   3. Turf, shrub, or tree fertilizer used shall contain low or no phosphate unless soil tests indicate soil is deficient in this nutrient.

Fertilizer Type A with micronutrients to be applied at a NPK ratio of 4-1-2. Provide 1 lb of actual nitrogen per 1,000 sf unless the soil test recommendations indicate otherwise.

Fertilizer Type B with micronutrients to be applied at a NPK ratio of 1-2-1. Provide 2 lbs of actual nitrogen per 1,000 sf unless the soil recommendations indicate otherwise.

L. "MyCor" Tree Saver Soil Conditioner manufactured by Plant Health Care, Inc., (800) 421-9051. Use for all tree and shrub species except Rhododendrons, Azaleas and Laurels.

M. Superphosphate: Composed of finely ground phosphate rock as commonly used for agricultural purposes containing not less than eighteen (18%) percent available phosphoric acid. Apply as required based upon soil test report.
N. Compost: The compost shall be a mature/stabilized, humus-like material derived from the aerobic decomposition of yard clippings or other materials as designated compostable as defined in Part 115 of Act 451 of 1994 as amended in Act 212 dated 2007, and shall be in compliance with all federal and state laws. The compost shall have a dark brown or black color, be capable of supporting plant growth without ongoing addition of fertilizers or other soil amendments and shall not have an objectionable odor. It shall be free of plastic, glass, metal and other physical contaminants, as well as viable weed seeds and other plant parts capable of reproducing (except airborne weed species). The compost moisture content shall be such that no visible free water or dust is produced when handling it.

<table>
<thead>
<tr>
<th>Test Items</th>
<th>Acceptable Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maturity/Stabilization:</td>
<td>An acceptable test that can demonstrate Maturity/Stability</td>
</tr>
<tr>
<td>Temperature:</td>
<td>The material must have undergone the procedure to significantly reduce the pathogen level as referenced in EPA 40 CFR, Part 257 Regulations, Federal Register Vol. 58, No. 32; dated 2/19/93; Rules and Regulations; (Pile temperatures must be maintained at 40 degrees C for 5 days with a temperature exceeding 55 degrees C for at least 4 hours).</td>
</tr>
<tr>
<td>Pathogens and Trace:</td>
<td>Shall meet the requirements of EPA 40 CFR, Part 503 *TCLP or Elements EPA 1311 Regulations, Federal Register Vol. 58, No. 32; dated 2/19/93; Rules and Regulations.</td>
</tr>
<tr>
<td>Organic Content:</td>
<td>30-65%, dry weight basis</td>
</tr>
<tr>
<td>Moisture Content:</td>
<td>30-60%, wet weight basis</td>
</tr>
<tr>
<td>Inert Contamination:</td>
<td>Less than 1% by weight (no visible plastic, glass or metal allowed)</td>
</tr>
<tr>
<td>Soluble Salts:</td>
<td>1 – 7.5 mmho</td>
</tr>
<tr>
<td>Carbon:Nitrogen Ratio:</td>
<td>10:1 to 20:1</td>
</tr>
<tr>
<td>pH:</td>
<td>6 to 7.5</td>
</tr>
<tr>
<td>Particle Size:</td>
<td>98% pass through 3/4” screen or smaller</td>
</tr>
</tbody>
</table>

A compost sample shall be submitted to the Owner for approval prior to being used.

O. Lime: Ground dolomitic limestone, ninety-five (95%) percent passing through #100 mesh screen. Use to adjust soil pH only, under direction of Landscape Architect or based upon soil test report.

P. Sand: Clean, coarse, ungraded conforming to ASTM C-3 for fine aggregates.

Q. Anti-Dessicant: Protective film emulsion providing a protective film over plant surfaces; permeable to permit transpiration. Mixed and applied in accordance with manufacturer's instructions.

R. Double Processed Shredded Bark Mulch: Dark brown in color, clean, free of debris and sticks, and well aerated. Materials shall be uniform in size, shape and texture. Recycled wood
products, such as “pallet mulch,” shall not be used. Submit samples for approval prior to installation.

S. Water: Free of substances harmful to plant growth. Hoses or other methods of transportation furnished by Contractor.

T. Stakes for Staking: Hardwood or green metal T-section posts without anchor plates, 2" x 2" x 6'-0" minimum length.

U. Stakes for Guying: Hardwood, 2 x 4 nominal, x 24" length, pointed on one end.

V. Guying/Staking Wire: New galvanized steel wire, free of kinks or bends, use 11 gauge for trees 4” caliper or 8’ height and under; use 9 gauge for larger trees.

W. Turnbuckles: Galvanized steel of size and gauge required to provide tensile strength equal to that of the wire. Turnbuckle opening shall be at least 3”.

X. Staking and Guying Hose: Two-ply, 3/4” black reinforced garden hose not less than 1/2” inside diameter.

Y. Tree Wrap: Standard waterproofed tree wrapping paper, 2-1/2” wide, made of 2 layers of crepe kraft paper weighing not less than 30 lbs. per ream, cemented together with asphalt.

Z. Twine: Two-ply jute material.

AA. Steel Edge Restraints: Painted steel edging (3/16 inch (4.8 mm) thick by 4 inches (100 mm) high), with loops pressed from or welded to face to receive stakes at 36 inches (900 mm) o.c., and steel stakes 15 inches (380 mm) long for each loop.

1. 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:
   b. Collier Metal Specialties, Inc.
   c. J. D. Russell Company (The).
   d. Ryerson, J. T. & Son, Inc.
   e. Sure-Loc Edging Corporation

2. Manufacturer: Subject to compliance with requirements, provide products by one of the following:

3. Color: Black

4. Install per manufacturer’s recommendations. Top to be flush with finish grade, alignment per drawings. All edging to be new.

5. Install per manufacturer’s recommendations. Top to be flush with finish grade, alignment per drawings. All edging to be new.

PART 3 - EXECUTION

3.1 EXAMINATION:

A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.
3.2 PREPARATION:

A. Time of Planting:
   1. Evergreen Material: Plant evergreen materials between August 15 and October 1 or in spring before new growth begins. If project requirements require planting at other times, plants shall be sprayed with anti-dessicant prior to planting operations.
   2. Deciduous Material: Dig deciduous materials in a dormant condition. If deciduous trees are dug in-leaf, they shall be sprayed with an anti-dessicant prior to planting operation.
   3. Planting times other than those indicated must be acceptable to the Landscape Architect.

B. Planting shall be performed only by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.

C. Individual plant locations shall be staked on the project site by the Contractor and approved by the Landscape Architect before any planting pits are dug. The Landscape Architect reserves the right to adjust plant material locations to meet field conditions, without additional cost to the Owner.

D. Planting pits shall be round, with vertical sides and flat bottoms and sized in accordance with outlines and dimensions shown on the planting details.

E. Accurately stake plant material according to the drawings. Stakes shall be above grade and painted a bright color to be clearly visible for inspection.

F. If obstructions are encountered that are not indicated, do not proceed with planting operations until alternative plant locations have been selected and approved in writing by the Landscape Architect. Where location or spacing dimensions are not clearly shown, request clarification by the Landscape Architect.

G. See drawings for planting details.

H. Vegetation Removal:
   1. Strip existing grass and weeds, including roots, from all bed areas, till and fine grade existing topsoil, leaving the soil surface one-inch below finished grade (in areas shown on plan).
   2. Herbicide: Use Round Up (Monsanto Co.) as required to prepare areas for new planting, applied to all ground cover, evergreen and shrubbery beds and all mulch areas before application of pre-emergence herbicide, per manufacturer’s recommendations. Clean area of all dead material after five (5) days.
   3. Pre-Emergence Herbicide: DACTHAL W-75 (Diamond Shamrock Agricultural Chemicals) applied to one (1) ounce per 100 square feet to same area where "Herbicide" has been applied and after area is cleared of dead vegetation.
   4. Herbicides to be applied by Licensed Applicator as required by the State.

3.3 INSTALLATION:

A. Excavate circular plant pits with vertical sides, except for plants specifically indicated to be planted in beds. Provide plant pits per planting details. Depth of pit shall accommodate the root system. Scarify the bottom of the pit to a depth of 4".
B. Provide pre-mixed planting mixture Type "A" for use around the balls and roots of all deciduous and evergreen tree plantings in planters. Trees planted in earth shall be backfilled with native soil per planting details unless noted otherwise.

C. Beds for Ground Cover, Flowers, Ericaceous Plants and Ornamental Grasses: Excavate existing soil to 12" depth over entire bed area and remove soil from site. Set plants according to drawings and backfill entire bed with pre-mixed planting mixture Type "B".

D. Mass Shrub Beds/Hedge Beds: Excavate existing soil to 18" depth over entire bed area and remove soil from site. Scarify bottom of the bed to a 4" depth. Set plants according to drawings and specifications, and backfill entire bed with (pre-mixed) specified planting mixture Type "A".
E. Planting:

1. Set plant material in the planting pit to proper grade and alignment. Set plants upright, plumb and faced to give the best appearance or relationship to each other or adjacent structure. Set plant material 2”-3” above the finish grade. No filling will be permitted around trunks or stems. Backfill the pit with planting mixture. Do not use frozen or muddy mixtures for backfilling. Form a ring of soil around the edge of each planting pit to retain water in non-irrigated areas.

2. After balled and burlapped plants are set, muddle planting soil mixture around bases of balls and fill all voids. Sufficiently compact to prevent settlement.

3. Add "MyCor" Tree Saver to mix per manufacturer's directions.

4. Remove all burlap, ropes and wires from the tops of balls.

5. Space ground cover plants in accordance with indicated dimensions. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants. Plant to within 12” of the trunks of trees and shrubs within planting bed and to within 6” of edge of bed.


7. Water immediately after planting.

F. Mulching:

1. Mulch tree and shrub planting pits and shrub beds with required mulching material depths per details immediately after planting. Thoroughly water mulched areas. After watering, rake mulch to provide a uniform finished surface.

G. Wrapping, Guying, Staking:

1. Inspect trees for injury to trunks, evidence of insect infestation and improper pruning before wrapping.

2. Wrap trunks of all trees spirally from bottom to top with specified tree wrap and secure in place.

3. Stake/guy all trees immediately after lawn seeding or sodding operations and prior to acceptance. When high winds or other conditions which may effect tree survival or appearance occur, the Architect shall require immediate staking/guying.

4. Stake deciduous trees 4" caliper and under. Stake evergreen trees 8’-0” height and under. Use two (2) stakes for each tree per details.

5. Guy deciduous trees over 4” caliper. Guy evergreen trees over 8’-0” height. Use three (3) guys per tree.

H. Pruning:

1. Prune branches of deciduous stock, after planting, to balance the loss of roots and preserve the natural character appropriate to the particular plant requirements. Remove or cut back broken, damaged and unsymmetrical growth of new wood.

2. Multiple Leader Plants: Preserve the leader which will best promote the symmetry of the plant. Cut branches flush with the branch collar. Make cut on an angle.

3. Prune evergreen trees only to remove broken or damaged branches.

3.4 MAINTENANCE:

A. Refer to Section 320536 – Landscape Maintenance and Warranty Standards.

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3.5 CLEANING:

A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, soil, debris and equipment. Repair damage resulting from planting operations.

END OF SECTION 329300