34-15-01

MUB RETAIL DINING
RENOVATIONS
Food Service Equipment Contractor

January 18, 2016 Bidding
MUB Retail Dining Renovations - FSEC
34-15-01

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INVITATION TO BID
MICHIGAN TECHNOLOGICAL UNIVERSITY
HOUGHTON, MICHIGAN 49931

PROJECT:
MUB Retail Dining Renovations, Food Service Equipment Contractor
Michigan Technological University Project #34-15-01

PREBID MTG:
An optional Pre-Bid Walk-Through for interested Food Service Equipment Contractors, will be held on Thursday January 28, 2016, at the University Memorial Union Building (MUB), Ground Floor Commons area.

DUE DATE:
The Owner will receive sealed proposals for the work as herein set forth until 2:00 P.M. local (eastern) time on Tuesday, February 9, 2016, at the offices of:

Ms. Penny Foetisch
Facilities Management
100 Facilities Building - Waterfront
1400 Townsend Drive
Michigan Technological University
Houghton, MI  49931

at which time and place all proposals will be publicly opened and read aloud.

DOCUMENTS:
Bidding documents consisting of proposal forms, plans, specifications, and other pertinent data can be viewed and downloaded from the Facilities Management web site at the following address:  http://www.mtu.edu/facilities/planning/bids/
Please call Project Architect Jake Guter at 906-487-2714 if you have technical questions.

PROPOSAL GUARANTEE:
All bidders submitting bids in excess of $50,000 must provide a certified check or bank draft payable to Michigan Technological University, or a satisfactory Bid Bond executed by the Bidder and surety company, in an amount equal to but not less than five percent (5%) of the maximum proposal amount.

CONTRACT SECURITY:
The successful bidders will be required to furnish a satisfactory performance bond and labor and material payment bond in amounts each of one-hundred percent (100%) of the accepted bid.

EQUAL EMPLOYMENT OPPORTUNITY:
All bidders submitting bids in excess of $50,000.00 must be certified by the Department of Civil Rights for compliance with the State of Michigan Equal Employment Opportunity requirements prior to submission of bids. A copy of the bidder’s valid certificate of compliance or awardability shall be submitted with the proposal. Failure to enclose the certificate with the proposal will not disqualify the bidder providing a valid certificate is submitted within a time acceptable to the owner.

Michigan Technological University is an equal opportunity educational institution/equal opportunity employer, which includes providing equal opportunity for protected veterans and individuals with disabilities.

This Project is a Prevailing Wage Project under the State of Michigan requirements.

Michigan Technological University reserves the right to reject any or all bids and to waive any informality or irregularity in any bid received.
Ms. Penny Foetisch  
Facilities Management  
Michigan Technological University  
1400 Townsend Drive  
Houghton, MI 49931-1295  

The Project involves providing and installing food service equipment within newly renovated space in the University Memorial Union Building. Work includes providing all equipment and accessories noted on the plans and specs, and installing the equipment. Work also includes coordinating the installation requirements with the Renovation General Contractor, and coordinating the equipment installation with the renovation schedule.

Having carefully read the specifications and drawings dated **January 18, 2016**, for Michigan Technological University MUB Retail Dining Renovation-FSEC Project, the undersigned agrees to perform the work in accordance with the Contract Documents and the proposed schedule for Project No. 34-15-01.

Firm Name:__________________________________________________________________________

Our **lump sum base bid price** to furnish and install all materials complete is:

$__________________________________________  
(Bid price in numbers and words)

Bidder acknowledges receipt of the following addenda:

<table>
<thead>
<tr>
<th>Addendum No.</th>
<th>Dated:</th>
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<tr>
<td>Addendum No.</td>
<td>Dated:</td>
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<td>Addendum No.</td>
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The undersigned has used the proposal of the following subcontractors to complete his bid and agrees to employ the firms listed below for the work (if any):

________________________________________________________________________

________________________________________________________________________

_______________________________________________________

Contractor:
BID PROPOSAL FORM

Name: ___________________________________________ Date: ____________
(Signature)

Name: ___________________________________________
(Print)

Title: __________________________________________________________________________________

Contact Information (Phone and email): _______________________________________________________

Sealed proposals will be received at Facilities Management, Bldg. 44, on the waterfront of Michigan
Technological University, Houghton, Michigan until 2:00 P.M. (eastern time zone) on January 18, 2016.
<table>
<thead>
<tr>
<th>Owner:</th>
<th>Michigan Tech University, 1400 Townsend Dr., Houghton, MI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project:</td>
<td>MUB Retail Dining Renovations - FSEC</td>
</tr>
<tr>
<td>Project #:</td>
<td>34-15-01</td>
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<tr>
<td>Contract for:</td>
<td>Food Service Equipment</td>
</tr>
<tr>
<td>Contractor:</td>
<td></td>
</tr>
<tr>
<td>Contract Start Date:</td>
<td>__________2016 or Date of Notice to Proceed</td>
</tr>
<tr>
<td>Contract Completion Date:</td>
<td>August 6, 2016 or Date of Final Payment</td>
</tr>
</tbody>
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This Agreement, is authorized and made to be effective as of this < > day of February, 2016 between Michigan Technological University, a Michigan constitutional corporation located in Houghton, Michigan, (the “University”) and < >, (the “Contractor”), a corporation located at < >, for contract services to be provided by the Contractor to the University for, and in connection with, the following described project located at the University’s campus in Houghton, Michigan. The Contractor and the Owner, agree as follows:

ARTICLE 1 - THE CONTRACT DOCUMENTS:

The Contract Documents consists of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Specifications, Construction Plans/Drawings, etc. as listed in this Agreement and Modifications issued after execution of this Agreement; these form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents other than Modifications, appears in Article 6.

ARTICLE 2 - SCOPE OF THE WORK:

The Contractor shall furnish all of the materials and perform all of the Work shown on the Drawings and described in the Specifications for 34-15-01 for the MUB Retail Dining Renovations – FSEC, as prepared by Rippe & Assoc, located in Minneapolis, MN, and dated January 18, 2016.

The Project involves providing and installing food service equipment within newly renovated space in the University Memorial Union Building. Work includes providing all equipment and accessories noted on the plans and specs, and installing the equipment. Work also includes coordinating the installation requirements with the Renovation General Contractor, and coordinating the equipment installation with the renovation schedule.
ARTICLE 3 – SCHEDULE AND LIQUIDATED DAMAGES

The Contractor shall complete Work in per the Project Schedule noted in Specification Section 00 60 00.

The Work to be performed under this Contract shall begin February 29, 2016 or Date of Notice to Proceed and shall be substantially completed on or before the Completion Date, August 6, 2016.

It is mutually agreed that Michigan Tech shall withhold from the Contractor, as liquidated damages and not as penalty, the sum of four (4) times the approximate daily gross receipts for each calendar day that the Work remains uncompleted beyond the Project Completion Date.

ARTICLE 4 - PROGRESS PAYMENTS:

Michigan Tech shall make payments as provided in Articles 1.2.14 of the General Requirements (2015) and 012900 Payment Procedures and conditions set forth and agreed upon herein:

Based upon Applications for Payment submitted to Michigan Tech by the Contractor and Certificates for Payment by Michigan Tech, Michigan Tech shall make payments on the Total Contract Amount to the Contractor as provided below and elsewhere in the Contract Documents.

The period covered by each Application for Payment shall be one month ending on the last day of each month.

Each Application for Payment and Conditional Waiver and Release on Progress Payment shall be based upon schedule of values consistent with format of AIA Documents G702, G703. The schedule of values (G703) shall allocate the entire Total Contract Amount among the various portions of the Work and supported by such data to substantiate its accuracy as Michigan Tech may require. This schedule of values, unless objected to by Michigan Tech, shall be used as a basis for reviewing the Contractor’s Application for Payment.

Applications for Payment shall indicate the percentage of completion of each portion of Work as of the end of the period covered by the Application for Payment. The amount of each Application for Payment (progress payment) shall be computed by:

1) Multiply the percentage complete of each portion of the work by the share of the Total Contract Amount allocated to that portion of the Work in the schedule of values, less retainage of ten (10%). Pending final determination of cost to Michigan Tech of changes in the Work, changes for amounts not in the dispute may be included per Section 1.2.8 of the General Requirements. The Total Contract Amount must be adjusted to reflect the changes in the Work.
by Change Order, then payment shall be allocated as to the completed portion of the Work in the adjusted schedule of values, less retainage of ten (10%).

2) The portion of the Total Contract Amount that is materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by Michigan Tech, suitably stored off the site at a location agreed upon in writing), may be included in the Application for Payment less retainage ten (10%).

3) Upon completion of 50% of the total project work, the retainage will be reduced to five percent (5%) of the amount completed to that point, and will remain at five percent (5%) for the remainder of the project.

4) The amount of the Application for Payment requested shall not include any previous payments made by Michigan Tech.

5) The amount of the Application for Payment requested shall not include any previous amounts that Michigan Tech has withheld or a nullified Application for Payment.

6) Michigan Tech shall review the Application for Payment and if acceptable, sign it; thus it will become a Certificate of Payment.

7) Provided Certificate of Payment is approved by Michigan Tech, Michigan Tech shall make payment to the Contractor not later than thirty (30) days after receipt of the Application for Payment.

ARTICLE 5 - ACCEPTANCE AND FINAL PAYMENTS:

Final Payment, constituting the entire unpaid balance of the Total Contract Amount, shall be made by Michigan Tech to the Contractor when (1) the Contract has been fully performed by the Contractor except for the Contractor’s responsibility to correct nonconforming Work as provided in Subparagraph 1.2.12. of the General Conditions and to satisfy other requirements, if any, which necessarily survive final payment; and (2) a Final Certificate for Payment has been issued by Michigan Tech.

1) The Contractor may request in writing that Michigan Tech issue a notice of Substantial Completion. Upon receipt of written notice that the Work is ready for inspection and acceptance, Michigan Tech shall promptly inspect the Work.

2) If the Work has been Substantially Completed and accepted, Michigan Tech shall issue upon request by the contractor, a notice of Substantial Completion and a Final Completion Checklist as necessary. Upon completion of the Final Completion Checklist to the satisfaction of Michigan Tech, Michigan Tech shall complete a Certificate of Completion for the Work.
3) When Michigan Tech finds the work is sufficiently complete per the Final Completion Checklist and Contract Documents in their entirety, Michigan Tech shall promptly issue the Certificate of Final Completion that states that the Work provided in this Contract is complete, and that the Final Payment is due the Contractor, as noted in the Certificate of Substantial Completion. Final payment shall be due thirty (30) days after the Contract is fully performed.

ARTICLE 6 - THE CONTRACT DOCUMENTS:

The Contract Documents, together with this Agreement, form the Contract, and they are as fully a part of the Contract as attached:

- Specifications for the project dated January 18, 2016 as listed in the Table of Contents
- Drawings for this project dated January 18, 2016 as listed on the Cover Sheet.
- Any Addendum issued prior to the bid date.

The Contractor’s signature on this Agreement indicates that the Contractor has read and will comply with each of these documents.

The Contract Lump Sum is based on and including the following Substitutions and Alternates: To be determined prior to the contract signing.

The amount shown below shall be both in words and in figures. In case of discrepancy, the amount shown in words shall govern.

<table>
<thead>
<tr>
<th>Contract Lump Sum</th>
<th>$ ______________</th>
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IN WITNESS, WHEROF, each of the parties has caused this Contract to be executed by its duly authorized representatives on the date first mentioned above.

FOR THE CONTRACTOR

____________________________________________________ / ______________________
Signature                                                  Date

Name and Title ____________________________________________

_____________________________ / ______________________

IN WITNESS, WHEROF, each of the parties has caused this Contract to be executed by its duly authorized representatives on the date first mentioned above.

FOR THE CONTRACTOR

____________________________________________________ / ______________________
Signature                                                  Date

Name and Title ____________________________________________
FOR MICHIGAN TECHNOLOGICAL UNIVERSITY

_________________________________________ Date __________________________

Ellen S. Horsch
Vice President for Administration
PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Overall Project Schedule for the MUB Retail Dining Renovations.

1.02 RELATED REQUIREMENTS
   A. Section 01 10 00 - Summary: Contract descriptions, description of alterations work, work by
      others, future work, occupancy conditions, use of site and premises, work sequence.
   B. Section 01 20 00 - Price and Payment Procedures: Applications for payment, Schedule of
      Values, modifications procedures, closeout procedures.

1.03 SUBMITTALS
   A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
   B. Contractors Schedule: As soon as practical after award of the contract, the contractor shall
      develop their own project schedule indicating the steps needed to achieve the Owner’s overall
      Project Schedule. Submit to the Owner for review and approval.
      1. Maintain project schedule and update monthly. Submit updates to Owner with each pay
         request.

PART 2 PRODUCTS: Not used

PART 3 EXECUTION

3.01 MAINTAINING OVERALL PROJECT SCHEDULE
   A. It is critical to the Owner that the overall project schedule be maintained. The Retail Dining
      Staff require sufficient time before the start of the Fall 2016 semester to stock and prepare the
      Retail Dining area for service. It is mandatory that the Retail Dining outlet be in operation for
      students at the start of the semester.
   B. Note that once renovated area is turned over for University occupancy, access will be very
      limited. Therefore, all work including but not limited to punch list completion and final cleaning,
      must be completed by 5 pm on the day noted as the completion date.

3.02 LIQUIDATED DAMAGES
   A. It is mutually agreed that Michigan Tech shall withhold from the Contractor, as liquidated
      damages and not as penalty, the sum of four (4) times the approximate daily gross receipts for
      each calendar day that the Work remains uncompleted beyond the Project Completion Date.

3.03 ATTACHMENTS
   A. Preliminary Project Schedule

END OF SECTION
010000 - GENERAL REQUIREMENTS

1. INSTRUCTION TO BIDDERS

1.1. PREPARATION OF PROPOSALS: All proposals shall include supplying all materials, equipment, and labor, and shall be submitted on the attached proposal form. The forms are to be filled out in ink or typewritten, with the bidder's authorized agent's signature in longhand. Each proposal shall be delivered in an opaque sealed envelope marked with the project name, Bid No., and bidders name.

1.2. BID FORM: No telephonic, telegraphic or digital facsimile (FAX) bid or telephonic, telegraphic or digital facsimile (FAX) modification of a bid will be considered. No bids received after the time fixed for receiving them will be considered. Late bids will be filed unopened.

1.3. BID GUARANTEE: Each proposal for which the base bid exceeds $50,000.00 shall be accompanied by either a certified or cashier's check on an open, solvent bank or a bid bond with an authorized surety company in the amount of 5% of the base bid, payable to Michigan Technological University, as a guarantee of good faith. If the successful bidder fails to furnish satisfactory bonds and insurance as required by the General Conditions within 7 days after notice of award, such guarantee shall be forfeited to the Owner as liquidated damages and the Owner shall be entitled at its sole option to immediately cancel, revoke, withdraw, or rescind its award. The guarantees of the three lowest bidders will be retained until the bond and insurance of the Contractor have been approved by the University. The guarantees of all other bidders will be returned within 10 days after the bid opening.

1.4. REJECTION OR WITHDRAWAL: The Owner reserves the right to accept or reject any or all proposals, in whole or in part, and also herein reserves the right to waive any informalities or irregularities in any or all proposals and to make such award as it deems, in its sole discretion, to be in the best interest of the Owner. No bid may be withdrawn within 60 days after opening date without forfeiting bid security.

1.5. CONTRACT: Upon acceptance of any proposal by the Owner, a purchase order will be issued incorporating the accepted proposal and upon the Contractor furnishing satisfactory proof of compliance with all bond and insurance requirements will constitute the Contract. The Contract shall not be binding upon the Owner until the Contractor has furnished the Owner’s Facilities Management Department satisfactory certification of compliance with the insurance and bond requirements under General Conditions and the Owner may withdraw or cancel its purchase order at any time prior to receipt of all such certifications.

1.6. TAXES: The Contractor shall include all applicable Michigan sales and use taxes currently imposed by Legislative enactment and as administered by the Michigan Department of Treasury, all applicable local or state permit, license or inspection fees, and all Federal taxes or fees applicable, and no additional payment over and above the bid amount shall be allowed for the same.

1.2. DEFINITIONS

UNIVERSITY OR OWNER - Michigan Technological University EXECUTIVE DIRECTOR OF FACILITIES MANAGEMENT – Kerri A. Sleeman

DIRECTOR OF ENGINEERING SERVICES - Gregg Richards

CONTRACTOR - The Bidder whose proposal is accepted by the University.

CONTRACT DOCUMENTS - This document, a purchase order, drawings, and specifications.

1.2.2. CONFLICT AND OMISSIONS: The intent of the Contract Documents is to provide everything necessary for the proper execution of the work. In case of conflict among or ambiguity in the Contract Documents the Contractor shall immediately notify the Director of Engineering Services and the work shall not proceed until a decision has been agreed upon by all parties concerned. Any adjustment or interpretation by the Contractor without such agreement shall be at his own risk and expense. No work stoppage by the Contractor will extend the time for completion.

1.2.3. ROYALTIES, PATENTS, NOTICES, AND FEES: The Contractor shall give all notices and pay all royalties and fees, shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, and shall comply with all laws, ordinances, and codes applicable to any portion of the work.

1.2.4. EXAMINATION OF PREMISES: The Contractor shall become familiar with local and on-site conditions affecting the job and the cost thereof, shall take independent measurements and make an examination and determination of all physical conditions affecting the work, and be responsible for the correctness of same even if they differ from those anticipated or indicated in the Contract. The Contractor shall be held to have made such examinations prior to bid submission and no allowances will be made in his behalf nor will any additional expenses be recoverable by reason of any error, omission, or misunderstanding on the part of the Contractor even if such actual conditions differ from those anticipated or indicated in the Contract. If any part of the Contractor's work depends for proper results upon existing work or the work of another contractor the Contractor shall examine such work and notify, before commencing work, the Director of Engineering Services of all defects or conditions that will affect the results. Failure to so notify will constitute acceptance of the conditions and render the Contractor responsible and liable for the results of any such defects or conditions which would have been revealed by complete examination and testing.

1.2.5. MOVING MATERIALS: If at any time it becomes necessary for the operation of the University to move materials temporarily located which are to enter into the final construction the Contractor furnishing the material shall, when so directed and without expense to the Owner, move them to another location.

1.2.6. MATERIALS AND WORKMANSHIP: All materials and workmanship shall be first-class in every respect and, unless otherwise specified, all materials and equipment shall be new and of the latest design. Should any disputes arise as to the quality and fitness of workmanship, equipment, materials or items, the decisions shall rest strictly with the University, and shall be based upon the requirements of the Contract Documents. The Contractor shall, if requested by the University, furnish evidence as to kind and quality of materials, at no additional cost to the University.

1.2.7. EMPLOYEES AND SUPERINTENDENCE: The Contractor shall enforce good order among his employees and shall not employ on the work any negligent, disorderly, intemperate or unfit person, or any anticipated or indicated in the work assigned. All work shall be performed in a skillful and workmanlike manner. The Contractor, or an authorized

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1/8/2016
1.2.8. EXTRA WORK AND CHANGES IN WORK: The Owner, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

In giving instructions, the Owner shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order from the Owner and no claim for an addition to the Contract sum shall be valid unless as ordered.

When so directed, the Contractor shall promptly submit his itemized estimate and proposal for such extra work or changes, as well as separate unit prices on work for both additions to and deductions from the Contract.

Adjustments in the Contract sum for any such extra work or change shall be determined by one or more of the following methods:

Method Number 1: By an acceptable estimate and lump sum proposal from the Contractor.

Method Number 2: By unit prices stated in the Contract or subsequently agreed upon.

Method Number 3: By actual cost of all labor and materials and a percentage or fixed fee for all other charges, such as overhead, profit, insurance, taxes and bonds. On any change which involves a net credit to the Owner, no allowance for overhead and profit shall be figured.

If none of the foregoing methods is agreed upon, the Contractor, upon receipt of an order as hereinbefore stated, shall proceed with the work. In such case and also under Method Number 3, the Contractor shall keep and present in such form as the Owner may direct, a correct account of the cost, together with vouchers. In any case, the Owner shall certify to the amount including the specified allowance for overhead and profit, due the Contractor.

The allowable fee for added work by Contractor's own forces shall not exceed 15% of additional cost and his fee on work performed by Subcontractors shall not exceed 7 1/2% of additional cost. Quotations by Subcontractors at all times shall be subject to these same limitations.

1.2.9. OTHER CONTRACTS: The Owner may let other contracts in connection with the work and the Contractor shall properly connect and coordinate all work with the work of such other contractors. The Owner shall not be liable for any damages or increased cost occasioned by the failure of other contractors to execute their work as may be anticipated by these Contract Documents. No contractor shall commit any act which will interfere with the performance of the work by any other contractor.

1.2.10. INSURANCE: No work connected with this Contract shall be started until the Contractor has submitted evidence, satisfactory to the Owner, depicting insurance coverage in accordance with the following:

1. Worker's Disability Insurance

The Contractor shall procure and shall maintain, during the life of this contract, Worker's Disability Insurance in work on the project under this Contract. In case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Disability Insurance for all of the latter's employees engaged in such work unless such employees are covered by the protection afforded by the Contractor's Worker's Disability Insurance. In case any class of employees engaged in hazardous work on the project under this Contract is not protected under the Worker's Disability Statute, the Contractor shall provide and shall cause each Subcontractor to provide Employer's General Liability Insurance for the protection of all such employees not otherwise protected.

2. General Liability Insurance

The Contractor shall carry, from the beginning of the Contract until completion of the same, general liability in the amount of $1,000,000 for each occurrence and $2,000,000 aggregate.

3. Property Insurance

The Contractor shall carry, from the beginning of the Contract until completion of the same, $100,000 for each property accident other than the property covered by this Contract.

4. Builders' Risk Insurance

The Contractor will assume all risk of loss for the first $100,000 on any single occurrence of damage to property of Owner or any third party, including the subject of this contract. This may be effected by purchase of insurance or by self-insurance, and must be primary and non-contributory. The Owner will assume all risk of loss for property damage in excess of $100,000 for any single occurrence.

5. Worker's Compensation/Employer's Liability

The Contractor shall carry, from the beginning of this Contract until completion of the same, Worker's Compensation Employer's Liability in accordance with Statutory required by the State and $500,000 per accident.

6. Automobile Liability

The Contractor shall carry, from the beginning of this Contract until the completion of the same, $1,000,000 in automobile insurance for each occurrence and the State Required Personal Injury Protection benefits.

Partial payments shall not relieve the Contractor from full responsibility for any claim which may result from any cause, including fire or any other casualty, until completion of the Contract and final payment. Any casualties shall not relieve the Contractor from performing the Contract.

Contractor will indemnify and hold harmless the University from
and against all claims, judgements, liability and expense of any nature due to bodily injury, personal injury or damage to property arising out of, on account of or in connection with contractors (or any employee, subcontractor or agent of contractor) performance of the work or activity pursuant to the contract.

1.2.11. BONDS: The successful Contractor of a project for which the base bid exceeds $50,000.00 shall furnish in form and with sureties acceptable to the Owner, a performance bond and a labor and material bond, each in the amount of 100% of the Contract sum, as security for the faithful performance of all Work under the Contract, and payment of all charges in connection therewith. The cost of the aforesaid bonds shall be paid by the Contractor and included in the Contract Sum. No work connected with the Project shall be started until the Contractor has placed bonds, in proper form, on file with the University.

1.2.12. NONCOMPLIANCE WITH CONTRACT-TERMINATION: The Owner, at its option, may order suspension of the Work in whole or in part for such time as it deems necessary because of the failure of the Contractor to comply with the contractual requirements. The contract suspension date shall not be extended or additional work or costs added to the contract or suspension order by the Owner. In the event the Owner orders an suspension of the work, the Contractor shall not be entitled to any costs or damages resulting from such suspension; the Owner shall not in any manner be liable or responsible for such costs or damages. The rights of the Owner provided in this clause are in addition to any other rights or remedies provided under this Contract or by law.

In addition to all other rights and remedies contained herein, at law or equity, the Owner may terminate this Contract when any default is not stopped immediately and corrected within a reasonable length of time after notification by the Owner. In the event of such termination the Owner may complete the contracted work and the Contractor and his surety will be liable for any excess cost occasioned by the Owner. In such case the Owner may take possession of and utilize in completing the work such necessary materials and equipment as may be on the Site.

1.2.13. GUARANTEE: The Contractor shall provide a written guarantee warranting all work under this Contract against faulty workmanship and defective materials, and to make good, at his own expense and promptly upon request by the Owner, all defective work and all damage to other work caused by such defective work, for 1 year from the date of signing of the Owner’s Notice of Completion of Contract Work form. The provisions of this express warranty shall not affect or impair any of the Owner’s rights under any other applicable, implied, or expressed warranties.

1.2.14. PAYMENT: Payment for the work will be made in one sum at the completion of the contract except that partial payments aggregating 90% of the value of the completed work may be made at monthly intervals. If the contractor expects to request partial payments he shall submit a schedule of costs and quantities of the various parts of the work aggregating the total contract sum. When applying for partial or full payments, the Contractor shall submit a statement based upon this schedule itemized and supported as the Director of Facilities Management may require and a Sworn Statement and Conditional Waiver and Release on Progress Payment setting forth the amounts due each subcontractor, supplier, and laborer.

The Contract will not be considered complete until the work has been finally accepted by the Director of Facilities Management and the following have been furnished: (1) the required guarantee, and (2) a sworn statement that all payrolls, material bills, and other indebtedness connected with the work have been paid, including such lien waivers as the M may request.

No presence, inspection, supervision, testing, or monitoring by the Owner or by any agent or representative thereof shall relieve the Contractor of responsibility for compliance with the terms of and performance pursuant to this Contract and the Contract Documents; nor shall any such conduct of the Owner or its agent or representatives constitute or be interpreted as constituting a waiver of any rights whatsoever or serve to stop them from requiring full performance by the Contractor.

1.2.15. NON-DISCRIMINATION CLAUSE: In connection with the performance of work under this Contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, national origin, age, sex, height, weight, or marital status. The Contractor will take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, national origin, age, sex, height, weight, or marital status. Such action shall include, but not be limited to, the following: employment upgrading; demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

2. 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 race, religion, color, national origin, age, sex, height, weight, or marital status.

3. The Contractor or his collective bargaining representative 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 said labor union or worker’s representative of the Contractor’s commitments under this section.

4. The Contractor will comply with all published rules, regulations, directives, and orders of the Michigan Civil Rights Commission relevant to Article 6, 1976 PA 453, as amended, which may be in effect prior to the taking of bids for any individual State project.

5. The Contractor will furnish and file compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission; said forms may also elicit information as to the practices, policies, program, and employment statistics of each Subcontractor as the Contractor himself, and said Contractor will permit access to his books, records, and accounts by the Michigan Civil Rights Commission, and/or its agent, for purposes of investigation to ascertain compliance with this Contract and with rules, regulations, and orders of the Michigan Civil Rights Commission relevant to Article 6, 1976 PA 453, as amended.

6. In the event that the Civil Rights Commission finds, after a hearing held pursuant to its rules, that a contractor has not complied with the contractual obligations under this agreement, the Civil Rights
7. The Contractor will include, or incorporate by reference, Secure and pay for all permits, fees, and licenses required by
permits, fees, and licenses required by the Director of Engineering Services and approved by all construction schedules, and shall be arrived at in consultation with the Director of Engineering Services in which cancellation of an existing contract is a possibility, the contracting agency shall be notified of such possible remedy and shall be given the option by the Civil Rights Commission to participate in such proceedings.

1.2.16 PERMITS, FEES AND NOTICES: The Contractor Secure and pay for all permits, fees, and licenses required by State or Local governments necessary for the proper execution and completion of the work. The Contractor shall specifically secure Houghton County permits for Electrical, Mechanical and Plumbing work and schedule work inspections as required for approval. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and orders of any public authority bearing on the performance of the work. The University retains full jurisdiction of construction on campus and will make final determination of all variances.

1.2.17. USE OF SERVICES: The Contractor may use the Owner's water and power by contacting Michigan Tech Facilities Management for arrangements.

1.2.18. SCHEDULING: The Contractor shall meet with the Director of Engineering Services as follows: (1) prior to the start of work; (2) to schedule any interruption of University services; and (3) monthly, or as directed, to review the progress of work.

At the time work is commenced on the project, the Contractor shall prepare a progress schedule showing the dates for the commencement and completion of the various stages of construction. This schedule shall be coordinated with the Owner's required use of the facilities and other contractors construction schedules, and shall be arrived at in consultation with the Director of Engineering Services and approved by all affected parties.

The Contractor shall furnish sufficient forces and construction plant and equipment to insure protection and progress of the work in accordance with the schedule.

Any changes in the work schedule are to be approved in advance by the Director of Engineering Services.

1.2.19. TEMPORARY CONSTRUCTION FACILITIES: All temporary construction facilities shall be neatly constructed and arranged on the Site in an orderly manner.

Suitable weather tight storage sheds, with raised floors, of capacity required to contain all materials which might be damaged by storage in the open shall be provided.

Construction equipment and other facilities such as ladders, ramps, etc., shall be strong, substantial, safe, and suitable for the purpose intended and shall comply with all University, Federal, State, and local requirements so as to maintain adequate and safe temporary access to all existing facilities. Temporary walkways, bridges, etc., shall be built with proper handrails, curbs, etc.

The Contractor will assume all risk of loss for any damage or destruction to the Contractor's temporary office, equipment, shanties, protective fence, scaffolding, staging, and all other miscellaneous materials and items owned or rented by the Contractor or any subcontractor used in the performance of this contract.

A temporary dust-proof enclosure of the work area, including existing machines and equipment, must be erected and maintained throughout the length of the project where required in the various Divisions herein.

1.2.20. CLEANLINESS OF THE WORK: The work and any public or private property occupied by the Contractor shall be kept in a neat and orderly condition at all times. Waste materials, rubbish, and debris shall be removed daily.

At the completion of the work all the Contractor's temporary buildings, equipment, tools, surplus or waste materials, and rubbish of every nature shall be removed from all occupied public and private premises and such premises shall be restored, as nearly as practicable, to the original condition. Such restoration shall be subject to the approval of the Director of Engineering Services.

Debris removed from the site must be disposed of in a licensed landfill as required by the Solid Waste Management Act, 1978 PA 614, as amended, being MCLA 299.402; MSA 13.29(1) and the administrative rules applying to the Act contained in the Michigan Administrative Code R 299.4101. The Contractor shall provide the Director of Engineering Services with written, dated verification that all debris removed has been disposed of in a licensed landfill. Any cost incurred by the Owner as a result of the failure of the Contractor to comply with this paragraph will be a charge against the Contractor.

All exposed surfaces of the work shall be left clean and free from all mud, grease, stains, or other extraneous materials.

The streets and service roads occupied or used by the Contractor shall be continuously kept clean of waste materials and refuse resulting from the work operations. Should the Contractor be negligent in the duties of maintaining proper cleanliness, the Owner will take steps to cause the required cleaning to be done and will deduct the cost thereof from any monies due the Contractor.

The elevators, if used, shall not be overloaded and suitable protection for the walls, floor, and ceiling shall be provided during use. Any damage to the elevators must be repaired to the Facilities Management Manager of Planning, Engineering, and Construction satisfaction.

1.2.21. FIRE PROTECTION DURING CONSTRUCTION: The Contractor shall have on the Site at all times fire protection
equipment as required by applicable codes and ordinances and requirements of the Owner’s insurance carriers. Prior to start of work, the Contractor shall be knowledgeable and proficient in Hot Work safety and in the Owner’s Hot Work policies, procedures and requirements. The Contractor shall faithfully follow the Owner’s Hot Work Policy, which regulates any temporary operation involving open flames or producing heat and/or sparks. The Contractor shall designate a Fire Safety Supervisor and Fire Watch for each Hot Work operation. The Fire Safety Supervisor shall not permit a hot work operation to proceed unless and until the provisions and required precautions checklist of the Owner’s Hot Work permit are adequately addressed. The Fire Watch shall monitor the Hot Work area during and after the hot work operation to take measures to control fires and to respond to fires if they start.

During all construction operations in occupied building space, the Contractor shall construct and maintain a one-hour fire resistance separation between the part of the building under construction and the occupied part of the building, per the Life Safety Code NFPA 101, Section 1-3.11, 1997 Edition.

1.2.22. PARKING AND USE OF ROADS: Immediately after the award of the Contract, the Contractor shall consult with the Director of Engineering Services to determine authorized parking and access to the Site, routing of all construction vehicles, and re-routing of other traffic during construction, and shall organize the work in relation thereto.

At the beginning of the field work, the Contractor shall post signs limiting construction parking, if available, to the construction area. Parking for worker’s cars is not guaranteed and is the Contractor’s responsibility.

During construction, when use of roads or sidewalks is restricted by construction work, the Contractor shall erect temporary barricades, post notices and warning lights, and when required during working hours, direct traffic to prevent congestion. The Contractor shall maintain such as long as temporary work requires and then remove from the public areas.

1.2.23. SAFETY PRECAUTIONS: During the progress of the work, the Contractor shall maintain adequate facilities for the protection and safety of all persons and property. All local, state, and federal laws, ordinances, rules, and regulations pertaining to the kind, use, and loading of all apparatus and equipment shall be complied with. Work shall be done to conformance with “General Safety Rules and Regulations for the Construction Industry” published by the Department of Labor, Construction Safety Standards Commission, Lansing, Michigan 48926.

The contractor will immediately report all accidents involving persons and property to the University Public Safety Dept. A copy of the accident report must be filed with the Public Safety Dept.

The contractor shall conduct safety meetings during the progress of work. A copy of the minutes of these meetings must be submitted to the University. Contractor shall acknowledge Owner’s Safety Requirements.

1.2.24. SUBSTITUTIONS:
1. The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.
2. No substitution directly related to an “or equal” clause or similar language in the contract documents will be considered unless written request for approval has been submitted by the Bidder and has been received by the University at least ten days prior to the date for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance, and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment, or work that incorporation of the substitute would require shall be included. A burden of proof of the merit of the proposed substitute is upon the proposer. The University’s decision of approval or disapproval of a proposed substitution shall be final.

3. If the University approves any proposed substitution, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

After receipt of bids, the University will consider a request for substitution only for the following reasons:
1. Products listed are no longer available.
2. Where the specified product or method cannot be provided within the Contract Time. However, the request will not be considered if the product or method cannot be provided as a result of the Contractor’s failure to pursue the work promptly or to coordinate the various activities properly.
3. Where the specified product or method cannot receive necessary approval by a governing authority and the requested substitution can be approved.
4. Where a substantial advantage is offered to the University, in terms of cost, time, energy conservation, or other consideration of merit, after deducting offsetting responsibilities the University may be required to bear. These additional responsibilities may include such considerations as additional compensation to the Architect for redesign and evaluation services, the increased cost of other work by the University or separate contractors, and similar considerations.
5. When the specified product or method cannot be provided in a manner which is compatible with other materials of the work, and where the contractor certifies that the substitution will overcome the incompatibility
6. When the specified product or method cannot be properly coordinated with other materials in the work, and where the Contractor certifies that the proposed substitution can be properly coordinated.
7. When the specified product or method cannot receive a warranty as required by the Contract Documents and where the Contractor certifies that the proposed substitution receive the required warranty.

1.2.25. SUBCONTRACTS: The Contractor shall, as soon as practicable after the execution of the contract, notify the Owner in writing of the names of proposed subcontractors for the work. If the Contractor submits a list of proposed subcontractors prior to the execution of the contract, the Owner must be notified in writing of any change of subcontractor after the contract is executed. The Contractor will not employ any subcontractor that the Owner may, within a reasonable time, object to as incompetent or unfit.

The Contractor agrees to be fully responsible to the Owner for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them, as he is for persons.
Nothing contained in the contract documents shall create any contractual relationship between any subcontractor and the Owner.

Should material or workmanship, or parties furnishing same prove objectionable under the provisions of the contract, or should violations of the contract exist at the building or elsewhere, and continue after the contractor has received from the Owner a reasonable warning, then, upon request of the Owner, such objectionable parties shall be dismissed, removed, and excluded from the building or work. Such work shall be remedied and continued by others satisfactory to the Owner.

1.2.26. RELATIONS OF CONTRACTOR AND SUBCONTRACTOR: The Contractor agrees to bind every subcontractor and every subcontractor agrees to be bound by the terms of the Contract Documents as applicable to his work, unless specifically noted to the contrary in a subcontract approved in writing by the Owner.

1.2.27. UNIVERSITY RULES AND REGULATIONS: The Contractor shall comply with all laws, ordinances, rules, regulations, and orders of the Owner, and be responsible for and shall direct his employees to conduct themselves so as not to interfere with or disrupt the University educational activities. The Contractor, Subcontractors, and their employees and suppliers shall not use or interfere with the Owner’s existing accesses, drives, walks, and roads except as specifically indicated or by prior arrangement with the Owner.

The Contractor shall confine his activities, equipment, and personnel to the area within the construction limits, except for minor operations as noted and by prior arrangement with the permission of the Owner. Existing areas disturbed outside the scope of the work shall be restored to their original state.

1.2.28. PREVAILING WAGE: Rates of wages and fringe benefits to be paid to each class of mechanics employed by the contractor and all subcontractors, shall be not less than the wage and fringe benefit rates prevailing in the locality in which the work is to be performed. Every Contractor and Subcontractor shall keep an accurate record showing the name and occupation of, and the actual wages and benefits paid to each construction mechanic employed by him in connection with said contract. This record shall be available for reasonable inspection by the Michigan Department of Labor and the University. Contractor responsibilities under the law: 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. Every contractor and subcontractor shall keep an accurate certified payroll record showing the name and occupation of and the actual wages and benefits paid to each construction mechanic employed by him in connection with said contract. This record shall be available for reasonable inspection by the contracting agent or the department. Each contractor or subcontractor is separately liable for the payment of the prevailing rate to its employees. The prime contractor is responsible for advising all subcontractors of the requirement to pay the prevailing rate prior to commencement of work. The prime contractor is secondarily liable for payment of prevailing rates that are not paid by a subcontractor. A construction mechanic shall only be paid the apprentice rate if registered with the United States Department of Labor, Bureau of Apprenticeship and training and the rate is included in the contract. Enforcement: A person who has information of an alleged prevailing wage violation on a state project may file a complaint with the Wage and Hour Division. The department will investigate and attempt to resolve the complaint informally.

Executive Order Number 2003-001 requires that contractors doing business with the State of Michigan be in compliance with state and federal law. A violation of Act 166 of 1965, as amended, the Prevailing Wages on State Projects act or Act 390 of 1978, as amended, the Payment of Wages and Fringe Benefits Act, may result in the debarment of a contractor from being awarded a contract for the provision of goods and services to the State of Michigan for a period of up to eight (8) years.

1.2.29. COMPLIANCE WITH ALL APPLICABLE LAWS, RULES AND REGULATIONS: Notwithstanding any other specific provision herein, contractor (and any subcontractor) shall, at its sole expense, comply with all applicable federal, state, local and other laws, ordinances, rules and regulations in any manner applicable to the performance of the work or contractors’ activities in furtherance of or in connection with the work. Contractor will indemnify and hold harmless the University from and against any and all costs, claims, expenses or orders (including any penalties or fines assessed to University) incurred as result of contractor’s failure to comply or contractor’s failure to perform any obligation imposed by the contract documents.
PART 1  PROTECTION - Contractor shall properly protect all new and existing work from damage. Proper safety provisions shall be made at all times for the protection of all persons and property. Contractor shall contact "Miss Dig" for all underground construction work as required by Michigan Public Act No. 53, 1974 and amended by P.A. 204, 1975.

PART 2  SHOP DRAWINGS

2.01  The Contractor shall submit for approval a complete list of items that will require shop drawings.

2.02  The Contractor shall check and verify all field measurements and submit; with such promptness as to cause no delay in the Contractor's or any other contractor's work; electronic versions, checked and approved, of all shop or setting drawings and schedules where such submissions are stipulated in the various Divisions herein.

2.03  The University will check, with reasonable promptness, such drawings and schedules only for conformance with design concept and compliance with information given in the Contract Documents. The drawings will be stamped by the University as follows:

"REVIEWED AND RELEASED" Indicates final action by the University and are released subject to meeting the requirements of the Contract Documents.

"REVIEWED AS NOTED & RELEASED" Deficiencies as marked indicate the drawings and schedules are subject to corrections, however deficiencies are such that resubmittal is not required and item is released subject to meeting the requirements of the Contract Documents.

"REVIEWED AS NOTED & RESUBMIT" Deficiencies as marked indicate the drawings and schedules are subject to corrections, however deficiencies are such that resubmittal is required. Item is released for shop drawing work only; item is released for corrections and resubmittal for final approval.

"REJECTED AND RETURNED" Submittal does not meet the requirements of the Contract Documents and is rejected. Resubmittal of item meeting the Contract Document is required.

2.04  The University's approval of such drawings shall not relieve the Contractor from the responsibility for deviations from drawings and specifications unless he has, in accompanying letter, called the University's attention to such deviation at the time of submission and secured written approval. University's approval shall not relieve the Contractor from responsibility for errors in shop drawings and schedules.
PART 3  DEFINITIONS

A. Furnish:  This term means procurement or fabrication of materials, equipment or components; or the performance of services to the extent indicated. Where used with respect to materials, equipment, or components, the term shall include delivery to and unloading at the Project site but is not intended to include the installation of the item, either temporary or final.

B. Install:  This term means the placement of materials, equipment, or components including the receiving, unloading, transporting, storage, and installing; and the performance of such testing and finish work as is compatible with the degree of installation specified.

C. Provide:  This term means to Furnish and Install, complete and in place, including all accessories, finishes, tests, and services as required to render the item so specified completely ready for use.

PART 4  AS-BUILT DRAWINGS - Each contractor shall record, legibly and to scale, all field change and deviations from the contract drawings as they occur. This record shall be kept on a set of contract drawings. This set of drawings shall be turned over to the University prior to final payment.

PART 5  OPERATION AND MAINTENANCE MANUALS: The Contractor shall provide complete operation and maintenance instructions, manuals, and other information for all architectural, electrical, mechanical, elevator equipment, and other systems installed and/or provided as part of the Work by the Contractor under the Contract. The Contractor shall furnish three complete sets of manuals bound in suitable quick release three ring binders. The intent of these manuals is that the University is provided with a complete operating and maintenance document for all significant systems, in a convenient, easy to use form.

PART 6  SCHEDULE OF VALUES: Within two weeks after start of job, the contractor shall provide the University with an itemized schedule of values for each division and major subdivision of work. The may be done on AIA form G703.

PART 7  DOCUMENT CLARIFICATION - All inquiries regarding project specifications and drawings shall be made to the Director of Engineering Services.

PART 8  CONTRACT COMPLETION – Construction work shall follow the construction schedule shown in Specification Section 00 60 00. Work on all buildings for this contract is expected to be completed on or before July 3, 2017.

PART 9  EQUAL EMPLOYMENT OPPORTUNITY – In order to qualify for award, bidders submitting bids in excess of $50,000.00 must be certified by the Department of Civil Rights for compliance with State of Michigan Equal Employment Opportunity requirements. (Contract Compliance Team may be contacted at MDCR-CCT@michigan.gov or by phone at (313)456-3823. A copy of the bidder’s valid certificate of compliance or awardability shall be submitted by the successful bidder prior to award of contract.

PART 10 ASBESTOS -. This is not an asbestos abatement project The Contractor shall
01 00 01 SUPPLEMENTARY GENERAL CONDITIONS

not start any work in any area that has not been inspected for asbestos by the Owner's Occupational Safety and Health Services, or a qualified representative of the Owner, and found to be safe. If asbestos is found, safety measures as recommended by the Owner's Occupational Safety and Health Services, or a qualified representative of the Owner, shall be implemented by the Owner before work is started. The Contractor is prohibited from using or supplying any asbestos containing materials for this project.

PART 11 SUMMARY OF WORK

11.01 Perform all work indicated in the Contract Documents.

11.02 The Project involves providing and installing food service equipment within newly renovated space in the University Memorial Union Building. Work includes providing all equipment and accessories noted on the plans and specs, and installing the equipment. Work also includes coordinating the installation requirements with the Renovation General Contractor, and coordinating the equipment installation with the renovation schedule.

11.03 See Specification Section 01 10 00 Summary for a more detailed description of the work.

END OF SECTION 01000
PART 1 – GENERAL

1.01 SUMMARY
A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.02 SCHEDULE OF VALUES
A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor’s construction schedule.
   1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
      a. Application for Payment forms with continuation sheets.
      b. Submittal schedule.
      c. Items required to be indicated as separate activities in Contractor’s construction schedule.
   2. Submit the schedule of values to Michigan Tech at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
B. Format and Content: Use Project Specifications table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
   1. Identification: Include the following Project identification on the schedule of values:
      a. Project name and location.
      b. Michigan Tech.
      c. Michigan Tech’s project number.
      d. Contractor’s name and address.
      e. Date of submittal.
   2. Arrange schedule of values consistent with format of AIA Documents G702, G703.
   3. Provide a breakdown of the Total Contract Amount in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Specifications table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Total Contract Amount.
      a. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Total Contract Amount and subcontract amount.
   4. Round amounts to nearest whole dollar; total shall equal the Total Contract Amount.
      a. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
      b. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor’s option.
   5. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders result in a change in the Total Contract Amount.

1.03 APPLICATIONS FOR PAYMENT
A. Each Application for Payment shall be consistent with previous applications and payments as certified by Michigan Tech and paid for by Owner.
   1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Michigan Tech and the Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for
Applications for Payment.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Michigan Tech will return incomplete applications without action.
   1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
   2. Include amounts of Change Orders issued before last day of construction period covered by application.

E. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Michigan Tech by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
   1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

F. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
   1. List of subcontractors.
   2. Schedule of values.
   3. Contractor's construction schedule (preliminary if not final).
   4. Schedule of unit prices.
   5. Submittal schedule (preliminary if not final).
   6. List of Contractor's staff assignments.
   8. Certificates of insurance and insurance policies.

G. Application for Payment at Substantial Completion: After Michigan Tech issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
   1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Total Contract Amount

H. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited to, the following:
   1. Evidence of completion of Project closeout requirements.
   2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
   3. Updated final statement, accounting for final changes to the Total Contract Amount.
   4. Completion of the Final Completion Checklist.
   5. Evidence that claims have been settled.
   6. Final liquidated damages settlement statement.

END OF SECTION 010001
TO OWNER: PROJECT: APPLICATION NO: DISTRIBUTION TO:

FROM CONTRACTOR: VIA ARCHITECT:

CONTRACT FOR:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet, AIA Document G703, is attached.

1. ORIGINAL CONTRACT SUM $ 0.00
2. Net change by Change Orders $ 0.00
3. CONTRACT SUM TO DATE (Line 1 ± 2) $ 0.00
4. TOTAL COMPLETED & STORED TO DATE (Column G on G703) $ 0.00
5. RETAINAGE:
   a. 10 % of Completed Work $ 0.00
   (Column D + E on G703)
   b. % of Stored Material $ 0.00
   (Column F on G703)
          Total Retainage (Lines 5a + 5b or
          Total in Column I of G703) $ 0.00
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total) $ 0.00
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) $ 0.00
8. CURRENT PAYMENT DUE $ 0.00
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less 6) $ 0.00

CHANGE ORDER SUMMARY

Total changes approved in previous months by Owner

Total approved this Month

TOTALS

NET CHANGES by Change Order

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED . . . . . . . . $ 0.00

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

ARCHITECT:

By: _____________________________ Date: _____________________________

Subscribed and sworn to before me this ______ day of _____________, 2009

County of: __________________________ State of: __________________________

Notary Public: __________________________

My Commission expires on: __________________________

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.
AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing
Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

### AIA Document G703

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION OF WORK</th>
<th>SCHEDULED VALUE</th>
<th>WORK COMPLETED</th>
<th>MATERIALS STORED</th>
<th>TOTAL STORED TO DATE</th>
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**GRAND TOTALS**  
$0.00  $0.00  $0.00  $0.00  $0.00  $0.00  $0.00

Users may obtain validation of this document by requesting of the license a completed AIA Document D401 - Certification of Document's Authenticity.
Substantial Completion Date and Final Completion Checklist:
The Work performed under this Contract as reviewed by the Contractor is substantially complete by the Contractor’s knowledge, information, and belief; the condition of the work is sufficiently complete per Contract Documents and the Owner can occupy for intended use.

The Contractor requests that Michigan Tech issue a notice of Substantial Completion for the project noted above.

If necessary, any Remaining Items to be completed and/or corrected are included on the 010010 Final Completion Checklist. The list does not alter the responsibility of the Contractor to complete Work per Contract Documents.

By signing below, the Contractor acknowledges that they will complete and/or correct the Remaining Items as documented on the Final Completion Checklist by the completion date listed on the Project Schedule.

Contractor Signature ______________________  By ______________________  Date ______________________

Owner Signature ______________________  By ______________________  Substantial Completion Date ______________________

The Date of Commencement of Warranties for all items, as established by the Contract Documents, including those as listed below, is also the date of Substantial Completion Date for the aforementioned project.

Owner Signature ______________________  By ______________________  Date of Commencement of Warranties Completion Date ______________________
010010 Final Completion Checklist

Project: MUB Retail Dining Renovations - FSEC
Owner: Michigan Technological University
1400 Townsend Drive
Houghton, MI 49931

Project Number: 32-15-02
Contract for: Food Service Equipment
Contractor:
Contract Date:

General Items:

1. Provide specific product warranties as follows:
   a.
2. Provide extra material as follows:
   a.
3. Provided Guaranty (attached).
4. Provide Consent of Surety for final payment (attached).
5. Provide Sworn Statement (attached).
6. Provide Full Unconditional Waiver of Lien from Contractor and major suppliers (attached).

List of Remaining Items to be completed and/or corrected:

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<tr>
<th>Space</th>
<th>Items to Complete</th>
<th>Date of Completion</th>
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010012 GUARANTY

The CONTRACTOR, as a condition precedent to final payment, shall execute this Guaranty to the OWNER, guaranteeing for one (1) year from the date noted below, to keep in good order and repair any defect in all the work completed under the Agreement. This includes work which may develop during said period due to improper materials, defective equipment, improper materials workmanship, or arrangements and in any work which may be affected in correcting any repairs or defects. This Guaranty will be binding upon the CONTRACTOR, his subcontractors and/or material suppliers and will be without any expense to the OWNER.

The **Date of Commencement for the Guaranty** for all items, as established by the Contract Documents, is _____________________________

OWNER:  
CONTRACTOR:

Print  
Print

Signature  
Signature

Date  
Date
CONSENT OF SURETY TO FINAL PAYMENT

AIA Document G707

(Instructions on reverse side)

TO OWNER:
(Name and address)

ARCHITECT'S PROJECT NO.:

ARCHITECT
OWNER
CONTRACTOR
SURETY
OTHER

PROJECT:
(Name and address)

CONTRACT FOR:

CONTRACT DATED:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the

(Surety)

SURETY,

on bond of

(Contractor)

CONTRACTOR,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety of any of its obligations to

(Owner)

OWNER,

as set forth in said Surety's bond.

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:

(Surety)

(Signature of authorized representative)

Attest:
(Seal):

(Printed name and title)

CAUTION: You should sign an original AIA document that has this caution printed in red. An original assures that changes will not be obscured as may occur when documents are reproduced. See Instruction Sheet for Limited License for Reproduction of this document.
A. GENERAL INFORMATION

1. Purpose

This document is intended for use as a companion to AIA Document G706, Contractor's Affidavit of Payment of Debts and Claims, on construction projects where the Contractor is required to furnish a bond. By obtaining the Surety's approval of final payment to the Contractor and its agreement that final payment will not relieve the Surety of any of its obligations, the Owner may preserve its rights under the bond.

2. Related Documents

This document may be used with most of the AIA's Owner-Contractor agreements and general conditions, such as A201 and its related family of documents. As noted above, this is a companion document to AIA Document G706.

3. Use of Current Documents

Prior to using any AIA document, the user should consult the AIA, an AIA component chapter or a current AIA Documents List to determine the current edition of each document.

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B. CHANGES FROM THE PREVIOUS EDITION

Changes in the location of various items of information were made, without revision to the substance of the document.

C. COMPLETING THE G707 FORM

GENERAL: The bond form is the usual source of required information such as the contract date and the names and addresses of the Surety, Owner, Contractor and Project.

ARCHITECT'S PROJECT NO.: This information is typically supplied by the Architect and entered on the form by the Contractor.

CONTRACT FOR: This refers to the scope of the contract, such as “General Construction” or “Mechanical Work”.

D. EXECUTION OF THE DOCUMENT

The G707 form requires both the Surety’s seal and the signature of the Surety’s authorized representative.
STATE OF MICHIGAN

County of ________________________________}

______________________________________, being duly sworn, deposes and says:

That _____________________________________________ is the (contractor) (subcontractor) for an improvement to the following described real property situated in County, Michigan, described as follows:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
(Insert legal description of property)

That the following is a statement of each subcontractor and supplier and laborer with whom the (contractor) (subcontractor) has (contracted) (subcontracted) for performance under the contract with the owner or lessee thereof, and that the amounts due to the persons as of the date hereof are correctly and fully set forth opposite their names, as follows:

<table>
<thead>
<tr>
<th>Name of subcontractor, supplier, or laborer</th>
<th>Type of improvement furnished</th>
<th>Total contract price</th>
<th>Amount already paid</th>
<th>Amount currently owing</th>
<th>Accrued fringe benefits contributions (if applicable)</th>
<th>Balance to complete</th>
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</table>
That the contractor has not procured material from, or subcontracted with, any person other than those set forth on the reverse side and owes no money for the improvement other than the sums set forth on the reverse side.

Deponent further says that he or she makes the foregoing statement as the (contractor) (subcontractor) or as __________________________ of the (contractor) (subcontractor) for the purpose of representing to the owner or lessee of the premises described on the reverse side and his or her agents that the property described on the reverse side is free from claims of construction liens, or the possibility of construction liens, except as specifically set forth on the reverse side.

WARNING: AN OWNER OR LESSEE OF THE PROPERTY DESCRIBED ON THE REVERSE SIDE MAY NOT RELY ON THIS SWORN STATEMENT TO AVOID THE CLAIM OF A SUBCONTRACTOR, SUPPLIER, OR LABORER WHO HAS PROVIDED A NOTICE OF FURNISHING TO THE DESIGNEE OR TO THE OWNER OR LESSEE IF THE DESIGNEE IS NOT NAMED OR HAS DIED.

________________________________________
Deponent

Subscribed and sworn to before me this __________ day of ______________________________, 20 _____

________________________________________
Notary Public

___________________________County, Michigan

My Commission Expires: _____________________
My/our contract with ______________________________ to provide
(other contracting party)

______________________________ for the improvement of the property described as

Michigan Technological University's MUB Retail Dining Renovations 34-15-01, having been fully paid and satisfied, with respect to our rights under the Payment / Lien Bond covering said Project and all of our rights to pursue payment under the Payment/Lien Bond No. issued by <<<<name of prime contractor>>> as principal and <<<<name of payment bond surety>>> as surety, together with any rights, demands, or causes of action we may have against <<<<name of prime contractor>>> or <<<<name of payment bond surety>>>, by signing this waiver, all my/our construction lien rights against such property are hereby waived and released.

________________________________________
(Printed Name of Lien Claimant)

________________________________________
(Signature of lien claimant)

Signed on:_________________________ Address:_________________________

_____________________________________

Telephone: _______________

DO NOT SIGN BLANK OR INCOMPLETE FORMS. RETAIN A COPY.

END OF SECTION 010018
010020 Certificate of Final Completion

<table>
<thead>
<tr>
<th>Project:</th>
<th>Owner:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUB Retail Dining Renovations - FSEC:</td>
<td>Michigan Technological University</td>
</tr>
<tr>
<td></td>
<td>1400 Townsend Drive</td>
</tr>
<tr>
<td></td>
<td>Houghton, MI 49931</td>
</tr>
<tr>
<td>Project Number: 34-15-01</td>
<td>Contractor:</td>
</tr>
<tr>
<td>Contract for: Food Service Equipment</td>
<td></td>
</tr>
<tr>
<td>Contract Date:</td>
<td></td>
</tr>
</tbody>
</table>

Substantial Completion Date ______________________
Final Completion Checklist Date ______________________

The Contractor certifies that the Work and all other requirements have been completed in accordance with the Contract for Construction, including, but not limited to:
1. submission and approval of all remaining change order proposals, claims, and Applications for Payment
2. submission of “as-built” plans and specifications, shop drawings, and other record documents
3. completion of all discrepancies: List of Remaining Items noted on the Final Completion Checklist at the time of Substantial Completion:
   a. submission of all final closeout deliverables/document
   b. submission of Guaranty
   c. submission of Consent of Surety for Final Payment
   d. submission of Sworn Statement
   e. submission of Full Unconditional Waiver of Lien

The Contractor further certifies that:
4. no liens have been attached against the Project
5. no suits are pending by reason of Work on the Contract
6. all Workers’ compensation claims are covered by Workers’ Compensation Insurance as required by law
7. all insurance required of the Contractor beyond final payment, if any, is in effect and will not be cancelled or allowed to be expired without notice to the Owner
8. all public liability claims are adequately covered by insurance and that the Contractor shall save, protect, defend, indemnify, and hold the Owner harmless from and against any and all claims which arise as a direct or indirect result of any transaction, event occurrence, or omission related to performance of the Work contemplated under said Contract

Upon execution below, this project will be considered complete. This consideration does not relieve the Contractor from its post-construction responsibilities, including correction of
discrepancies noted during the first year after Substantial Completion, warranty issues, latent defects, and other requirements of the Contract or State law.

Name of Contractor: ________________________________

Notary Public: ________________________________

Personally appeared before me this day of [date] known (or made known) to me to be the [title] of [firm], who, being by me duly sworn, subscribed to the foregoing affidavit in my presence.

By: ________________________________

Authorized Representative

My Commission Expires: ________________________________

(date)

Owner ________________________________

Owner Signature ________________________________

Final Completion Date ________________________________

End of Section 010020
**01 00 22 CONTRACT CHANGE ORDER**

<table>
<thead>
<tr>
<th>CONTRACTOR:</th>
<th>CHANGE ORDER No.</th>
<th>PROJECT: MUB Retail Dining Renovations-FSEC</th>
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<tbody>
<tr>
<td></td>
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<td>PROJECT No.: 34-15-01</td>
</tr>
</tbody>
</table>

**OWNER:** Michigan Technological University 1400 Townsend Dr., Houghton, MI, 49931

**ARCHITECT:**

**DATE OF ISSUE:**

**EFFECTIVE DATE:**

The Contractor is hereby directed to make the following changes in the Contract Documents.

**Description:**

**Reason for Change Order:**

**Attachments:** *List documents supporting change and justifying cost and time*

<table>
<thead>
<tr>
<th>CHANGE IN CONTRACT PRICE:</th>
<th>CHANGE IN CONTRACT TIMES:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Original Contract Price:</strong> $</td>
<td><strong>Original Contract Times:</strong> (calendar days or dates)</td>
</tr>
<tr>
<td>Net changes from previous C. O.'s No. ___ to ___ $</td>
<td>Net changes from previous C. O.'s No. ___ to ___ (calendar days)</td>
</tr>
<tr>
<td><strong>Contract Price Prior to this Change Order:</strong> $</td>
<td><strong>Contract Times prior to this Change Order:</strong> (calendar days or dates)</td>
</tr>
<tr>
<td><strong>Net Increase (decrease) of this Change Order:</strong> $</td>
<td><strong>Net Increase (decrease) of this Change Order:</strong> (calendar days)</td>
</tr>
<tr>
<td><strong>Contract Price with all Approved Change Orders:</strong> $</td>
<td><strong>Contract Times with all Approved Change Orders:</strong> (calendar days or dates)</td>
</tr>
</tbody>
</table>

**ACCEPTED:** (Contractor)

By: ____________________________
Date: ____________________________

**APPROVED:** (Owner): Michigan Tech University

By: ____________________________
Date: ____________________________
PART 1 – GENERAL

1.01 SUMMARY
A. Section includes administrative and procedural requirements for substitutions.
B. Related Requirements:
   1. Section 016000 Product Requirements for requirements for submitting comparable product submittals for products by listed manufacturers.

1.02 DEFINITIONS
A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.03 ACTION SUBMITTALS
A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   1. Substitution Request Form: Use CSI Form 13.1A.
   2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
      a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
      b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
      c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
      d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
      e. Samples, where applicable or requested.
      f. Certificates and qualification data, where applicable or requested.
      g. List of similar installations for completed projects with project names and addresses and names and addresses of architects, engineers, and owners.
      h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
      i. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
      j. Cost information, including a proposal of change, if any, in the Contract Sum.
      k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
      l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
   3. Michigan Tech's Action: If necessary, Michigan Tech will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Michigan Tech will notify Contractor of acceptance or rejection of proposed substitution within 10 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
      a. Forms of Acceptance: Change Order, Construction Change Directive, or Michigan Tech's...
012500 SUBSTITUTION PROCEDURES

Supplemental Instructions for minor changes in the Work.

b. Use product specified if Michigan Tech does not issue a decision on use of a proposed substitution within time allocated.

1.04 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

PART 2 – PRODUCTS

2.01 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 10 days prior to time required for preparation and review of related submittals.

1. Conditions: Michigan Tech will consider Contractor's request for substitution when the following conditions are satisfied:
   a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
   b. Requested substitution will not adversely affect Contractor's construction schedule.
   c. Requested substitution has received necessary approvals of authorities having jurisdiction.
   d. Requested substitution is compatible with other portions of the Work.
   e. Requested substitution has been coordinated with other portions of the Work.
   f. Requested substitution provides specified warranty.
   g. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

END OF SECTION 01 2500
# Substitution Request

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<th>Project:</th>
<th>Substitution Request Number:</th>
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<tr>
<th>Manufacturer:</th>
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**History:**

- [ ] New product
- [ ] 1-4 years old
- [ ] 5-10 years old
- [ ] More than 10 years old

**Differences between proposed substitution and specified product:**

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| ☐ Point-by-point comparative data attached — REQUIRED BY A/E |

**Reason for not providing specified item:**

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**Similar Installation:**

- **Project:**
- **Architect:**
- **Address:**
- **Owner:**
- **Date Installed:**

**Proposed substitution affects other parts of Work:**

- [ ] No
- [ ] Yes; explain ____________________________

**Savings to Owner for accepting substitution:**

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<th>Savings to Owner for accepting substitution:</th>
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**Proposed substitution changes Contract Time:**

- [ ] No
- [ ] Yes [Add] [Deduct] ________________ days.

**Supporting Data Attached:**

- [ ] Drawings
- [ ] Product Data
- [ ] Samples
- [ ] Tests
- [ ] Reports
- [ ] ________
The Undersigned certifies:

• Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
• Same warranty will be furnished for proposed substitution as for specified product.
• Same maintenance service and source of replacement parts, as applicable, is available.
• Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
• Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
• Proposed substitution does not affect dimensions and functional clearances.
• Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
• Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: 

Signed by: 
Firm: 
Address: 
Telephone: 
Attachments: 

A/E’s REVIEW AND RECOMMENDATION

☐ Approve Substitution - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Approve Substitution as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Reject Substitution - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: ____________________________ Date: ______________

OWNER’S REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures. Prepare Change Order.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures. Prepare Change Order.
☐ Substitution rejected - Use specified materials.

Signed by: ____________________________ Date: ______________

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E
PART 1 - GENERAL

1.01 SUMMARY
   A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.02 DEFINITIONS
   B. Action Submittals: Written and graphic information and physical samples that require Michigan Tech's responsive action.

   C. Informational Submittals: Written and graphic information and physical samples that do not require Michigan Tech’s responsive action. Submittals may be rejected for not complying with requirements.

1.03 ACTION SUBMITTALS
   D. Prior to ordering materials and construction, provide an Action Submittal for items specified throughout the contract documents that include the phrase ‘as approved by Michigan Tech,’ if the exact item as specified cannot be obtained and a similar item must be provided. This is not intended to be a substitution procedure, substitutions must follow requirements of section 012500.

1.04 SUBMITTAL ADMINISTRATIVE REQUIREMENTS
   E. Electronic copies of digital data files of the specified items can be provided by Michigan Tech for Contractor's use in preparing submittals.

   F. Processing Time: Provide submittals as soon as possible after award of contract to insure sufficient lead time for materials in time for the May 2016 construction start date. Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Michigan Tech's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

      1. Initial Review: Allow 7 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Michigan Tech will advise Contractor when a submittal being processed must be delayed for coordination.

      2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.

      3. Resubmittal Review: Allow 7 days for review of each resubmittal.

   G. Submittal form: All submittals shall be submitted electronically to extent possible. For actual samples, provide sample directly to the architect, and include electronic submittal cover page.

   H. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

      1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.

      2. Name file with submittal number or other unique identifier, including revision identifier.

         a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

      3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Michigan Tech.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Architect, containing the following information:
   a. Project name.
   b. Date.
   c. Name and address of Architect.
   d. Name of Construction Manager.
   e. Name of Contractor.
   f. Name of firm or entity that prepared submittal.
   g. Names of subcontractor, manufacturer, and supplier.
   h. Category and type of submittal.
   i. Submittal purpose and description.
   j. Specification Section number and title.
   k. Specification paragraph number or drawing designation and generic name for each of multiple items.
   l. Drawing number and detail references, as appropriate.
   m. Location(s) where product is to be installed, as appropriate.
   n. Related physical samples submitted directly.
   o. Indication of full or partial submittal.
   p. Transmittal number, numbered consecutively.
   q. Submittal and transmittal distribution record.
   r. Other necessary identification.
   s. Remarks.

I. Options: Identify options requiring selection by Michigan Tech.

J. Deviations: Identify deviations from the Contract Documents on submittals.

K. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
   1. Note date and content of previous submittal.
   2. Note date and content of revision in label or title block and clearly indicate extent of revision.
   3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

L. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

M. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Michigan Tech's action stamp.

PART 2 - PRODUCTS

2.01 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements:
   1. Submit electronic submittals via email as PDF electronic files.
   2. Submit to Architect and Michigan Tech simultaneously.
      a. Michigan Tech will review and forward comments to the Architect
      b. The Architect shall incorporate Michigan Tech’s comments with their own.
      c. Stamped and annotated submittal will be returned to Contractor and Michigan Tech simultaneously.
B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. Mark each copy of each submittal to show which products and options are applicable.
2. Include the following information, as applicable:
   a. Manufacturer’s catalog cuts.
   b. Manufacturer’s product specifications.
   c. Standard color charts.
   d. Statement of compliance with specified referenced standards.
   e. Testing by recognized testing agency.
   f. Application of testing agency labels and seals.
   g. Notation of coordination requirements.
   h. Availability and delivery time information.
3. Submit Product Data before or concurrent with Samples.
4. Submit Product Data in the following format:
   a. PDF electronic file.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Architect’s digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
   a. Identification of products.
   b. Schedules.
   c. Compliance with specified standards.
   d. Notation of coordination requirements.
   e. Notation of dimensions established by field measurement.
   f. Relationship and attachment to adjoining construction clearly indicated.
   g. Seal and signature of professional engineer if specified.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
3. Submit Shop Drawings in the following format:
   a. PDF electronic file.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
   a. Generic description of Sample.
   b. Product name and name of manufacturer.
   c. Sample source.
   d. Number and title of applicable Specification Section.
3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-
control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Michigan Tech will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

a. Number of Samples: Submit one sets of Samples. Michigan Tech will retain.
b. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Application for Payment and Schedule of Values: Comply with requirements specified in Section 010001 Payment Procedures.

F. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017000 Closeout Procedures.

G. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

H. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

I. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

J. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

2.02 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide
products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Michigan Tech.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file and three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.01 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017000 Closeout Procedures.

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.02 MICHIGAN TECH'S ACTION

A. General: Michigan Tech will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Michigan Tech will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.

C. Informational Submittals: Michigan Tech will review each submittal and will not return it, or will return it if it does not comply with requirements. Michigan Tech will forward each submittal to appropriate party.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 3300
PART 1 – GENERAL

1.1 SUMMARY
   A. Section includes requirements for temporary facilities, support facilities, storage facilities, and security and protection facilities.
   B. Related Requirements:
      1. Section 011000 Summary for work restrictions and limitations on utility interruptions.
      2. Comply with requirements of Section 017419 - Waste Management, remove from site all materials not to be reused on site.
   C. For this project the Contractor may use the existing building utilities as necessary at no charge. Contractor is responsible for making any temporary connections that may be necessary.
   D. Storage on site and on Michigan Tech’s campus is extremely limited. Any storage of material for the project is the Contractor’s responsibility, and any cost for storage should be included in the base bid amount.

1.2 USE CHARGES
   A. General: Installation and removal of and use charges for temporary facilities shall be included in the Total Contract Amount. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Michigan Tech, testing agencies, and authorities having jurisdiction.

1.3 INFORMATIONAL SUBMITTALS
   A. If storage facilities are temporary facilities, the following must be provided and the facilities must adhere to the remainder of this specification, as necessary so stored materials remain free from damage.
      1. Site Plan: Coordinate with Michigan Tech regarding location temporary facilities, construction trailers, utility hookups, staging areas, and parking areas for construction personnel.
      2. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire prevention program.
   B. If storage facilities are rented or other facilities, the facilities must adhere to the remainder of this specification, as necessary so stored materials remain free from damage.

1.4 QUALITY ASSURANCE
   A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
   B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS
   A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Michigan Tech’s acceptance, regardless of previously assigned responsibilities.

PART 2 – PRODUCTS

2.1 EQUIPMENT
   A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
   B. HVAC Equipment: Provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
      1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type
heating units is prohibited.

2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

PART 3 – EXECUTION

3.1 GENERAL
A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.
   1. Protect existing site improvements to remain including curbs, pavement, and utilities.

D. Maintain access for fire-fighting equipment and access to fire hydrants.

E. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
   1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment“ and not temporary facilities.

3.2 TEMPORARY UTILITY INSTALLATION
A. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.

B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

C. Heating: Provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

D. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations. Coordinate with Michigan Tech for any perceived use of electrical service.

3.3 VEHICULAR ACCESS AND PARKING
A. Comply with Michigan Tech regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

B. Coordinate access and haul routes with governing authorities and Michigan Tech.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide means of removing mud from vehicle wheels before entering streets.

E. Coordinate with Michigan Tech Facilities Management and refer to construction plans for designated temporary parking areas to accommodate construction personnel.

3.4 SECURITY
A. Provide security and facilities to protect Work, existing facilities, and Michigan Tech’s operations from unauthorized entry, vandalism, or theft.

B. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.

C. Security Enclosure and Lockup: Install temporary enclosure around partially completed
areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.

D. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire prevention program.
   1. Prohibit smoking in construction areas.
   2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
   3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.5 MOISTURE AND MOLD CONTROL

A. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.

B. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
   1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
   2. Keep interior spaces reasonably clean and protected from water damage.
   3. Discard or replace water-damaged and wet material.
   4. Discard, replace, or clean stored or installed material that begins to grow mold.
   5. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

C. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
   1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
   2. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

D. Control moisture so stored materials, furniture, and appliances are not damaged in (temporary) storage facilities during time of storage. Contractor will assume full replacement costs without reimbursement.

3.6 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for Michigan Tech's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

3.7 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.
   1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Michigan Tech reserves right to take possession of Project identification signs.

2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017000 Execution and Closeout Requirements.

END OF SECTION 015000
PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Requirements:
   1. Section 012500 Substitution Procedures for requests for substitutions.

1.2 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
   1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
   2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
   3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.3 ACTION SUBMITTALS

A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   1. Michigan Tech's Action: If necessary, Michigan Tech will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Michigan Tech will notify Contractor of approval or rejection of proposed comparable product request within 10 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
   a. Use product specified if Michigan Tech does not issue a decision on use of a comparable product request within time allocated.

1.4 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:
   1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of
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construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:
1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.6 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
3. Refer to other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017000 Closeout Procedures.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Michigan Tech will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish
016000 PRODUCT REQUIREMENTS

salient characteristics of products.

B. Product Selection Procedures:
1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products:
   a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
   b. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. Manufacturers:
   a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
   b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.

D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
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2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.

3. Evidence that proposed product provides specified warranty.

4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.

5. Samples, if requested.

END OF SECTION 016000
PART 1 GENERAL

1.01 RELATED REQUIREMENTS
   A. Section 010008 – Substantial Completion Notice
   B. Section 017010 – Final Cleaning: for final cleaning of each apartment
   C. Section 017419 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.

1.02 COORDINATION
   A. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
   B. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
   C. Coordinate completion and clean-up of work of separate sections.
   D. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.03 SUBMITTAL OF PROJECT WARRANTIES
   A. Submit written warranties on request of Michigan Tech Facilities Management for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Michigan Tech's rights under warranty.
   B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS
   A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
   B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
   C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 012500 and Section 016000.

PART 3 EXECUTION

3.01 EXAMINATION
   A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.

B. Require attendance of parties directly affecting, or affected by, work of the specific section.

C. Notify Michigan Tech four days in advance of meeting date.

D. Prepare agenda and preside at meeting:
   1. Review conditions of examination, preparation and installation procedures.
   2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as shown.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of alterations work constitutes acceptance of existing conditions.
B. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.
   2. Relocate items indicated on drawings.
   3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
   4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, etc.): Remove, relocate, and extend existing systems to accommodate project work.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
   2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
   3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
      a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
      b. Provide temporary connections as required to maintain existing systems in service.
   4. Verify that abandoned services serve only abandoned facilities.
   5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

D. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.

E. Adapt existing work to fit new work: Make as neat and smooth transition as possible.

F. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

G. Refinish existing surfaces as indicated:
   1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
   2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.

H. Clean existing systems and equipment.
   I. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
   J. Do not begin new construction in alterations areas before demolition is complete.
   K. Comply with all other applicable requirements of this section.
3.06 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.
B. See Alterations article above for additional requirements.
C. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-conforming work.
D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
G. Restore work with new products in accordance with requirements of Contract Documents.
H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material, to full thickness of the penetrated element.
J. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.07 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.
B. Provide special protection where specified in individual specification sections.
C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.09 ADJUSTING
A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.10 FINAL CLEANING
A. See Section 01 70 10 for Final Cleaning requirements for the apartments.

3.11 CLOSEOUT PROCEDURES
A. Each phase of the project will go through the closeout procedure when the phase is complete.
B. Notify Michigan Tech when work is considered ready for Substantial Completion, and submit the Substantial Completion Notice to the Owner.
C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Michigan Tech's review.
D. Correct items of work listed in executed Certificates of Substantial Completion and the Final Completion Checklist.
E. Notify Michigan Tech when work is considered finally complete.

END OF SECTION 01 7000
SECTION 01 07 10 FINAL CLEANING

PART 1 GENERAL

1.01 SECTION INCLUDES
   A. Final cleaning of Project.

1.02 RELATED REQUIREMENTS
   A. Section 01 10 00 - Summary: Contract descriptions, description of alterations work, work by
      others, future work, occupancy conditions, use of site and premises, work sequence.
   B. Section 01 70 00 - Execution and Closeout Requirements: Examination, preparation, and
      general installation procedures; preinstallation meetings; cutting and patching; cleaning and
      protection; starting of systems; demonstration and instruction; closeout procedures except
      payment procedures; requirements for alterations work.

PART 2 PRODUCTS: Not Used

PART 3 EXECUTION

3.01 EXAMINATION
   A. Examine project area to verify that it is ready for final cleaning, and that all construction work
      has been completed.

3.02 FINAL CLEANING
   A. Use cleaning materials that are nonhazardous.
   B. Clean interior window glass, all surfaces exposed to view; remove temporary labels, stains and
      foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft
      surfaces.
   C. Steam clean all carpets, mop all floors, and wipe with disinfectant all horizontal and vertical
      surfaces.
   D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or
      nameplates on mechanical and electrical equipment.
   E. Clean surfaces and fixtures to a sanitary condition with cleaning materials appropriate to the
      surface and material being cleaned.
   F. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site;
      dispose of in legal manner; do not burn or bury.

END OF SECTION
PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

A. Owner requires that this project generate the least amount of trash and waste possible.

B. Any cost or savings from scrap of any materials or appliances must be incorporated into the contract price.

C. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.

D. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.

E. Optional Recycling, Salvage, Reuse, or Landfills.

F. Recycling is optional for this project; Contractor is responsible for implementation. Revenue or savings must be reflected in the Contractor's bid price.

G. Methods of trash/waste disposal that are not acceptable are:
   1. Burning or burying on the project site.
   2. Dumping or burying on other property, public or private or other illegal dumping or burying.
   3. Incineration, either on- or off-site.

H. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

I. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.


K. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers.

L. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

M. Leave site in clean condition, ready for subsequent work.

N. Clean up spillage and wind-blown debris from public and private lands.

1.02 RELATED REQUIREMENTS

A. Section 015000 Temporary Facilities and Controls: Additional related requirements.

B. Section 024100 Demolition: Additional related requirements.

1.03 DEFINITIONS

A. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.

B. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.

C. Reuse: To reuse a construction waste material in some manner on the project site.

D. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
E. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

END OF SECTION
PART 1 GENERAL

1.01 WORK INCLUDED: Provide labor, equipment, appliances and materials, and perform all operations in connection with the execution of the Work as stated and as represented in the drawings and specifications including that which is reasonably inferred; install and coordinate all equipment in Section 11 40 00.

A. Equipment: Fabricate, deliver, unload, uncrate, assemble, set in place and level ready for final connection by mechanical and electrical trades.

B. Coordination: Coordinate mechanical and electrical rough in services, manufactured equipment and fabricated equipment construction, equipment bases, curbs, ceiling heights, depressed areas, sleeves, wall openings, refrigeration lines, service access, existing building conditions that affect equipment, and all other building conditions required to accommodate the Section 11 40 00 equipment including new, existing, Owner furnished and future equipment with other trades; cut holes in equipment to accommodate pipes, drains, electrical conduit and outlets as required.

C. Schedule: Perform work in a timely manner consistent with the construction schedule, submit written notice of any manufacturer or construction related problems that are causing a delay in the equipment delivery or installation; substitutions for failure to order equipment in a timely manner are not acceptable.

D. Permits, Licenses and Inspections: Secure and pay for tests, permits and inspections required by authorized regulatory agencies and directly related to the construction and installation of the Section 11 40 00 foodservice equipment work.

E. Document Inconsistencies: When drawings and specifications contain conflicting requirements, request written clarification; provide the better quality or greater quantity of work or material; costs incurred by failure to clarify conflicting requirements are the equipment contractor's responsibility.

F. Model Number Changes and Manufacturer Sales or Bankruptcies: When equipment specified is no longer available, the Owner reserves the right to accept the manufacturer's replacement or equipment from a manufacturer specified as equal; the Owner reserves the right to reject equipment when a specified manufacturer is sold, when sale is pending, when filing for Chapter 7 or 11 status, and receive equipment from a specified equal manufacturer.

G. FSEC Qualifications: Must be able to provide references for two projects of similar size and complexity within the past five years. These must be consultant specified projects successfully completed to the Owner's satisfaction.

1.02 RELATED WORK SPECIFIED IN MECHANICAL AND ELECTRICAL SECTIONS:

A. Services and Connections: Extending utility lines from rough in locations to connection points on the equipment and final connections, including indirect wastes to floor drains and installation of faucets and backflow prevention devices, unless otherwise specified.

B. Interconnections: Between equipment and remote components.
C. Disconnection: Existing equipment that is relocated or removed.

1.03 DEFINITIONS

A. Equal: Must be comparable in critical dimensions, capacity, features, utilities and operation; if equal is submitted, pay all costs required to modify work of any trade affected to accommodate equal.

B. Exposed: All visible surfaces — includes surfaces behind cabinet doors when the doors are open.

C. Foodservice Equipment Contractor (FSEC): Person or organization identified as such in the Agreement as providing the Section 11 40 00 equipment.

D. Fabricated Equipment: Equipment that is not a standard catalog item and must be constructed by a singular authorized fabricator from Article 2.01, Paragraph B at their shop or on the job site to conform to the Contract Documents.

E. Manufactured Equipment: Equipment offered as a catalog item but which is built to size for each project and generally requires a shop drawing.

F. Buy-out Equipment: Equipment offered as a catalog item by a manufacturer, including items requiring minor modifications.

1.04 REGULATORY REQUIREMENTS

A. Laws and Ordinances: Comply with laws, ordinances, rules, codes and regulations relating to the performance of the Work; rulings and interpretations of the enforcing agencies are considered a part of the regulations; no extra charge will be paid for furnishing items required by the enforcing agency.

B. Minimum Standards: Notify the Owner's Representative prior to equipment purchase and/or installation of any item that does not comply with the applicable regulations, including but not limited to the following:
   1. National Sanitation Foundation (NSF): Equipment and installation; affix the NSF label to each equipment item.
   2. Underwriters Laboratory (UL): Electrical equipment and/or components.
   4. American Institute of Electrical and Electronics Engineers: Electrical wiring and devices included with the equipment.
   6. American Society of Mechanical Engineers (ASME): Boilers.
   7. National Electrical Code (NEC): Electrical wiring and devices included with the equipment.
   12. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): Equipment and installation where required.
   15. Intertek Testing Services (ETL).
16. Safe Drinking Water Act: Lead-free plumbing fittings, faucets and fixtures or more stringent state/local codes where applicable

1.05 SUBMITTALS

A. General: Manufacturer or fabricator changes are not acceptable after submittal review and acceptance without written authorization from Owner's Representative.

B. Schedule: Submit within thirty (30) days from award of Contract; identify key dates and tasks that must be completed by others in order to meet the equipment installation schedule.

C. Review: Stamp and sign each submittal indicating it has been checked for conformance to the specifications, field dimensions, compatibility with other equipment, and coordination with other trades and services.

D. Revisions: Incorporate corrections noted by the Owner's Representative and resubmit new sets for review; repeat until corrections are incorporated.

E. Routing: Projects with an equipment value of less than $500,000 must be submitted as one complete package.

F. Drawings

1. General - Submit Electronically
   a. Match the contract drawings sheet size
   b. Submit in roll form, not folded
   c. Leave a 3” x 8” space for review stamps
   d. Submit one (1) set of black and white prints
   e. Lettering not less than 1/8” high

2. Floor Plan and Schedule
   a. Scale: ¼” = 1’ 0”
   b. Number equipment and include a schedule on the same sheet
   c. Use Architect's dimensioned plans to prepare plan drawing; verify field dimensions

3. Rough in Plan
   a. General: Provide a utility symbol legend; list the utility requirements, along with the equipment item number on a line extending from the symbol; show exact rough in locations and heights; stub out of walls wherever possible; make allowances for valves, fittings and other required components specified under Mechanical and Electrical Sections; if utilities are already installed, field measure locations and indicate on plan, noting any objection to installed location.
   b. Scale: ¼” = 1’ 0”
   c. Equipment Included: Show requirements for specified, Owner furnished, existing and future equipment; include equipment layout on drawing
   d. Format: Provide separate drawings for mechanical and electrical rough-in plans and schedules.
   e. Dimensioning: Dimension utility rough ins installed under floor from either existing walls, exterior walls or from column line centers; dimension other rough ins from new walls
   f. Code Compliance: See Article 1.04
   g. Coordination: Refer to the architectural, electrical and mechanical engineering drawings for this submission; verify that the correct utility
services are available for equipment ordered; verify existing building conditions; coordinate any changes required to accommodate equipment provided

h. Interconnections: Include connection diagrams for equipment where one or more items are interconnected by Mechanical and Electrical Trades

i. Sleeves and Conduits: Include requirements for beverage lines, refrigeration lines and any other equipment interconnections

4. Special Conditions (building details): Show finished dimensions of bases, depressions, curbs, special height walls and wall openings for equipment; ¼" = 1’ 0” scale; coordinate with other trades; include equipment layout on drawing

5. Equipment Shop Drawings
a. Scale: Detail fabricated and manufactured equipment in plan, elevation and end view at ¾" = 1’ 0” or larger; show sections at 1 ½" = 1’ 0” or larger

b. Detail: Show fabricated equipment dimensions and materials, manufacturer and type of hardware, and other pertinent data as specified and as required for construction; where fabricated equipment adjoins other equipment, indicate partial plans and elevations to illustrate the junction condition; show quartz surfacing dimensions, locations, dimensions of cutouts, and countertop seam locations, required locations of support and blocking members, edge profiles, and installation details and methods; identify colors and finishes

c. Organization: Indicate equipment by item number and arrange on sheets in numerical sequence

d. Built-in and Counter-mounted Equipment: Show on fabricated equipment elevation and section drawings; dot in countertop equipment on plans; detail built-in/drop-in equipment supports and relationship to quartz top

e. Field Dimensions: Equipment dimensions are subject to adjustments required by field dimensions and understructure components; take measurements and coordinate with finished building conditions; field dimensions completed by a company/person approved by the custom fabricator; circle any dimensional changes on initial and subsequent submissions

f. Hood Fire Protection System: Submit complete detailed shop drawings including system description, configuration and system component locations; after review by design team, incorporate comments and submit to fire authorities having jurisdiction for system approval prior to fabrication

g. Walk-ins: Show ceiling panel lay-outs and all control and switch locations

G. Written Materials
1. Itemized Bid: If not required during bid submittal, provide itemized bid within 10 days of bid award date; include freight and installation within each item.

2. General: Submit electronically, follow the same format as the hard copy.

3. Equipment Brochure
a. Equipment List: Include item number, quantity and manufacturer

b. Cover Sheet: Submit a typewritten sheet — copies of project specification are not acceptable — for each item with item number and equipment description to include: model number, quantity, optional features, special construction, installation and utility service requirements for manufacturer provided; include Owner furnished, existing and future equipment

c. Manufacturer’s Catalog Sheet: Circle relevant utility requirements, dimensions and accessories for each item; do not include advertising or
sales sheets; mark item number and quantity required; mark out equipment not being supplied
d. Organization: Arrange sheets in numerical sequence; tab every 25th item

4. Operation and Maintenance Manual – submit prior to equipment demonstrations
   a. Service Agents: List manufacturers alphabetically with tabs; list equipment type; identify local service agent; list the name, address and telephone number authorized to service the equipment; list FSEC when there is no other service agent
   b. Parts Catalog, Operating and Maintenance Instructions: Include manufacturer’s original instructions for buy-out and manufactured equipment; organize alphabetically by manufacturer
   c. Certificate of Warranty: Provide for each piece of refrigeration equipment per Article 1.07 C & D

5. Utility Rebate Documents: For applicable equipment, provide and prepare manufacturer’s rebate registration documents for submission by Owner to utility company; include pertinent equipment model/serial numbers, utility data, installation dates and other information needed to complete application.

6. LEED Information:
   a. Refrigeration: For each item of refrigeration (self-contained and remote) identify type of refrigerant used and pounds of refrigerant used by each refrigeration system.
   b. Spray Rinse Faucets: Identify gallons per minute flow rate.

1.06 SUBSTITUTIONS

A. Procedure: Submit a written request to the Owner's Representative for approval not less than ten (10) days prior to the bid date; include a description of the proposed substitute, drawings, equipment cutsheets, performance test data and any other data or information necessary for complete evaluation; list separately construction and performance features that do not meet or exceed the specified item.

B. Approval: Approval or rejection of a proposed substitution is vested in the Owner's Representative whose decision is final and binding; determination may or may not express the reason for the decision; approval by Addendum or Change Order only; verbal approval is not binding.

C. Responsibility: If proposed substitution is approved, pay all costs required to modify work of any trade affected to accommodate substitution.

1.07 WARRANTY/CORRECTION PERIOD

A. General: Warranty equipment and installation with full parts and labor for one (1) calendar year from date of acceptance by Owner's Representative; Owner's acceptance is defined by first date of foodservice facility operation; inoperable equipment is not considered “accepted”; inoperable equipment includes, but is not limited to, inadequate training and demonstration, defective materials and improper installation.

B. Other Equipment: Compressors/Condensers: Five (5) year warranty; first year to include labor and materials without charge to Owner.

C. Fire Protection System: Warranty and required inspections for one (1) year; provide materials without charge to Owner.
D. Correction Period: When the complete breakdown of a piece of equipment occurs, perform service within 24 hours; make other repairs within one week.

E. Service Agreement: Service agents listed in the Operation and Maintenance Manual must perform service as described above; repairs and/or replacements not made within the specified time will be corrected by other means and the Section 11 40 00 contractor is responsible for reasonable costs incurred.

F. Defective Equipment: If within the first year of operation the piece of equipment has not been fully operational for 6 continuous months, the FSEC will replace the unit at their expense.

PART 2 PRODUCTS

2.01 QUALIFIED FABRICATORS

A. Qualifications: Minimum five years' experience in similar work; produce custom fabricated equipment in one shop.

B. Authorized Equipment Fabricators: The following companies are approved custom stainless steel equipment fabricators; request for substitutions can be made per Article 1.06.

Albers Commercial Kitchen Services
(651) 265-0603

Florida Stainless Fabricators, Inc.
(407) 971-8280

Keas Stainless Steel Fabricators, Inc.
(405) 232-0869

Russco
(816) 241-8787

Servco Companies
(314) 781-3189

Two Rivers Enterprises
(320) 746-3156

C. Authorized Quartz Surface Fabricators: Minimum five years' experience fabricating quartz surface materials or granite using water-cooled cutting tools; certified fabricator/installer, certified in writing by the manufacturer.

D. Coordination Requirements: Field dimensions and installation must be done by a fabricator approved person/company.

2.02 MATERIALS

A. General: Furnish new materials free from faults and defects in materials and workmanship
B. Metals
1. Gauges: U.S. Standard Gauge; not more than 5% plus or minus from thickness indicated below:

<table>
<thead>
<tr>
<th>Gauge Thickness</th>
<th>Gauge</th>
<th>Thickness</th>
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<tbody>
<tr>
<td>10</td>
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<tr>
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<td>18</td>
</tr>
<tr>
<td>14</td>
<td>0.0781</td>
<td>20</td>
</tr>
</tbody>
</table>

2. Stainless Steel: ANSI Type 304, number 4 finish, 180 grit, extra low carbon, non-magnetic, 18% chrome, 8% nickel, corrosion resistant alloy steel; flat, first grade and free of buckles and surface imperfections
3. Galvanized Sheet Steel: Zinc coating, smooth, free of runs, blisters, excess spelter and uncoated spots or patches; recoat welded or damaged members; finish with two coats of epoxy based gray Hammertone paint
4. Aluminum Sheet Metal: ASTM sheet and plate; ASTM extrusions; 0.40 mil clear anodized finish unless otherwise specified
5. Stainless Steel Tubing: Type 304, number 4 finish 180 grit; seamless or welded; 16 gauge; annealed, ground smooth and polished; heat treated and properly quenched to eliminate precipitation; drawn true to size and roundness and polished with concentric grain
6. Black Iron Angle: Ductile in quality; free of hard spots, runs, checks, cracks and other surface defects; clean and properly prime with rust inhibiting primer; finish with two coats of epoxy based gray Hammertone paint

C. Sealant:
1. General: Dow Corning, Silastic or G.E. RTV 108 silver color; Type S Grade NS, Class 25; comply with Food and Drug Administration Regulation 21 CFR 177.2600 for food contact areas or equal by Kason 3700 Series Rubbaseal silicone
2. Walk-in Penetrations: Low expansion, closed cell polyurethane foam

D. Glass: Tempered 3/8” thick, unless noted otherwise

E. Plastics: Polycarbonate or acrylic as specified; ¼” thick

F. Cutting Board: Richlite, ½” thick; size as specified; 1” diameter finger hole when used below drawers

G. Bolts, Screws and Nuts: Unacceptable on exposed surfaces; use same composition as the metal to which they are applied; space to insure suitable fastening and to prevent bulging of the metals fastened; cap threads with a zinc plated combination hexnut-lockwasher; cap screw threads that are not visible or readily accessible with a standard lock washer and nut; wherever bolts or screws are welded to the underside of trim or tops, neatly finish the reverse side; depressions at these points are not acceptable

H. Rivets: Unacceptable as a method of fastening

I. Sound Deadening
1. Tape Sealant: Schnee Morehead, Inc., Model SM5227 Tacky Tape or Component Hardware Model Q85-5225 Tacky Tape
2. Spray-On: Sink bottoms only; do not coat beyond sink front cove

2.03 FABRICATION - GENERAL

A. Final Coordination: After approved shop drawings are issued, communicate subsequent changes to the Owner’s representative before fabrication begins.
B. Quality Standards: Include necessary reinforcing, bracing, welding, number and spacing of uprights and crossmembers for adequate strength; construct tops, shelves, exterior panels, doors and drainboards of a single metal sheet when possible; except where removable, secure flat surfaces to vertical and horizontal bracing members by welding or other approved means to eliminate buckle, warp, rattle and wobble; equipment subject to rattle or wobble is not acceptable; overlapping materials are not acceptable; unless specified, exposed joints on countertops, cabinet bases and overselves are not acceptable.

C. Welding: Heliarc method; same composition as materials welded; complete welds, strong and ductile, with excess metal ground off and joints finished smooth to match adjoining surfaces; free of mechanical imperfections such as gas holes, pits, runs and cracks; same finish as adjoining surfaces.
   1. Spot Welds: 3" maximum spacing
   2. Tack Welds: Minimum ¼" welding material at 3" maximum spacing

D. Butt Joints: Unacceptable as a method of fastening on fabricated and manufactured equipment

E. Tops: 14 gauge seamless stainless steel; fully weld with edges as specified; pitch drainboards ¼" per foot; 1" maximum pitch
   1. Edges: Detail SD-1 and as specified
   2. Backsplash: Detail SD-2; continuously weld rolled edges abutting splashes

F. Sinks: Detail SD-9 & SD-10
   1. Standard Construction: Construct multiple compartment sinks from one large sink; weld in double wall partitions; 1" separation between partitions to form fully coved sink; fully welded flush front with no indentations
   2. When Specified: Construct multiple compartment sinks from individually formed bowls; close off front, bottom and rear of spaces between with 18 gauge stainless steel sink banding.

G. Grain of Polishing: Run in the same direction on all horizontal and on all vertical surfaces; where table or sink tops join at right angles, terminate the finish in a mitered edge; polish grain consistent in direction throughout the length of the backsplash and sink compartment.

H. Framework
   1. Drain tables and Worktables: Detail SD-3
   2. Serving Counters and Cabinet Bases: Detail SD-7, SD-8 & SD-71

I. Counter/Table Construction
   1. Legs: Detail SD-4
   2. Crossrails: Detail SD-4
   3. Undershelves:
      a. Welded: Detail SD-5
      b. Removable: Detail SD-6

J. Cabinet Construction: Inaccessible open areas are not acceptable; no exposed shelf standard screws
   1. Standard Construction: Detail SD-7, SD-26 & SD-28
   2. Piece Construction: When specified, Detail SD-8 & SD-27
   3. General
      a. Sink Enclosure: Detail SD-12, SD-12a & SD-13
      b. Utility Curb: Detail SD-30
Section 11 40 00 – Foodservice Equipment

K. Doors
   1. Hinged Solid: Detail SD-17; door face flush with cabinet body
   2. Sliding: Detail SD-21; removable for cleaning
   3. Hinged Louvered: Detail SD-19 or 20; door face flush with cabinet body
   4. Hinged Perforated Panel: Detail SD-19A; door face flush with cabinet body

L. Drawers: Detail SD-14; drawer face flush with cabinet body

M. Elevated Shelves:
   1. Wall Shelves: Detail SD-25
   2. Table Mounted Shelves: Detail SD-22, SD-23 & SD-24

N. Built In Equipment: Install per manufacturer’s recommendations, Article 2.11 and project details.
   1. General: Coordinate to provide adequate ventilation, service access and support structure; submit written notification of any design conditions that are likely to prevent proper operation or that void equipment warranty; provide supplemental fans if required for proper operation; equipment contractor is responsible for proper operation of equipment
   2. Food Wells: Connect drainlines to ¾” diameter manifold and extend to a ball valve; provide chrome plated handle for drain valve and locate in stainless steel recessed cup in counter mullion; countertop temperature greater than 175°F within 2” of well opening is not acceptable

O. Counter Mounted Equipment: Ferrule openings to accommodate cords, wiring, and/or piping.

2.04 Fabrication – Refrigeration

2.05 Hardware Components

A. Cap Nuts: Component Hardware Model Q31 Series with lock washer

B. Casters: 5” diameter polyurethane tire swivel casters; grey tire; minimum 250# capacity; NSF approved; models as follows.
   1. Stem Caster: Jarvis & Jarvis Model 5-40-213G-19A or Component Hardware Model CMS4-5RPB
   2. Stem Caster with Brake: Jarvis & Jarvis Model 5-40-213G-VL-19A with Vertilok brake or Component Hardware Model CMS4-5RBB with brake
   3. Plate Caster: Jarvis & Jarvis Model 5-30-213G-PLT2 or Component Hardware Model CMP1-5RPB
   4. Plate Caster with Brake: Jarvis & Jarvis Model 5-30-213G-PLT2 with Vertilok brake or Component Hardware Model CMP1-5RBB with brake

C. Drain Valve Recessed Cup: Vollrath, Model 47536.

D. Drain Valve Handle: Chicago, Model 634; 3” diameter, four arm metal cross handle.

E. Glass Capping: Component Hardware Model B70-1001; stainless steel.
F. Locks: Component Hardware Model P30 Series; stainless steel faced; master keyed

G. Switch/Receptacle Housing
1. Recessed: Component Hardware Model R73 1210
2. Pedestal: Component Hardware Model R58-1010

2.06 MILLWORK

A. Materials
1. Core Material: Medex exterior resin medium density fiberboard; conform to ANSI A208.2.3.3.4, as manufactured by MEDITE Corporation (Ph: 503/773-2522) or equal by Norbord MDF-MR (Ph: 800/367-6338)
2. Plastic Laminate: NEMA LD3 1/16” Type I general purpose, Grade 10, color-through and high pressure; color, pattern, and finish as specified
3. Backing Sheets: NEMA LD .020” thick, Type V, Grade 91 plastic laminate; apply on all surfaces not covered with plastic laminate; coordinate color with exposed surface color; comply with NSF Standard 35
4. Adhesive: Formica 100 or 150
5. Grain/Pattern: Coordinate on all equipment furnished under this section so that grain/pattern runs in same direction throughout project
6. Wood Frames and Counter Edges
   a. Exposed: Species, grade and finish per item specification or detail
   b. Unexposed: Solid, choice white pine free from knots and defects
7. Edge Banding: Doellken PVC 3mm thickness with beveled edge, color to match adjacent plastic laminate

B. Construction: Detail SD-171, SD-172, SD-173 & SD-174; 1977 AWI Premium Grade Standards; factory assemble parts and prefinish; flush type fronts and overlapping ends; ¾” core material base cabinet, ends and dividers with corner joints between frame members fully lock jointed, glued and screwed; dado and glue cabinet backs into sides and bottom; scribe countertops and backsplashes; secure countertops to base cabinet from underside; fully cure surfaces prior to installation.

C. Hardware
1. General: Utilize expandable dowels for screws on all cabinet hardware installed on MDF
2. Hinges
   a. Standard: Grass Institutional Series MB8000, 180°-270° opening, concealed casework hinges or approved equal by Blum; utilize doweled cup and hinge screws when installed on MDF
   b. When Specified: Component Hardware Model M75-5003
3. Catches: Only required with Component Hardware hinge, either is acceptable
   a. Non-Magnetic: Component Hardware Model M22-2420; adjustable tension
   b. Magnetic: Component Hardware Model M30-2400; heavy duty; self-aligning
4. Pulls: Hafele, Model 124.02.920, anodized silver finish, Component Hardware Group, Model P46-1010, brushed stainless or as specified
5. Locks: Component Hardware Model P30 Series; stainless faced; master keyed as specified
D. Trayslide and Counterfront: See project detail.
   1. Panels: Easily removable without the use of tools; finish edges to match front surface
   2. Louvered Panel and Door: Horizontal hardwood slats mounted inside panel frame; slats canted at 45° angle; space slats ¾” apart; cover front and exposed top with finish material; cover unexposed areas with the specified backing sheet
   3. Hinged Access Door: Locate where shown; finish edges to match front surface

E. Solid Surface Materials
   1. Solid Surface: DuPont Corian; thickness as detailed; grade, color, finish and edges as indicated on elevations and details
   2. Joint Adhesive: DuPont Joint Adhesive, to match surfacing color
   3. Sealant: Silicone Sealant for DuPont Corian, to match surfacing color
   4. Substructure Mounting Adhesive: Provide silicone, epoxy or polyester adhesive of type recommended by manufacturer for application and conditions of use
   5. Support/Backing: As detailed and per manufacturer's recommendations

F. Solid Surface Fabrication and Installation
   1. Fabrication: Use sheets of maximum width and length in accordance with manufacturer’s recommendations; provide soft seam at a minimum of every sheet length and where recommended by manufacturer; verify dimensions by field measurement prior to fabrication; inspect material for defects prior to fabrication; materials throughout project to be from same manufacturer batch number; variation in distribution of aggregates which are within manufacturer’s tolerances is not a defect
   2. Seams/Joints: Joints to be flush, tight fitting, level and neat; indicate seam locations on shop drawings; apply joint adhesive and sealants in accordance with specified manufacturer’s recommendations; provide appropriate seam reinforcement where exposed to loads; flexible expansion joint between hot and cold wells as recommended by manufacturer
   3. Cutouts: Corner radius as recommended by manufacturer; minimum expansion gap between cutout and drop-in equipment as recommended by manufacturer; cutout support as recommended by manufacturer so weight of drop-in equipment is not supported by countertop material; use Nomex insulation and aluminum foil tape as required by manufacturer at hot and cold cutouts
   4. Drop-in Equipment: drop-in/built-in equipment to be supported from cabinet framework
   5. Mounting Sneezeguards: Mount sneezeguards to cabinet framework in accordance with manufacturer's recommendations; allow at least ¼” gap between countertop and upright perimeter; provide escutcheon cover to match finish on upright
   6. Trayslides: Provide adequate support and reinforcement in accordance with manufacturer’s recommendations
   7. Edge Details: Fabricate in accordance with manufacturer’s recommendations; indicate edge profile and installation details on shop drawings
   8. Backsplash: Integral coved; set-on pieces not acceptable
   9. Installation: Field install all quartz surfaces; install materials in accordance to manufacturer's recommendations; verify that substrates supporting solid surfaces are plumb, level, and flat and that necessary supports and blocking are in place
10. Cleaning and Protection: remove masking and excess adhesives and sealants; clean exposed surfaces; protect surfacing from damage by other Sections
11. Warranty and Care: Provide manufacturer warranty statement and maintenance instructions with the Operations and Maintenance Manual in Section 1.05G
12. Authorized Fabricators: Fabrication/installation by manufacturer’s certified fabricator with minimum of five years’ experience fabricating solid polymer materials; contact manufacturer for authorized fabricators and installers

2.07 REFRIGERATION - Not Used

2.08 EXHAUST HOODS

A. Construction: Fully welded; all 18 gauge Type 304 stainless steel per Article 2.02, para. B stainless steel; #4 finish including exposed rear; exterior corners fully welded, ground and polished; length and depth per plan; provide duct collar; conceal plumbing and wiring; heat sensors installed at each hood duct collar to automatically activate the exhaust fan whenever cooking operations occur.

B. Exhaust and Supply Requirements: Design for use and function at project engineered volume. Manufacturer’s approved representative to measure volumes at each hood duct collar and provide documentation to the consultant indicating both the measured air volumes and the design air volume at each duct collar.

C. Code Compliance: See Article 1.04.

D. Fire Damper (When Specified): Fusible link activated; Underwriters Laboratories listed; microswitch on duct collar for interwiring by Electrical Trades to shut down exhaust fan when damper is closed

E. Lights: Provide minimum (or greater) foot candle light levels as required per current FDA food code or per local code requirements; prewire in conduit to junction box on top of exhaust hood; recessed vapor proof fixtures; tempered glass diffuser; wall mounted light and fan switches provided by others.
   1. LED: By hood manufacturer; suitable for grease hood; all fixtures for entire project must emit the same color.

F. Design: See item specification for designs required for this project.
   1. Filter Hoods: Underwriters Laboratory classified stainless steel self-draining removable baffle filters; full length concealed self-draining trough pitched to built in recessed stainless steel grease cup; one filter removal tool per project

G. Hood Installation
   1. Mounting: Height as shown, not to exceed 7’ 0” above finished floor; free from vibration and distortion; coordinate with ceiling construction and ceiling heights; provide stainless steel hanger brackets, mounting angles and steel hanger rods
   2. Trim: Conceal fasten 18 gauge stainless steel trim or enclosure panels from top of hood to ceiling
   3. Interconnections: Make all plumbing and electric interconnections between adjacent sections, ready for singular final electrical and plumbing connections by respective trades
H. Performance Guarantee: Hood manufacturer guarantees that the exhaust hood will capture grease, smoke and vapor from the cooking equipment shown on the plan at the specified air volumes without the addition of end panels, extensions to the hoods or other appurtenances. If after installation, testing and balancing the hood cannot effectively capture grease, smoke and vapor, it is the responsibility of the hood manufacturer to determine the reason the hood does not capture. If the manufacturer believes it is due to a defect in the building ventilation system, the hood manufacturer must identify the defect and prove it exists to the satisfaction of the General Contractor and Consultant. If the hood manufacturer cannot prove that a defect exists, the manufacturer will pay for all costs associated with modifying the exhaust hood, ductwork, fan, controls, make-up air system, wiring and all associated work required for the exhaust hood to capture grease, smoke and vapor from the cooking equipment.

2.09 FIRE PROTECTION SYSTEMS

A. General: The piping and detection lines built into the hood at time of fabrication include all piping, elbows, tee's, U.L. grease seals, conduit and corner pulleys for the protection of the hood plenum(s) and exhaust duct(s); fire system and components supplied by a local authorized fire protection company.

B. Code Compliance: See Article 1.04; comply with NFPA 13, 17 and 96, local codes and Underwriters Laboratory; submit shop drawings to code authorities and secure approval prior to system fabrication.

C. Systems: See item specification for system required for this project.
   1. Wet Chemical: Automatic and remote manual actuation; stainless steel control cabinet; cable and conduit; manual reset relay when applicable; installation and certification by factory trained personnel; mount control cabinets at the ceiling where shown on plan without exposed piping and conduit; minimum of one remote flush mounted manual pull station per system; coordinate location with local fire authorities and Electrical Trades

D. Piping: Schedule 40 black pipe and fittings; all exposed under the hood piping chrome plated with no exposed threads.

E. Nozzles at Fire Dampers: On wet chemical and dual agent systems, if hoods have fire dampers at duct collars, provide nozzles above and below fire damper; provide welded 3/8” diameter schedule 40 black iron sleeve in ductwork for nozzle above damper.

F. Gas Shut-off Valve: Automatic electrically or mechanically activated per item specifications; installed by Mechanical Trades; equip electrical gas shut-off valve with 15-second power interruption.

G. Follow-up Inspection: Include two semi-annual maintenance checkouts of the system by factory authorized personnel conforming to the recommendations as outlined in the manufacturer’s specifications and manuals; include permits, drawings, and testing by authorized fire protection company as required by authority having jurisdiction

H. Warranty: See Article 1.07, para. E.

2.10 CONVEYORS - Not Used
2.11 UTILITY SERVICE REQUIREMENTS

A. General
   1. Interconnections: Interconnect equipment utility lines between equipment sections to single connection point; materials consistent with specifications
   2. Performance: Install heated and motor operated equipment as required for efficient and stable operation; provide additional vents, guards, deflectors and other accessories as necessary whether or not such items are called for on the drawings or specifications; show additional modifications on the Shop Drawings; notify the Owner’s representative in writing if design prevents proper operation prior to installation
   3. All plumbing components must be lead-free to conform to Safe Water Drinking Act or more stringent state/local codes where applicable
   4. Coordination: Verify incoming water pressure and temperature prior to equipment installation; provide written communication to Owner’s Representative if conditions will adversely affect equipment operation

B. Plumbing
   1. Fabricated/Manufactured Equipment
      a. Connection Access: Provide access openings for mechanical connections
      b. Piping: Install horizontal piping at the highest possible elevation and not less than 6” above floor; conceal piping; no tool marks or more than one visible thread at exposed fittings; bright polished chrome plate exposed piping and fittings
      c. Faucets: Available through Standard Plumbing Suppliers
         (1) Vegetable prep sink: Chicago 540-LDL8E1ABCP or equal by T&S B-0230-0CS8-CR or Component Hardware KL54-8108-SE1
         (2) General Use Sink (Splash Mounted): Chicago 540-LDGN8AE3ABCP or equal by T&S B-0331 or Component Hardware KL54-8001-SE1
         (3) General Use Sink (Deck Mounted): Chicago 201-AGN8AE3VPAABCP or equal by T&S B-2867-04 or Component Hardware KL41-8001-SE1
         (4) Hand Sink (Splash Mounted): Chicago 631-E35ABCP or equal by T&S B-0350-04 or Component Hardware KL54-8000-RE4
         (5) Hand Sink (Deck Mounted): Chicago 786-E35CP or equal by T&S B-2867-04 or Component Hardware KL84-8002-RE4
         (6) Hand Sink (Electronic Eye, Splash Mounted): Chicago 116.214.AB.1 or equal by T&S EC-3101TMVHGF10 or Component Hardware KE19-1100-SD0
         (7) Hand Sink (Electronic Eye, Deck Mounted): Chicago116.213.AB.1 or equal by T&S EC-3100TMVHGF10 or Component Hardware KE19-4100-SD0
         (8) Disposer Spray Rinse: Chicago 510-GCTFWSLABCP with wall bracket or equal by T&S Model B-0133-CR-BC or Component Hardware Encore KLF53-1000-BR
         (9) Food Well Fill Faucet: Chicago 349 E1HOTABCP; with “hot” water handle or equal by T&S B-0208 or Component Hardware KL64-9006-TE1
         (10) Pot and Pan Sink: Chicago 540-LDL12HFA or equal by T&S B-0290 w/handle 001636-45 or Component Hardware KL34-8012
      d. Wastes: Adjust handle length when required
         (1) Drain: Rotary handle commercial waste drain, with flat strainer Chicago Model 1367-NF or Component Hardware DBN-8000-SPI
         (2) Overflow: Chicago Model 1344-001KJRCF head with Chicago Model 1344-002JKRCF elbow tube or Component Hardware E50-1000
e. Accessories/Components: Chrome plate exposed fittings
   (1) Water Inlets: Locate above the positive water level to prevent siphoning
   (2) Backflow Prevention: Where conditions require a submerged inlet, provide a code approved check valve or backflow prevention device with the fixture to prevent siphoning; provide with T & S B-0461 angle slip flanges where plumbing penetrates backsplash; set flanges so top of vacuum breaker is 4” above splash or per local code
f. Water Filters: Furnish Everpure or Cuno complete filter assemblies for new and existing beverage and ice making equipment, steamers, combi ovens and rack ovens; individual filters for vendor furnished equipment provided by vendor; furnish one additional set of filter cartridges with each filter system; install in accessible location and indicate on rough in drawings; meet peak water flow requirements of equipment being furnished; test water quality at site and adjust filter system to meet the equipment manufacturer requirements; if manufacturers quality requirement cannot be met, provide documentation to foodservice consultant; provide permanent label on filter system, indicating equipment name of item served.
g. Gas Quick Disconnect: Dormont, Series BPQ-2SR or equal by T&S Brass; 5'-0” long with suitable length restraint to facilitate cleaning; mount restraint to prevent it lying on floor; sized to accommodate connection on equipment
h. Water Quick Disconnect: Dormont CMB37BP2Q or equal by T&S Brass Series HW; 5'-0” long or required length; sized to accommodate connection on equipment; one hose per connection.
i. Gas Pressure Reducing Valves: Furnish appropriate models in 5” to 15” water column pressure limits for installation by Mechanical Trades if not factory installed
j. Gas Fired Ranges: Provide rear gas connection and stainless steel manifold end caps unless otherwise specified
k. Indirect Wastes: Extend the following indirect wastes/drainline: condensate hood, hot and/or cold well, fabricated counter/equipment, countertop ice machines, and specified beverage equipment

C. Electrical
   1. General: Underwriters’ Laboratories (UL) listed and comply with National Electrical Code, Standards of National Electrical Manufacturers’ Association and American Institute of Electrical and Electronics Engineers; wire, wind or construct equipment to conform to available electrical services; furnish wiring and connection diagrams with equipment; provide equipment rigid and free from objectionable vibration and noise
   2. Plug in Equipment: Furnish with cords attached; match plugs to receptacles; coordinating cords and plugs are the FSEC's responsibility; modify cord to a suitable length; on mobile equipment; provide suitable length restraint to facilitate cleaning; mount restraint to prevent it lying on floor.
   3. Fabricated Equipment: Wire internally; furnish and install electric outlets and receptacles; run lines to a junction box, load center panel, starter, or disconnect switch; neatly tag wires showing item number, voltage characteristics and load information; furnish transformers for equipment unavailable in building electrical characteristics
      a. Built In Equipment: Install and interconnect electric controls, switches, receptacles or other units furnished separately; wire in concealed conduit to accessible junction point
      b. Motor Driven Appliances and Electric Heating Units: UL listed control switch or starter; exposed fused disconnect at motors larger than ½ hp or...
per code requirements; furnish line switches, fittings and connections when not part of the equipment for installation by Electrical Trades

c. Motors: Drip-proof, splash-proof or totally enclosed type, having a continuous-duty cycle; ball bearings except small motors which may have sleeve bearings; windings impregnated to resist moisture; enclose when exposed to dust, lint, water or other matter; mount on vibration elimination pads

d. Conduit: Code approved; conceal from view

e. Switches and Controls: Internally wire equipment to a thermostatic control and/or on/off switch with red indicator light; locate where shown; label function with plastic nameplates with not less than ¼” high white recessed lettering, and glue to adjacent surface

f. Cover Plates: Stainless steel

g. Outlets and Receptacles: Hubbell GF-15 and GF-20 ground fault interrupt outlets mounted where shown; wire to separate j-box; Hubbell #5251S and #5252S blue colored, surge suppression receptacles for point of sale equipment

h. Light Fixtures: Provide ballasts and 3500° Kelvin lamps at 82 CRI (Color Rendering Index); install non-breakable sleeves or coated lamps over food areas

(1) Snack/Display: Hera STICKLED 12WW LED light; provide connecting cables, power supply cables and drivers as required for complete operation

i. Load Center: Locate in a separate compartment; prewire electrical components built into or set on the counter to panel; conceal conduit; UL listed, three phase, four-wire with grounded copper buss; individual ground fault interrupt breakers for each service load; identify equipment serviced on each breaker; snap-in type circuit breakers with thermo magnetic quick make/quick break trip; provide circuit breakers rated at 10,000 KAIC interrupting capacity; size each breaker for 125% of the connected load; minimum of two spare 20 amp circuits; balance the loads on each phase; shunt trip breakers for items under hood; install panel in accordance with electrical codes and regulatory requirements; provide Nomex wrap around panel to protect from heat within counter and louver access panel/door for improved ventilation.

PART 3 EXECUTION

3.01 SITE INSPECTION

A. Field Measurements: Field measure foodservice space prior to equipment construction; conform to finished building conditions; submit written notification to Owners Representative if building conditions prevent equipment from functioning properly.

B. Site Conditions: Verify that surfaces, prepared openings, finished building dimensions, and roughed in utilities are ready for equipment; coordinate equipment with building openings and dimensions; construct and deliver equipment in sections sized to site limitations.

C. Utilities: Verify that voltages, air volumes, water temperature and water, steam, and gas pressures are as required for equipment; coordinate changes to ensure that equipment operates properly

D. Acceptance: Beginning of installation means acceptance of site conditions.
E. **Responsibility**: Assume the expense of changes to equipment and/or cutting and patching walls, partitions, ceilings and floors necessary to receive and successfully operate equipment, caused by failure to coordinate with site conditions.

### 3.02 INSTALLATION

A. **Qualifications**: Minimum five years' experience in similar work, including field welding.

B. **Code Compliance**: Conform to current Standards and Revisions established by the National Sanitation Foundation, Ann Arbor, Michigan, and to prevailing local codes and regulations.

C. **Sealing**: Seal equipment that abuts a wall or other fixed equipment with silicone sealant per Article 2.02, para. C; ¼” maximum width.

D. **Trim**: Material to match equipment surface; trim equipment in wall openings, recesses or abutting a wall that cannot be effectively sealed with silicone; exposed fasteners are not acceptable; unacceptable as a substitute for accuracy and neatness.

E. **Schedule**: Comply with the Owner's construction schedule; notify the Owner's Representative in writing, not less than thirty (30) days prior to the scheduled deadline if there is a reason the schedule cannot be met.

F. **Cutting and Patching**: Cut and drill tops, backs, or other elements for service outlets, fixtures, and fittings; cut and patch foodservice equipment as required for equipment installation or service

G. **Protection**: Protect equipment from damage.

H. **Damage and/or Loss**: Replace or repair items that are lost or damaged prior to Owner acceptance.

I. **Factory Supervision**: Provide factory authorized service agent supervision for installation of job-site assembled conveyors, flight-type dishmachines and pulpers; include a thorough check of utility connections, pressures and overall installation.

J. **Custom Fabrication**: The fabricator must conduct or approve the person/company responsible for taking field dimensions and installing their equipment.

### 3.03 EXISTING EQUIPMENT

A. **Disconnection**: By appropriate trade; specified in other sections of these specifications.

B. **Reused**: Disassemble, if required, remove and store equipment until ready for installation; reassemble and set existing equipment in place ready for final connection; install in the same working order as when removed from service; prepare and submit a packing list identifying each piece of equipment removed and any attachments or accessories removed with it; equipment that is not in
good working order should be noted; submit packing list signed by the Owner’s Representative and the Section 11 40 00 Contractor.

C. Not Reused: Owner's Representative has the option to retain existing equipment; authorized demolition contractor will remove and dispose; obtain written authorization from Owner's Representative to remove equipment from site.

3.04 CLEANING

A. Remove masking or protective covering from stainless steel and other finished surfaces; wash, clean and polish equipment; polish glass, plastic, hardware, accessories, fixtures and fittings prior to the inspection and acceptance of the Work. Install existing equipment in the same state as when it was removed from service.

3.05 DEMONSTRATION AND TESTING

A. Demonstration: Schedule times with the Owner's Representative to provide instruction on the maintenance and use of each item; conveyor authorized service agent to demonstrate adjustment and maintenance procedures to Owner's maintenance staff and dishroom supervisor and demonstrate pump adjustment to detergent supplier; demonstrate operation to appropriate inspectors if required; verify that copies of all instructional, operational, maintenance manuals, charts and audio and video media have been provided at least two weeks prior to demonstration as required in Article 1.05, para. G.4.

B. Testing: Test, regulate and put into proper operating condition; calibrate controls, including thermostats; coordinate dishmachine testing with detergent supplier; properly activate water filters per manufacturer's recommendations.

C. Chart of Completion: Provide separate charts for demonstration and testing; include item number, description of equipment, date, person/firm responsible, and Owner’s initials; provide charts to Owner, Owner’s Representative, and Consultant prior to Owner’s acceptance.

3.06 ITEM SPECIFICATIONS

A. NOTE: Provide like equipment items (upright refrigeration, serving counters, display cases, and range match cooking equipment) and items that directly interface (hoods, raceways, fire protection systems/hood control panels) from same manufacturer. Provide common locks (when specified) on all equipment from same manufacturer.

B. NOTE: Field dimensions and installation must be completed by a person/company approved by the custom fabricator.

1 DRY STORAGE SHELVING

Five
Metro Industries Super Adjustable Super Erecta Shelving or equal by Eagle Group  *R103

A. Features: Shelves width and length shown on plan; five chrome wire shelves per section; 74” high chrome posts; no common posts

B. Installation: Verify that units fit within finished wall dimensions; assemble with bottom shelf 10” above floor or per local health code requirements
2  ROLL-THRU REFRIGERATOR, 2-SEC.  
Three  
Traulsen Model ARI232HPUT-FHS or equal by True Spec Series or Continental Designer Line *R103  
A. Features: Roll-thru model; stainless steel exterior; aluminum interior; stainless steel door liners, thermal breaks and cart ramps; 20 gauge stainless steel, self-closing door, hinged per plan; stainless steel perimeter wall trim per plans and elevations; built-in digital thermometer; automatically activated interior lights; self-contained refrigeration; automatic hot gas condensate evaporator; common door locks with other upright refrigeration on this project; must accommodate two 72" high mobile racks, Item #3, 4' cord and plug set  
B. Electrical: 120V, 1 phase; cord and plug  

3  MOBILE RACK  
Six  
New Age Industrial Model 1331 or equal by Channel Manufacturing 400A Series *R103  
Features: Aluminum construction; welded angle ledge pan slides to accommodate twenty 18" x 26" high sheet pans on 3" centers; must fit in Roll-in Refrigerator, Item #2, as specified for this project with door closed; perimeter bumper, four 5" diameter polyurethane swivel casters, two with brakes  

4  HAND SINK  
Six  
John Boos PBHS-1410-4D1X or Advance Tabco *R103  
A. Features: Stainless steel construction; 8" high integral backsplash; wall mounting bracket; two stainless steel side support brackets; single faucet hole; chrome p-trap; strainer-type waste; provide electronic eye faucet with internal thermostatic mixing valve, Chicago Faucet Model 116.104.AB.1 with Transformer Model 242.659.00.1; provide side splash if required by code  
B. Installation: Mount 34" above floor; conceal excess wiring; adjust electronic eye so it is activated only when object is placed under faucet  
C. Electrical: 120V, 1 phase  

5  OPEN NUMBER  

6  WORKCOUNTER W/SINKS  
One  
A. Fabricate; construct per plan, Part 2-Products, Elevations 1 & 2/FS200 and Standard Details  
B. Electrical: (4) 120V, 1 phase; 120/208V, 1 phase  

7  COFFEE GRINDER  
One  
This item is by Owner's Vendor and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings  

8  COFFEE BREWER  
One  
This item is by Owner's Vendor and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings
9  DOUGH PRESS W/STAND
   One
   Existing; Owner to relocate to position shown on plan; include utility requirements on rough-in drawings

10  STAINLESS STEEL WALL PANEL
    One
    A. Fabricate; construct per plan, Part 2 - Products, Elevation 3/FS200 and SD-38
    B. Features: 18 gauge stainless steel panel, continuous circular finish per Standard Detail SD-213, provide sample prior to fabricating to Consultant; stainless steel sheet to extend from 6" high AFF, coordinate with height of floor covering, to bottom edge of hood; conceal fasten to wall and seal perimeter; neatly finished utility openings with escutcheon covers; maximize size of sheets used

11  REFRIGERATED PREP TABLE
    One
    Existing; Owner to relocate to position shown on plan; include utility requirements on rough-in drawings

12  MOP SINK
    One
    Existing/no change

13  UTILITY SHELF W/MOP HANGER
    One
    Advance Tabco Model K-245 or equal by Eagle Group *R103
    Features: Stainless steel construction; 8" wide; two mop hangers; three rag hooks; mount over mop sink, Item #12, so mops do not interfere with sink use when positioned in mop hangers

14  MOBILE COMPOSITE PIZZA CUTTING TABLE
    One
    Fabricate; construct per plan, Part-2 Products *R103
    Features: 60" wide x 24" deep table; Richlite top; 14 gauge stainless steel base, welded in place undershelf; sound deadened top; four heavy-duty swivel casters, all with brakes; counter top at 36" high AFF

15  FIRE PROTECTION SYSTEM
    One
    Ansul R-102 System or equal by Pyro-Chem or Range Guard *R103
    A. Features: Wet chemical fire protection system per Article 2.09 to protect exhaust hood, Item #15 and the equipment below; automatic mechanically activated gas shut-off valve; remote manual pull station; coordinate shape of empty J-box in wall (with empty conduit) by Electrical for remote pull by FSEC, all conduit to be inside wall; tanks and nozzles per UL 300; stainless steel cabinet; provide wet chemical tanks properly sized to fit within 30" high stainless steel cabinet
    B. Testing: Provide system pre-test by factory authorized personnel to ensure proper operation prior to final test by Fire Marshal
    C. Electrical: 120V, 1 phase

16  EXHAUST HOOD (TYPE I)
    One
    Existing/no change
17 CONVEYOR PIZZA OVEN, 2-SEC.
   One
   Existing/no change

18 WORKCOUNTER
   One
   Fabricate; construct per plan, Part 2-Products, Elevation 3/FS200 and Standard Details

19 PRINTER
   Four
   This item is by Owner and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings

20 UTENSIL RACK
   One
   Advance Tabco Model SW1-48 TA-60 or equal by Eagle Group or Aero *R103
   Features: Wall mounted; length per plan; one tier rack; all stainless steel construction; pot hooks

21 OPEN NUMBER

22 REACH-IN REFRIGERATOR/FREEZER, 1-SEC.
   One
   Traulsen Model ADT132WUT-HHS or equal by Victory Ultra Spec Series, True Spec Series or Continental Designer Line *R103
   A. Features: Stainless steel exterior; aluminum interior; stainless steel door liner and thermal break; 20 gauge stainless steel, self-closing, half-height doors, hinged per plan; built-in digital thermometer; automatically activated interior lights; self-contained refrigeration; automatic condensate evaporator; automatic defrost; common door locks with other upright refrigeration on this project; 6" high stainless steel legs; total of six chrome-plated wire shelves; all electrical wired to single cord and plug set
   B. Electrical: 120V, 1 phase; cord and plug

23 MOBILE TRASH BIN
   Two
   Rubbermaid Model FG263200 GRAY w/2631 Lid & 2640 Dolly or equal by Continental Commercial Products *R103
   Features: 32 gallon capacity; dolly; gray color; with lid

24 WORKCOUNTER W/SINK
   One
   Fabricate; construct per plan, Part 2-Products, Elevation 4/FS200 and Standard Details

25 MAGNETIC KNIFE RACK
   One
   This item is by Owner and is not in the 11 40 00 Contract

26 WALL SHELF
   One
   Fabricate, construct per plan, Part 2-Products, Elevation 4/FS200 and Standard Detail SD-25b
27 DROP-IN SLIMLINE COLD PAN, 2-WELL
One
Low Temp Industries Temp-est Aire Model DI-1240TA-H-SLIM-RIP *R103
A. Features: Stainless steel construction; 2 well circulating cold air refrigerated slim-line drop in cold pan; removable divider bars; 1/3 HP compressor; fully insulated; self-contained condensing unit; one fan; stainless steel drain with strainer; FSEC to extend to floor drain; accommodates two 12" x 20" pans; standard depth model; remote on/off thermostat switch mounted in counter; provide flat flange with hugged edge; verify location and direction of condenser to ensure proper ventilation and serviceability; provide muffin fans as needed for proper ventilation; ship unit to Fabricator for installation in counter and coordination
B. Electrical: 120V, 1 phase; cord and plug

28 HEAT LAMP
Two
Hatco Model GRAH Series *R103
A. Features: Length as shown on plan; aluminum construction; high wattage; infrared heat lamp; remote control enclosure with infinite control and indicator light; position as shown on plan; install with air gap to underside of shelf per manufacturer's instructions; provide unit with all certifying agency stickers on operator's side, not visible to customer
B. Electrical: 120V, 1 phase

29 EXHAUST HOOD (TYPE I)
One
Accurex XBDW or equal by Streivor or Halton *R103
A. Features: Baffle filter-type hood; 24" high canopy; fully insulated hood to meet UL710 zero clearance requirements; without fire damper; one filter removal tool per project; inside mounted LED lights, every 3'; equipped per Article 2.08; heat sensors installed at each hood duct collar to automatically activate the exhaust fan whenever cooking operations occur (wiring to fan by Electrical Trades)
B. Size: Per plan
C. Exhaust Requirements: The project was designed on the basis of the exhaust air volumes listed below:
D. Exhaust: Two duct collars, each measuring 22" x 9" at 2269 CFM each at 0.529" static pressure, for a total of 4583 CFM at 0.529 static pressure
E. Hood must comply with code authority requirements, properly ventilate the cooking equipment beneath it and be compatible with the building ventilation systems; see mechanical engineer's drawings for further requirements; FSEC to provide stickers on all sides stating- PENETRATION WITH ANY FASTENERS VIOLATES AGENCY LISTINGS.
F. Fire Protection: See Item #32
G. Installation: Mount bottom edge of hood per Elevation
H. Electrical: 120V, 1 phase

30 TICKET RAIL
One
Carlisle Model 38480A or equal by Winco or Advance Tabco *R103
Features: Aluminum construction; 4 feet long; ball bearing design; position per plan and Elevation 4/FS200
31 STAINLESS STEEL WALL PANEL
One
A. Fabricate; construct per plan, Part 2 - Products, Elevation 5/FS200 and Standard Detail SD-38
B. Features: 18 gauge stainless steel panel, continuous circular finish per Standard Detail SD-213, provide sample prior to fabricating to Consultant; stainless steel sheet to extend from 6" high AFF, coordinate with height of floor covering, to bottom edge of hood; conceal fasten to wall and seal perimeter; neatly finished utility openings with escutcheon covers; maximize size of sheets used

32 FIRE PROTECTION SYSTEM
One
Ansul R-102 System or equal by Pyro-Chem or Range Guard *R103
A. Features: Wet chemical fire protection system per Article 2.09 to protect exhaust hood, Item #29 and the equipment below; automatic mechanically activated gas shut-off valve; remote manual pull station; coordinate shape of empty J-box in wall (with empty conduit) by Electrical for remote pull by FSEC; all conduit to be inside wall; tanks and nozzles per UL 300; stainless steel cabinet; provide wet chemical tanks properly sized to fit within 30" high stainless steel cabinet
B. Testing: Provide system pre-test by factory authorized personnel to ensure proper operation prior to final test by Fire Marshal
C. Electrical: 120V, 1 phase

33 REACH-IN FREEZER, 2-SEC.
One
Traulsen Model ALT232WUT-HHS or equal by Victory Ultra Spec Series, True Spec Series or Continental Designer Line *R103
A. Features: Stainless steel exterior; aluminum interior; automatic hot gas condensate evaporator; automatic defrost; built-in digital thermometer; 20 gauge stainless steel, self-closing half-height doors, hinged per plan; aluminum door liners; automatically activated interior lights; common door locks with other upright refrigeration on this project; 6" high stainless steel legs; five chrome-plated wire shelves per section; 4'-0" cord and plug set
B. Electrical: 120V, 1 phase; cord and plug

34 FRYER W/FILTER, 3-SEC. & (2) DUMP STATION
One
Frymaster Model FPPH355BL-SE w/ (2) Dumpstation or equal by Pitco *R103
A. Features: Three 50 pound fat capacity fryers; natural gas operation; 80 MBTU per section; full pot; electronic ignition; automatic melt cycle; timer controlled basket lifts; computer controller-CM3.5; stainless steel pot, door, and cabinet sides; twin-size baskets; full pot covers; sediment tray; gas pressure regulator; gas quick disconnect hose with restraining chain per Article 2.11B; (2) dumpstation with stainless steel sides and door, permanently attached (1) to each end of the fryer line up; common back riser, front ledge and casters to be one continuous unit; preplumbed FootPrint PRO Filtration System to accommodate all three sections; 5" diameter swivel casters, front with brakes; dump station with rod style heat lamp, cafeteria dump pan
B. Electrical: 120V, 1 phase; cord and plug (fryer & filter)
120V, 1 phase; cord and plug (heat lamp)
35  BUN DOLLY
  One
  This item is by Owner's Vendor and is not in the 11 40 00 Contract

36  SPREADER
  Two
  A. Fabricate; construct per plan, Part 2-Products and Elevation 5/FS200
  B. Features: 14 gauge stainless steel construction; cantilever-style; secure
     without the use of exposed fasteners; construct and secure as to not sag
     where attached to Grill, Item #38

37  REFRIGERATED BASE
  One
  Kairak Model KE096SC or equal by Traulsen Model TE096HT *R103
  A. Features: Self-contained unit; front breathing; stainless steel front,
     drawers, louvers and sides; reinforced stainless steel flat top; magnetic
     drawer gaskets; digital control system; non-electric automatic condensate
     evaporator; plasticized evaporator coil; one piece louver assembly; 4"
     heavy-duty swivel casters, all front casters with brakes
  B. Electrical: 120V, 1 phase; cord and plug

38  GRILL
  One
  Imperial Model ITG-72-CG or equal by Wolf Model ASA72 or Vulcan Model
  972RX *R103
  Features: 72" x 24" chrome-plated cooking surface; natural gas operation; full
  length trough with drain; grease drawers with handle; stainless steel front, sides;
  splash guard and ledge; six burners with 180,000 BTU total output; thermostatic
  controls; 7" Richlite cutting board; 4" stainless steel legs; gas pressure regulator;
  gas quick disconnect hose with restraining chain per Article 2.11B

39  WORKCOUNTER W/SINK
  One
  Fabricate; construct per plan, Part 2-Products, Elevation 6/FS200 and Standard
  Details

40  OPEN NUMBER

41  WALL SHELF
  One
  Fabricate, construct per plan, Part 2-Products, Elevation 6/FS200 and SD-25b

42  EXHAUST HOOD (TYPE I)
  One
  Accurex XBDW or equal by Streivor or Halton *R103
  A. Features: Baffle filter-type hood; 24" high canopy; fully insulated hood to
     meet UL710 zero clearance requirements; without fire damper; one filter
     removal tool per project; inside mounted LED lights, every 3'; equipped
     per Article 2.08; heat sensors installed at each hood duct collar to
     automatically activate the exhaust fan whenever cooking operations occur
     (wiring to fan by Electrical Trades)
  B. Size: Per plan
  C. Exhaust Requirements: The project was designed on the basis of the
     exhaust air volumes listed below:
  D. Exhaust: One duct collar measuring 22" x 9" at 2250 CFM at 0.482" static pressure
E. Hood must comply with code authority requirements, properly ventilate the cooking equipment beneath it and be compatible with the building ventilation systems; see mechanical engineer’s drawings for further requirements; FSEC to provide stickers on all sides stating—PENETRATION WITH ANY FASTENERS VIOLATES AGENCY LISTINGS

F. Fire Protection: See Item #44

G. Installation: Mount bottom edge of hood per Elevation

H. Electrical: 120V, 1 phase

43 STAINLESS STEEL WALL PANEL
One
A. Fabricate; construct per plan, Part 2 - Products, Elevation 6/FS200 and SD-38
B. Features: 18 gauge stainless steel panel, continuous circular finish per Standard Detail SD-213, provide sample prior to fabricating to Consultant; stainless steel sheet to extend from 6" high AFF, coordinate with height of floor covering, to bottom edge of hood; conceal fasten to wall and seal perimeter; neatly finished utility openings with escutcheon covers; maximize size of sheets used

44 FIRE PROTECTION SYSTEM
One
A. Features: Wet chemical fire protection system per Article 2.09 to protect exhaust hoods, Items #42, #74 and the equipment below; automatic mechanically activated gas shut-off valve; remote manual pull station; coordinate shape of empty J-box in wall (with empty conduit) by Electrical for remote pull by FSEC, all conduit to be inside wall; tanks and nozzles per UL 300; stainless steel cabinet; provide wet chemical tanks properly sized to fit within 30" high stainless steel cabinet
B. Testing: Provide system pre-test by factory authorized personnel to ensure proper operation prior to final test by Fire Marshal
C. Electrical: 120V, 1 phase

45 OPEN NUMBER

46 FRYER W/FILTER, 2-SEC. & DUMP STATION
One
A. Features: Two 50 pound fat capacity fryers; natural gas operation; 80 MBTU per section; full pot; electronic ignition; automatic melt cycle; timer controlled basket lifts; computer controller-CM3.5; stainless steel pot, door, and cabinet sides; twin-size baskets; full pot covers; sediment tray; gas pressure regulator; gas quick disconnect hose with restraining chain per Article 2.11B; (2) dumpstation with stainless steel sides and door, permanently attached (1) to each end of the fryer line up; common back riser, front ledge and casters to be one continuous unit; preplumbed FootPrint PRO Filtration System to accommodate all three sections; 5" diameter swivel casters, front with brakes; dump station with rod style heat lamp, cafeteria dump pan
B. Electrical: 120V, 1 phase; cord and plug (fryer & filter)
   120V, 1 phase; cord and plug (heat lamp)
47  STEAMER, BOILERLESS, 1-SEC. W/STAND
    One
    Groen Model SSB-5G or equal by Cleveland *R103
    A. Features: Boilerless steamer; stainless steel construction; one section to
       accept minimum of five 12" x 20" x 2 1/2" pans; blower cut off when door
       is open; condensate tray; continuous steam setting; ready light; minimum
       62,000 BTU; automatic drain; self-contained natural gas heated steam
       generator; gas pressure regulator; water filter per Article 2.11B and
       manufacturer's requirements; gas quick disconnect hose with restraining
       chain and water quick disconnect hose per Article 2.11B; flexible
       electrical conduit; stainless steel support stand
    B. Electrical: 120V, 1 phase; cord and plug

48  REACH-IN REFRIGERATOR/FREEZER, 2-SEC.
    One
    Traulsen Model ADT232WUT-HHS or equal by Victory Ultra Spec Series, True
    Spec Series or Continental Designer Line *R103
    A. Features: Stainless steel exterior; aluminum interior; stainless steel
       interior door liners; automatic condensate evaporator; automatic defrost;
       built-in digital thermometer; self-closing, half-height doors hinged per
       plan; common door locks with other upright refrigeration on this project; 6"
       high stainless steel legs; automatically activated interior lights; five
       chrome-plated wire shelves per section; all electrical wired to single cord
       and plug set
    B. Electrical: 120V, 1 phase; cord and plug

49  WORKCOUNTER W/SINK & OVERSHELF
    One
    A. Fabricate; construct per plan, Part 2-Products, Elevation 7/FS200 and
       Standard Details
    B. Electrical: 120/208V, 3 phase; Load Center Panel

50  OPEN NUMBER

51  OPEN NUMBER

52  OPEN NUMBER

53  UNDERCOUNTER DISHMACHINE
    One
    Hobart Model LXeR *R103
    A. Features: Stainless steel undercounter dishmachine; electric tank heat;
       steam elimination and energy recovery; 13-30 racks per hour capacity;
       custom cycle selection; hot water sanitation; solid state controls; 17" high
       interior chamber; dual upper and lower wash arms; top-mounted slide-out
       controls; removable stainless steel scrap basket; door interlock switch;
       automatic fill; automatic pumped drain; fresh water rinse; built-in booster
       heater, adequately sized to provide a minimum final rinse temperature of
       180 degrees F, FSEC to verify incoming water temperature prior to
       ordering; detergent and rinse aid pumps; chemical pump prime; service
       diagnostics; delime notification; low chemical alert; one peg and one
       combination rack; chemical bottles located to right of unit; drain water
       tempering kit; power cord kit; coordinate chemical and detergent pump
       connections with chemical supplier; must fit under counter; flexible
       plumbing connections by Mechanical; skid/leg assembly to allow unit to
be easily moved; FSEC to coordinate maximum 25 psi. water pressure to dishmachine; pressure regulator valve if required.

B. Electrical: 120/208V, 1 phase; cord and plug

54 RICE COOKER
Two
Panasonic Model SR-GA721 or equal by Town *R103
A. Features: Countertop electric rice cooker; capacity for 180 three ounce servings (40 cups raw rice); automatic shut-off; stainless steel lid; built-in thermostat; push button controls
B. Electrical: 208V, 1 phase; cord and plug

55 OPEN NUMBER

56 SOILED PAN CART
One
Metro Industries MY2030-24-BL or Custom Fabricate *R103
A. Features: All-polymer shelves; black; two adjustable shelf units, per cart; overall height of posts with casters, 28” AFF; four heavy-duty swivel casters; unit must fit under counters per plan and Elevations
B. Modifications: FSEC to provide hole in each shelf for cleaning purposes; modify posts to meet overall height to 28” AFF

57 MOBILE WORKTABLE
Two
Advance Tabco Model SS-308 or equal by Eagle Group or Custom Fabricate *R103
A. Features: Length and width per plan; 36” high; 14 gauge stainless steel top and understructure; stainless steel adjustable undershelf; stainless steel legs and underbracing; rolled rim edge; paint on sound deadening under top; (2) convenience duplex receptacles to service Items #58; XHD urethane 5” diameter swivel casters, all with brakes; cord and plug wrap
B. Electrical: 120/208, 1 phase; cord and plug; Mini Load Center Panel

58 PANINI GRILL
Two
STAR GX10IG or equal by Electrolux *R103
A. Features: Griddle with upper and one lower cast iron grooved cooking surfaces; independently controlled thermostat and timer; full-length crumb tray; cleaning tool for grooved cooking surface
B. Electrical: 208V, 1 phase; cord and plug

59 SANDWICH PREP TABLE
One
Existing; Owner to relocate to position shown on plan; include utility requirements on rough-in drawings

60 OPEN NUMBER

61 WALL SHELF
One
Fabricate, construct per plan, Part 2-Products, and SD-25b; coordinate mounting height with Item #59 and Owner's Representative
62 BREAD RACK
   One
   This item is by Owner's Vendor and is not in the 11 40 00 Contract

63 DELI SERVING COUNTER
   One
   A. Fabricate; construct per plan, Part 2-Products, Elevations 1 & 2/FS201 and Standard Details
   B. Electrical: (2) 120V, 1 phase; (2) 208V, 1 phase

64 REFRIGERATED DISPLAY CASE
   Three
   Structural Concepts Model GHSS436R Fusion *R103
   A. Features: Self-contained refrigerated, self-service unit; Breeze refrigeration; Clean Sweep coil cleaner; plastic laminate exterior, color as approved by Consultant and to match Counters, Item #63 and #72; black lower front exterior panel; solid surface top, color as approved by Consultant and to match Counters, Item #63 and #72; black interior; black trim; retractable, non-locking night curtain, positioned out of Customer view when not in use; casters with levelers; full end panel with mirror interior at ends; refrigerated rear storage with doors; LED 4200K top light and lighted solid shelves, removable and adjustable on 1” centers; stainless steel rear exterior; 1” bumper on front, color as approved by Consultant; floor drain; provide shop drawing
   B. Electrical: 120V, 1 phase; cord and plug

65 OPEN NUMBER

66 FILLER COUNTER PIECE
   One
   Fabricate; construct per plan, Part 2-Products, Elevations 1 & 2/FS201, Section C/FS202 and Standard Details.; plastic laminate and solid surface finishes to match Refrigerated Display Case, Item #64

67 SOUP WELL
   Two
   Wells Model HW106D-120 *R103
   A. Features: Heavy-duty, drop-in cook & hold soup well; stainless steel construction; provide adapter top to convert to 7-quart inset capacity; infinite thermostatic control with on-off indicator light and 36” high capillary; wet operation only; 1240 watt output; centered drain with drain valve assembly; drain screen; manifold adjacent wells to one accessible drain valve and extend to floor drain; provide electrical conduit, bezel and control box; provide 7-quart stainless steel inset pan and hinged lid for each unit
   B. Electrical: 208V 1 phase

68 CUP DISPENSER
   Six
   Dispense-Rite Model BFL-2S or equal by San Jamar or Carlisle *R103
   Features: Stainless steel construction; stainless ring bezel; silicone baffle gasket size to accommodate 8 - 44 ounce cups; horizontal mounting; coordinate to accommodate Owner's cup size and composition; two units to be wall mounted per plan
69 ELECTRONIC MENU BOARD
Three
This item is by Owner and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings

70 OPEN NUMBER

71 P.O.S. SYSTEM
Four
This item is by Owner and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings

72 STIR FRY/GRILL/PIZZA SERVING COUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevations 1 & 2/FS201 and Standard Details
B. Electrical: 120/208V, 3 phase; Load Center Panel

73 PROTECTOR SHELF SYSTEM W/HEAT LAMP
One
BSI, LLC Z-Guard Model ZG9915/ZG9930 w/Heat Lamp Model 490 & Model ZG9500-4 "R103
A. Features: 1" round diameter tubing; brushed aluminum finish; Stealth heat lamp centered over Item #76; 3/8" tempered, rounded glass panels on adjustable brackets; 14" angled front glass panel; 14" horizontal top glass panel; verify height of front glass panel at Item #77; end panels as required by code; 1" radius corners; remote infinite switch; heavy-duty flange, undercounter mount, SSU3 with gusset; 21" post height above counter; 8" minimum undercounter mount extension, welded to cabinet framework
B. Electrical: 208V, 1 phase

74 EXHAUST HOOD (TYPE I)
One
Accurex Model XBEW or equal by Streivor or Halton "R103
A. Features: Island style, filter-type hood; 24" high canopy; fully insulated hood to meet UL710 zero clearance requirements; without fire damper; one filter removal tool per project; inside mounted LED lights, every 3'; equipped per Article 2.08; heat sensors installed at each hood duct collar to automatically activate the exhaust fan whenever cooking operations occur; interwiring by Electrical Trades
B. Size: Per plan
C. Exhaust Requirements: The project was designed on the basis of the exhaust air volumes listed below:
D. Exhaust: One duct collar measuring 24" x 9" at 2450 CFM at 0.398" static pressure
E. Hood must comply with code authority requirements, properly ventilate the cooking equipment beneath it and be compatible with the building ventilation systems; see mechanical engineer's drawings for further requirements; FSEC to provide stickers on all sides stating:
   PENETRATION WITH ANY FASTENERS VIOLATES AGENCY LISTINGS
F. Fire Protection: See Item #44
G. Installation: Mount bottom edge of hood per Elevation
H. Electrical: 120V, 1 phase
75 OPEN NUMBER

76 HOT/COLD PAN, 2-WELL
One
Low Temp Industries Model QSCHFP-2H *R103
A. Features: Stainless steel construction; fully welded and insulated pan; self-contained refrigeration system; thermal break between top and refrigerated interior; individually controlled wells; 500 watt heating system per well; wet or dry use; remote control panel with 30" wip, mount in apron of counter per Elevation 1/FS201; accommodates two 12" x 20" pans; removable divider bars; manifold individual well drains to a single drain connection, FSEC to extend to floor drain; provide loose brass ball valves for installation by FSEC; provide flat flange with hugged edge; modify flange width to cover counter thermal break; verify location and direction of condenser to ensure proper ventilation and serviceability; provide muffin fans as needed for proper ventilation; ship unit to Fabricator for installation in counter and coordination; provide shop drawing; two year parts and labor warranty
B. Electrical: 120/208V, 1 phase

77 SAUTE' RANGE W/REFRIGERATED BASE & RAIL
One
Jade Model JMSS-04-T-48/JRLH-02S-T-48 or equal by Montague Sauté Station *R103
A. Features: Heavy-duty sauté station; natural gas operation; four feet wide; stainless steel exterior including front, top, sides and stub back with flue diverter; four cast iron burners at front; raised refrigerated rail at rear; refrigerated base below; self-contained refrigeration system sized for both raised rail and refrigerated base; drawers on bottom refrigeration; rear gas connection; gas pressure regulator; gas quick disconnect with restraining chain per Article 2.11B; 6" high heavy-duty swivel casters, front two with brakes
B. Electrical: 120V, 1 phase; cord and plug

78 DROP-IN COLD PAN, 3-WELL
One
Low Temp Industries Temp-est Aire Model DI-2037TAH *R103
A. Features: Circulating cold air refrigerated drop-in cold pan; stainless steel construction; 1/3 HP compressor; fully insulated; self-contained condensing unit; one fan; stainless steel drain with strainer; FSEC to extend to floor drain; accommodates three 12" x 20" pans; standard depth model; removable divider bars; remote on/off thermostatist controls mounted in counter per Elevation 1/FS201; provide flat flange with hugged edge; verify location and direction of condenser to ensure proper ventilation and serviceability; provide muffin fans as needed for proper ventilation; ship unit to Fabricator for installation in counter and coordination; provide shop drawing
B. Electrical: 120V, 1 phase; cord and plug

79 REFRIGERATED DISPLAY CASE
One
Structural Concepts Model GHSS636R Fusion *R103
A. Features: Self-contained refrigerated, self-service unit; Breeze refrigeration; Clean Sweep coil cleaner; plastic laminate exterior, color as approved by Consultant and to match Counters, Item #63 and #72; black lower front exterior panel; solid surface top, color as approved by
Consultant and to match Counter, #73 and (1) Item #64, per plan; black interior; black trim; retractable, non-locking night curtain, positioned out of Customer view when not in use; casters with levelers; full end panel with mirror interior at ends; refrigerated rear storage with doors; LED 4200K top light and lighted solid shelves, removable and adjustable on 1” centers; stainless steel rear exterior; 1” bumper on front, color as approved by Consultant; floor drain; provide shop drawing

B. Electrical: 120V, 1 phase; cord and plug

80 LID DISPENSER
Two
Dispense-Rite Model TL0-2BT *R103
Features: Countertop lid and straw dispenser, 2-section; polystyrene construction; angled lid compartments; divided section for straws

81 AIRPOT DISPENSER
Two
This item is by Owner's Vendor and is not in the 11 40 00 Contract

82 HEATED SHELF W/PROTECTOR SHELF
One
Hatco Model GRHW-2P *R103
A. Features: Countertop unit; width per plan; 19.125” depth, including protector shelf; countertop unit; top and bottom heat; integral protector shelf; hardcoat aluminum top; prefocused infrared top heat; infinite switch for top heat only; thermostatically-controlled heated base; coated shatter-resistant light; hardcoated surface; 4” legs; verify designer color with Owner prior to ordering
B. Electrical: 120V, 1 phase; cord and plug

83 BEVERAGE COUNTER
One
Fabricate; construct per plan, Part 2-Products, Elevation 3/FS201 and Standard Details

84 ICE DISPENSER W/SODA HEADS
Two
This item is by Owner's Vendor and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings.

85 TRASH BIN
One
Rubbermaid Model 3540-60 or equal by Continental Commercial Products or Carlisle *R103
A. Features: 23 gallon capacity; 30” high; venting channels; molded-in handles and base grips; gray color
B. Installation: Position as shown on plan

86 ICE MAKER
Two
Manitowoc Model IY-0606A *R103
A. Features: Stainless steel exterior finish; 635 pounds ice production capacity per 24 hours; half-dice cubes; air-cooled condensing unit; removable/cleanable air filter; luminice growth inhibitor with replacement bulb; water filter per Article 2.11B
B. Electrical: 208V, 1 phase; cord and plug
87  SODA SYSTEM CARBONATOR
   Two
This item is by Owner's Vendor and is not in the 11 40 00 Contract; include utility
requirements on rough-in drawings

END OF SECTION 11 40 00
STATE OF MICHIGAN
Prevailing Wages
PO Box 30476
Lansing, MI 48909
517-284-7800

Informational Sheet: Prevailing Wages on State Projects

REQUIREMENTS OF
THE PREVAILING WAGES ON STATE PROJECTS ACT, PUBLIC ACT 166 OF 1965

The State of Michigan determines prevailing rates pursuant to the Prevailing Wages on State Projects Act, Public Act 166 of 1965, as amended. The purpose of establishing prevailing rates is to provide minimum rates of pay that must be paid to workers on construction projects for which the state or a school district is the contracting agent and which is financed or financially supported by the state. By law, prevailing rates are compiled from the rates contained in collectively bargained agreements which cover the locations of the state projects. The official prevailing rate schedule provides an hourly rate which includes wage and fringe benefit totals for designated construction mechanic classifications. The overtime rates also include wage and fringe benefit totals. Please pay special attention to the overtime and premium pay requirements. Prevailing wage is satisfied when wages plus fringe benefits paid to a worker are equal to or greater than the required rate.

State of Michigan responsibilities under the law:

- The department establishes the prevailing rate for each classification of construction mechanic requested by a contracting agent prior to contracts being let out for bid on a state project.

Contracting agent responsibilities under the law:

- If a contract is not awarded or construction does not start within 90 days of the date of the issuance of rates, a redetermination of rates must be requested by the contracting agent.
- Rates for classifications needed but not provided on the Prevailing Rate Schedule, must be obtained prior to contracts being let out for bid on a state project.
- The contracting agent, by written notice to the contractor and the sureties of the contractor known to the contracting agent, may terminate the contractor’s right to proceed with that part of the contract, for which less than the prevailing rates have been or will be paid, and may proceed to complete the contract by separate agreement with another contractor or otherwise, and the original contractor and his sureties shall be liable to the contracting agent for any excess costs occasioned thereby.

Contractor responsibilities under the law:

- Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing rates prescribed in a contract.
- Every contractor and subcontractor shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each construction mechanic employed by him in connection including certified payroll, as used in the industry, with said contract. This record shall be available for reasonable inspection by the contracting agent or the department.
- Each contractor or subcontractor is separately liable for the payment of the prevailing rate to its employees.
- The prime contractor is responsible for advising all subcontractors of the requirement to pay the prevailing rate prior to commencement of work.
- The prime contractor is secondarily liable for payment of prevailing rates that are not paid by a subcontractor.
- A construction mechanic shall only be paid the apprentice rate if registered with the United States Department of Labor, Bureau of Apprenticeship and Training and the rate is included in the contract.

Enforcement:

A person who has information of an alleged prevailing wage violation on a state project may file a complaint with the State of Michigan. The department will investigate and attempt to resolve the complaint informally. During the course of an investigation, if the requested records and posting certification are not made available in compliance with Section 5 of Act 166, the investigation will be concluded and a referral to the Office of Attorney General for civil action will be made. The Office of Attorney General will pursue costs and fees associated with a lawsuit if filing is necessary to obtain records.
General Information Regarding Fringe Benefits

Certain fringe benefits may be credited toward the payment of the Prevailing Wage Rate:

- If a fringe benefit is paid directly to a construction mechanic
- If a fringe benefit contribution or payment is made on behalf of a construction mechanic
- If a fringe benefit, which may be provided to a construction mechanic, is pursuant to a written contract or policy
- If a fringe benefit is paid into a fund, for a construction mechanic

When a fringe benefit is not paid by an hourly rate, the hourly credit will be calculated based on the annual value of the fringe benefit divided by 2080 hours per year (52 weeks @ 40 hours per week).

The following is an example of the types of fringe benefits allowed and how an hourly credit is calculated:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Value Calculation</th>
<th>Hourly Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacation</td>
<td>40 hours X $14.00 per hour = $560/2080 =</td>
<td>$.27</td>
</tr>
<tr>
<td>Dental insurance</td>
<td>$31.07 monthly premium X 12 mos. = $372.84 /2080 =</td>
<td>$.18</td>
</tr>
<tr>
<td>Vision insurance</td>
<td>$5.38 monthly premium X 12 mos. = $64.56/2080 =</td>
<td>$.03</td>
</tr>
<tr>
<td>Health insurance</td>
<td>$230.00 monthly premium X 12 mos. = $2,760.00/2080 =</td>
<td>$1.33</td>
</tr>
<tr>
<td>Life insurance</td>
<td>$27.04 monthly premium X 12 mos. = $324.48/2080 =</td>
<td>$.16</td>
</tr>
<tr>
<td>Tuition</td>
<td>$500.00 annual cost/2080 =</td>
<td>$.24</td>
</tr>
<tr>
<td>Bonus</td>
<td>4 quarterly bonus/year x $250 = $1000.00/2080 =</td>
<td>$.48</td>
</tr>
<tr>
<td>401k Employer Contribution</td>
<td>$2000.00 total annual contribution/2080 =</td>
<td>$.96</td>
</tr>
<tr>
<td><strong>Total Hourly Credit</strong></td>
<td></td>
<td><strong>$3.65</strong></td>
</tr>
</tbody>
</table>

Other examples of the types of fringe benefits allowed:

- Sick pay
- Holiday pay
- Accidental Death & Dismemberment insurance premiums

The following are examples of items that will not be credited toward the payment of the Prevailing Wage Rate

- Legally required payments, such as:
  - Unemployment Insurance payments
  - Workers’ Compensation Insurance payments
  - FICA (Social Security contributions, Medicare contributions)

- Reimbursable expenses, such as:
  - Clothing allowance or reimbursement
  - Uniform allowance or reimbursement
  - Gas allowance or reimbursement
  - Travel time or payment
  - Meals or lodging allowance or reimbursement
  - Per diem allowance or payment

- Other payments to or on behalf of a construction mechanic that are not wages or fringe benefits, such as:
  - Industry advancement funds
  - Financial or material loans
OVERTIME PROVISIONS for MICHIGAN PREVAILING WAGE RATE COMMERCIAL SCHEDULE

1. Overtime is represented as a nine character code. Each character represents a certain period of time after the first 8 hours Monday thru Friday.

<table>
<thead>
<tr>
<th></th>
<th>Monday thru Friday</th>
<th>Saturday</th>
<th>Sunday &amp; Holidays</th>
<th>Four 10s</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 8 Hours</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>9th Hour</td>
<td></td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>10th Hour</td>
<td></td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Over 10 hours</td>
<td></td>
<td>3</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Overtime for Monday thru Friday after 8 hours:
the 1st character is for time worked in the 9th hour (8.1 - 9 hours)
the 2nd character is for time worked in the 10th hour (9.1 - 10 hours)
the 3rd character is for time worked beyond the 10th hour (10.1 and beyond)

Overtime on Saturday:
the 4th character is for time worked in the first 8 hours on Saturday (0 - 8 hours)
the 5th character is for time worked in the 9th hour on Saturday (8.1 - 9 hours)
the 6th character is for time worked in the 10th hour (9.1 - 10 hours)
the 7th character is for time worked beyond the 10th hour (10.01 and beyond)

Overtime on Sundays & Holidays
The 8th character is for time worked on Sunday or on a holiday

Four Ten Hour Days
The 9th character indicates if an optional 4-day 10-hour per day workweek can be worked between Monday and Friday without paying overtime after 8 hours worked, unless otherwise noted in the rate schedule. To utilize a 4 ten workweek, notice is required from the employer to employee prior to the start of work on the project.

2. Overtime Indicators Used in the Overtime Provision:
H - means TIME AND ONE-HALF due
X - means TIME AND ONE-HALF due after 40 HOURS worked
D - means DOUBLE PAY due
Y - means YES an optional 4-day 10-hour per day workweek can be worked without paying overtime after 8 hours worked
N - means NO an optional 4-day 10-hour per day workweek can not be worked without paying overtime after 8 hours worked

3. EXAMPLES:
HHHHHHHDN - This example shows that the 1½ rate must be used for time worked after 8 hours Monday thru Friday (characters 1 - 3); for all hours worked on Saturday, 1½ rate is due (characters 4 - 7). Work done on Sundays or holidays must be paid double time (character 8). The N (character 9) indicates that 4 ten-hour days is not an acceptable workweek at regular pay.

XXXHHHHDDY - This example shows that the 1½ rate must be used for time worked after 40 hours are worked Monday thru Friday (characters 1-3); for hours worked on Saturday, 1½ rate is due (characters 4 – 7). Work done on Sundays or holidays must be paid double time (character 8). The Y (character 9) indicates that 4 ten-hour days is an acceptable alternative workweek.

LARA is an equal opportunity employer.
Auxiliary aids, services and other reasonable accommodations are available, upon request, to individuals with disabilities.
Wage and Hour Program
530 W. Allegan • P.O. BOX 30476 • LANSING, MICHIGAN 48909
www.michigan.gov/wagehour • Phone : (517) 284-7800
### Undergraduate Engineers

**Class I**
Backfiller Tamper, Backhoe, Batch Plant Operator, Clam-Shell, Concrete Paver (2 drums or larger), Conveyor Loader (Euclid type), Crane (crawler, truck type or pile driving), Dozer, Dragline, Elevating Grader, End Loader, Gradall (and similar type machine), Grader, Power Shovel, Roller (asphalt), Scraper (self propelled or tractor drawn), Side Broom Tractor (type D-4 or larger), Slope Paver, Trencher (over 8’ digging capacity), Well Drilling Rig, Mechanic, Slip Form Paver, Hydro Excavator.

**Class II**
Boom Truck (power swing type boom), Crusher, Hoist, Pump (1 or more 6” discharge or larger gas or diesel powered by generator of 300 amps or more, inclusive of generator), Side Boom Tractor (smaller than type D-4 or equivalent), Tractor (pneu-tired, other than backhoe or front end loader), Trencher (8’ digging capacity and smaller), Vac Truck.

**Class III**
Air Compressors (600 cfm or larger), Air Compressors (2 or more less than 600 cfm), Boom Truck (non-swning, non-powered type boom), Concrete Breaker (self-propelled or truck mounted, includes compressor), Concrete Paver (1 drum, ½ yard or larger), Elevator (other than passenger), Maintenance Man, Mechanic Helper, Pump (2 or more 4” up to 6” discharge, gas or diesel powered, excluding submersible pump), Pumpcrete Machine (and similar equipment), Wagon Drill Machine, Welding Machine or Generator (2 or more 300 amp or larger, gas or diesel powered).

**Class IV**
Boiler, Concrete Saw (40HP or over), Curing Machine (self-propelled), Farm Tractor (w/attachment), Finishing Machine (concrete), Firemen, Hydraulic Pipe Pushing Machine, Mulching Equipment, Oiler (2 or more up to 4”, exclude submersible), Pumps (2 or more up to 4” discharge if used 3 hrs or more a day-gas or diesel powered, excluding submersible pumps), Roller (other than asphalt), Stump Remover, Vibrating Compaction Equipment (6’ wide or over), Trencher (service) Sweeper (Wayne type and similar equipment), Water Wagon, Extend-a-Boom Forklift.

### Hazardous Waste Abatement Engineers

**Class I**
Backhoe, Batch Plant Operator, Clamshell, Concrete Breaker when attached to hoe, Concrete Cleaning Decontamination Machine Operator, Concrete Pump, Concrete Paver, Crusher, Dozer, Elevating Grader, End Loader, Farm Tractor (90 h.p. and higher), Gradall, Grader, Heavy Equipment Robotics Operator, Hydro Excavator, Loader, Pug Mill, Pumpcrete Machines, Pump Trucks, Roller, Scraper (self-propelled or tractor drawn), Side Boom Tractor, Slip Form Paver, Slope Paver, Trencher, Ultra High Pressure Waterjet Cutting Tool System Operator, Vactors, Vacuum Blasting Machine Operator, Vertical Lifting Hoist, Vibrating Compaction Equipment (self-propelled), and Well Drilling Rig.

**Class II**
Air Compressor, Concrete Breaker when not attached to hoe, Elevator, End Dumps, Equipment Decontamination Operator, Farm Tractor (less than 90 h.p.), Forklift, Generator, Heater, Mulcher, Pigs (Portable Reagent Storage Tanks), Power Screens, Pumps (water), Stationary Compressed Air Plant, Sweeper, Water Wagon and Welding Machine.
State of Michigan

Official Request #: 69
Requestor: Michigan Technological University
Project Description: Memorial Union Building Retail Dining Renovations installing food service equipment
Project Number: 34-15-01

Houghton County

Official 2016 Prevailing Wage Rates for State Funded Projects

Issue Date: 1/14/2016
Contract must be awarded by: 4/13/2016

Official Rate Schedule

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

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

Asbestos & Lead Abatement Laborer

Asbestos & Lead Abatement Laborer MLDC 10/30/2015 $40.75 $54.34 $67.93 H H X X X X D Y
4 ten hour days @ straight time allowed Monday-Saturday, must be consecutive

Asbestos & Lead Abatement, Hazardous Material Handler

Asbestos and Lead Abatement, Hazardous Material Handler AS207 10/30/2015 $40.75 $54.25 $67.75 H H X X X X D Y
4 ten hour days @ straight time allowed Monday-Saturday, must be consecutive

Boilermaker

Boilermaker BO169 2/17/2015 $54.70 $81.08 $107.45 H H H H H H D Y

Apprentice Rates:

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

Page 1 of 25
Official 2016 Prevailing Wage Rates for State Funded Projects

Issue Date: 1/14/2016
Contract must be awarded by: 4/13/2016

Classification | Name Description | Last Updated | Straight Hourly | Time and a Half | Double Time | Overtime Provision
===================================================================================================
Bricklayer | Marble, Tile and Terrazzo Finisher | BR6 | 6/2/2014 | $36.55 | $45.79 | $55.03 | H H D X H H D D Y
Make up day allowed | comment
Four 10s allowed Monday-Thurs. | Make up days: Friday & Saturday.

Bricklayer, stone mason, mosaic worker, plasterer, tuck pointer, pointer, caulk & cleaner | BR6-2 | 6/2/2014 | $42.71 | $55.03 | $67.35 | X X H X X H H D D Y
Make up day allowed | comment
Saturday
All time over 12 hours pr day - double

Apprentice Rates:
0 - 749 hours | $32.85 | $40.24 | $47.63
750 - 1499 hours | $34.09 | $42.10 | $50.11
1500 - 2249 hours | $35.32 | $43.95 | $52.57
2250 - 2999 hours | $36.55 | $45.79 | $55.03
3000 - 3749 hours | $37.78 | $47.63 | $57.49
3750 - 4499 hours | $39.01 | $49.48 | $59.95
4500 - 5249 hours | $40.25 | $51.34 | $62.43
5250 - 6000 hours | $41.48 | $53.19 | $64.89

Marble, Tile and Terrazzo Layer | BR6TL | 6/2/2014 | $42.71 | $55.03 | $67.35 | H H D X H H D D Y
Make up day allowed | comment
Four 10s allowed Monday-Thurs. | Make up days: Friday & Saturday.

Official Request #: 69
Requestor: Michigan Technological University
Project Description: Memorial Union Building Retail Dining Renovations installing
Project Number: 34-15-01
County: Houghton

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.
### Carpenter

**Carpenter, Drywall Taper & Finisher, & Floor**  
CA1510-C  
10/14/2015  
$42.00 $53.66 $65.32 X X H X X H H D Y  

- **Make up day allowed**  
- **Saturday**

#### Apprentice Rates:

<table>
<thead>
<tr>
<th>Period</th>
<th>Straight Time</th>
<th>Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st 6 months</td>
<td>$32.67</td>
<td>$39.66</td>
<td>$46.66</td>
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<tr>
<td>2nd 6 months</td>
<td>$33.84</td>
<td>$41.42</td>
<td>$49.00</td>
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<tr>
<td>3rd 6 months</td>
<td>$35.00</td>
<td>$43.16</td>
<td>$51.32</td>
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<tr>
<td>4th 6 months</td>
<td>$36.17</td>
<td>$44.92</td>
<td>$53.66</td>
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<td>5th 6 months</td>
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<td>6th 6 months</td>
<td>$38.50</td>
<td>$48.41</td>
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<td>7th 6 months</td>
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<td>$50.16</td>
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<td>8th 6 months</td>
<td>$40.83</td>
<td>$51.90</td>
<td>$62.98</td>
<td></td>
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</tbody>
</table>

### Piledriver

**Piledriver**  
CA1510-P  
10/14/2015  
$42.20 $53.96 $65.72 X X H X X H H D Y  

- **Make up day allowed**  
- **Saturday**

#### Apprentice Rates:

<table>
<thead>
<tr>
<th>Period</th>
<th>Straight Time</th>
<th>Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st 6 months</td>
<td>$32.79</td>
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<td>$33.97</td>
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<td>3rd 6 months</td>
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<td>4th 6 months</td>
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<td>Double Time</td>
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<tr>
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<tr>
<td>Cement Mason</td>
<td>6/2/2014</td>
<td>$42.71 $55.03</td>
<td>$67.35</td>
<td>H D X H D D Y</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H H H H H H H H H D D Y</td>
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</tr>
</tbody>
</table>

**Make up day allowed**

- Comment: Four 10s allowed Monday-Thurs.
- Make up days: Friday and Saturday.

**Apprentice Rates:**

- 0 - 749 hours: $34.09, $42.10, $50.11
- 750 - 1499 hours: $35.32, $43.95, $52.57
- 1500 - 2249 hours: $36.55, $45.79, $55.03
- 2250 - 2999 hours: $37.78, $47.63, $57.49
- 3000 - 3749 hours: $39.01, $49.48, $59.95
- 3750 - 4500 hours: $40.25, $51.34, $62.43

Cement Mason

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
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</thead>
<tbody>
<tr>
<td>BR6-CM</td>
<td>Cement Mason</td>
<td>6/2/2014</td>
<td>$42.71 $55.03</td>
<td>$67.35</td>
<td>H D X H D D Y</td>
</tr>
</tbody>
</table>

**Make up day allowed**

- Comment: Four 10s allowed Monday-Thursday with Friday or Saturday inclement weather make up days.
- Saturday hours for inclement weather make up shall be paid straight rate unless over 40 hours worked.

**Apprentice Rates:**

- 1st year: $23.24, $29.79, $36.35
- 2nd year: $25.26, $32.83, $40.39
- 3rd year: $27.27, $35.84, $44.41
<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Updated</th>
<th>Straight Time and a Half Time Provision</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrician</td>
<td>Sound and Communications Installer/Technician</td>
<td>3/12/2013</td>
<td>$33.43</td>
<td>$43.97</td>
</tr>
</tbody>
</table>

A 4 day 10 hour day schedule is allowed

**Apprentice Rates:**

- 1st period: $25.00, $31.32, $37.65
- 2nd period: $27.11, $34.49, $41.87
- 3rd period: $28.16, $36.07, $43.97
- 4th period: $29.22, $37.66, $46.09
- 5th period: $30.27, $39.23, $48.19
- 6th period: $31.33, $40.83, $50.31

Inside wireman for work above $180,000 total value.

A 4 ten schedule may be worked if 4 consecutive days, M-Th or Tues-F.

Make up day allowed

**Apprentice Rates:**

- 6,500-8,000 hours: $37.17, $50.94, $64.70
- 0-1,000 hours: $23.41, $30.29, $37.17
- 1,000-2,000 hours: $24.94, $32.58, $40.22
- 2,000-3,500 hours: $28.01, $37.19, $46.36
- 3,500-5,000 hours: $31.07, $41.77, $52.48
- 5,000-6,500 hours: $34.13, $46.37, $58.60
### Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Straight Hourly</th>
<th>Time and Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside wireman for work below $180,000 total value.</td>
<td>EC-219-ZB</td>
<td>below</td>
<td>3/12/2013</td>
<td>$42.47</td>
<td>$55.48</td>
<td>$68.49</td>
<td>H H H H H D</td>
</tr>
<tr>
<td>A 4 ten schedule may be worked if 4 consecutive days, M-Th or Tues-F.</td>
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<tr>
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<td>$27.22</td>
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<td>$22.67</td>
<td>$29.17</td>
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<td>$25.26</td>
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<td>$30.47</td>
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<td>$33.08</td>
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<td>Elevator Constructor Mechanic</td>
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<td>4/8/2013</td>
<td>$70.77</td>
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<td>$116.32</td>
<td>D D D D D D D Y</td>
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<td>4 tens allowed M-TH</td>
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<tr>
<td>1st year</td>
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<td>$50.27</td>
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<td>$54.83</td>
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<td>$88.98</td>
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## Glazier

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<th>Description</th>
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<th>Straight Hourly</th>
<th>Time and Half Hourly</th>
<th>Double Time Hourly</th>
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<td>$75.91</td>
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</tbody>
</table>

4 tens allowed on consecutive days

**Apprentice Rates:**

- 1st 6 months: $31.46, $40.99, $50.51
- 2nd 6 months: $33.05, $43.37, $53.69
- 3rd 6 months: $34.63, $45.74, $56.85
- 4th 6 months: $36.22, $48.13, $60.03
- 5th 6 months: $37.81, $50.51, $63.21
- 6th 6 months: $39.40, $52.90, $66.39
- 7th 6 months: $40.99, $55.28, $69.57
- 8th 6 months: $42.57, $57.66, $72.73

## Heat and Frost Insulator

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
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<tbody>
<tr>
<td>Heat and Frost Insulator</td>
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<td>11/3/2014</td>
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<td>$55.93</td>
<td>$68.89</td>
<td>H H H D D D Y</td>
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</table>

Make up day allowed

**Apprentice Rates:**

- 1st year: $30.01, $36.49, $42.97
- 2nd year: $32.60, $40.37, $48.15
- 3rd year: $35.19, $44.26, $53.33
- 4th year: $37.79, $48.16, $58.53

## Spray Insulation

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

For work over $10 million: Structural, Ornamental, Machinery Rigger & Reinforcing Ironworker; installation of sheet metal siding

A 4-10 work week allowed Monday thru Thursday. Friday may be used as a make-up day. Hours in excess of 40 must be paid time and one half.

*Make up day allowed*

<table>
<thead>
<tr>
<th>Apprentice Rates:</th>
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<tr>
<td>0-1,000 hours</td>
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<td>1,001 - 2,000 hours</td>
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<tr>
<td>2,001 - 3,000 hours</td>
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</tr>
<tr>
<td>4,001 - 5,000 hours</td>
</tr>
<tr>
<td>5,001 - 6,000 hours</td>
</tr>
<tr>
<td>6,001 - 7,000 hours</td>
</tr>
</tbody>
</table>

For work under $10 Million: Structural, Ornamental, Machinery Rigger & Reinforcing Ironworker; pre-engineered metal buildings

A 4-10 work week allowed Monday thru Thursday. Friday may be used as a make-up day. Hours in excess of 40 must be paid time and one half.

*Make up day allowed*

<table>
<thead>
<tr>
<th>Apprentice Rates:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 hours</td>
</tr>
<tr>
<td>1,001 - 2,000 hours</td>
</tr>
<tr>
<td>2,001 - 3,000 hours</td>
</tr>
<tr>
<td>3,001 - 4,000 hours</td>
</tr>
<tr>
<td>4,001 - 5,000 hours</td>
</tr>
<tr>
<td>5,001 - 6,000 hours</td>
</tr>
<tr>
<td>6,001 - 7,000 hours</td>
</tr>
</tbody>
</table>
Official 2016 Prevailing Wage Rates for State Funded Projects

Issue Date: 1/14/2016
Contract must be awarded by: 4/13/2016

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight Time and</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>10/15/2015</td>
<td>Updated</td>
<td>Hourly</td>
</tr>
<tr>
<td>Laborer</td>
<td>Class A Laborer - construction laborer on building and heavy construction work, storm, and sanitary sewers on all construction sites and streets which are not included in the road builder rates, tool crib attendant, civil engineer helper, rodman, oxi-gun operator, propane or acetylene cutting torch operator, motor driven buggies, chipping hammers, tamping machines, green cutting, sand blasters, mason tenders, mortar mixers, material mixers, vibrator operators, concrete mixers, laborers with concrete crew, mixer to pour, including pour time from trucks.</td>
<td>L1329-B-A</td>
<td>$33.40</td>
<td>$43.49</td>
<td>$53.57</td>
</tr>
<tr>
<td>Apprentice Rates:</td>
<td></td>
<td></td>
<td></td>
<td>$28.36</td>
<td>$35.93</td>
</tr>
<tr>
<td>0 - 1,000 hours</td>
<td></td>
<td></td>
<td></td>
<td>$29.37</td>
<td>$37.44</td>
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<tr>
<td>1,001 - 2,000 hours</td>
<td></td>
<td></td>
<td></td>
<td>$30.37</td>
<td>$38.94</td>
</tr>
<tr>
<td>2,001 - 3,000 hours</td>
<td></td>
<td></td>
<td></td>
<td>$32.39</td>
<td>$41.97</td>
</tr>
<tr>
<td>3,001 - 4,000 hours</td>
<td></td>
<td></td>
<td></td>
<td>$33.81</td>
<td>$44.10</td>
</tr>
<tr>
<td>Class B Laborer - Cement gun nozzleman, blasters, miners, drillers, buster operators, layers of all non-metallic pipe</td>
<td>L1329-B-B</td>
<td>10/15/2015</td>
<td>$34.17</td>
<td>$44.64</td>
<td>$55.11</td>
</tr>
<tr>
<td>Class C Laborer - caisson worker &amp; airtrack</td>
<td>L1329-B-C</td>
<td>10/15/2015</td>
<td>$35.51</td>
<td>$46.65</td>
<td>$57.79</td>
</tr>
<tr>
<td>Class E Laborer - digester, tanks &amp; kilns</td>
<td>L1329-B-D</td>
<td>10/15/2015</td>
<td>$34.17</td>
<td>$44.64</td>
<td>$55.11</td>
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</table>

Official Request #: 69
Requestor: Michigan Technological University
Project Description: Memorial Union Building Retail Dining Renovations installing
Project Number: 34-15-01
County: Houghton

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.
### 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>Hours Range</th>
<th>Rate Hourly</th>
<th>Rate Half Time</th>
<th>Rate Double Overtime</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
<td>$27.93</td>
<td>$38.90</td>
<td>$49.86</td>
<td>H H H H H H H D Y</td>
</tr>
<tr>
<td>1,001-2,000 work hours</td>
<td>$28.93</td>
<td>$40.40</td>
<td>$51.86</td>
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<tr>
<td>2,001-3,000 work hours</td>
<td>$29.92</td>
<td>$41.88</td>
<td>$53.84</td>
<td>H H H H H H H D Y</td>
</tr>
<tr>
<td>3,001-4,000 work hours</td>
<td>$31.91</td>
<td>$44.86</td>
<td>$57.82</td>
<td>H H H H H H H D Y</td>
</tr>
</tbody>
</table>

**Class B** - performing work in conjunction with the removal, handling, or containment of hazardous waste substances when the use of personal protective equipment levels "A", "B" or "C" 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>Hours Range</th>
<th>Rate Hourly</th>
<th>Rate Half Time</th>
<th>Rate Double Overtime</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
<td>$28.68</td>
<td>$40.02</td>
<td>$51.36</td>
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<tr>
<td>1,001-2,000 work hours</td>
<td>$29.73</td>
<td>$41.60</td>
<td>$53.46</td>
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<tr>
<td>2,001-3,000 work hours</td>
<td>$30.77</td>
<td>$43.16</td>
<td>$55.54</td>
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<tr>
<td>3,001-4,000 work hours</td>
<td>$32.86</td>
<td>$46.29</td>
<td>$59.72</td>
<td>H H H H H H H D Y</td>
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<tr>
<td>Classification</td>
<td>Description</td>
<td>Last Updated</td>
<td>Straight Time and a Half</td>
<td>Double Time</td>
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<tr>
<td>----------------</td>
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</tr>
<tr>
<td>Laborer Underground - Tunnel, Shaft &amp; Caisson</td>
<td>Class I - Tunnel, shaft and caisson laborer, dump man, shanty man, hog house tender, testing man (on gas), and watchman.</td>
<td>10/30/2014</td>
<td>$35.67</td>
<td>$47.07</td>
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<tr>
<td></td>
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<td></td>
<td>$38.57</td>
<td>$51.48</td>
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<td>$41.48</td>
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<td></td>
<td></td>
<td>$47.31</td>
<td>$62.63</td>
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**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Work Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
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<tr>
<td>1,001-2,000 work hours</td>
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<tr>
<td>2,001-3,000 work hours</td>
</tr>
<tr>
<td>3,001-4,000 work hours</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Classification</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>Laborer Underground - Tunnel, Shaft &amp; Caisson</td>
<td>Class II - Manhole, headwall, catch basin builder, bricklayer tender, mortar man, material mixer, fence erector, and guard rail builder</td>
<td>10/30/2014</td>
<td>$35.76</td>
<td>$47.21</td>
<td>$58.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$38.67</td>
<td>$51.59</td>
<td>$64.51</td>
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<tr>
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<td></td>
<td></td>
<td>$41.58</td>
<td>$55.51</td>
<td>$68.45</td>
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<td>$44.49</td>
<td>$59.44</td>
<td>$72.38</td>
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<td></td>
<td></td>
<td></td>
<td>$47.40</td>
<td>$63.37</td>
<td>$76.31</td>
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</tbody>
</table>

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Work Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
</tr>
<tr>
<td>1,001-2,000 work hours</td>
</tr>
<tr>
<td>2,001-3,000 work hours</td>
</tr>
<tr>
<td>3,001-4,000 work hours</td>
</tr>
</tbody>
</table>

Official Request #: 69
Requestor: Michigan Technological University
Project Description: Memorial Union Building Retail Dining Renovations installing
Project Number: 34-15-01
County: Houghton

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 2016 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/14/2016  
**Contract must be awarded by:** 4/13/2016  

#### Page 12 of 25

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class III - Air tool operator (jack hammer man, bush hammer man and grinding man), first bottom man, second bottom man, cage tender, car pusher, carrier man, concrete man, concrete form man, concrete repair man, cement invert laborer, cement finisher, concrete shoveler, conveyor man, floor man, gasoline and electric tool operator, gunnite man, grout operator, welder, heading dinky man, inside lock tender, pea gravel operator, pump man, outside lock tender, scaffold man, top signal man, switch man, track man, tugger man, utility man, vibrator man, winch operator, pipe jacking man, wagon drill and air track operator and concrete saw operator (under 40 h.p.)</td>
<td>LAUCT-Z2-3</td>
<td>10/30/2014</td>
<td>$35.86</td>
<td>$47.36</td>
<td>$58.85</td>
<td>X</td>
</tr>
</tbody>
</table>

#### Apprentice Rates:

- **0-1,000 work hours**  
  - Straight Hourly: $30.66  
  - Time and Half Hourly: $39.56  
  - Double Time Hourly: $48.45  

- **1,001-2,000 work hours**  
  - Straight Hourly: $31.70  
  - Time and Half Hourly: $41.12  
  - Double Time Hourly: $50.53  

- **2,001-3,000 work hours**  
  - Straight Hourly: $32.74  
  - Time and Half Hourly: $42.68  
  - Double Time Hourly: $52.61  

- **3,001-4,000 work hours**  
  - Straight Hourly: $34.82  
  - Time and Half Hourly: $45.80  
  - Double Time Hourly: $56.77  

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class IV - Tunnel, shaft and caisson mucker, bracer man, liner plate man, long haul dinky driver and well point man</td>
<td>LAUCT-Z2-4</td>
<td>10/30/2014</td>
<td>$36.02</td>
<td>$47.60</td>
<td>$59.17</td>
<td>X</td>
</tr>
</tbody>
</table>

#### Apprentice Rates:

- **0-1,000 work hours**  
  - Straight Hourly: $30.78  
  - Time and Half Hourly: $39.74  
  - Double Time Hourly: $48.69  

- **1,001-2,000 work hours**  
  - Straight Hourly: $31.83  
  - Time and Half Hourly: $41.32  
  - Double Time Hourly: $50.79  

- **2,001-3,000 work hours**  
  - Straight Hourly: $32.88  
  - Time and Half Hourly: $42.89  
  - Double Time Hourly: $52.89  

- **3,001-4,000 work hours**  
  - Straight Hourly: $34.97  
  - Time and Half Hourly: $46.02  
  - Double Time Hourly: $57.07  

---

**Official Request #:** 69  
**Requestor:** Michigan Technological University  
**Project Description:** Memorial Union Building Retail Dining Renovations installing  
**Project Number:** 34-15-01  
**County:** Houghton  

**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 12 of 25
### Class V - Tunnel, shaft and caisson miner, drill runner, keyboard operator, power knife operator, reinforced steel or mesh man (e.g. wire mesh, steel mats, dowel bars)

<table>
<thead>
<tr>
<th>Classification Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight</th>
<th>Time and</th>
<th>a Double</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAUCT-Z2-5</td>
<td>$36.28</td>
<td>$47.99</td>
<td>$59.69</td>
<td>X</td>
<td>X</td>
<td>X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Rate 1</th>
<th>Rate 2</th>
<th>Rate 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
<td>$30.98</td>
<td>$40.04</td>
<td>$49.09</td>
</tr>
<tr>
<td>1,001-2,000 work hours</td>
<td>$32.04</td>
<td>$41.63</td>
<td>$51.21</td>
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<td>2,001-3,000 work hours</td>
<td>$33.10</td>
<td>$43.22</td>
<td>$53.33</td>
</tr>
<tr>
<td>3,001-4,000 work hours</td>
<td>$35.22</td>
<td>$46.40</td>
<td>$57.57</td>
</tr>
</tbody>
</table>

### Class VI - Dynamite man and powder man.

<table>
<thead>
<tr>
<th>Classification Name</th>
<th>Updated</th>
<th>Last Straight</th>
<th>Time and</th>
<th>a Double</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAUCT-Z2-6</td>
<td>$36.59</td>
<td>$48.45</td>
<td>$60.31</td>
<td>X</td>
<td>X X X X X D Y</td>
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</tbody>
</table>

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Rate 1</th>
<th>Rate 2</th>
<th>Rate 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
<td>$31.21</td>
<td>$40.38</td>
<td>$49.55</td>
</tr>
<tr>
<td>1,001-2,000 work hours</td>
<td>$32.28</td>
<td>$41.99</td>
<td>$51.69</td>
</tr>
<tr>
<td>2,001-3,000 work hours</td>
<td>$33.36</td>
<td>$43.61</td>
<td>$53.85</td>
</tr>
<tr>
<td>3,001-4,000 work hours</td>
<td>$35.51</td>
<td>$46.84</td>
<td>$58.15</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Classification Name</th>
<th>Updated</th>
<th>Last Straight</th>
<th>Time and</th>
<th>a Double</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAUCT-Z2-7</td>
<td>$28.86</td>
<td>$36.86</td>
<td>$44.85</td>
<td>X</td>
<td>X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Rate 1</th>
<th>Rate 2</th>
<th>Rate 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1,000 work hours</td>
<td>$25.41</td>
<td>$31.68</td>
<td>$37.95</td>
</tr>
<tr>
<td>1,001-2,000 work hours</td>
<td>$26.10</td>
<td>$32.72</td>
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<tr>
<td>2,001-3,000 work hours</td>
<td>$26.79</td>
<td>$33.76</td>
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<td>3,001-4,000 work hours</td>
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<tr>
<td>Classification</td>
<td>Name</td>
<td>Description</td>
<td>Updated</td>
</tr>
<tr>
<td>----------------</td>
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<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Landscape Laborer</td>
<td>Landscape Specialist includes air, gas, and diesel equipment operator, skidsteer (or equivalent), lawn sprinkler installer on landscaping work where seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintenance of landscape projects occurs. Sundays paid at time &amp; one half. Holidays paid at double time.</td>
<td>LLAN-Z2-A</td>
<td>10/13/2015</td>
</tr>
<tr>
<td>Skilled Landscape Laborer: small power tool operator, lawn sprinkler installers' tender, material mover, truck driver on when seeding, sodding, planting, cutting, trimming, backfilling, rough grading or maintaining of landscape projects occurs. Sundays paid at time &amp; one half. Holidays paid at double time.</td>
<td>LLAN-Z2-B</td>
<td>10/13/2015</td>
<td>$24.05</td>
</tr>
<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>
</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>
</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

Official Request #: 69
Requestor: Michigan Technological University
Project Description: Memorial Union Building Retail Dining Renovations installing
Project Number: 34-15-01
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.
<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and a Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friction, Lattice Boom or Crane License Certification</td>
<td>GLF-2B</td>
<td>2/12/2014</td>
<td>$64.50</td>
<td>$84.10</td>
<td>$103.70</td>
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<td></td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>Holiday pay = $123.30</td>
<td>Make up day allowed</td>
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</tr>
<tr>
<td>Subdivision of county</td>
<td>All Great Lakes, islands therein, &amp; connecting &amp; tributary waters</td>
<td></td>
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<td>Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity)</td>
<td>GLF-3</td>
<td>$59.30</td>
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<td>and under or Backhoe 115,000 lbs or less, Assistant Tug Operator</td>
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</table>
## Official 2016 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/14/2016  
**Contract must be awarded by:** 4/13/2016  
**Page 16 of 25**

### Classification

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Half Time</th>
<th>Double Time</th>
<th>Overtime Provision</th>
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<tr>
<td>Crane with 400’ or longer main boom &amp; jib N</td>
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<td>Class A- Regular equipment operator, crane, dozer, front end loader, pumpcrete, squeeze crete, job mechanic, welder, concrete pump, excavator, milling &amp; pulverizing machines, &amp; scraper (self-propelled &amp; tractor drawn).</td>
<td>EN-324UP-AGU</td>
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</tbody>
</table>

#### Apprentice Rates:

- 1st 6 months $40.37 $50.19 $60.01
- 2nd 6 months $41.78 $52.31 $62.83
- 3rd 6 months $43.18 $54.41 $65.63
- 4th 6 months $44.58 $56.51 $68.43
- 5th 6 months $45.98 $58.61 $71.23
- 6th 6 months $47.39 $60.72 $74.05

### Class B- Air-Trac Drill, boom truck (non-swing), concrete mixers, material hoist and tugger, pumps 6” and over, beltcrete, sweeping machine, trencher, head grease man, winches, well points and freeze systems

- EN-324UP-BGU | 7/1/2015 | $46.95 | $59.36 | $71.76 | X X H H H H D N |
| **comment**                  | Double time after 12 hours Mon-Sat                                         |              |                 |           |             |                   |

### Class C- Fork Truck, air compressor, conveyer, concrete saw, farm tractor(without attachments), generator, guard post driver, mulching machines, pumps under 6", welding machines

- EN-324UP-CGU | 7/1/2015 | $46.37 | $58.49 | $70.60 | X X H H H H D |
| **comment**                  | Double time after 12 hours Mon-Sat                                         |              |                 |           |             |                   |

### Class D- Oilier, fireman, heater operator, brock concrete breaker, elevators (other than passenger), end dump & skid steer

- EN-324UP-DGU | 7/1/2015 | $45.43 | $57.08 | $68.72 | X X H H H H D |
| **comment**                  | Double time after 12 hours Mon-Sat                                         |              |                 |           |             |                   |

Official Request #: 69  
Requestor: Michigan Technological University  
Project Description: Memorial Union Building Retail Dining Renovations installing  
Project Number: 34-15-01  
County: Houghton  

**Official Rate Schedule**

Every contractor and subcontractor shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in a contract.
<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Updated</th>
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<th>Straight Hourly</th>
<th>Time and Half</th>
<th>a Double Time</th>
<th>Overtime Provision</th>
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<tbody>
<tr>
<td>Crane 220' boom &amp; jib</td>
<td>EN-324UP-GU 7/1/2015</td>
<td>$51.20</td>
<td>$65.73</td>
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<tr>
<td>Mechanic w/ truck &amp; tools</td>
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<td></td>
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</tr>
</tbody>
</table>

Operating Engineer Steel Work

| Crane 120' boom & jib | EN-324UP-120S 7/8/2015 | $51.10 | $65.58 | $80.06 | X | H | H | H | H | D |
| comment | Double time after 12 hours Mon-Sat |

| Crane 140' boom & jib | EN-324UP-140S 7/8/2015 | $51.35 | $65.96 | $80.56 | X | H | H | H | H | D |
| comment | Double time after 12 hours Mon-Sat |

| Crane 220' boom & jib | EN-324UP-220S 7/8/2015 | $51.60 | $66.33 | $81.06 | X | H | H | H | H | D |
| comment | Double time after 12 hours Mon-Sat |

| Crane with 300' boom & jib | EN-324UP-300S 7/8/2015 | $53.33 | $68.93 | $84.52 | X | H | H | H | H | D |
| Make up day allowed | comment | Double time after 12 hours Mon-Sat |

| Crane with 400' boom & jib | EN-324UP-400S 7/8/2015 | $55.05 | $71.51 | $87.96 | X | H | H | H | H | D |
| Make up day allowed | comment | Double time after 12 hours Mon-Sat |

| Compressor, Welder & Forklift | EN-324UP-CWS 7/8/2015 | $47.35 | $59.96 | $72.56 | X | H | H | H | H | D |
| comment | Double time after 12 hours Mon-Sat |

| Mechanic w/ truck & tools | EN-324UP-MS 7/8/2015 | $52.10 | $67.08 | $82.06 | X | X | H | H | H | H | D | Y |
| comment | Double time after 12 hours Mon-Sat |

Official Request #: 69
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County: Houghton

Official Rate Schedule
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Official 2016 Prevailing Wage Rates for State Funded Projects

Issue Date: 1/14/2016
Contract must be awarded by: 4/13/2016

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<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and a Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
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</thead>
<tbody>
<tr>
<td>Oiler &amp; Fireman</td>
<td>EN-324UP-OFS 7/8/2015</td>
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<td>$58.01</td>
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<td>Operator</td>
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<td>$79.06</td>
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**Apprentice Rates:**

1st 6 months: $40.56
2nd 6 months: $41.98
3rd 6 months: $43.41
4th 6 months: $44.84
5th 6 months: $46.26
6th 6 months: $47.68

| Painter | PT-1011 7/17/2015 | $31.25 | $41.01 | $50.76 | H H H H H D N |

**Apprentice Rates:**

1st 1000 hours: $23.45
2nd 1000 hours: $24.42
3rd 1000 hours: $25.40
4th 1000 hours: $26.37
5th 1000 hours: $27.35
6th 1000 hours: $28.32
7th 1000 hours: $29.30
8th 1000 hours: $30.27

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<td><strong>Apprentice Rates:</strong></td>
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<tr>
<td>1st 1,000 hours</td>
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<td>$26.23</td>
<td>$33.48</td>
<td>$40.72</td>
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<td>2nd 1,000 hours</td>
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<td>$27.44</td>
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<td>$29.85</td>
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<td>General Laborer for rehab work or normal cleaning and cctv work-top man, scaffold man, CCTV assistant, jetter-vac assistant</td>
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<td>$28.20</td>
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**Official Request #:** 69  
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**Project Number:** 34-15-01  
**County:** Statewide  

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<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Straight</th>
<th>Time and</th>
<th>Overtime</th>
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<td>CCTV Technician/Combo Unit Operator</td>
<td>unit driver and operator of cctv unit or combo unit in connection with normal cleaning and televising work</td>
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<td>Combo Unit driver &amp; Jetter-Vac Operator</td>
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<td>Pipe Bursting &amp; Slip-lining Equipment Operator</td>
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<td>4/17/2015</td>
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<td>10/23/2012</td>
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**Apprentice Rates:**

- 1st year | $29.67 | $38.06 | $46.46
- 2nd year | $32.25 | $41.94 | $51.62
- 3rd year | $34.84 | $45.82 | $56.80

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## Official 2016 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/14/2016  
**Contract must be awarded by:** 4/13/2016

### Plumber & Pipefitter

<table>
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<th>Description</th>
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<th>Time and a Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
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<td>PL-111</td>
<td>7/30/2009</td>
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4 ten hour days may be worked only Monday-Thursday  
*Make up day allowed*

#### Apprentice Rates:

- 1st 6 months: $23.96  
- 2nd 6 months: $25.44  
- 3rd 6 months: $35.32  
- 4th 6 months: $36.65  
- 5th 6 months: $37.99  
- 6th 6 months: $39.47  
- 7th 6 months: $40.80  
- 8th 6 months: $42.13  
- 9th 6 months: $43.46

### Roofer

| Description         | RO-149-UP | 4/17/2015 | $28.23 | $36.56 | $44.88 | X X X X X X D Y |

*Make up day allowed*

#### Apprentice Rates:

- Apprentice 1: $20.84  
- Apprentice 2: $21.67  
- Apprentice 3: $22.48  
- Apprentice 4: $23.29  
- Apprentice 5: $24.09  
- Apprentice 6: $24.90

### Sewer Relining

| Description                          | SR-I | 11/24/2015 | $43.66 | $59.01 | $74.36 | H H H H H H D N |

Class I-Operator of audio visual CCTV system including remote in-ground cutter and other equipment used in conjunction with CCTV

---

**Official Request #:** 69  
**Requestor:** Michigan Technological University  
**Project Description:** Memorial Union Building Retail Dining Renovations installing  
**Project Number:** 34-15-01  
**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 2016 Prevailing Wage Rates for State Funded Projects

**Issue Date:** 1/14/2016  
**Contract must be awarded by:** 4/13/2016  
**Page 22 of 25**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Last Updated</th>
<th>Straight Time and a Double Overtime</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class II-Operator of hot water heaters and circulation system; water jetters; and vacuum and mechanical debris removal systems and those assisting.</td>
<td>SR-II</td>
<td>11/24/2015</td>
<td>$42.13</td>
<td>$56.72</td>
<td>$71.30 H H H H H H D N</td>
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**Sheet Metal Worker**  
Sheet Metal Worker  
shm-7-5  
11/5/2015  
$51.59 $65.60 $79.60 H H H D D Y  
4 10s allowed as consecutive days, M-Th  
Make up day allowed  

**Apprentice Rates:**  
1st 6 months $27.84 $34.14 $40.44  
2nd 6 months $29.88 $36.88 $43.88  
3rd 6 months $31.93 $39.64 $47.34  
4th 6 months $33.96 $42.37 $50.77  
5th 6 months $36.01 $45.12 $54.22  
6th 6 months $38.05 $47.86 $57.66  
7th 6 months $40.09 $50.60 $61.10  
8th 6 months $42.13 $53.34 $64.54

**Sprinkler Fitter**  
Sprinkler Fitter  
SP 669  
9/17/2009  
$46.51 $61.99 $77.47 H H H H H H D Y  
Make up day allowed

**Apprentice Rates:**  
Class 1 & 2 $23.44 $31.31 $39.17  
Class 3 $29.35 $37.75 $46.15  
Class 4 $30.93 $40.12 $49.31  
Class 5 $35.50 $45.47 $55.45  
Class 6 $37.07 $47.83 $58.59  
Class 7 $38.65 $50.20 $61.75  
Class 8 $40.22 $52.55 $64.89  
Class 9 $41.79 $54.91 $68.03  
Class 10 $43.36 $57.27 $71.17

---

Official Request #: 69  
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<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Description</th>
<th>Updated</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and Half Hourly</th>
<th>Double Time Hourly</th>
<th>Overtime Provision</th>
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<tbody>
<tr>
<td><strong>Truck Driver</strong></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>of all trucks of 8 cubic yd capacity or over</td>
<td>TM-RB2</td>
<td>8/8/2013</td>
<td>$41.92</td>
<td>$37.85</td>
<td>H H H H H H H Y</td>
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<tr>
<td></td>
<td></td>
<td>of all trucks of 8 cubic yard capacity or less</td>
<td>TM-RB2A</td>
<td>8/8/2013</td>
<td>$41.82</td>
<td>$37.70</td>
<td>H H H H H H H Y</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(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)</td>
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<tr>
<td></td>
<td></td>
<td>on euclid type equipment</td>
<td>TM-RB2B</td>
<td>8/8/2013</td>
<td>$41.35</td>
<td>$38.08</td>
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<tr>
<td><strong>Underground Laborer Open Cut, Class I</strong></td>
<td></td>
<td>Construction Laborer</td>
<td>LAUC-Z5-1</td>
<td>10/30/2014</td>
<td>$32.75</td>
<td>$42.68</td>
<td>$52.61 X X X X X X D Y</td>
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<tr>
<td></td>
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<td>Apprentice Rates:</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>0-1,000 work hours</td>
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<td></td>
<td>$28.35</td>
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<tr>
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<td>1,001-2,000 work hours</td>
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<td>$29.23</td>
<td>$37.40</td>
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<tr>
<td></td>
<td></td>
<td>2,001-3,000 work hours</td>
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<td></td>
<td>$30.11</td>
<td>$38.72</td>
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<tr>
<td></td>
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<td>3,001-4,000 work hours</td>
<td></td>
<td></td>
<td>$31.87</td>
<td>$41.36</td>
<td>$50.85</td>
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<tr>
<td><strong>Underground Laborer Open Cut, Class II</strong></td>
<td></td>
<td>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.</td>
<td>LAUC-Z5-2</td>
<td>10/30/2014</td>
<td>$32.89</td>
<td>$42.89</td>
<td>$52.89 X X X X X X D Y</td>
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<tr>
<td></td>
<td></td>
<td>Apprentice Rates:</td>
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<tr>
<td></td>
<td></td>
<td>0-1,000 work hours</td>
<td></td>
<td></td>
<td>$28.46</td>
<td>$36.25</td>
<td>$44.03</td>
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<tr>
<td></td>
<td></td>
<td>1,001-2,000 work hours</td>
<td></td>
<td></td>
<td>$29.34</td>
<td>$37.57</td>
<td>$45.79</td>
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</tr>
<tr>
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<td></td>
<td>2,001-3,000 work hours</td>
<td></td>
<td></td>
<td>$30.23</td>
<td>$38.90</td>
<td>$47.57</td>
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<td>3,001-4,000 work hours</td>
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<td></td>
<td>$32.00</td>
<td>$41.56</td>
<td>$51.11</td>
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</tr>
</tbody>
</table>

Official Request #: 69  
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Project Number: 34-15-01  
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Official Rate Schedule  
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### Underground Laborer Open Cut, Class III

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>LAUC-Z5-3 10/30/2014</td>
<td>$33.02</td>
<td>$43.09</td>
<td>$53.15</td>
<td>X X X X X Y</td>
<td></td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $28.56, $36.40, $44.23
- 1,001-2,000 work hours: $29.45, $37.74, $46.01
- 2,001-3,000 work hours: $30.34, $39.07, $47.79
- 3,001-4,000 work hours: $32.13, $41.76, $51.37

### Underground Laborer Open Cut, Class IV

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trench or excavating grade man.</td>
<td>LAUC-Z5-4 10/30/2014</td>
<td>$33.07</td>
<td>$43.16</td>
<td>$53.25</td>
<td>X X X X X Y</td>
<td></td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $28.59, $36.44, $44.29
- 1,001-2,000 work hours: $29.49, $37.80, $46.09
- 2,001-3,000 work hours: $30.38, $39.13, $47.87
- 3,001-4,000 work hours: $32.17, $41.82, $51.45

### Underground Laborer Open Cut, Class V

<table>
<thead>
<tr>
<th>Classification</th>
<th>Name Description</th>
<th>Last Updated</th>
<th>Straight Hourly</th>
<th>Time and a Half</th>
<th>Double Time</th>
<th>Overtime Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Layer</td>
<td>LAUC-Z5-5 10/30/2014</td>
<td>$33.12</td>
<td>$43.24</td>
<td>$53.35</td>
<td>X X X X X Y</td>
<td></td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $28.63, $36.50, $44.37
- 1,001-2,000 work hours: $29.53, $37.86, $46.17
- 2,001-3,000 work hours: $30.43, $39.20, $47.97
- 3,001-4,000 work hours: $32.22, $41.89, $51.55

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</tr>
</thead>
<tbody>
<tr>
<td>Underground Laborer Open Cut, Class VI</td>
<td>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 &amp; the installation and repair of water service pipe and appurtenances.</td>
<td>LAUC-Z5-6 10/30/2014</td>
<td>$30.50</td>
<td>$39.31</td>
<td>$48.11</td>
<td>X X X X X X D Y</td>
</tr>
</tbody>
</table>

**Apprentice Rates:**

- 0-1,000 work hours: $26.66 $33.55 $40.43
- 1,001-2,000 work hours: $27.43 $34.70 $41.97
- 2,001-3,000 work hours: $28.20 $35.86 $43.51
- 3,001-4,000 work hours: $29.73 $38.16 $46.57

| Underground Laborer Open Cut, Class VII | Restoration laborer, seeding, sodding, planting, cutting, mulching and topsoil grading and the restoration of property such as replacing mail boxes, wood chips, planter boxes, flagstones etc. | LAUC-Z5-7 10/30/2014 | $28.61 | $36.47 | $44.33 | X X X X X X D Y |

**Apprentice Rates:**

- 0-1,000 work hours: $25.25 $31.44 $37.61
- 1,001-2,000 work hours: $25.92 $32.44 $38.95
- 2,001-3,000 work hours: $26.59 $33.44 $40.29
- 3,001-4,000 work hours: $27.94 $35.47 $42.99