
This is a Cover Sheet to the State's Owner and Contractor Standard Construction Contract, known as the *MICHSPEC™* Division 0 Specifications. The *MICHSPEC™* Division 0 Specifications have been developed from the FORMSPEC™ Michigan Model, 1997 Edition. Although the State's 2008 Version of the Division 0 Specifications are written as simply as practical, it is nonetheless advisable to consult with companion Guide to Specifiers when preparing specifications for a specific project. These Division 0 Specifications were developed by incorporating provisions and requirements furnished by the State into the FORMSPEC™ Michigan Model. These Division 0 Specifications have undergone detailed technical reviews by Department of Technology, Management and Budget, **State Facilities Administration** representatives and detailed legal reviews by the Department of the Attorney General for the State of Michigan. Specifiers are encouraged to consult with a Division 0 specifications specialist or an attorney knowledgeable in public contracts when preparing specifications for a specific project.

STATE OF MICHIGAN

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET

STATE FACILITIES ADMINISTRATION

MICHSPEC™ 2008 VERSION, OWNER AND CONTRACTOR

STANDARD CONTRACT FORMS AND CONDITIONS OF THE CONTRACT

MICHSPEC™ No. 97.0820 – 00020 THROUGH 97.0820 – 00440

RELEASED ON NOVEMBER 1, 1997.

Developed from
Contract Forms and Conditions of the Contract
FORMSPEC™ Michigan Model
and suggested for use with
Bidding Requirements

File No.: 491/23066.SDW
Department/Agency: DHHS

**Project Name: Replace Security System
Programmable Logic Controllers**
Location: Center for Forensic Psychiatry

7/22/2024

1997 Edition/R 02/24 Version

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Previous System installation As-Built drawings. These are for reference only.

SECTION 00020 GLOSSARY**1.1 Defined Terms:**

1.1.1. The following terms or relative pronouns used in Division 0 of the Specifications have these intent and meanings:

Activity– An element in the Progress Schedule establishing a requisite step, or the time and resources required, for completing the part of the Work associated with that Activity.

Addenda– Written instruments that are used by the **Owner** and/or **Professional** to incorporate interpretations or clarifications, modifications, and other information into the Bidding Documents. An Addendum issued after Bid opening to those Bidders who submitted a Bid, for the purpose of rebidding the Work without re-advertising, is referred to as a post-Bid Addendum.

Agreement– The written agreement between the **Owner** and **Contractor** covering the Work to be furnished and performed.

Alternate– Refers to Work specified in the Bidding Documents for which the Bidder shall bid a Bid Price in the space provided in the Schedule of Alternates in Section 00300 Bid Form.

Apparent Low Bidder– Those Bidders whose Base Bid, when added to those specific Alternates the Owner intends to accept, yields the three lowest sums of Base Bid and Alternates. Additional Bidders may be considered Apparent Low Bidders if their Base Bid, when added to those specific Alternates the Owner intends to accept, yields a sum within 10% of the lowest of the Apparent Low Bidder's sum. If a qualified disabled veteran meets the requirements of the contract solicitation and with the veteran's preference is the lowest Bidder is considered the Apparent Low Bidder.

Archaeological Feature– Any prehistoric or historic deposit of archaeological value, as determined by a representative of a State agency that is duly authorized to evaluate such findings and render such judgments. An Archaeological Feature deposit may include, but is not limited to Indian habitations, ceremonial sites, abandoned settlements, treasure trove, artifacts, or other objects with intrinsic archaeological value and that relate to the history and culture of the State of Michigan.

As-Planned Schedule– The **Contractor's** Revision 0 Progress Schedule returned to the **Contractor** as "Resubmittal Not Required," with or without comments or objections noted.

Authorized Technical Data– Information and data contained in a report of exploration and tests of subsurface conditions that are expressly designated in paragraph 2.0 of Section 00210 Information for Bidders. Also, any physical data (dimension, location, conditions, etc.) contained in those drawings of physical conditions of existing surface and subsurface facilities identified in paragraph 3.0 of Section 00210 Information for Bidders.

Bar Chart Schedule– Activity schedule, in a bar chart format, that accounts for the entire Work at a level of detail

commensurate with the Progress Schedule requirements of the Contract Documents.

STATE OF MICHIGAN MODEL

Developed from FORMSPEC™ Michigan Model.

Bid– Written offer by a Bidder for the Work, as specified, which designates the Bidder's Base Bid and Bid Prices for all Alternates. The term *Bid* includes a *Rebid*.

Bidder– The Person acting directly, or through an authorized representative, who submits a Bid directly to the **Owner**.

Bidding Documents– The proposed Contract Documents as advertised, and all Addenda issued before Bid opening, and after Bid opening, if the Work is rebid without re-advertising.

Bid Price– The Bidder's price for a lump sum item of Work, or the product of the Bidder's unit price for an item of Unit Price Work times the quantity given on the Bid Form for that item.

Bid Security– A security serving as a guarantee that the Bidder will conform to all conditions requisite for its return or as liquidated damages in the event of failure or refusal to conform.

Bidding Requirements– The Advertisement, Instructions to Bidders (including Attachment A), Supplementary Instructions, Information for Bidders, Bid Form, Bid Form Attachments and Qualification Submittals, as advertised and as modified by Addenda, and any other Section included within Division 0 of the Bidding Documents for the purpose of governing bidding and award of the Contract.

***AD Board**– The Administrative Board of the State of Michigan.

Bonds– Section 00310 Bid Bond, Section 00610 Performance Bond and Section 00620 Payment Bond are security furnished by the **Contractor**, as required by the Contract Documents.

Business Day– Any Day except Saturdays, Sundays and holidays observed by the **Owner**.

Bulletin– A standard **DTMB** or other **PSC** form used by the **PSC & Owner** to describe a change in the Work under consideration by the **Owner** and to request the **Contractor** to submit a proposal for the corresponding adjustment in Contract Price and/or Contract Time, if any.

Calendar Day– Every day shown on the calendar, Saturdays, Sundays, and holidays included.

Cash Allowance– An **Owner**-specified sum included within the Contract Price to reimburse the **Contractor** for the actual purchase/furnished cost of materials and/or equipment or other designated items, as specifically provided in the Contract Documents. Although the scope (e.g., the required quantity) of any Work covered by a Cash Allowance is sufficiently

detailed in the Contract Documents for the purposes of bidding the required labor costs, Subcontract costs, construction equipment costs and general conditions costs and Fee, it is understood that the required materials, equipment or other designated items are of uncertain purchase cost at the time of Bid or are yet to be specified in more detail by the **Professional** as to quality, appearance, durability, finish and such other necessary features affecting purchase price.

Change Authorization– A written order issued and signed by the **Professional**, which directs changes in the Work that require no adjustment in Contract Price or Contract Time, or which allows for variations in the quantities of Unit Price Work.

Change Order– A written order issued and signed by the **Owner**, which amends the Contract Documents for changes in the Work or an adjustment in Contract Price and/or Contract Time, or both.

Construction Mechanic– A skilled or unskilled mechanic, laborer, worker, helper, assistant, or apprentice working on a state project but shall not include executive, administrative, professional, office, or custodial employees

Contact Person– Individual in the employ of the **Professional** or the **Owner** who is designated as the sole point of contact for prospective Bidders for requests or inquiries concerning the Work and/or the Bidding Documents.

Contract– Refer to the definition in paragraph 1.1 of Section 00500 Agreement. The term “Contract” encompasses the legal obligations of the **Owner** and **Contractor**, as defined by the Contract Documents.

Contract Award– The official action of the **Board**, the **Director-SFA** or the **Director-DCD** awarding the Contract to the **Contractor**.

Contract Documents– Those documents itemized or designated in paragraphs 2.2 through 2.4 of Section 00500 Agreement.

Contract Float– Calendar Days between the **Contractor's** anticipated date for early completion of the Work, or of a specified portion of the Work, if any, and the corresponding Contract Time.

Contract Price– The Contract price for the Work, or a designated portion of the Work, as designated in Section 00500 Agreement or elsewhere in the Contract Documents, is the total compensation, including authorized adjustments, payable by the **Owner** to the **Contractor** (subject to provisions for Unit Price Work).

Contract Times– The Contract Times for the entire Work are the periods allowed, including authorized adjustments, for Substantial Completion and final completion of the Work. The Contract Times for a designated portion of the Work are the periods allowed for Substantial Completion and final completion of any such portion of the Work, as specified in the Contract Documents.

Contractor– Person named “the **Contractor**” in Section 00500 Agreement with whom the **Owner** has entered into the Contract.

Correction Period– The period during which the **Contractor** shall, in accordance with the Contract Documents, (a) correct or, if rejected, remove, and replace Defective Work, and (b) maintain warranties for materials and equipment in full force and effect.

Cost of the Work Involved– The sum of all costs that would be, or were, necessarily incurred by the **Contractor** in providing any Work Involved with the related change, less the costs that would be, or would have been, incurred by the **Contractor** to provide such Work without the related change.

CPM Schedule– Computerized, Activity-based Progress Schedule, using Critical Path Method (CPM) techniques, and accounting for the entire Work at a level of detail commensurate with the Progress Schedule requirements of the Contract Documents.

Critical Path Method (CPM)– The Critical Path Method of planning and scheduling. The term “Critical Path” denotes a sequence of Activities controlling achievement of a specified Contract Time.

Date of Commencement of the Contract Time– The date when the Contract Time starts to run.

Defective– An adjective which when referring to or when applied to the term “Work” refers to (a) Work not conforming to the Contract Documents or not meeting the requirements of any inspection, test, or approval, or (b) Work itemized in a Punch List which the **Contractor** fails to complete or correct within a reasonable time after issuance of the Punch List by the **Professional**.

Defective Work/Non-Compliance Notice – A DTMB-0499 form or equivalent issued to identify defective or non-compliant conditions requiring response and remedy by the **Contractor**.

Delay– Any act or omission or other event that in any manner adversely affects or alters the schedule, progress or completion of all or any part of the Work. Delay is a generic term intended to include deferral, stoppage, slow down, interruption and extended performance, and all related hindrance, rescheduling, disruption, interference, inefficiency and productivity and production losses.

***Department (DTMB)**– Department of Technology, Management and Budget of the State of Michigan. **Director** is the Director of the **Department**.

Director-SFA– The Director of **DTMB** State Facilities Administration.

Director-DCD– The Director of **DTMB** State Facilities Administration, **Design and Construction Division**

Division– Each of the numbered, distinct parts (starting with Division 0) into which the Specifications are divided.

Drawings– Part of the Contract Documents showing the Work. Drawings shall neither serve nor be used as Shop Drawings.

Early (Late) Dates– Early (late) times of performance for the Activities.

Emergency– A condition affecting the safety or protection of persons, or the Work, or property at or adjacent to the site.

Fee for the Work Involved (Fee)– A negotiated, percentage mark-up on the Cost of the Work Involved which is allowed to the **Contractor** for (a) reasonable administrative costs, and (b) negotiated, reasonable profit on the Cost of the Work Involved.

General Requirements– Division 1 of the Specifications.

Hazardous Material– Asbestos, ACBMs, PCBs, petroleum products, such construction materials as paint thinners, solvents, gasoline, oil, etc., and any other like material the manufacture, use, treatment, storage, transportation, or disposal of which is regulated by federal, State, or local Laws governing the protection of public health, natural resources, or the environment.

State Facilities Administration– Entity in the **Department** of Technology, Management and Budget responsible for design, construction, and operations and maintenance of facilities and capital renewal.

State Facilities Administration Representative– Designated DTMB-SFA **Design and Construction Division Project Director** (a) Responsible for directing and supervising the **Professional's** services during the period allowed for completion of the Work; and/or (b) Acting as representative for the **Owner** and for the enforcement of the Contract Documents, approving payment to the **Contractor** and coordinating the activities of the State, **Owner**, **Professional** and **Contractor**.

Law(s)– Means federal, state, and local statutes, ordinances, orders, rules and/or regulations.

MCL– The Michigan Compiled Laws of the State of Michigan.

Means and Methods– Includes means, methods, techniques, sequences and/or procedures applicable to the Work.

Notice of Award– Written notice accepting the Bid to the lowest responsive, responsible Bidder and designating the Contract Price (and establishing the Alternates accepted by the **Owner**).

Notice to Proceed– Written notice authorizing the **Contractor** to proceed with the Work, or a designated portion of the Work, and establishing the Date of Commencement of the Contract Time.

On-Site Inspection– The **Professional's** on-site examination of the **Contractor's** completed or in progress Work to determine and verify to the **State Facilities Administration Representative** that the quantity and quality of all Work is in accordance with the requirements of the Contract Documents.

Owner– The State of Michigan, named "the **Owner**" in Section 00500 Agreement, with whom the **Contractor** has entered into the Contract and for whom the Work is to be provided. The State of Michigan includes its departments, agencies, boards, commissions, officers, employees, and agents.

Partial Use– The use, by the **Owner**, of a designated portion of the Work before accomplishing Substantial Completion of the entire Work. Partial Use does not implicate or refer to Substantial Completion of the portion of the Work placed in use by the **Owner**.

Person– Individuals, partnerships, corporations, receivers, trustees, joint ventures, and any combinations of any of them.

Political Subdivision– Any county, city, village, or other local unit of the State, including any agency, department, or instrumentality of any such county, city, village, or other local unit.

Pre-Award Schedule– A Qualification Submittal required of the Apparent Low Bidder before Contract Award, and which is used by the **Owner** in the evaluation of the Apparent Low Bidder's Bid.

Professional Services Contractor (Professional)– The Person or its authorized representative licensed to practice architecture and/or engineering, named as "**Professional**" in Section 00500 Agreement, who has the right and authority assigned in the Contract Documents. The term **Professional** includes the **Professional's** consultants practicing the disciplines required by the Contract Documents. If the **Owner** will function as the **Professional**, such information will be noted in Section 00800 Supplementary Conditions or at the pre-construction conference.

Progress Schedule– Work Schedule that shows the **Contractor's** approach to planning, scheduling, and execution of the Work and that accurately portrays completed Work as to sequencing and timing, as provided in the Contract Documents.

Project– The total construction, which includes the Work and possibly other work, as indicated in the Contract Documents.

Project Field Representative– A **DTMB-SFA Design and Construction** employee or consultant, acting in collaboration and with direction from the **DTMB-SFA-DCD Project Director**, providing on-site, periodic observation and documentation of the Work for compliance with the Contract Documents.

Project Manual– The Book of Specifications, containing Division 0 of the Specifications and the technical Specifications.

Provisionary or Contingency Allowance– An amount included within the Contract Price to reimburse the **Contractor** for the cost to furnish and perform Work that is uncertain, i.e., may not be required, or is of indeterminate scope, i.e., design information and quantities, complexity, etc. are neither shown nor detailed in the Contract Documents. Work authorized under any Provisionary Allowance may consist of (a) changes

required by actual conditions, as determined by the **Professional**, that are incorporated into the Work in accordance with Section 00700 General Conditions, and (b) any other Work authorized and completed under the pertinent provisions of the Contract Documents. Unlike a Cash Allowance, payments under a Provisionary Allowance shall include not only the purchase/furnished cost of the materials and equipment involved, but also all related labor costs, Subcontract costs, construction equipment costs, general conditions costs and Fee, provided they are calculated in accordance with the requirements of Articles 10 and 11 of Section 00700 General Conditions.

Public Utility– Any utility company, utility department or agency of a Political Subdivision, natural gas pipeline company, cable TV company, or any other owner/operator of utilities that are operated or maintained in, on, under, over or across public right-of-way or public or private easements and which is defined as “Public Utility” under the provisions of 2013 PA 174, as amended, MCL 460.721.

Punch List– A list of minor items to be completed or corrected by the **Contractor**, any one of which do not materially impair the use of the Work, or the portion of the Work inspected, for its intended purpose. A Punch List shall be prepared by the **Professional** upon having decided that the Work, or portion of the Work inspected, is substantially complete and shall be attached to the respective certificate of Substantial Completion.

Qualification Submittals– Data concerning a Bidder's qualifications and eligibility, as specified in the Bidding Requirements.

Rebid– A revised or new Bid submitted by a Bidder on the Section 00300 Bid Summary and Bid Form and the Bid Form Attachments made available through post-Bid Addenda, in the event the Work is rebid without readvertising, as allowed by post-Bid Addenda.

Record Documents– Drawings, Specifications, Addenda, Change Orders, Change Authorizations, Bulletins, inspection, test and approval documentation, photographs, written clarifications and interpretations and all other documents recording, or annotated to show, all revisions and deviations between the as-built installation and the Contract Documents, all approved Submittals and all clarifications and interpretations.

Records– Books, reports, documents, and other evidence relating to the bidding, award and furnishing and performance of the Work.

Record Schedule– A Progress Schedule Revision Submittal returned to the **Contractor** as “Resubmittal Not Required,” with or without comments or objections noted.

***Recycled Material**– Recycled paper products, structural materials made from recycled plastics, refined lubricating oils, reclaimed solvents, recycled asphalt and concrete, recycled glass products, retreaded tires, ferrous metals containing recycled scrap metals and all other materials that contain (a) waste materials generated by a business or consumer, (b) materials that have served their intended purpose, and/or (c)

materials that have been separated from solid waste for collection, recycling and disposition in the percentage determined by the State as provided by Law.

Request for Payment– The form provided by the **Owner** (Payment Request DMB-440) to be used by the **Contractor** in requesting payment for Work completed, which shall enclose all supporting information required by the Contract Documents.

Resident Project Representative– The authorized representative of the **Professional** who is assigned to the site.

Schedule of Values– A schedule of pay items, which subdivides the Work into its various parts and which details, for each itemized part, cost and pricing information required for making payments for Work performed. The sum of all pay item costs in the Schedule of Values shall equal the Contract Price for the Work.

Shop Drawings– Includes drawings, diagrams, illustrations, standard schedules, performance charts, instructions and other data prepared by or for the **Contractor** to illustrate some part of the Work, or by a Supplier and submitted by the **Contractor** to illustrate items of material or equipment.

Soil Erosion and Sedimentation Control– The planning, design and installation of appropriate Best Management Practices designed and engineered specifically to reduce or eliminate the off-site migration of soils via water runoff, wind, vehicle tracking, etc. Soil erosion and sedimentation control in the State of Michigan is regulated under The Natural Resources Environmental Protection Act; Soil Erosion and Sedimentation Control, 1994 PA 451, Part 91, as amended, MCL 324.9101 et seq. Soil erosion and sedimentation control associated with this Contract is monitored and enforced by the **Department of Technology, Management and Budget, State Facilities Administration.**

Specifications– Parts of the Contract Documents organized into Divisions. “Technical Specifications” means Divisions of the Specifications consisting of technical descriptions of materials, equipment, construction systems, standards, and workmanship.

State– The State of Michigan in its governmental capacity, including its departments, agencies, boards, commissions, officers, employees, and agents. Non-capitalized references to a state refer to a state other than the State of Michigan.

***State Construction Code**– The Michigan State Construction Code Act, 1972 PA 230, as amended, MCL 125.1501 et seq.

Sub agreement– A subcontract or purchase order awarding a part of the Work to a Subcontractor or Supplier.

Subcontractor– A Person having a Sub agreement for providing labor at the site, or for providing labor at the site and furnishing materials and/or equipment for incorporation into the Work.

Submittals– Includes technical Submittals, Progress Schedules and those other documents required for

submission by the Contract Documents. The term "technical Submittal" includes Shop Drawings, brochures, samples, Operation and Maintenance (O&M) Manuals, test procedures and any other Submittal the Contract Documents require the **Contractor** to submit to demonstrate how the items covered, after installation or incorporation into the Work, will conform to the information given in the Contract Documents and be compatible with the design of the completed Work as a functioning whole as indicated in the Contract Documents.

Substantial Completion– The Work, or a portion of the Work designated in the Contract Documents as eligible for separate Substantial Completion, has been completed in accordance with the Contract Documents, to the extent that the **Owner** can use or occupy the entire Work, or the designated portion of the Work, for the use intended without any outstanding, concurrent Work at the site, except as may be required to complete or correct Punch List items. Prerequisites for Substantial Completion, over and above the extent of Work completion required, include (a) receipt by the **Owner** of operating and maintenance documentation, (b) all systems have been successfully tested and demonstrated by the **Contractor** for their intended use, and (c) the **Owner** having received all required certifications and/or occupancy approvals from the State and those Political Subdivisions having jurisdiction over the Work. Receipt of all certifications and/or occupancy approvals from those Political Subdivisions with jurisdiction in and of itself does not necessarily connote Substantial Completion.

Supplementary Conditions– Section 00800 within Division 0 of the Specifications that amends and/or supplements Section 00700 General Conditions and other designated Contract Documents.

Supplementary Instructions– Section 00120 within Division 0 of the Specifications that amends and/or supplements Section 00100 Instructions to Bidders and any other designated Bidding Requirement.

Supplier– A manufacturer or fabricator, or a distributor, material man or vendor representing a manufacturer or fabricator, who has a Sub agreement for furnishing materials and/or equipment.

Target– A point of progress for a key part of the Work, which is identified for monitoring progress of the Work. Target Times are not Contract Times.

Total Float– Number of Calendar Days by which the Work or any part of the Work may be delayed from its Early Dates without necessarily causing an overrun in a pertinent Contract Time. Total Float is by definition at least equal to Contract Float.

Underground Utilities– Pipelines, piping, conduit, duct, cables, wells, tanks, tunnels and appurtenances, or other similar facilities, installed underground to convey or support conveyance of potable water, sprinkler or irrigation water, fire protection systems, electricity, gases, steam, petroleum products, sewerage and drainage removal, telephone, communications, cable TV, traffic, or control systems.

Unit Price Work, Contingent– Work involving specified but undefined quantities (i.e., related Work quantities are not detailed in the Contract Documents) which when performed is measured by the **Professional** and paid using the measured quantities and unit prices contained in the Contract Documents. Performance of such Unit Price Work is contingent upon conditions encountered at the site, as determined, and authorized by the **Professional**.

Unit Price Work, Specified– Work of specified and defined quantities (i.e., quantities are detailed in, and can be taken-off from, the Contract Documents) that when performed is measured by the **Professional** and paid based on the measured quantities and unit prices contained in the Contract Documents.

Work (as in "the Work," "the entire Work)– The entire *completed Construction* required by the Contract Documents. The Work results from furnishing and performing all services, obligations, responsibilities, management, supervision, labor, materials, equipment, construction equipment, general conditions, permits, taxes, patent fees and royalties, testing, inspection and approval responsibilities, warranties, temporary facilities, small tools, field supplies, Bonds, insurance, mobilization, close-out, overhead and all connections, devices and incidental items of any kind or nature required and/or made necessary by the Contract Documents.

Work Involved, any Work Involved–Existing or prospective Work (a) reflected in any notice, proposal, or claim, or (b) reflected in changes ordered or in process, or (c) affected by Delay.

1.1.2. Other defined terms used in Division 0 but not assigned intent and meanings in this Section 00020 Glossary have the intent and meanings set forth in MCL or Section 00800 Supplementary Conditions.

1.1.3. Terms defined in this Section 00020 Glossary and used in other Specifications and/or in the Drawings in lower cases, or as capitalized terms, have the intent and meanings assigned to them in this Section 00020 Glossary if the context will permit.

1.2 Division 0 Rules of Construction:

1.2.1. Each Article in a Section in Division 0 contains "sub-articles," numbered as this sub-article 1.2 is numbered; "parts," numbered as this part 1.2.1 is numbered, and "sub-parts," all of which are considered "paragraphs." A reference to a paragraph means a reference to the sub-article, part or sub-part, or any combination of any of them, if the context will permit.

1.2.2. Any reference to an Article or a paragraph in a Section within Division 0 means a reference to an Article or a paragraph in the very Section in which the reference is made, unless that reference specifically names another Section.

1.2.3. Whenever the context of any provision requires, the singular number includes the plural number and vice versa, and the use of any gender includes all genders

END OF SECTION 00020

SECTION 00030 ADVERTISEMENT

1. Invitation to Bid (ITB) – Your firm is invited to submit a Bid. The State of Michigan as the Owner will receive bids electronically through the SIGMA VSS website at <https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService> until 2:00 p.m., ET, on 8/21/2024. The State reserves the right to cancel this Invitation to Bid (ITB) or change the date and time for submitting Bids by announcing same at any time before the established date and time for Bid opening. Bids must remain open for acceptance by the Owner for no less than the Bid hold period. Contractor may agree to extend the Bid hold period. However, any such extension must be based upon no increase in the Bid Price and/or Contract Time.

2. Work Description – The Work, Replace Security System Programmable Logic Controllers, File No. 491/23066.SDW includes, but is not necessarily limited to a new PLC control system and intercom system. The site is located at 8303 Platt Road, Saline, MI as shown on the Drawings.

3. Bidding Documents – Sets of Bidding Documents may be obtained at:
<https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService>

4. Bid Security – Each Bid shall enclose Bid Security, as specified in Section 00100 Instructions to Bidders (and as specified in Section 00310 Bid Bond, if a Bid Bond is enclosed), in the amount of five percent (5%) of the Bidder's Base Bid. *If Bid Security is by check or money order, such certified or cashier's check or money order must be delivered in original copy before the Bid Due Time to:*

State Facilities Administration
Design & Construction Division
3111 W. St. Joseph Street
Lansing, Michigan 48917

All other Bid information must be submitted via SIGMA as per standard bidding procedure.

5. Pre-Bid Conference – A mandatory voluntary pre-bid conference will be held at 8303 Platt Road, Saline, MI, MI on 8/9/2024 at 10:00 AM ET. A tour 8/9/2024, will be held on the same day, starting at 11:00 AM ET. All prospective Bidders and other parties interested in the Work are required to attend the tour, if held. Addenda may be issued, in response to issues raised at the pre-bid conference and tour, or as the **Owner** and/or **Professional** may otherwise consider necessary.

An individual is only permitted to represent one bidder at a mandatory Pre-Bid Conference.

FOR CORRECTIONAL FACILITIES ONLY: All contractor/vendor representatives attending a Pre-Bid Walk Through Meeting must submit a Vender/Contractor LEIN Request five business days prior to the meeting date, (Lien Request For CAJ-1037 attached to Bid posting). Send the LEIN Request form, filled out and signed, by email to SmithD76@michigan.gov & FrostS1@michigan.gov. The email "Subject" must include Facility Name, Project Name, Date & Time of Pre-Bid Walk Through Meeting).

6. SIGMA VENDOR NUMBER: If you are bidding a State job for the first time, visit the State of Michigan SIGMA website, <https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService>, and follow the "SOM VSS User Guide for New Vendors" instructions, located under Forms and Reference Documents. Registration is required for bid submission. **Do not wait until the last minute to submit a proposal**, as the SIGMA system requires the creation of an account and entry of certain information, in addition to uploading and submitting the materials. The SIGMA system **will not** allow a proposal to be submitted after the proposal deadline, even if a portion of the proposal has been updated.

Questions on how to submit information or how to navigate in the SIGMA VSS system can be answered by calling **(517) 373-4111 or (888) 734-9749**.

7. Equal Employment Opportunity – Covenants not to discriminate in employment by contractors, subcontractors and suppliers required by Law are contained in paragraph 14.12 of Section 00100 Instructions to Bidders and paragraph 7.12 of Section 00700 General Conditions and are applicable to the Work and any Sub agreement under the Contract.

8. Contract Times – The Contract Times and the associated liquidated damages are specified in Article 4 of Section 00500 Agreement.

9. Contact Person – All requests or inquiries concerning the Bidding Documents, or the Work shall be addressed to Bret Emerson at bids@commtechdesign.com

10. Award – Subject to any agreed extension of the period for holding Bids, Bids shall remain valid for acceptance by the **Owner** for Six (6) Calendar Months after the date of Bid opening. In addition, the **Owner** expressly reserves the right, within the **Owner's** sole discretion, to reject any or all Bids, to waive any irregularities, to issue post-Bid Addenda and rebid the Work without re-advertising, to re-advertise for Bids, to withhold the award for any reason the **Owner** determines and/or to take any other appropriate action.

END OF SECTION 00030

SECTION 00100 INSTRUCTIONS TO BIDDERS

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STATE OF MICHIGAN MODEL

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ARTICLE 1 BIDDING DOCUMENT INTERPRETATIONS

1.1. Section 00020 Glossary assigns specific intent and meanings to capitalized terms and to other defined terms used in Section 00030 Advertisement, this Section 00100 Instructions to Bidders and Section 00210 Information for Bidders. The Glossary also provides specific rules for construing any reference to any Article or paragraph that is made in this Section 00100.

1.2. The deadlines and submission requirements imposed on the Bidders by the provisions of Articles 3 and 4 also shall apply to any prospective subcontractor or supplier seeking access to the site or needing to submit written questions or inquiries.

1.3. Except as otherwise noted, the deadlines and other requirements imposed upon the "Apparent Low Bidder" by the provisions of Articles 2, 5, 8 and 13 also shall apply to any other Bidder remaining or wishing to remain in contention for the award.

1.4. Neither the **Owner** nor **Professional** assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents in preparing Bids. The **Owner** and **Professional** make Bidding Documents available only for obtaining Bids, and neither the **Owner** nor **Professional** grants a license for any other use of the Bidding Documents.

ARTICLE 2 QUALIFICATIONS OF BIDDERS

2.1. The Apparent Low Bidder shall submit to the **Professional**, within two (2) Business Days after receipt of the **Professional's** request, Section 00430 List of Subcontractors. The Apparent Low Bidder also shall submit to the **Professional**, within five (5) Calendar Days after the **Professional's** request, a Pre-Award Schedule and those other Qualification Submittals noted in Sections 00410, 00420 and 00440. The Apparent Low Bidder(s) may be required to attend a pre-award conference(s).

2.2. The Pre-Award Schedule shall consist of a time-scaled CPM Schedule or a Bar Chart Schedule, as designated by the **Professional**. The Pre-Award Schedule shall (a) identify start and completion dates for the Work in summary form, (b) show the sequencing in which the Bidder plans to perform the Work to conform to the Contract Times and sequences of Work indicated in or required by the Bidding Documents, and (c) include a plot with percentages of completion for the Work correlating to the start and completion dates.

2.3. Unless otherwise determined by the **Owner**, in its sole discretion, failure, neglect or refusal by the Apparent Low Bidder to submit Qualification Submittals when and as requested justifies the **Owner's** refusal to consider the Apparent Low Bidder's Bid and the Apparent Low Bidder's Bid Security will be forfeited to the **Owner** as liquidated damages. However, in the case of any other Bidder remaining or wishing to remain in contention for the award, such failure, neglect, or refusal will not constitute grounds for forfeiting that other Bidder's Bid Security

ARTICLE 3 BIDDING DOCUMENTS; SITE CONDITIONS. SAFETY REQUIREMENTS; LAWS

3.1. It is the responsibility of each Bidder, before submitting a Bid, to: (a) examine the Bidding Documents thoroughly; (b) visit the site and, if necessary, record conditions at the site (through logs/notes, photographs, video or any other means); (c) study and correlate the Bidder's observations with the Bidding Documents; and (d) submit written questions or inquiries about the Bidding Documents or the Work, as provided in Article 4, immediately after discovering any conflicts, ambiguities, errors or omissions in the Bidding Documents.

3.2. It is also the responsibility of each Bidder, in the preparation of its Bid, to take those steps that are reasonably necessary to (a) ascertain and satisfy itself of the physical conditions under which the Work will be performed and the condition of existing facilities, including those which may not be a part of the Work, but could be affected by the performance of the Work, and (b) account for all general, local and prevailing conditions at or near the site that may in any manner affect the cost, schedule, progress, performance or furnishing of the Work. Examples of such conditions include, but are not limited to: (a) the nature and location of the Work; (b) conditions related to the transportation, disposal, handling and storage of materials; (c) the availability and suitability of labor, materials, water, electric power, telephone, sanitary services and roads; (d) daily and monthly weather variations, including any related subsurface conditions, river stages, or similar conditions; (e) the character, quality and quantity of surface and subsurface conditions at the site, including but not limited to ground water table variations, and the location, configuration and condition of existing facilities and Underground Utilities; (f) the character of equipment and facilities needed preliminary to and during Work performance; (g) conditions related to maintaining the uninterrupted operation/occupancy of existing services or facilities; and (h) the extent to which the nature, characteristics and use of any adjacent or nearby lands, rights-of-way and easements, and facilities (in all cases, inclusive of real and personal property) may affect the Bidder's activities.

3.3. It is the responsibility of each Bidder to inform itself of, and the Bidder awarded the Contract shall comply with, all applicable Laws, including, but not limited to Laws affecting cost, schedule, progress, performance or furnishing of the Work. Examples of those Laws include, but are not limited to, those relating to nondiscrimination in employment, prevailing wages, protection of public and employee health and safety, environmental protection, building codes, fire protection, grading and drainage, use of explosives, vehicular traffic, restoration of lands and property under the control of the State or a Political Subdivision, taxes, permits and licensing.

3.4. Section 00210 Information for Bidders identifies (a) reports of explorations and tests of subsurface conditions, and (b) drawings of physical conditions of existing surface and subsurface facilities that have been used by the **Professional** in the preparation of the Bidding Documents. Bidders may rely upon such expressly stated technical information and data contained in those reports which are expressly designated as Authorized Technical Data in Section 00210 Information for Bidders, but those reports and drawings are not part of the Bidding Documents.

3.4.1. Any conclusions or interpretations made by any Bidder based on such Authorized Technical Data shall be at the Bidder's own risk. Reliance by any Bidder on any Non-technical Information or Data, interpretations or opinions contained in those reports or drawings also shall be at the Bidder's own risk. The **Owner**, **Professional** and their respective consultants assume no responsibility for any understanding reached or representation made about subsurface conditions and physical conditions of existing facilities, except as otherwise expressly shown in or represented by the Authorized Technical Data made available.

3.4.2. Section 00210 Information for Bidders also identifies additional reports of explorations and tests of subsurface conditions and reference documents reflecting physical conditions of existing surface and subsurface facilities that have not been used by the **Professional** in the preparation of the Bidding Documents. Any such reports and documents are not part of the Bidding Documents and are made available solely to allow Bidders to have access to the same information available to the **Owner** and **Professional**. Neither the **Owner** nor **Professional** warrants the accuracy or completeness of any such information nor do they warrant that Section 00210 Information for Bidders identifies all such existing relevant reports and/or documents.

3.5. Section 00210 Information for Bidders also identifies information and data shown or indicated in the Bidding Documents or Underground Utility drawings about Underground Utilities. Such information and data about existing Underground Utilities is based on information and data obtained from record documents of previous construction or furnished to the **Owner** by the owners of those Underground Utilities or by others.

3.6. Section 00700 General Conditions contain provisions concerning (a) responsibilities for Underground Utilities, (b) changes that may be ordered because of incidents with differing site conditions, and (c) the adequacy and completeness of the Authorized Technical Data of subsurface conditions and existing subsurface and surface facilities made available to Bidders.

3.7. To the extent that any Bidder considers that additional Authorized Technical Data is necessary for determining its Bid, it is the responsibility of that Bidder to request from the **Owner** the necessary additional Authorized Technical Data. In the event the **Owner** does not have the requested additional Authorized Technical Data, it shall be the responsibility of the Bidder, at the Bidder's sole cost, to undertake reasonable examinations of the site and any other pertinent available information and data that the Bidder considers necessary for determining its Bid.

3.8. If requested by a Bidder at least seven (7) Calendar Days before the date of Bid opening (or as otherwise agreed to by the **Owner**), the **Owner** will provide access to the site, when and as designated by the **Owner**, to allow that Bidder to conduct those reasonable explorations and tests that Bidder considers necessary for preparation and submission of the Bidder's Bid. Any such explorations and/or tests conducted by that Bidder shall comply with the requirements of the **Owner**, any Public Utilities involved and any Political Subdivisions with jurisdiction. If access to the site is granted, that Bidder shall fill all holes and clean up and restore the site to its former

condition, to the **Owner's** satisfaction, upon completion of those explorations and/or tests.

3.9. The Bidder awarded the Contract shall be responsible for obtaining any lands, areas, properties, facilities, rights-of-way, and easements, in addition to those furnished by the **Owner**, that the Bidder considers necessary for temporary facilities, storage, disposal of spoil or waste material or any other similar purpose. Neither the **Owner** nor **Professional** assumes any responsibility for site conditions at any lands, areas, properties, facilities, rights-of-way, and easements obtained by any Bidder.

*3.10. With respect to any earth disturbance associated with this Contract, the Bidder awarded the Contract shall comply with The Natural Resources and Environmental Protection Act; Soil Erosion and Sedimentation Control, 1994 PA 451 Part 91, as amended, MCL 324.9101 *et seq.* **State Facilities Administration** is the designated "Authorized Public Agency" under the provisions of Section 9110 of 1994 PA 451, Part 91 as amended.

3.11. Each Bid shall include and be deemed to have included all (a) Michigan sales and use taxes and other similar taxes applicable to the Work that are required by Law as of the date of Bid opening, and (b) the cost of all permits, approvals, licenses, and fees necessary for the commencement, prosecution, and completion of the Work. Section 00700 General Conditions contain provisions concerning responsibilities of the Bidder for sales and use taxes and other similar taxes and for obtaining permits, approvals, licenses, and fees applicable to the Work.

3.12. To the extent the **Owner** or **Professional** has knowledge of other work at the site, which may be ongoing during the period allowed for the Work, the Bidding Documents shall identify such other work. Before submitting a Bid, each Bidder shall evaluate: (a) the effect that any such other work operations (e.g., dewatering, blasting, etc.) may have on the Work, (b) related conditions and sequences of Work contained in the Bidding Documents, (c) the requirements for coordination and cooperation between the Work and other work, and (d) related Contract Times.

3.13. The submission of a Bid constitutes a binding representation by the Bidder that: (a) the Bidder has complied with every requirement of this Article and the Bidding Documents; (b) the Bidder has examined and agrees with the Progress Schedule requirements contained in the Specifications, including, but not limited to, requirements concerning the administration of early completion schedules; (c) without exception, the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and in accordance with those Means and Methods indicated in or required by the Bidding Documents; and (d) the Bidder considers the Bidding Documents to be sufficient in scope and detail to indicate a clear understanding of all terms and reasonably foreseeable conditions applicable to the Work, and how such terms and conditions may affect the cost, schedule, progress, performance and furnishing of the Work.

3.14. Any failure of a Bidder to take the actions described and acknowledged in this Article will not relieve that Bidder of the responsibility for (a) properly estimating the difficulty, cost of and schedule for successfully performing and

furnishing the Work, or (b) upon award, performing and furnishing the Work successfully at no increase in Contract Price or Contract Time.

3.15. Neither the **Owner** nor **Professional** assumes any responsibility for any conclusions or interpretations made by any Bidder based on the information made available by the Bidding Documents. Nor does the **Owner** or **Professional** assume any responsibility for any understanding reached or representation made about conditions that may in any way affect cost, schedule, progress, furnishing or performance of the Work, unless that understanding, or representation is expressly stated or indicated in the Bidding Documents (including written Addenda).

ARTICLE 4 INTERPRETATIONS; ADDENDA

4.1. All requests for clarification or interpretation of the Bidding Documents, all proposals for any modifications to the Bidding Documents, all requests for information and all other questions or inquiries about the Bidding Documents and/or the Work shall be submitted in writing to the Contact Person identified in Section 00030 Advertisement, Article 8. Requests or inquiries received less than seven (7) Calendar Days before the date of Bid opening will be answered only if (a) the response can be given through Addenda made available at least seventy-two (72) hours before Bid opening (counting Business Days only), (b) the Bid opening is postponed by Addendum, or (c) the Work is rebid without re-advertising following the issuance of post-Bid Addenda.

4.2. Any interpretation or clarification, modification to the Bidding Documents (whether by correction, addition, deletion, or other revision) and/or information given will be binding only if given by Addenda. Interpretations, clarifications, corrections, additions, deletions or other revisions or information given orally or in any other manner are not binding on the **Owner** and if relied upon by any Bidder, shall be relied upon at the Bidder's own risk. Addenda will be provided by posting to and may be obtained by bidders at: <https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService>

4.3. In the **Owner's** sole discretion, subsequent to the opening of Bids, post-Bid Addenda may be issued setting a new date for the receipt and opening of sealed Rebids.

4.4. Any quantities of Unit Price Work given on the Bid Form, whether detailed in the Drawings or Specifications or contingent upon actual conditions, are approximate only, and are to be used solely for comparing Bids and establishing the Contract Price. Neither the **Owner** nor **Professional** represents that the actual quantity for any item of Unit Price Work performed will equal the quantity given. Payments will be made only for actual quantities of Unit Price Work completed in accordance with the Contract Documents. Actual quantities of Unit Price Work may overrun or underrun those in the Bid Form without necessarily invalidating the unit prices bid (except as provided in paragraph 10.6 of Section 00700 General Conditions).

ARTICLE 5 BID SECURITY

5.1. Bid Security shall be made payable to the "State of Michigan" in the form of a certified or cashier's check or money

order drawn upon a bank insured by an agency of the Federal Government or consist of a duly executed Bid Bond. A Bid Bond shall be duly executed by the Bidder and by a surety authorized to do business in the State by the Department of Energy, Labor and Economic Growth and listed on the current U.S. Department of the Treasury Circular 570. Bidders shall attach a certified copy of Power of Attorney to sign Bid Bonds as the Attorney-in-Fact. Copies of the current Circular listing of approved bonding/insurance companies and interim changes may be obtained through the Internet web site <https://www.fiscal.treasury.gov/fsreports/ref/suretyBnd/c570.htm>.

5.2. Failure by a Bidder to enclose with its Bid a certified or cashier's check or money order or a duly executed Bid Bond signed by Bidder and Surety shall disqualify that Bidder from any consideration for the award. *If Bid Security is by check or money order, such certified or cashier's check or money order must be delivered in original copy before the Bid Due Time to:*

State Facilities Administration
Design & Construction Division
3111 W. St. Joseph Street
Lansing, Michigan 48917

All other Bid information must be submitted via SIGMA as per standard bidding procedure.

5.3. The Bid Security of the Bidder recommended for award will be retained until that Bidder has fulfilled all the following: (a) submitted Qualification Submittals and required information, (b) executed and delivered Section 00500 Agreement, (c) delivered evidence of insurance, and (d) furnished the required Section 00610 Performance Bond and Section 00620 Payment Bond (including separate certifications). If that Bidder fails to do so when and as specified, the **Director-DCD or his/her designee**, may annul the Notice of Award recommendation, and the Bid Security of that Bidder will be forfeited to the **Owner** as liquidated damages. If the **Owner** incurs any collection costs in the enforcement of the Bid Security requirement, that Bidder and its surety, if any, agree jointly and severally to reimburse the **Owner's** costs of collection, which shall include reasonable fees and charges of attorneys and others, court or hearing costs incurred with or without suit and interest.

5.4. If the Apparent Low Bidder gives a certified or cashier's check or money order as Bid Security, and the **Owner** requests a certification by an acceptable surety stating that the Bidder will furnish the Section 00610 Performance Bond and Section 00620 Payment Bond if awarded the Contract, that Bidder shall furnish such certification within seven (7) Calendar Days after the **Owner's** request.

5.5. The Bid Securities of the Apparent Low Bidder and of any other Bidder remaining in contention for the award will be retained by the **Owner** until the end of the period during which Bids shall remain open, or seven (7) Calendar Days after the **Owner** executes Section 00500 Agreement, whichever last occurs.

ARTICLE 6 CONTRACT TIME; LIQUIDATED DAMAGES

6.1. The Contract Times, i.e., the number of Calendar Days within, or dates by, which the Work or any part of the Work shall be completed, are specified in Section 00500

Agreement, and may be supplemented, as provided in Section 00500 Agreement. As stated in Section 00500 Agreement, the Contract Times are of the essence of the Contract. If any Bidder believes that any of the Contract Times are insufficient or excessive, that Bidder shall advise the **Owner** in accordance with the requirements of Article 4.

6.2. Liquidated damages are specified in Section 00500 Agreement and may be supplemented, as provided in Section 00500 Agreement.

ARTICLE 7 MATERIALS AND EQUIPMENT

7.1. Named or Specified Materials and Equipment – Materials and equipment described in the Specifications by naming a brand, make, supplier or manufacturer or by using a specification shall establish a standard and shall be intended to convey function, necessary design features, general style, type, materials of construction, character and quality, serviceability, and other essential characteristics. A number of Specifications, if any, using named or specified materials and equipment are *listed* in Schedule 1.6 of Section 00440 Schedule of Materials and Equipment.

7.2. Proposal for Adding Products by Addenda – For those Specifications *listed* in paragraph 1.6 in Section 00440 Schedule of Materials and Equipment, the **Professional** will, up to ten (10) Calendar Days before the date of Bid opening stated in Section 00030 Advertisement, accept written proposals from non-named manufacturers and suppliers seeking to have the **Professional** add their products to Schedule 1.6. The **Professional** will consent to any such proposal by Addendum if, in the **Professional's** judgment, the proposed material or equipment also may be used as a named or specified product. Lack of adequate time or information needed to evaluate a proposal, as determined in the sole discretion of the **Professional**, may justify its rejection.

7.2.1. Any such proposal shall clearly identify differences between the proposed and named or specified material or equipment and demonstrate objectively that the proposed material or equipment: (a) has the same essential characteristics of the item named or specified, (b) will equally perform the functions and achieve the results called for by the general design concept, (c) is suited to the same use as the item named or specified, (d) is at least of equal materials of construction, quality and necessary essential design features to the material or equipment named or specified, (e) conforms substantially to the desired detailed requirements, including, but not limited to durability, strength, appearance and aesthetics (if aesthetics are significant), safety, service, life, reliability, economy of operation and ease of maintenance, and (f) offers a proven record of performance and service for at least three (3) years before the date of Bid opening.

7.2.2. Any such proposal shall further include (a) a list of installations that have been in service for at least three (3) years before the date of Bid opening (including the name, address, and telephone number of a person familiar with and at the installation), and (b) sufficient drawings, diagrams, brochures, schedules, performance charts, instructions, samples, and other data as may be necessary to allow the **Professional** to make a determination.

7.3. Each Bidder is responsible for notifying the **Professional** in writing if the Bidder knows or has reason to know that any material or equipment *listed* in Section 00440 Schedule of Materials and Equipment, which the Bidder intends to bid requires changes in the Work. Any such notice shall be provided no later than seven (7) Calendar Days before Bid opening. This requirement applies but is not limited to changes in any testing requirements or Means and Methods indicated in or required by the Bidding Documents. However, this requirement is not intended to make the Bidder responsible for correcting design errors or omissions.

7.3.1. If any Bidder fails to provide such notice, and is awarded the Contract, that Bidder assumes responsibility for its proportionate share of any *excess* costs and Delay. *Excess* costs and Delay are those resulting from changes in the Work that would not have been incurred had that Bidder not failed to provide written notice to the **Professional**.

7.4. Bidding Requirement – For those Specifications *listed* in paragraph 1.6 of Section 00440 Schedule of Materials and Equipment, each Bidder shall bid one of the *listed* materials and equipment only. This requirement to not bid "or equal" or substitute materials and/or equipment for the *listed* Specifications applies even if the Bidding Documents state that an "or equal" or substitute may be furnished or used for any *listed* Specification.

7.5. Contract Condition – For those Specifications *listed* in paragraph 1.6 of Section 00440 Schedule of Materials and Equipment, the Contract will be awarded on the basis that only *listed* named or specified materials and equipment will be furnished. If an "or equal" or a substitute may be furnished for any *listed* Specification, if acceptable to the **Professional**, application for acceptance will not be considered until after Contract Award.

7.6. Section 00700 General Conditions contains provisions requiring each Supplier (a) to be bound to the requirements of the Contract Documents, (b) to assume toward the **Contractor** all obligations that the **Contractor** assumes toward the **Owner** and **Professional**, and (c) to furnish Work under a Sub-agreement containing waiver of rights of subrogation provisions.

ARTICLE 8 SUBCONTRACTORS

8.1. For each Division, Section of the Specifications and/or trade itemized in Section 00430 List of Subcontractors, the Apparent Low Bidder shall, when requested by the **Professional**, nominate the Subcontractor(s) to be awarded a Sub-agreement(s). When completing Section 00430, the Apparent Low Bidder shall provide licensing data for trades for which contractors' licensing is required and, if applicable, indicate minority, woman, or handicapped status. One Subcontractor shall be nominated for each Specification or trade, unless the Apparent Low Bidder, directly or through a Subcontractor, intends to award more than one Sub-agreement for the listed Specification or trade.

8.2. If the **Owner** objects, for good cause, to any nominated Subcontractor, the **Owner**, before issuing the Notice of Award, may request replacement of that Subcontractor. In that event, the Apparent Low Bidder shall

nominate a substitute Subcontractor or the Bidder itself, if qualified for the Work involved. In such case, there will be no extension in the Bid hold period nor any increase in the Bidder's Bid or Alternates. If the Bidder declines, that Bidder shall not be recommended for the award; however, such declining will not constitute grounds for forfeiting the Bidder's Bid Security.

8.3. Except as provided in paragraph 8.2, no removal or replacement of a nominated Subcontractor will be considered by the **Owner**, except for good cause. Before Contract Award, any removal, replacement, or addition of a nominated Subcontractor shall be responsive to the requirements of the Bidding Documents only to the extent it permits the timely evaluation of the newly nominated Subcontractor. After Contract Award, if the Apparent Low Bidder, as the **Contractor**, nominates *for the first time* a Subcontractor for any Division, Specification and/or trade listed in Section 00430 List of Subcontractors, and the **Owner** objects for good cause to any such newly nominated Subcontractor, the **Contractor** shall provide a replacement Subcontractor at no increase in Contract Price and/or Contract Time.

8.4. Section 00700 General Conditions contains provisions requiring each Subcontractor (a) to be bound to the requirements of the Contract Documents, (b) to assume toward the **Contractor** all obligations that the **Contractor** assumes toward the **Owner** and **Professional**, and (c) to provide Work under a Sub-agreement containing waiver of rights of subrogation provisions.

8.5. These provisions shall not be construed to create any third-party beneficiary or joint employer status with respect to the **Owner** and/or **Professional** and any Subcontractor. Furthermore, these provisions shall not be construed to create or impose any duty or liability on the **Owner** to exercise this authority for the benefit of any Bidder, nominated or newly nominated Subcontractor or any other third party.

ARTICLE 9 BID FORM AND BID FORM ATTACHMENTS

9.1. All bid forms should be uploaded as attachments to SIGMA, including the Section 00300 Bid Summary, Section 00300 Bid Form and Bid Form Attachments (Section 00310 Bid Bond Form and Section 00320 Non-collusion Affidavit. If any forms are revised by Addendum, the latest revision of the appropriate Bid Summary, Bid Form and/or Bid Form Attachment shall be used. All blank spaces shall be legibly and properly printed in ink or typed as required in these Instructions to Bidders and each form. All Bid prices shall be printed or typed in both words and figures.

9.2. Bids by individuals shall be signed by the person making that Bid, or the Bid shall enclose a Power of Attorney evidencing authority to sign the Bid in the individual's name.

9.3. Bids by partnerships shall be signed in the name of the partnership. The partner authorized to sign shall be named and sign where indicated. A certified copy of power of attorney authorizing that partner to bind all partners shall be attached to Section 00300 Bid Form. If a certified copy of the partnership's certificate attached to Section 00300 Bid Form indicates that all partners have signed, no separate authorization is required.

9.4. Bids by corporations shall be signed in the legal corporate name. The signature of the president or authorized officer shall be entered below the corporate name, followed by the attesting signature of the corporation secretary or of an authorized officer other than the officer signing the Bid. A certified copy of a pertinent Board Resolution authorizing that individual to bind the corporation shall be attached to Section 00300 Bid Form.

9.5. Bids by joint ventures shall be signed by all or one of the joint venturers. If not all joint venturers sign, a certified copy of Power of Attorney authorizing the individual(s) signing to bind all joint venturers shall be attached to Section 00300 Bid Form. If a certified copy of the joint venturer's certificate attached to Section 00300 Bid Form indicates that all joint venturers have signed, no separate authorization is required.

9.6. The Bidder shall acknowledge receipt of all Addenda by completing the blank spaces in the table provided for that purpose in paragraph 2.1 of Section 00300 Bid Form.

ARTICLE 10 PREPARATION AND SUBMISSION OF BIDS

10.1. Left Blank Intentionally

10.2. Bids must be submitted electronically through the SIGMA VSS website at <https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService>

10.3. Each bid requesting the Qualified Disabled Veterans (QDV) preference, in accordance with Public Act 22 of 2010, MCL 18.1241(3), shall include a DD 214 Proof of Service and Discharge, a Veterans Administration rating decision letter, proof of disability (if the disability is not indicated on the DD 214), and appropriate legal documents setting forth the 51% natural persons QDV ownership.

10.4. If Unit Price Work is specified, the Bidder shall, for each Unit Price Work item listed separately on Article 6 of Section 00300 Bid Form, bid a unit price, and enter, in the appropriate column, the computation of the respective quantity multiplied by the respective Bidder's bid unit price. Bid prices for each lump sum or "One Each" item listed on the Bid Form shall be printed or typed only in the appropriate "Bid Price" column. The Bidder shall show the sum representing the Bidder's Base Bid and, if Alternates are listed, the Bid prices for all Alternates, in the spaces provided for those purposes.

10.5. For each Cash Allowance, the Bidder shall include, within the Bid, all labor costs, construction equipment costs, insurance and Bond premiums and other general conditions costs and Fee (Bidder's and Subcontractors') to complete Work associated with the material, equipment, or other designated item to be furnished under the Cash Allowance. For each Provisionary/Contingency Allowance, the Bidder shall include, within the Bid, insurance premiums (not recoverable as labor burden) and Bond premiums required to complete Work that may be ordered under the Provisionary/Contingency Allowance. Cash Allowances and Provisionary/Contingency Allowances are defined in Section 00020 Glossary and are further described in paragraph 10.7 of Section 00700 General Conditions.

10.6. The Bidder's Base Bid and Alternate Bid prices shall include, and payment for completed Work shall be compensation in full for, all services, obligations, responsibilities, management, supervision, labor, materials, devices, equipment, construction equipment, general conditions, permits, patent fees and royalties, testing, inspection and approval responsibilities, warranties, temporary facilities, small tools, supplies, Bonds, insurance, taxes, mobilization, close-out, overhead and profit and all connections, appurtenances and any other incidental items of any kind or nature, as are necessary to complete the Work, in a neat, first quality, workmanlike and satisfactory manner in accordance with the Drawings and Specifications and as otherwise required to fulfill the requirements of the Bidding Documents.

10.7. Neither the Section 00300 Bid Form nor any Bid Form Attachment made available to the Bidders and submitted with the Bid shall be altered in any way. Bids shall not contain any qualifications or conditions or any recapitulations of the Work whatsoever. No Alternate will be considered, unless any such Alternate is itemized in paragraph 6.2 Schedule of Alternates in Section 00300 Bid Form and specified in the Bidding Documents.

10.8. Before and after Bid submission, and before the time for receiving Bids has expired, any Bidder may alter or revise any price or information the Bidder has entered on its Bid Form or any Bid Form Attachments by: (a) crossing out the entry, (b) legibly printing in ink or typing the new price or information, and (c) placing the initials of the person who signs the Bid adjacent to each change. After Bid opening, the **Owner** may require a Bidder to verify any such alteration or revision. Ambiguities arising from any alterations or revisions made by any Bidder may be resolved against that Bidder, in the **Owner's** sole discretion.

10.9. Neither the **Owner** nor **Professional** assumes any responsibility for any costs any Bidder incurs, however caused, in preparing and submitting its Bid, in withdrawing its Bid, or in objecting to the award or to being disqualified for the award.

10.10. In the event of any conflict between Attachment A to Section 00100–Bidder's Checklist and any requirements specified in any other parts of the Bidding Documents; the requirements of the Bidding Documents taken as a whole shall be binding on the Bidders.

10.11. All bonds, insurance, and other required documents shall be issued in the name of the bidder.

ARTICLE 11 BID WITHDRAWAL

11.1. Any Bidder may withdraw its Bid before Bid opening by submitting to the **Owner** a document requesting the withdrawal in the manner in which a Bid shall be signed and submitted to the **Owner**. Withdrawal of a Bid before Bid opening will not prejudice the right of that Bidder to submit a new, modified Bid. After the time for receiving Bids has expired, the following will apply: (a) no Bid may be modified, altered, or reformed, except to resolve irregularities on the Bid Form or Bid Form Attachments, as provided in paragraph 14.6,

and (b) no Bid withdrawal will be accepted by the **Owner**, except as provided in paragraphs 11.2 through 11.6.

11.2. After the time for receiving Bids has expired, no Bid may be withdrawn, unless that Bidder lodges a written claim of a mathematical or clerical error in the Bidder's Bid with the **Owner** within two (2) Business Days after the date of Bid opening. The claim shall describe in detail the mathematical or clerical error, include a signed affidavit stating the facts of the alleged error and request that the Bidder be released from the Bidder's Bid.

11.3. If any Bidder's claim to withdraw its Bid due to an alleged mathematical or clerical error is timely filed, the **Director-DCD**, or his/her designee, will determine the validity of the claim and, as he/she deems necessary within his/her sole discretion, will provide an opportunity to the Bidder making the withdrawal to present its verification claim at a hearing/review session within ten (10) Calendar Days after the **Owner** received the claim.

11.4. At the Bid withdrawal claim review, the **Director-DCD**, or his/her designee shall, within his/her discretion, informally hear testimony and receive evidence as to whether (a) the Bid contains an obvious mathematical or clerical error not involving lack of good faith or fair dealing, (b) the error is subject to objective certification and is of such grave consequences that to enforce the Contract would be unconscionable, (c) the error relates to a material feature of the Contract, and (d) the error was not caused in any way by the Bidder's violation of positive legal duty or culpable negligence.

11.5. Upon completion of the claim review process and before any award recommendation, the **Director-DCD**, or his/her designee, will enter findings and render a determination on the Bidder's withdrawal claim. The **Owner** will notify the Bidder within a reasonable time after such determination.

11.6. If the **Director-DCD**, or his/her designee, concurs with the Bid withdrawal claim and the **Owner** suffers no serious prejudice, except loss of bargain, the **Owner** will allow the Bidder to withdraw its Bid will return the Bidder's Bid Security within a reasonable time. However, that Bidder will not be allowed to submit another Bid for the Work. The decision of the **Director-DCD**, or his/her designee, shall be final and binding on any such Bidder.

ARTICLE 12 BID OPENING; OBJECTION TO THE AWARD

12.1. Each Bidder bears sole responsibility to submit their bid electronically through the SIGMA VSS website at <https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService>

12.2. Within reasonable time after the date of Bid opening, the **Owner** will make available a "Bid tabulation" listing the Bids opened and the Apparent Low Bidder. If any Bidder listed in the Bid tabulation has any objection to the Apparent Low Bidder, the objecting Bidder shall file a written protest with the **Owner** within seven (7) Calendar Days after the date of Bid opening. The protest shall describe in detail the basis for the protest and request a determination under this Article.

12.3. If a written protest is timely filed, the **Director-DCD**, or his/her designee, will review the protest and if he/she determines in his/her sole discretion that a claim review process is necessary, such proceeding shall be conducted within ten (10) Calendar Days after receipt of the written protest.

12.4. The **Owner** will notify the Bidders involved within a reasonable time of the **Director-DCD's**, or his/her designee's, recommendation to dismiss or uphold the protest. If the protest has been denied, the **Owner** will notify those Bidders of the time and date on which the **Board's** Building Committee will meet to consider the **Director-DCD's**, or his/her designee's recommendation of award. The objecting Bidder and the Apparent Low Bidder will be given an opportunity to be heard at the Building Committee meeting and, at the discretion of the **Board**, at any subsequent **Board** meetings. The Building Committee and **Board**, at its discretion, will review or hear the protest under such terms and conditions as either deems proper.

12.5. Upon reviewing the protest, the Building Committee and/or the **Board** will either (a) dismiss the protest, or (b) uphold the protest and send the Bid back to the **Director-DCD**, or his/her designee, for a new Bid evaluation or rebid, consistent with the determination of the Building Committee or **Board's** findings. The decision of **Board** as to the protest shall be final and binding.

ARTICLE 13 BIDS TO REMAIN OPEN

13.1. Bids shall remain open for acceptance by the **Owner** for no less than the period during which Bids shall remain valid (i.e., the Bid hold period) stated in Section 00030 Advertisement.

13.2. The **Owner**, by written notice, may elect to request the Apparent Low Bidder and any other Bidder remaining or wishing to remain in contention for the award to hold their Bids beyond the Bid hold period. Any such Bidder who fails or refuses to agree to the **Owner**-requested extension may be disqualified for further consideration for the award. However, no such Bidder shall forfeit the Bidder's Bid Security due to its failure or refusal to hold its Bid.

13.3. Any such Bid hold extension request by the **Owner** and consent by any Bidder shall be based upon no increase in (a) the Bidder's Base Bid, (b) any of the Bidder's Alternate Bid Prices, and (c) any Contract Times stated in Calendar Days. However, in the event none of the Bidders involved consent to extending their Bids, as conditioned in this paragraph, the **Owner** will issue a post-Bid Addendum specifying an additional Alternate for the sought extension in the Bid hold period.

ARTICLE 14 AWARD OF THE CONTRACT

14.1 If the Owner elects to award the Contract, the Owner will make the award to the responsive and responsible best value bidder except as provided below relative to veteran's preference.

14.1.1 The Apparent Low Bidders will be evaluated for responsiveness and responsibility based on the following:

- Compliance with the bid specifications and requirements.
- The Bidder's financial resources.
- The Bidder's technical capabilities.
- The Bidder's technical experience.
- The Bidder's past performance.
- The Bidder's insurance and bonding capacity.
- The Bidder's business integrity.

If a qualified disabled veteran meets the requirements of the contract solicitation, provides acceptable responses to both Part One and Part Two of the Best Value Construction Bidder Evaluation to achieve a Best Value recommendation and with the veteran's preference is the lowest responsive, responsible, best value Bidder the Owner will award the contract to the qualified disabled veteran bidder.

A determination as to whether the requirements of the bid solicitation have been met will be based solely on the Owner's and Professional's evaluation of the Section 00300 Bid Form, Bid Form Attachments, Bidder-provided documents, Best Value Evaluation by the PSC, interview, and Bidder Qualification Submittals received in a timely basis. Each bid requesting the Qualified Disabled Veterans (QDV) preference, in accordance with Public Act 22 of 2010, MCL 18.1241.3 shall include a DD 214 Proof of Service and Discharge, a Veterans Administration rating decision letter, proof of disability (if the disability is not indicated on the DD 214), and appropriate legal documents setting forth the 51% natural persons QDV ownership.

The bids will be evaluated for best value based on price and qualitative components by comparing the qualitative components of the three lowest responsive and responsible Bidders. The comparison may also include other Bidders whose bids are within 10% of the lowest responsive and responsible Bidder. Determination of the lowest three Bidders shall be based on the sum of the Base Bid and any additive and deductive Alternates the Owner accepts. Alternates shall be accepted in the order listed in paragraph 6.2 Schedule of Alternates in Section 00300 Bid Form only. The Owner will accept an Alternate only if all other previously listed Alternates are also accepted unless acceptance by the Owner of Alternates in a different order does not affect determination of the lowest three bidders in any way.

Some qualitative components that may be evaluated are:

- Technical approach.
- Quality of proposed personnel.
- Management plans.
- ADD ANY OTHER PROJECT SPECIFIC

For contracts under \$250,000, best value will primarily be based on the lowest responsive and responsible bid.

14.1.2. For determining the lowest, responsive, and responsible bid, when a Qualified Disabled Veterans (QDV) preference is requested, 10% of the lowest responsive and responsible bid (the bid that would otherwise receive the contract award if the preference were not being considered) will be deducted from all QDV bids. If the low responsive and responsible QDV bid, less the 10% preference, is less than the

lowest responsive and responsible bid, then the QDV bid will be declared the official lowest responsive and responsible bid. The original QDV bid amount will be the basis of the contract award.

14.1.3. Bid irregularities with respect to the Bidding Documents, for which corrective action is not already provided in paragraph 14.6 or elsewhere in the Bidding Documents, may be waived at the sole discretion of the **Owner**, unless the irregularity was due to the Bidder's lack of good faith or fair dealing, or where the waiver would lead to a determination obviously in error or inconsistent with the Bidding Documents.

14.1.4. For Bids over \$100,000.00, Bidders that self-certify to be a Michigan business shall be given a preference over an out of state Bidder in the same manner in which an out-of-state Bidder would be preferred in its home state. Bidders that neither self-certify as a Michigan business in their Bid nor authorize the Michigan Department of Treasury to release information necessary to verify entitlement will be deemed to have waived their right to claim entitlement to any preference.

14.2. No Bidder shall be considered responsible under the requirements of the Bidding Documents, unless that Bidder delivers the information required in paragraph 2.1 that the **Owner** considers necessary to the evaluation of the Bid.

14.3. The following may be considered examples of sufficient grounds for determining that a Bidder is not responsible, or for objecting to any of the Bidder's Subcontractors (even if holding a valid license) or Suppliers: *(a) being listed on the Michigan Department of Labor's register of employers who have been found in contempt of court by a Federal Court of Appeals for failure to correct an unfair labor practice as prohibited by Section 8 of Chapter 372 of the National Labor Relations Act, 29 U.S.C. 158 (1980 PA No. 278, as amended, MCL 423.321 et seq.); *(b) being debarred from participation in the bid process pursuant to Section 264 of 1984 PA 431, as amended, MCL 18.1264, or debarred or suspended from consideration for award of contracts by any other State or any federal Agency; (c) a felony conviction in any state (including this State) within the last three (3) years before the date of Bid opening; (d) lack of adequate experience or demonstrated qualifications or capability to perform the trades or classifications of the Work specified in the Bidding Documents; (e) reasonable doubt concerning the ability to maintain adequate construction equipment, quality control, schedule control or financing to meet contractual obligations under the Bidding Documents; (f) a previous termination for cause by the **Owner** within the last five (5) years before Bid opening; (g) failure to comply with all requirements for foreign corporations; (h) concealment, misrepresentation or misstatement of any material facts; or (i) failure to pay any federal, State or local taxes.

14.4 If the Owner, either through the Director-DCD or his/her designee, or the Board, intends to disqualify any Bidder under consideration for award, written notice of the impending disqualification will be provided by the Owner (including reasons for the disqualification) to that Bidder and those Bidders remaining under consideration to the award. If the disqualified Bidder has any objection to the disqualification that Bidder shall, within two (2) Business Days, file a written protest, as provided in paragraph 12.2, and follow the protest

procedures in paragraphs 12.3 through 12.5. The decision of the Board shall be final and binding on the disqualified Bidder.

14.5. Except in circumstances leading to a determination obviously in error or inconsistent with the Bidding Documents, irregularities on any Bid shall be resolved using the rules provided in paragraph 14.6. Except as stated in paragraph 14.6(e), any Bid Form and Bid Form Attachment having any such irregularity shall be modified, altered, or revised to reflect the resolution of the irregularity, however, no Bidder-provided sum or extension shall be modified, altered, or revised and the Bidder's Bid shall be binding on the Bidder and the Bidder's surety, subject to the provisions governing Bid withdrawals stipulated in Article 11.

14.6. The following irregularities on any Bid Form or Bid Form Attachment shall be resolved as follows: (a) between SIGMA entry and signed Bid Summary attachment, the signed Bid Summary attachment will be used; (b) between words and figures, the words shall be used; (c) between any sum, computed by the Bidder, and the correct sum, the sum computed by the Bidder shall be used; (d) between the product, computed by the Bidder, of any quantity and bid unit price and the correct product of the unit price and the quantity of Unit Price Work, the product extended by the Bidder shall be used; (e) between a stipulated Allowance and the amount entered, the Allowance shall be used; (f) any mobilization pay item exceeding the maximum specified shall be ignored and the Bid shall remain unchanged; (g) if any Bidder fails or neglects to bid a unit price for an item of Unit Price Work but shows a "Bid Price" for that item, the missing unit price shall be computed from the respective quantity and the Bid Price shown; (h) if any Bidder fails or neglects to show a "Bid Price" for an item of Unit Price Work but bids a unit price, the missing Bid Price shall remain as "zero"; and (i) if any Bidder fails or neglects to enter a Bid price in both words and figures, the Bid price printed or typed, whether in words or figures, shall be used.

14.7. If there are reasonable grounds for believing that collusion or unlawful agreements exist between any Bidders, that a Bidder is interested in more than one Bid, or that any Bids are not genuine, those Bidders will be disqualified, and their Bids will be rejected without consideration.

14.8. All costs of the Bidder awarded the Contract and that are incurred in responding to requests from the **Owner** or **Professional**, whether or not sufficient, shall neither justify any increase in Contract Price or Contract Time nor provide any basis for subsequent consideration by the **Owner** of a proposal or claim for any increase in Contract Price or Contract Time.

*14.9. Michigan and Recycled Products – The Bidder awarded the Contract and all Subcontractors and Suppliers shall use (a) Michigan-made products whenever possible where price, quality and performance are equal to or better than non-Michigan products, and (b) supplies, materials and equipment made from Recycled Materials if there is a readily identifiable source or market as determined by the **Director-DCD, or his/her designee**, and the cost does not exceed one hundred ten percent (110%) of supplies, materials or equipment not containing Recycled Materials (Sections 261 and 261a of the Management and Budget Act, 1984 PA 431, as amended, MCL 18.1261 and MCL 18.1261a).

*14.10. Subcontractor and Supplier Businesses Owned by Minorities, Women and Persons with Physical or Mental Disabilities – Bidders are urged to utilize as Subcontractors and Suppliers, businesses owned by minorities, women, and persons with physical or mental disabilities. For assistance in locating and identifying certified businesses, contact the Michigan Department of Civil Rights, Business and Community Affairs, Cadillac Place, 3054 W. Grand Boulevard, Suite 3-600, Detroit, MI 48202, 1-800-482-3604.

*14.11. Unfair Labor Practice - Bidders who have been found in contempt of court by a Federal Court of Appeals on not less than three occasions involving different violations during the preceding seven (7) years for failure to correct an unfair labor practice prohibited by Section 8 of Chapter 372 of the National Labor Relations Act, 29 U.S.C. 158 are not eligible to be awarded the Contract. A register of employers in violation of this requirement is compiled by the Michigan Department of Energy, Labor and Economic Growth pursuant to 1980 PA 278, MCL 423.321 et seq. Further, the Bidder awarded the Contract shall not use any Subcontractors or Suppliers on the Work whose name appears on the register. According to Section 4 of 1980 PA 278, any contract entered into by the State may be declared void and rescinded to the extent the Bidder awarded the Contract or any Subcontractor, manufacturer, or Supplier awarded Work under the Contract subsequently appears in the register compiled by the Department of Consumer and Industry Services.

*14.12. Nondiscrimination – The Bidder awarded the Contract, and each Subcontractor and Supplier awarded a Sub agreement covenants that it will comply with the nondiscrimination requirements described in paragraphs 7.12.1 through 7.12.3 of Section 00700 General Conditions.

*14.12.1. A breach of the covenants set forth in paragraph 7.12 of Section 00700 General Conditions shall be regarded as a material breach of the Contract.

*14.12.2. The Bidder awarded the Contract shall include or incorporate by reference paragraph 14.12.1 (above) and the provisions of paragraphs 7.12.1 through 7.12.3 of Section 00700 General Conditions in every Sub agreement, unless exempted by rules, regulations, or orders of the Michigan Civil Rights Commission. Each Sub agreement shall provide that those provisions shall be binding upon the Subcontractor or Supplier.

*14.13. Bidders are further directed to Article 7 of Section 00700 General Conditions for terms and conditions concerning the following Michigan legal requirements applicable to this Contract: (a) Laws and permits, paragraph 7.1, (b) taxes, paragraph 7.2, (c) safety and protection, paragraph 7.3, (d) unfair labor practice, paragraph 7.10, (e) Michigan Right-to-Know Law, paragraph 7.11, and (f) Michigan residency for employees, paragraph 7.13.

ARTICLE 15 EXECUTION OF THE AGREEMENT

15.1. Upon acceptance of a Bid for the Work by the **Board** or by the **Director** of the **Department** of Technology, Management and Budget, the **Director-DCD** or his/her designee will send the Notice of Award to the Bidder awarded the Contract. The Notice of Award will (a) designate the

Contract Price and itemize the Alternates that the **Owner**, in its sole discretion, has accepted, (b) enclose completed, unsigned Section 00500 Agreement forms and blank Section 00610 Performance and Section 00620 Payment Bond forms, and (c) outline the procedures to be followed and information to be provided by the **Contractor** for execution of Section 00500 Agreement.

15.2. Unless otherwise designated in the Notice of Award, within fifteen (15) Calendar Days after receipt of the Notice of Award, the Bidder recommended for award shall (a) sign Section 00500 Agreement; (b) execute Section 00610 Performance Bond and Section 00620 Payment Bond (and attach to each Bond separate, certified copy of Power of Attorney); and (c) return to the Owner the executed Section 00500 Agreement, Section 00610 Performance Bond and Section 00620 Payment Bond forms, evidence of original certificates of insurance and any other documents required for submission by the Notice of Award.

15.3. Evidence of insurance shall consist of certificates of insurance confirming that the policies of insurance that the **Contractor** has obtained, including the limits of coverage and endorsements provided, are in compliance with the insurance requirements specified in paragraphs 7.4 through 7.7 of Section 00700 General Conditions. Certificates of insurance shall contain a statement confirming that coverage will not be canceled, adversely changed or renewal refused until at least thirty (30) Calendar Days' prior written notice has been delivered or mailed to the **Owner** and **Contractor**.

15.4. The **Owner** will execute the Section 00500 Agreement retain one hard copy and compile a complete electronic copy of the Contract Documents upon two conditions: (a) receipt of the executed Section 00500 Agreement, Section 00610 Performance Bond and Section 00620 Payment Bond (with each Bond enclosing a separate certified copy of Power of Attorney and a separate certificate of principal) and evidence of insurance; and (b) a determination by the **Owner** that the Section 00610 Performance Bond and Section 00620 Payment Bond, required certifications and evidence of insurance received conform to the requirements of the Contract Documents and are acceptable to the **Owner**.

15.5. Each full set of the executed Contract Documents shall consist of: (a) two (2) or more volumes containing the executed Agreement (conformed Section 00500); executed Performance and Payment Bond and certifications (conformed Section 00610 and Section 00620); the **Contractor's** Bid Form and Non-Collusion Affidavit (conformed Sections 00300 and 00320); and the remainder of the Bidding Documents, including Addenda; and (b) a separate volume with Qualification Submittals submitted by the **Contractor** that the **Owner**, in its sole discretion, chooses to include as part of the Contract Documents. The **Contractor** will receive one full set of the executed Contract Documents.

15.6. Bid prices in the "Schedule of Change Order Prices" on the **Contractor's** Bid Form accepted by the **Owner** upon evaluation of the **Contractor's** Bid will be incorporated into the Contract as provided in paragraph 3.2 of Section 00500 Agreement.

15.7. The Notice to Proceed shall be authorized by the **Director-DCD** or his/her designee. Subject to the provisions of Article 13 and compliance with paragraphs 15.2 through 15.4, the Notice to Proceed shall designate a Date of Commencement of the Contract Time no later than sixty (60) Calendar Days after the date ending the Bid hold period, or thirty (30) Calendar Days after receipt by the **Owner** of the executed Section 00500 Agreement and acceptable, executed Section 00610 Performance Bond and Section 00620 Payment Bond, whichever last occurs, unless otherwise directed in writing by the **Owner**.

15.8. Within fifteen (15) Calendar Days after receiving the Notice to Proceed, the **Contractor** shall submit to the **Owner** any additional Change Order cost and pricing data requested with the Notice to Proceed. The **Contractor's** submittal shall be itemized in a breakdown acceptable to the **Owner**, and shall be certified as accurate, current, and complete by a duly authorized financial representative of the **Contractor**. The **Contractor** shall meet with the **Owner** to review the cost and pricing data submittal. The **Owner** shall incorporate into the Contract Documents any acceptable cost and pricing data by Change Authorization issued within a reasonable time after the Notice to Proceed.

ARTICLE 16 MOBILIZATION PAY ITEM

16.1. The mobilization pay item, if designated in the Specifications and/or the Bid Schedule in Section 00300 Bid Form, shall be intended to cover, at least in part, up-front costs incurred by the **Contractor** from Contract Award until sixty (60) Calendar Days after the **Contractor** starts the Work. Allowable mobilization items shall be as itemized in the Schedule of Values approved by the **Professional**, and may include costs incurred by the **Contractor** (a) in establishing temporary site offices and other facilities specified in the Specifications, (b) in obtaining permits required to commence the Work, (c) for premiums for the required Section 00610 Performance Bond and Section 00620 Payment Bond, (d) for insurance obtained by the **Contractor** to comply with the requirements of the Contract Documents, and (e) in complying with the Revision 0 Schedule and Cost Submittal requirements.

16.2. Total payments to the **Contractor** under the mobilization pay item shall not exceed four percent (4%) of the Base Bid, unless otherwise expressly provided in the Bidding Documents. If the **Contractor** incurs costs, which the **Contractor** considers within the scope of the mobilization pay item, more than the four percent (4%) limitation, those excess costs will not be reimbursed under the mobilization pay item and will be deemed to have been included in other parts of the **Contractor's** Bid.

16.3. To the extent practicable, the basis of measurement for payment shall be proof of actual payment by the **Contractor**. Where actual payment by the **Contractor** does not apply, as in the case of premiums for the Section 00610 Performance Bond, the Section 00620 Payment Bond and the insurance policies the **Contractor** is required to furnish under the provisions of Article 15, or in connection with the **Contractor** costs to comply with the Revision 0 Progress Schedule and Cost Submittal requirements of the Contract Documents, the basis of measurement for payment shall be

as stipulated in the Schedule of Values approved by the **Professional**. Payments to the **Contractor** shall be based on the requirements of the Bidding Documents, subject to the following:

16.3.1. Approval by the **Professional** of the Schedule of Values (required by paragraph 12.1 of Section 00700 General Conditions) shall be a condition precedent to making any payment under the mobilization pay item. Partial payments shall be based on the breakdown itemized in the Schedule of Values and the extent of completion, as determined by the **Professional**.

16.3.2. Full payment of the amount corresponding to the Revision 0 Schedule and Cost Submittals shall be paid by with the Request for Payment following return to the **Contractor** of the Revision 0 Submittal, or Revision 0A Submittal (i.e., first resubmission), Revision 0B Submittal (i.e., second resubmission), etc. of the Progress Schedule marked "Resubmittal Not Required."

ARTICLE 17 SOIL EROSION AND SEDIMENTATION CONTROL —FINE FOR NON-COMPLIANCE

17.1. All Work within this Contract must comply with the applicable soil erosion and sedimentation control rules and regulations (Soil Erosion and Sedimentation Control – 1994 PA 451, Part 91, as amended, MCL 324.9101 et seq.) and specific provisions for same within the Contract Documents. Soil erosion and sedimentation control will be monitored and enforced by the Department of Technology, Management and Budget, **State Facilities Administration**.

17.2. Soil erosion and sedimentation control on **Department** Projects will be monitored and enforced by **State**

Facilities Administration through the review of **Contractor** implementation plans and site inspections by Soil Erosion and Sedimentation Control Unit personnel and/or **State Facilities Administration** Representative.

17.2.1. In the event, the **Owner** determines through site inspections by the **State Facilities Administration** Representative or by notification by regulatory authorities that the **Contractor** has not met the soil erosion requirements of the Project and/or is in violation of the applicable soil erosion and sedimentation control statutes, the **Contractor** shall be notified in writing and stop work orders may be issued by **State Facilities Administration** in conjunction with paragraph 2.3 of Section 00700 General Conditions.

17.3. In the event, the **Owner** determines through site inspections by the **State Facilities Administration** Representative or by notification by regulatory authorities that the **Contractor** has not met the soil erosion requirements of the Project and/or is in violation of the applicable soil erosion and sedimentation control statutes, the **Contractor** shall be notified in writing and corrective actions undertaken by **State Facilities Administration** in conjunction with paragraph 9.4 of Section 00700 General Conditions.

17.4. In the event, the **Contractor** fails to respond to written notice from **State Facilities Administration** regarding noncompliance with the provisions of the Contract Documents and/or soil erosion and sedimentation control regulations applicable to this Work, **State Facilities Administration** has the right to assess a fine to the **Contractor**. Fines shall be in addition to any other remediation costs or liquidated damages applicable to the Project and may exceed the value of the Contract.

END OF SECTION 00100

ATTACHMENT A TO SECTION 00100 – BIDDER'S CHECK LIST

PROFESSIONAL – Commtech Design, Inc.

WORK – Replace Security System Programmable Logic Controllers

FILE No. – 491/23066.SDW

BEFORE BID OPENING:

Date. – Due date for delivery to the **Professional** of written proposals seeking to have the **Professional** consent to naming additional materials or equipment by Addenda. (Reference: Section 00100, Paragraph 7.2).

Date. – Bidder inquiries received after this date will not be answered, unless answered through Addenda issued at least seventy-two (72) hours before Bid opening (Business Days only), the Bid opening is postponed by Addendum, or the Work is rebid following post-Bid Addenda. (Reference: Section 00100, paragraph 4.1).

CONTENTS SHALL BE UPLOADED AS A PDF DOCUMENT TO/THROUGH SIGMA VSS (ITEMS 1 THROUGH 5.3 BELOW):

NOTE 1: THE BIDDER SHALL USE THE BID SUMMARY, BID FORM AND BID FORM ATTACHMENTS INCLUDED WITH THE BIDDING DOCUMENTS, UNLESS REVISED BY ADDENDUM, IN WHICH CASE THE LATEST REVISION OF THE BID SUMMARY, BID FORM AND/OR BID FORM ATTACHMENTS ISSUED BY ADDENDUM SHALL BE USED.

NOTE 2: THE BIDDER IS NOT REQUIRED TO INCLUDE THE PROJECT MANUAL OR DRAWINGS IN THE PDF BID DOCUMENT PACKAGE UPLOADED TO SIGMA VSS, ONLY THE COMPLETED BID SUMMARY, BID FORM AND BID FORM ATTACHMENTS!

- 1. Completed Bid Summary provided with Section 00300 Bid Form.
- 2. Completed Section 00300 Bid Form, which requires (a) completing the acknowledgment of Addenda in paragraph 2.1, (b) filling out Article 6 Bid Schedule and, if any prices are designated, completing Article 7 Change Order Prices, and (c) completing Article 8, that is, entering the date the Bid is submitted, completing paragraphs 8.1 through 8.4, and, if the Bidder is a joint venture, paragraph 8.5, and signing, as appropriate, in the spaces provided.
- 2.1 Completed Certificate of Principal or other equivalent acceptable certificate or authorization document, which certificate shall be attached to the completed Section 00300 Bid Form.
- 3. If the Bid includes a Bid Bond, ensure that the surety is authorized to do business in the State by the Department of Licensing and Regulatory Affairs – Insurance Bureau and is listed on the current U.S. Department of the Treasury Circular 570. Also, ensure that the completed Section 00310 Bid Bond is dated, is signed by both the Bidder and surety, and attaches Power of Attorney. If the Bid includes a certified or cashier's check or money order, that check, or money order shall be delivered in original copy before the Bid Due Time to:

State Facilities Administration
Design & Construction Division
3111 W. St. Joseph Street
Lansing, Michigan 48917

All other Bid information must be submitted via SIGMA as per standard bidding procedure.

- 4. Completed Section 00320 Non-collusion Affidavit.
- 5. Qualified Disabled Veterans Preference Documentation (if preference requested).
- 5.1 DD 214 – Proof of Service/Discharge.
- 5.2 Veterans Administration Rating Decision Letter – Proof of Disability, if not indicated in the DD 214.
- 5.3 Legal Proof of 51% QDV Ownership
- 5.4 Byrd Anti-Lobbying Certification (Only when Federal Provisions Addendum is included)

This Bidder's Check List is provided solely to aid the Bidder in submitting a Bid. It shall not be relied on to include all items necessary to insure a complete Bid. The Bidder is solely responsible for including all items as required by the Bidding Documents, including any items required by Addenda, which may not be listed in this Bidder's Check List.

END OF ATTACHMENT A TO SECTION 00100

SECTION 00120 – SUPPLEMENTARY INSTRUCTIONS

PROFESSIONAL – Commtech Design, Inc
WORK – Replace Security System Programmable Logic Controllers
FILE No. – 491/23066.SDW

The provisions of this Section 00120 Supplementary Instructions amend or supplement Section 00100 Instructions to Bidders and those other provisions of the Bidding Requirements that are indicated below. All other Bidding Requirements that are not so amended or supplemented remain in full force and effect.

The contractor will require an Escort to accompany their work when in the secure areas of the building. Contractor shall assume one (1) escort is available during the life of the contract 14. A second escort may be available at specific times when the contractor coordinates that with the facility. Contractor and all their onsite personnel must Pass LEIN check if awarded the project.

END OF SECTION 00120

SECTION 00210 – INFORMATION FOR BIDDERS

PROFESSIONAL – Commtech Design, Inc.
WORK – Replace Security System Programmable Logic Controllers
FILE No. – 491/23066.SDW

1.0 RELATED PROVISIONS

1.1. Paragraphs 3.4 through 3.7 of Section 00100 Instructions to Bidders, which contain terms and conditions governing the information made available to Bidders in this Section, are made part of this Section 00210 Information for Bidders by this reference.

2.0 SUBSURFACE CONDITIONS

2.1. The reports of explorations and tests of subsurface conditions itemized immediately below have been used by the **Professional** in the preparation of the Bidding Documents.

Not applicable

2.1.1. Information or data contained in those reports that may be properly considered Authorized Technical Data concerning subsurface conditions include (NOTE: All other information or data excluded from the list below represent Non-Technical Information or Data, interpretations, or opinions):

Not applicable

2.2. The reports of explorations and tests of subsurface conditions itemized immediately below have not been used by the **Professional** in the preparation of the Bidding Documents. Those reports are available at the office of the **Professional** for review or purchase. Neither the **Owner** nor **Professional** warrants that this list identifies all existing relevant documents.

3.0 OTHER PHYSICAL CONDITIONS

3.1. The Drawings and technical Specifications and those drawings itemized immediately below contain information or data that have been used by the **Professional** in the preparation of the Bidding Documents, and that may be properly considered Authorized Technical Data concerning physical conditions of existing surface and subsurface facilities.

Existing drawing As-Builts. These are attached

3.2. The reference documents itemized immediately below have not been used by the **Professional** in the preparation of the Bidding Documents and are available at the office of the **Professional** for review or purchase. Information and data contained in those reference documents, including, but not limited to dimensions, locations and conditions of existing surface and subsurface structures, roadways, piping, raceways, equipment, etc. may not accurately or reliably reflect actual conditions. Neither the **Owner** nor **Professional** warrants that this list identifies all existing relevant documents.

Not applicable

4.0 UNDERGROUND UTILITIES

4.1. Information or data about physical conditions of existing Underground Utilities, that have been used by the **Professional** in the preparation of the Bidding Documents, is shown or indicated in the Drawings and technical Specifications and those Underground Utility drawings itemized immediately below.

Not applicable

5.0 PERMITS, APPROVALS, LICENSES AND FEES

5.1. To the extent that the **Owner** has secured or will secure any permits, approvals and licenses and has paid or will pay any associated charges and fees, any such permits, approvals and licenses are itemized in this paragraph.

Owner will not provide any permits. Contractor shall provide and apply for all permits required

5.2. In the event any permits, approvals and licenses itemized in paragraph 5.1 have been obtained by the **Owner** and the fees have been paid, copies of those permits, approvals, licenses, and corresponding fee receipts, will be attached by the **Professional** as a PDF copy with the SIGMA posting or will otherwise be made available for contractor to download.

5.3. Except for any permits, approvals, licenses, and fees identified in paragraph 5.1, the **Contractor** shall be responsible for all permits, approvals, licenses, and fees applicable to Work.

6.0 SEQUENCING REQUIREMENTS

6.1. Refer to the technical Specifications, including, but not limited to the General Requirements, for information, data, and criteria on sequences of Work restraints, constructability, and maintenance of service to existing facilities, which, if provided, shall govern the selection of Work sequences.

6.2. Each Bidder shall be responsible for any conclusions or interpretations the Bidder makes related to the selection of sequences and Means and Methods, based on the technical data made available, and/or those additional investigations or studies made or obtained by that Bidder.

7.0 PREVAILING WAGE

7.1. The Bidding Documents include either the attached Schedule of prevailing rates of wages and fringe benefits for all classes of Construction Mechanics called for in the Bid and resulting Contract, if any, or the attached current prevailing wage determination issued by the U.S. Department of Labor, as applicable depending on the funding source(s).

END OF SECTION 00210

SECTION 00300 – BID SUMMARY

DTMB-0401M (R 03/21)

BID SUMMARY
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET

**STATE FACILITIES ADMINISTRATION
 DESIGN AND CONSTRUCTION DIVISION
 3111 W. St. Joseph Street
 Lansing, Michigan 48917**

Bids must be submitted electronically through the SIGMA VSS website at
<https://sigma.michigan.gov/webapp/PRDVSS2X1/AltSelfService>

FILE NUMBER 491/23066.SDW	DEPARTMENT/INSTITUTION DHHS/Center for Forensic Psychology		
CONTRACT TIME(S) 6 Months from Contract approval.	PROJECT NAME Replace Security System Programmable Logic Controllers	LOCATION Center for Forensic Psychology	
BID OPENING DATE Wednesday August 21, 2024 at 2:00 pm ET	FOR AN EXAMINATION OF THE SITE CONTACT: Dave Roschinsky RoschinskyD@michigan.gov		
SEE SECTION 00100 INSTRUCTIONS TO BIDDERS AND SECTION 00700 GENERAL CONDITIONS PROVIDED WITH THE BIDDING DOCUMENTS. BID: WE PROPOSE TO FURNISH, PERFORM AND COMPLETE THE ENTIRE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS IN CONSIDERATION OF THE BID PRICE (S) STATED BELOW.			
FIRM NAME AND COMPLETE ADDRESS		TELEPHONE NUMBER and E-MAIL ADDRESS	
<input type="checkbox"/> Qualified Disabled Veteran		SIGMA VENDOR NUMBER <small>(protected information required for processing payments)</small>	
BIDDER'S SIGNATURE AND TITLE	DATE	WITNESS' SIGNATURE	DATE

By signing this bid above, bidder certifies their enclosed Qualified Disabled Veteran and Michigan-Based Business Certifications.

BASE BID FROM BID SCHEDULE (Include specified Allowances):

_____ Dollars \$ _____
(use words) (in figures)

Alternate 1: (Subtract) _____ Dollars \$ _____
(use words) (in figures)

Alternate 2: (Add/Subtract) _____ Dollars \$ _____
(use words) (in figures)

Alternate 3: (Add/Subtract) _____ Dollars \$ _____
(use words) (in figures)

A PERFORMANCE BOND AND A PAYMENT BOND ARE REQUIRED FOR ALL BIDS OVER \$50,000.00. EACH BID MUST BE ACCOMPANIED BY A FIVE (5) PERCENT BID GUARANTEE. BUILDERS RISK INSURANCE IS REQUIRED TO BE PROVIDED BY THE CONTRACTOR UNLESS OTHERWISE INDICATED IN THE BID DOCUMENTS.

BIDDERS ARE ALSO CAUTIONED TO FAMILIARIZE THEMSELVES WITH ALL OF THE OTHER CONDITIONS OF THE CONTRACT.

Project Scope of Work:

Contractor shall provide and install equipment, cabling, software and configuration to replace and upgrade the existing Programmable Logic Controller (PLC) system. This includes the provision of a new Ethernet network and CAT- and fiber optic cabling required to connect the PLC devices throughout the building see the drawings and specifications for the extent of the systems to be provisioned.

Upgrade the audio intercom system to integrate the intercoms to the PLC system. System shall work as it works currently after installation. Work with the owner to establish baselines for communications, control and integration of the PLC system to the existing video security system, existing access control system and upgraded intercom system.

Provide and configure new software to allow control of the PLC system and audio intercom system thru the PLC system.

Install CAT-6 cabling and termination/testing for the connection of the PLC system. Install Fiber cabling and termination/testing of the fiber to facilitate Ethernet connectivity between the SEC1, SEC2 and SEC3 communications rooms.

Provide and install all patch cables and interconnection cables to fully connect the PLC System, Ethernet network and Intercom systems.

Configure the new equipment and software to match and extend the current PLC and intercom systems.

Provide new system as-built documentation and warranty as described in the specifications and on the drawings.

The Bidder must figure its Base Bid on the specified, or Addendum-approved, materials and equipment **only**. No "or equal" or substitution proposals will be permitted after Bid opening, except as provided in the General Conditions.

Addenda: Bidder acknowledges receipt of Addenda: No. ___ dated: _____, No. ___ dated: _____ No. ___ dated: _____

SECTION 00300 BID FORM

PROFESSIONAL – Commtech Design, Inc

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

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Bidding Documents, including, without limitation, those dealing with the disposition of the Bid Security.

1.2. The undersigned Bidder agrees to hold this Bid open for acceptance by the **Owner** for the period specified in Article 9 of Section 00030 Advertisement.

STATE OF MICHIGAN MODEL
Developed from FORMSPEC™ Michigan Model

1.3. The Bidder will provide a signed original of Section 00500 Agreement, the executed Section 00610 Performance Bond, the executed Section 00620 Payment Bond, and appropriate evidence of insurance within the times and in the manner specified in the Bidding Documents.

ARTICLE 2 THE BIDDER'S REPRESENTATIONS

2.1. The Bidder has examined the Bidding Documents, including the Addenda acknowledged in the table below. The Bidder has verified that the Addenda acknowledged below include all issued Addenda. Except for Addenda, which solely revise the date of Bid, opening, failure by the Bidder to acknowledge receipt of all Addenda correctly, by either failing to complete or incorrectly completing the table below, shall justify the Owner's refusal to read the Bid and automatically disqualify the Bidder from any consideration for award of the Contract.

No. ___ Dated _____	No. ___ Dated _____
No. ___ Dated _____	No. ___ Dated _____

ARTICLE 1 THIS BID IS SUBMITTED TO THE STATE OF MICHIGAN ("the Owner").

1.1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the **Owner** on the form in Section 00500 Agreement and to furnish and perform the Work as specified or indicated in the Bidding Documents for the Bid prices in the "Bid Schedule" on this Section 00300 Bid Form, within the Contract Times specified in Section 00500 Agreement, and in accordance with all other provisions and terms and conditions of the

No. ____ Dated _____ No. ____ Dated _____

2.2. The Bidder has taken those steps that are reasonably necessary to (a) ascertain and become familiar with the Work, site, and locality; (b) account for all applicable federal, state, and other local Laws and all general, local, and prevailing conditions that may in any manner affect cost, schedule, progress, performance or furnishing of the Work; and (c) study and account for the terms and conditions of the Bidding Documents. The Bidder has carefully correlated the Bidder's observations with the Bidding Documents.

2.3. The Bidder has studied carefully all reports concerning subsurface conditions and drawings of physical conditions of existing surface and subsurface facilities that have been used by the **Professional** and all documents of physical conditions of existing Underground Utilities facilities that have been used by the **Professional** – in both cases as identified in Section 00210 Information for bidders. The Bidder assumes responsibility for carefully and accurately locating existing Underground Utilities in a manner consistent with paragraph 10.3 of Section 00700 General Conditions and as required by 2013 PA 174, as amended, MCL 460.721 et seq. The Bidder accepts the determinations set forth in the Bidding Documents as to the extent of such Authorized Technical Data and Underground Utilities information and data contained in those reports, drawings, documents, or the Bidding Documents, as applicable, upon which the Bidder may rely.

2.4. To the extent Additional Technical Data has been considered by the Bidder as necessary for determining the Bid in Article 6 Bid Schedule, and the **Owner**, upon request, did not have the necessary Additional Technical Data, the Bidder assumes responsibility for having undertaken or undertaking reasonable examinations of the site and any other pertinent available information and data. The Bidder agrees to perform and furnish the Work affected by the conditions involved, at no increase in Contract Price and Contract Time, to the extent the information and data necessary for determining the Bid could have been discovered through reasonable examinations of the site and any other pertinent information and data available (including, but not limited to the information and data designated in Section 00210 Information for Bidders).

2.5. The Bidder has carefully correlated the results of its observations, examinations, and studies of those reports of explorations and all that information and data in studies, drawings, and specifications, referred to in paragraphs 2.3 and 2.4, with the terms and conditions of the Bidding Documents.

2.6. The Bidder has examined all information and data shown or indicated in the Bidding Documents concerning other work, including, but not limited to provisions in Section 00700 General Conditions. The Bidder assumes responsibility for all reasonably foreseeable terms, conditions and consequences resulting from other work that may in any manner affect cost, schedule, progress, performance or furnishing of the Work.

2.7. The Bidder has carefully examined the terms and conditions of the Bidding Documents concerning Delay, Activity Float times and early completion. The Bidder agrees that increases in Contract Price and/or Contract Time for Delay shall be as provided in Section 00700 General Conditions. The Bidder has correlated those terms and conditions with the Bidder's schedule for the Work and its Base Bid and Alternates.

2.8. The Bidder represents that each unit price covering Specified or Contingent Unit Price Work, whether bid on Article 6 – Bid Schedule or on Article 7 – Schedule of Change Order Prices, includes sufficient amounts to cover (a) all labor costs, Subcontractor costs, material and equipment costs, construction equipment costs and general conditions costs, and (b) all administrative costs and home office overhead), and (c) profit. The **Owner** reserves the right to reject any unit prices bid on paragraph 6.2 Schedule of Alternates or in Article 7 Schedule of Change Order Prices, which, in the **Owner's** sole discretion, are not in the **Owner's** best interest.

2.9. The Bidder has given the **Professional** written notice of all conflicts, ambiguities, errors, or omissions the Bidder has discovered in the Bidding Documents, and the written resolution given by the **Professional** is acceptable to the Bidder.

2.10. This Bid is genuine, is not made in the interest of or on behalf of any undisclosed person and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation. To induce the **Owner** into consideration of this Bid, the Bidder reiterates and makes each of the representations made by the Bidder in Section 00320 Non-collusion Affidavit attached to this Section 00300 Bid Form.

2.11. The Bidder is aware of the **Owner's** requirements for business owned by minorities, women, and persons with physical or mental disabilities, and assumes responsibility for all conditions and consequences that may result from meeting those requirements and that may in any manner affect cost, schedule, progress, performance and furnishing of the Work.

2.12. The Bidder has read and studied each provision of the Bidding Documents. The Bidder has no expectations different from the terms and conditions of the Bidding Documents.

ARTICLE 3 TIME OF COMPLETION

3.1. The Contract Times are specified in paragraph 4.1 of Section 00500 Agreement. The Bidder has carefully correlated the provisions in paragraph 4.1 of Section 00500 Agreement with the other terms and conditions of the Bidding Documents and unequivocally accepts the Contract Times for the Work, and any other designated parts of the Work, as specified.

3.2. The Bidder unequivocally accepts the liquidated damage provisions specified in paragraph 4.2 of Section 00500 Agreement in the event of any failure, neglect, or refusal to complete the Work, or designated part of the Work, within the corresponding Contract Times specified in paragraph 4.1 of Section 00500 Agreement.

ARTICLE 4 ATTACHMENTS INCLUDED WITH THIS BID

4.1. Attachments to this Section 00300 Bid Form and made a condition of this Bid are:

4.1.1. Evidence of Authority to Sign the Bid.

4.1.2. Section 00310 Bid Bond, with the attached certified copy of Power of Attorney, or

Alternate Bid Security.

4.1.3. Section 00320 Non-collusion Affidavit.

TO BE PROVIDED POST BID WITH SECTION 00400 SUBMITTALS:

4.1.5 Current EMR Rating

4.1.6 Identification of the proposed project superintendent with a resume or list of similar projects handled by that individual.

4.1.7 A list of at least three (3) projects completed within the last three (3) years of similar size and complexity, with contact information for references for each.

4.2. Bidder-provided documents, made a condition of this Bid, are as required in the following Section(s) of the Bidding Documents:

ARTICLE 5 DEFINED TERMS

5.1. Section 00020 Glossary assigns specific intent and meanings to capitalized terms and to other defined terms used in (a) this Section 00300 Bid Form, (b) Section 00310 Bid Bond and Section 00320 Non-collusion Affidavit), and (c) Section 00410 Bid Breakdown, Section 00420 Questionnaire, Section 00430 List of Subcontractors and Section 00440 Schedule of Materials and Equipment.

ARTICLE 6 BID SCHEDULE

6.1 Base Bid Schedule - The Bidder will complete the Work and accept in full payment, for the Work items listed, the following unit prices and/or Bid Prices, as applicable:

Base Bid Item No.	Bid Quantity	Description	Unit Price	Item Bid Price
1	Lot	CAT-6 and Fiber Cabling Equipment and Raceway	N/A	
2	Lot	CAT-6 and Fiber Cabling and Raceway Labor	N/A	
3	Lot	PLC System Equipment and software	N/A	
4	Lot	PLC System Equipment and software labor	N/A	
5	Lot	Intercom System Equipment	N/A	
6	Lot	Intercom System Labor	N/A	
7	Lot	Ethernet Network Equipment	N/A	
8	Lot	Ethernet Network Labor	N/A	
9	Lot	Mobilization	N/A	
10	Lot	Bonds and Warranty	N/A	
11	Lot	2% Code Approval	N/A	
11	Lot	2% Warranty	N/A	
12	Lot	2% As-Builts	N/A	
13	Lot	Attic stock: This shall include		
	1	Compactlogix PLC controller		
	1	Point I/) PLC controller		
	1	Intercom DCC and DCE controller		
	8	Door intercom		
		ALLOWANCE AMOUNT		\$25,000
TOTAL (This amount should equal the Base Bid amount on the Bid Summary Form)				\$

Base Bid (Sum of Bid Prices for all Base Bid Items):

_____ Dollars and No/Cents \$ _____
 (use words) (in figures)

Name of the Bidder _____ File No. _____

Date _____

SIGMA VENDOR NUMBER _____

Telephone No. _____

6.2 Schedule of Alternates - The Bidder will complete (or deduct from the Contract) the parts of the Work designated by the Alternates that follow and accept in full payment (or allow in full credit) for those parts of the Work the following Bid Prices:

Alternate Item No.	Bid Quantity	Description	Unit Price	Item Bid Price
1	Lot	Deduct alternate #1. Remove from the bid scope the provision and installation of Intercoms at the doors. This only includes replacement of the intercoms at the doors. The rest of the intercom system upgrade shall remain as part of the Base Bid.	NA	

The Bidder further acknowledges and agrees that the separate prices bid on this "Schedule of Alternates," where they are applicable and deemed acceptable by the **Owner**, will be used if incorporated into the Contract when the **Owner** issues the Notice of Award.

Name of the Bidder _____ File No. _____

Date _____

SIGMA VENDOR NUMBER _____

Telephone No. _____

ARTICLE 7 SCHEDULE OF CHANGE ORDER PRICES

7.1 The Bidder shall use this "Schedule of Change Order Prices" to propose contingent prices. The proposed contingent Change Order prices set forth in this schedule, at the sole discretion of the **Owner**, may, or may not be incorporated into the Contract Documents. The **Owner** reserves the right to negotiate contingent Change Order prices set forth herein prior to their possible incorporation into the Contract Documents. Proposed Change Order prices will not affect determination of the lowest Bid.

7.2 Subject to their incorporation into the Contract Documents, as provided in the Agreement, the Bidder will add to, or deduct from, the Contract Work covered by the contingent prices that follow and accept in full payment, or allow in full credit, for that Work (a) those prices bid by the Bidder, or (b) if a particular price is not bid, the price proposed by the **Owner** (and shown in the appropriate column):

Item No.	Bid Quantity	Description	Unit Price	Item Bid Price
		None		

Name of the Bidder _____

File No. _____

Date _____

SIGMA VENDOR NUMBER _____

Telephone No. _____

ARTICLE 8 BID SUBMITTED ON the _____ day of _____, 20_____.

8.1. Bid Security is in the form of a Bid Bond _____ Bid Bond form provided in Section 00310 has been duly executed _____; or
A Certified or Cashier's check ___ or Money Order ___ if a check or money order is provided as Bid Security, the original check/money order must be delivered before Bid Due Time to the issuing office as per Section 00100 paragraph 5.2 and Section 00110 item 3.

8.2. If the Bidder is an Individual:

Name of Individual: _____
Name & Title of Person Authorized to sign: _____
Signature: _____ (If not the Individual, Attach Power of Attorney) Date _____
Doing Business as: _____
Business Address: _____
SIGMA VENDOR NUMBER _____
County of registration _____
Telephone: _____ FAX: _____

8.3. If the Bidder is a Partnership:

By: _____ (True Name of the Partnership)
Partner Authorized to Sign _____ Date _____
Signature: _____ (Attach evidence of Authority to sign) Date _____
Business Address: _____
SIGMA VENDOR NUMBER _____
County of registration _____
Telephone: _____ FAX _____

8.4. If the Bidder is a Corporation:

By: _____ (Legal Corporation Name)
Name & Title of Authorized Officer: _____
Signature: _____ (Attach evidence of Authority to sign) Date _____
Name & Title of Officer Attesting: _____
Signature: _____ Date _____
Business Address: _____
SIGMA VENDOR NUMBER _____
Telephone: _____ FAX _____
(State of Incorporation): _____

SECTION 00310 BID BOND

FILE No. 491/23066.SDW

SURETY COMPANY REFERENCE No. _____

KNOW ALL PERSONS BY THESE PRESENTS: That we, "the Bidder," _____, a corporation _____, individual _____, partnership _____, joint venture _____, of the State of _____, qualified to do business in the State of Michigan, as Principal, and "the Surety," _____, of the State of _____, as surety, are hereby held and firmly bound unto the State of Michigan, "the Owner," as Obligee, in the amount of _____ Dollars (\$ _____), and if no amount is entered, in the amount of five percent (5%) of the Bidder's Base Bid designated in paragraph 6.1 Base Bid Schedule in Section 00300 Bid Form, for the payment of which the Bidder and the Surety hereby bind ourselves, our respective heirs, successors, legal representatives and assigns, jointly and severally, firmly by these presents in accordance with Michigan Law.

WHEREAS, the Bidder has submitted to the Owner a Bid, to which this Bond is attached, to enter into the Contract with the Owner for _____ covered by Bidding Documents prepared by the Professional, which Bidding Documents are incorporated into this Bid Bond by this reference:

NOW, THEREFORE: THE CONDITION OF THIS OBLIGATION IS THAT, if the Bidder faithfully performs and fulfills all the understandings, covenants, terms and conditions of the Bidding Documents governing the bidding and award of the Contract (including Addenda issued before Bid opening and any post-Bid Addenda) within the time specified or any extension thereof, with or without notice to the Surety or fails to do so but pays to the Owner the full amount of the sum set forth in this Section 00310 Bid Bond as liquidated damages - then THIS OBLIGATION SHALL BE NULL AND VOID, OTHERWISE THIS OBLIGATION SHALL REMAIN IN FULL FORCE AND EFFECT.

but not be limited to reasonable fees and charges of architects, engineers, attorneys and others, court or hearing costs incurred with or without suit, and interest.

A. If the Owner makes demand on the Surety to perform in accordance with the Surety's obligations under this Section 00310 Bid Bond, the full amount of the sum set forth in this Section 00310 Bid Bond shall be immediately due and payable to the Owner, and the Surety shall pay that sum without delay. Additionally, the Surety shall reimburse the Owner all costs of collection, which shall include,

B. The Surety, for value received, stipulates, and agrees that the obligations of the Surety and this Section 00310 Bid Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept the Bid, and the Surety does, by this agreement, waive notice of any such extension.

C. It is the intention of the Bidder, Surety and Owner that the Surety shall be bound by all terms and conditions of the Bidding Documents and this Section 00310 Bid Bond. However, if any provision(s) of this Section 00310 Bid Bond is/are illegal, invalid, or unenforceable, all other provisions of this Section 00310 Bid Bond shall nevertheless remain in full force and effect, and the Owner shall be protected to the full extent provided by Michigan Law.

IMPORTANT: The Surety shall be authorized to do business in the State by the Department of Consumer and Industry Services – Insurance Bureau and listed on the current U.S. Department of the Treasury Circular 570 and shall be otherwise acceptable to the Owner.

Address and Telephone of Surety

Address and Telephone of Agent

Signed and sealed this _____ day of _____, 20____ (NOTE: Use the date entered on Article 8 of Section 00300 Bid Form).

THE BIDDER: (Print Full Name and Sign)

THE SURETY: (Print Full Name and Sign)

By: _____

By Agent: _____

Name & Title: _____

By Attorney-in-Fact: _____
(Attach Certified Copy of Power of Attorney)

Signature: _____

Signature: _____

WITNESS: _____

WITNESS: _____

Telephone No. _____

Telephone No. _____

Email: _____

END OF SECTION 00310

SECTION 00320 NONCOLLUSION AFFIDAVIT

PROFESSIONAL – Commtech Design, Inc

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

Affiant, _____, being first duly sworn, deposes and says that:

(1) Affiant is (enter title) _____ of _____, "the Bidder." Affiant has personal knowledge of the matters set forth in this Affidavit and is competent to testify about them.

(2) The Bidder has submitted to the Owner a "Bid" to enter into the above referenced Contract, also referred to in this Affidavit as "the Work."

(3) This Section 00320 Non-collusion Affidavit is executed by Affiant for inclusion with the submission to the Owner of the Bid and may be relied upon by the Owner in considering the Bid.

(4) Affiant is fully informed about the preparation and contents of the Bid and of all pertinent circumstances surrounding the Bid, has not entered into any contract, combination, conspiracy, or other act prohibited by federal, State or any other local Law. The Bid is genuine and is not a collusive or sham Bid.

(5) Neither the Bidder nor any of the Bidder's owners, officers, partners, directors, agents, representatives, employees or parties in interest, including this Affiant, have in any way entered or proposed to enter into any combination to prevent the making of any Bid, or to fix any prices (including overhead, profit or other costs) for the Bid; or have made any agreement, or given or promised any

By: _____

consideration to induce any other person not to Bid for the Work, or to Bid at a specified price; or have secured, proposed or intended to secure through any agreement an unlawful advantage against the Owner or any other person interested in the Work.

(6) No officer or employee of the State of Michigan is personally or financially interested, directly or indirectly, in the Bid, or any Contract which may be under it, or in the purchase or sale of any materials, equipment or supplies for the Work to which it relates, or any portion of any expected profits thereto.

(7) The Bid is not intended to secure an unfair advantage or benefit from the Owner or in favor of any person interested in the proposed Contract.

(8) The prices bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any other of the Bidder's owners, officers, partners, directors, agents, representatives, employees or parties in interest, including this Affiant; and neither the Bidder nor any of its owners, officers, partners, directors, agents, representatives, employees or parties in interest, including this Affiant, have divulged any information regarding the Bid or any data about the Bid to any other person.

Title: _____

SIGMA VENDOR NUMBER _____

Telephone No. _____

VERIFICATION

STATE OF _____)
COUNTY OF _____)

Before me, a Notary Public commissioned, qualified and acting, personally appeared (enter name of the person signing this Affidavit) _____ to me well known to be the person described in and who signed this Section 00320 Non-collusion Affidavit, who being by me first duly sworn upon oath, says that he/she is the Attorney-in-Fact for (enter Bidder's name) _____, that he/she has been authorized by (enter name of individual, partnership name, or the authorized governing body of the Bidder) _____ to execute this Section 00320 Non-collusion Affidavit on behalf of the named Bidder in favor of the STATE OF MICHIGAN, for the uses and purposes mentioned.

Subscribed and sworn to before me this ____ day of _____, 20 ____.

Notary Public, State of _____
My Commission expires: _____, 20 ____

END OF SECTION 00320

SECTION 00410 BID BREAKDOWN

PROFESSIONAL – Commtech Design, Inc

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

1.0 BID BREAKDOWN: The Apparent Low Bidder shall itemize below a cost breakdown of the Apparent Low Bidder's Bid. The Bid Breakdown shall be organized into separable parts of the Work so that one hundred percent (100%) of the Base Bid plus all Alternates is accounted for. Portions of the Work for which costs are itemized shall include Work to be furnished and performed directly by the Apparent Low Bidder and its Subcontractors and Suppliers, as applicable. Each separable part of the Work identified in this Bid Breakdown shall have a value not exceeding _____ percent (____%) of the Apparent Low Bidder's Base Bid, except parts of the Work designating furnished materials or equipment, which may be itemized as quoted.

2.0 DISCREPANCIES: Discrepancies in this Section 00410 Bid Breakdown shall be resolved in accordance with Article 14 of the Instructions to Bidders. Any discrepancies between the Apparent Low Bidder's Bid Breakdown and Article 6 "Bid Schedule" on the Apparent Low Bidder's Section 00300 Bid Form with respect to a given lump sum item, unit price item or "One Each" item, or any sum of any of them, will be resolved so that the corresponding amount(s) on the Apparent Low Bidder's Section 00300 Bid Form will be binding on the Apparent Low Bidder.

END OF SECTION 00410

PROFESSIONAL –

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

ARTICLE 1 ORGANIZATION

1.1. Date of organization (or incorporation) _____ State of incorporation _____ (IRS) EIN _____

1.2. Title and name of Principals (President, Vice-Presidents, Secretary and Treasurer, if a corporation; partners, if a partnership)

1.3. Is your organization's principal place of business maintained in the State of Michigan? ____ If your organization maintains its principal place of business outside the State, attach a copy of the Certificate of Authority which your organization procured in accordance with MCL 450.2011.

1.4. If your organization, any business entity related to or affiliated with your organization, or any present or former executive employee, officer, director, shareholder (owning twenty percent (20%) or more of the outstanding shares), partner, or owner of your organization or of any such related or affiliated entity has ever been convicted of a felony, or has felony charges pending, in any state within the last three (3) years from the date of Bid opening, furnish with this Bidder's Questionnaire all material facts relating to any such felony conviction or such pending felony charges.

ARTICLE 2 SPECIALTY CONTRACTOR LICENSES

2.1. Does your organization hold valid licenses covering specialty classifications of Work that your organization itself intends to perform and for which a specific specialty license is required by any Political Subdivision with jurisdiction over the Work _____? If so, attach a list with all licenses by number and classification; state the name of the organization holding the license, the renewal date of each license, whether each license is active, and attach a copy of each license.

ARTICLE 3 EXPERIENCE

3.1. What is the general character of the work performed by your organization? _____ How many years of experience in construction work similar in character and scope to the Work under the Bidding Documents has your organization had: (a) as a General Contractor? _____; (b) as a Subcontractor? _____.

3.2. Attach a list of all public contracts or subcontracts under public contracts that your organization has performed within the last five (5) years which are similar in character and scope to the Work under the Bidding Documents (using the forms in the "References Attachment" provided with this Questionnaire). If the contract or subcontract referenced is not substantially completed, furnish the percent complete for that contract or subcontract.

3.3. Within the last five (5) years, has your organization been in litigation with The State of Michigan or failed to complete a contract or subcontract awarded to it? ____ If so, attach a list for each contract or subcontract, state when, where and why.

3.4. Within the last five (5) years, has any officer, partner or executive employee of your organization been an officer, partner or employee of another organization that was involved in a litigation with The State of Michigan? or failed to complete a contract or subcontract? _____. If so, for each contract or subcontract, state the name of each officer, partner or employee and the name of the organization and owner(s), and the explanation of litigation or reasons why the contract or subcontract was not completed.

3.5 Identify your organizations Experience Modification Rating (EMR) _____. Attach a letter of explanation if your organization does not have an EMR.

3.6 Provide the name and attach a brief resume and list of similar success projects for your proposed Project Superintendent.

ARTICLE 4 ADDITIONAL QUALIFICATIONS

4.1. **(Nominated Subcontractor only)** Will you subcontract any part of the Work covered by the intended Sub agreement? _____. If so, which parts of the Work covered by the intended Sub agreement do you intend to subcontract to a lower tier Subcontractor?

4.2. State the name, address, and telephone number of a representative of your organization who personally visited and inspected the site: _____.

Also, describe, in an attachment to this Section 00420 Questionnaire, subsurface and physical conditions at or contiguous to the site that your representative investigated and how they were accounted for in the preparation of your organization's Bid.

4.3. Attach a list of construction equipment and machinery your organization intends to use in the execution of the Work, as estimated in the preparation of your organization's Bid.

4.4. Does your organization rent or lease equipment or facilities from other affiliate organizations? _____. If so, state the name of the affiliate organization(s) _____.

4.5. **(Apparent Low Bidder only)** Bank line of credit available? \$_____.

4.6. **(Apparent Low Bidder only)** Will your organization, i.e., the Bidder named in the Authorized Signature Article on Section 00300 Bid Form, be the only named Principal in Section 00610 Performance Bond and Section 00620 Payment Bond? _____. If not, please identify the organization who will be named as Principal or Co-Principal on Section 00610 Performance Bond and Section 00620 Payment Bond _____. Also, state how such organization relates to the Bidder _____ (NOTE: If another organization is identified, the Apparent Low Bidder shall submit to the **Owner** a separate Section 00420 Questionnaire filled out by that organization as part of the Qualification Submittals required under Article 2 of Section 00100 Instructions to Bidders).

ARTICLE 5 REFERENCES

5.1. Trade references (Minimum of three (3)):

5.2. Bank references:

5.3. Insurance:

The undersigned Apparent Low Bidder _____ or nominated Subcontractor _____ certifies that all statements and answers made to the interrogatories in this Section 00420 Questionnaire are current, accurate and complete as of the date stated below. (Note: Attachments shall be fastened at the end of this Section).

Signed by: _____ Name _____ Title _____

on this _____ day of _____, 20_____.

END OF SECTION 00420

REFERENCES ATTACHMENT

PROFESSIONAL –

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

REFERENCE #

Public Owner: _____

Project/Contract Name: _____

Location of Project/Contract: _____

Contract Price: _____ Project/Contract Started: _____ Completed: _____

Owner's Representative (Name and Telephone): _____

Apparent Low Bidder's ____ or Nominated Subcontractor's ____

Representative Name and Telephone _____

Scope of Project/Contract: _____

REFERENCE #

Public Owner: _____

Project/Contract Name: _____

Location of Project/Contract: _____

Contract Price: _____ Project/Contract Started: _____ Completed: _____

Owner's Representative (Name and Telephone): _____

Apparent Low Bidder's ____ or Nominated Subcontractor's ____

Representative Name and Telephone _____

Scope of Project/Contract: _____

REFERENCES ATTACHMENT

PROFESSIONAL –

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

REFERENCE #

Public Owner: _____

Project/Contract Name: _____

Location of Project/Contract: _____

Contract Price: _____ Project/Contract Started: _____ Completed: _____

Owner's Representative (Name and Telephone): _____

Apparent Low Bidder's ____ or Nominated Subcontractor's ____

Representative Name and Telephone _____

Scope of Project/Contract: _____

REFERENCE #

Public Owner: _____

Project/Contract Name: _____

Location of Project/Contract: _____

Contract Price: _____ Project/Contract Started: _____ Completed: _____

Owner's Representative (Name and Telephone): _____

Apparent Low Bidder's ____ or Nominated Subcontractor's ____

Representative Name and Telephone _____

Scope of Project/Contract: _____

SECTION 00430 LIST OF SUBCONTRACTORS

PROFESSIONAL –

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

1. To enable the **Owner** and **Professional** to evaluate the Apparent Low Bidder's qualifications to perform the Work, for each Division of the Specifications, Section of the Specifications and/or trade itemized in this Section 00430 List of Subcontractors, the Apparent Low Bidder shall nominate the Subcontractor(s) to be awarded a Sub agreement(s). To the extent a contractor's licensing is required for any such classification of Work, the Apparent Low Bidder shall provide the nominated Subcontractor's license number(s). If the Apparent Low Bidder intends to self-perform any of the listed classifications of Work, the Apparent Low Bidder shall nominate itself in the spaces provided for that purpose and shall furnish the corresponding Apparent Low Bidder's license number(s). For each nominated Subcontractor, the Apparent Low Bidder shall enter, if applicable, whether the Subcontractor is a minority, woman or handicapped owned business in the spaces provided for that purpose. The Apparent Low Bidder also shall furnish the amount of the Sub agreement that the Apparent Low Bidder, directly or through another higher tier Subcontractor, anticipates awarding to each nominated Subcontractor.

2. Should the Apparent Low Bidder fail to nominate Subcontractors, as required, or provide duplicate nominees for any Division, Specification, or trade, or fail to enter the required licensing information, the Apparent Low Bidder shall clarify the omission or ambiguity within two (2) Business Days of the **Owner** or **Professional's** request. Failure by the Apparent Low Bidder to comply with this Subcontractor nominating requirement may render the Bid as not conforming in all material respects with the requirements of the Bidding Documents.

3. Pursuant to the Bidding Documents, the Apparent Low Bidder shall not remove, replace, or add a nominated Subcontractor except as provided in paragraph 8.3 of Section 00100 Instructions to Bidders and/or in paragraph 5.1 of Section 00700 General Conditions. Since the requirement to nominate Subcontractors for the *listed* Divisions, Specification Sections and/or trades survives the award of the Contract, any Subcontractor nominated for any *listed* Division, Specification Section and/or trade *for the first time* after Contract Award and who is objected to by the **Owner**, for good cause, shall be replaced at no increase in Contract Price and/or Contract Time.

4. The requirement to make a definite nomination of Subcontractors or to state that the Apparent Low Bidder intends to self-perform that classification, and to clarify any omissions or ambiguities in this Section 00430 List of Subcontractors, applies to the Apparent Low Bidder and any other Bidder remaining or wishing to remain in contention for the award.

5. This listing requirement is not intended to create any express or implied duty or obligation to the Apparent Low Bidder or the nominated Subcontractors by the **Owner** or **Professional**.

(THE REMAINDER OF THIS PAGE LEFT BLANK INTENTIONALLY)

Division, Specification Section and/or Trade	Nominated Subcontractor(s)	License Number(s) Classification	Amount of Subcontract
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____

The undersigned Apparent Low Bidder _____ certifies that all the information and data furnished in this Section 00430 List of Subcontractors are current, accurate and complete as of the date stated below.

Signed by: _____ Name _____ Title _____

on this _____ day of _____, 20_____.

END OF SECTION 00430

PROFESSIONAL –
 WORK – Replace Security System Programmable Logic Controllers
 FILE No. - 491/23066.SDW

ARTICLE 1 BID MATERIALS AND EQUIPMENT – LISTED (NAMED OR SPECIFIED) ITEMS

1.1. The Apparent Low Bidder has examined the requirements of paragraphs 7.4 and 7.5 of Section 00100 Instructions to Bidders, and by submitting a Bid, commits to bid only a *listed* named or specified materials and equipment for those Specifications *listed* in Schedule 1.6. To the extent that any such *listed* Specification states that an "or equal" or a substitute may be furnished, if acceptable to the **Professional**, application for any such acceptance will not be considered by the **Professional** until after Contract Award. Any such application shall comply with the terms and conditions of Article 2 in this Section and paragraph 5.2 of Section 00700 General Conditions.

1.2. For those Sections of the Specifications *listed* in paragraph 1.6, the Contract will be awarded on the basis that only one of the *listed* materials or equipment will be furnished. Therefore, to be considered responsible, the Apparent Low Bidder shall nominate, by circling the letters "A," "B," "C," etc. corresponding to each *listed* manufacturer/Supplier, the Bidder's chosen manufacturers/Suppliers for the corresponding products named or specified in the Specifications and Drawings (including all Addenda).

1.3. If the Apparent Low Bidder fails to circle a manufacturer/Supplier for a *listed* material or equipment, or circles more than one letter for a *listed* material or equipment, the Apparent Low Bidder hereby agrees to correct the omission or ambiguity within two (2) Business Days after submittal of this Section 00440 Schedule of Materials and Equipment. The requirement to make a definite selection and to correct any omissions or ambiguities in Schedule 1.6 applies to the Apparent Low Bidder and any other Bidder remaining or wishing to remain under consideration for the award.

1.4. The Apparent Low Bidder's attention is directed to paragraph 7.3 of Section 00100 Instruction to Bidders, which holds the Apparent Low Bidder responsible, if awarded the Contract, for certain costs and time impacts, provided the Apparent Low Bidder, in the preparation of its Bid, knew or had reason to know, that any *listed* material or equipment bid by the Bidder requires changes in the Work and failed to provide advanced written notice to that effect to the **Professional**.

1.5. The Apparent Low Bidder shall insert the provisions of this Section in all Sub agreements with Subcontractors and Suppliers furnishing the materials or equipment *listed* in Schedule 1.6, altering the respective paragraphs only as appropriate to properly identify the contracting parties. Each such Sub agreement shall expressly bind the respective Subcontractor or Supplier to the conditions of paragraph 1.4, the other provisions of Section 00440 Schedule of Materials And Equipment and paragraph 5.2 of Section 00700 General Conditions.

1.6. Schedule of Bid Materials and Equipment

ITEMS NAMED OR SPECIFIED (ENTERED BY THE PROFESSIONAL)		CONTRACTOR TO NOMINATE (CIRCLE) ITS CHOSEN NAMED OR SPECIFIED MANUFACTURERS AND SUPPLIERS
ITEM OF MATERIAL OR EQUIPMENT	SPECIFICATION SECTION	
ITEM 1 -		A. B. C. D.
ITEM 2 -		A. B. C. D.
ITEM 3 –		
ITEM 4 -		

1.7 Use of "Or Equal" or Substitute Materials or Equipment After Contract Award

1.7.1. Paragraph 5.2 of Section 00700 General Conditions provides for the consideration (after the date of Contract Award) and possible acceptance by the **Professional** of "or equal" or substitute materials or equipment (unless any material or equipment named is followed by words establishing that no "or equal" or substitution is permitted). If sufficient information is submitted to allow the **Professional** to determine in a timely manner that the material or equipment proposed is equivalent or equal to that named or described in the Drawings or specified in the Specifications, then the **Professional** will consider the proposed "or equal" or substitute material or equipment.

1.7.2. The Apparent Low Bidder assumes responsibility for the cost and time required to make any proposed "or equal" or substitute material or equipment approved by the **Professional** conform to the requirements of the Contract Documents. In addition, if any such "or equal" or substitute material or equipment requires any changes in the drawings, or in any testing requirements, or in any Means and Methods indicated in or required by the Contract Documents, or in work performed by the **Owner** or others, or requires any other changes in the Work whatsoever, the Apparent Low Bidder shall assume full responsibility for the cost and the time required to carry out such changes in the Work or the work of others. Pursuant to this provision, the Apparent Low Bidder shall bear an appropriate portion of the Delay and costs resulting from the events contemplated in this paragraph.

1.7.3. Paragraph 5.2 of Section 00700 General Conditions provides for reimbursement by the **Contractor** to the **Owner** for any additional expenses incurred by the **Professional** directly attributable to the evaluation of any proposed substitute material or equipment and any proposed "or equal" material or equipment for materials and equipment *listed* in Schedule 1.6.

1.7.4. The Apparent Low Bidder shall insert the provisions of this Article 1 of Section 00440 Schedule of Materials and Equipment in all Sub agreements with Subcontractors and Suppliers furnishing any materials or equipment, altering the respective paragraphs only as appropriate to properly identify the contracting parties. Each such Sub agreement shall expressly bind the respective Subcontractor or Supplier to the conditions of paragraph 1.7.2, the other provisions of this Section 00440 Schedule of Materials And Equipment and paragraph 5.2 of Section 00700 General Conditions.

ARTICLE 2 BID MATERIALS AND EQUIPMENT – OPEN SPECIFICATIONS

2.1. For those Specifications *not listed* in Schedule 1.6, the Apparent Low Bidder, if and when awarded the Contract, shall disclose to the **Owner** and **Professional** (when submitting the Schedule of Values required by paragraph 12.1.1 of Section 00700 General Conditions) the Bidder's chosen manufacturers/Suppliers for the corresponding materials and equipment specified in the Specifications and Drawings (including all Addenda).

2.2. The Apparent Low Bidder has examined the requirements of paragraphs 7.2 and 7.3 of the Instructions to Bidders and commits to furnish materials and equipment meeting the requirements of the Specifications. If any such Bidder-selected material or equipment represents an "or equal" or a substitute material or equipment, no such material or equipment shall be used or furnished in the execution of the Work unless previously approved by the **Professional** as an acceptable "or equal" or substitute material or equipment. Application for any such acceptance will not be considered until after Contract Award. Any such application shall comply with the terms and conditions of this Article 2 and paragraph 5.2 of Section 00700 General Conditions.

2.3. The Apparent Low Bidder shall insert the provisions of this Section in all Sub agreements with Subcontractors and Suppliers furnishing the materials or equipment listed in Schedule 2.4, altering the respective paragraphs only as appropriate to properly identify the contracting parties. Each such Sub agreement shall expressly bind the respective Subcontractor or Supplier to the conditions of paragraph 2.2, the other provisions of this Section 00440 Schedule of Materials and Equipment and paragraph 5.2 of Section 00700 General Conditions.

2.4. Schedule of Bid Materials and Equipment

MATERIAL OR EQUIPMENT	SPECIFICATION SECTION	CONTRACTOR TO NAME ITS CHOSEN MANUFACTURERS AND SUPPLIERS
ITEM 1 -		
ITEM 2 -		
ITEM 3 -		
ITEM 4 -		
ITEM 5 -		
ITEM 6 -		
ITEM 7 -		

IMPORTANT: The provisions of this Section 00440 Schedule of Materials and Equipment shall not create or impose any express or implied duty or obligation on the **Owner** or **Professional** to exercise this authority for the benefit of the Apparent Low Bidder or any *listed* manufacturer/Supplier.

The undersigned Apparent Low Bidder _____ certifies that all the information and data furnished in this Section 00440 Schedule of Materials and Equipment are current, accurate and complete as of the date stated below.

Signed by: _____ Name _____ Title _____

on this _____ day of _____, 20_____.

END OF SECTION 00440

SECTION 00500 AGREEMENT

FILE No. 472/23066.SDW CONTRACT ORDER No. Y _____

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* To be Completed With the Bidding Documents
 ** To Be Completed Upon Award of the Contract **

 **THIS AGREEMENT TO CONTRACT is made this _____ day
 of _____ in the year Two-Thousand And _____
 (_____) by and between THE STATE OF MICHIGAN, "Owner,"
 represented by the Director, Department of Technology,
 Management and Budget, duly authorized, and
 _____,
 the "Contractor," a corporation _____, partnership _____, individual
 _____, or joint venture _____ (between
 _____ and
 _____), of the
 State of _____, whose address is _____
 _____, represented by
 _____, its _____, duly authorized.

The Owner and Contractor, in consideration of the mutual covenants and obligations stated in this Section 00500 Agreement and the other parts of the Contract Documents, agree as follows:

ARTICLE 1 THE CONTRACT; THE PROJECT; THE WORK

1.1. THE CONTRACT – The contract entered between the Owner and Contractor for the furnishing and performance of the Work by the Contractor, which consists of the Contract Documents listed or designated in paragraphs 2.2 through 2.4.

STATE OF MICHIGAN MODEL
 Developed from FORMSPEC™ Michigan Model
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 All Rights Reserved

1.2. PROJECT NAME – Replace Security System Programmable Logic Controllers

1.3. THE WORK – Replace Security System Programmable Logic Controllers

ARTICLE 2 CONTRACT DOCUMENTS

2.1. The Contract Documents form the contract between the Owner and Contractor and represent the entire and final integrated agreement between the Owner and Contractor with respect to the Work. The Contract Documents are incorporated into this Agreement by this reference, and supersede all prior oral or written agreements, if any, between the Owner and Contractor. Any statement, representation, promise or inducement not set forth in the Contract Documents is null and void, and not binding on either the Owner or Contractor. The Contract Documents shall not in any way create a relationship of any kind between the Professional and Contractor, or between the Owner and a Subcontractor, or Supplier or any other third party. The Professional shall, however, be entitled to performance and enforcement of obligations under the Contract that are consistent with the Professional's authority and responsibilities under the Contract Documents.

2.2. The Contract Documents on the date when the Owner executes this Section 00500 Agreement, which are attached to this Section 00500 Agreement, consist of the following:

2.2.1. This **Section 00500 Agreement**, fully executed by the Owner and Contractor, including the following attachments: _____ and **Addenda** _____ through _____.

2.2.2. **Section 00800 Supplementary Conditions**, including _____; and **Section 00120 Supplementary Instructions**, including _____

2.2.3. **Section 00020 Glossary**, and **Section 00700 General Conditions**.

2.2.4. **General Requirements**, Division 1 of the Specifications.

2.2.5. **Divisions 2 through _____ of the Specifications**, and **Drawings**, bearing the title: _____, dated _____.

2.2.6. **Section 00030 Advertisement; Section 00100 Instructions to Bidders**, including **Attachment A–Bidder's Check List**, and **Section 00210 Information for Bidders**.

2.2.7. **Section 00610 Performance Bond** and **Section 00620 Payment Bond**, fully executed by the **Contractor** and the sureties, each enclosing separate evidence of Power of Attorney.

2.2.8. The **Contractor's Section 00300 Bid Summary and Bid Form** (with attachments) and **Section 00320 Non-collusion Affidavit** (including any revisions delivered after Bid opening).

2.2.9. The following **Contractor's Qualification Submittals** (post-Bid opening): _____

2.3. Contract Documents that will be issued after the date the **Owner** executes this Section 00500 Agreement consist of:

2.3.1. **Change Orders** and **Change Authorizations** signed as provided in the Contract Documents.

2.3.2. **Notice of Award** and **Notice to Proceed**.

2.4. There are no Contract Documents other than those listed or designated in this Article or added through Section 00520 Attachment A to the Agreement. The Contract Documents may be modified, as provided in Section 00700 General Conditions.

ARTICLE 3 CONTRACT PRICE

3.1. The **Contractor** will furnish and perform the Work and accept in full payment the Contract Price of _____ Dollars (\$_____). The Contract Price includes only those Alternates accepted by the **Owner**, as itemized in the Notice of Award.

3.2. The Contract will include those Change Order prices (bid on Section 00300 Bid Form) accepted by the **Owner** when the **Owner** issues the Notice to Proceed or by Change Authorization.

3.3. Payments to the **Contractor** will be made based on the prices stated on the **Contractor's** Section 00300 Bid Form, subject to the terms and conditions of the Contract Documents.

ARTICLE 4 CONTRACT TIME; LIQUIDATED DAMAGES

4.1. The periods allowed for completion of the Work, or a designated part of the Work, will be as follows:

4.1.1. The entire Work will be substantially complete in accordance with the requirements of the Contract Documents: 6 months from contract date.

4.1.2. If separable parts of the Work shall be completed before the period allowed for Substantial Completion of the entire Work, the Contract Times for those parts of the Work will be as specified in Section 00520 Attachment A to Agreement, and as may be supplemented in the Specifications.

4.1.3. The entire Work will be complete and ready for final payment as specified in the Contract Documents: 6 months from contract date.

4.2. The **Owner** and **Contractor** recognize that the Contract Times are of the essence of the Contract and that the **Owner** will suffer costs and damages if the Work is not completed within the

Contract Times, including any extensions in Contract Time authorized by Change Orders. Therefore, liquidated damages (in the amounts specified in paragraphs 4.2.3 through 4.2.5) will apply if the Work is not completed within the limits of the Contract Times. Liquidated damages are not a penalty, are cumulative and represent a reasonable estimate of the **Owner's** extra costs and damages, which are difficult to estimate with accuracy in advance.

4.2.1. Accordingly, if the **Contractor** fails, neglects, or refuses to complete all or any designated part of the Work within the specified Contract Time, the **Contractor** agrees to pay to the **Owner** liquidated damages and to allow, at the appropriate time, a corresponding adjustment in Contract Price.

4.2.2. If under the procedures of paragraph 4.3, the **Owner** is justified in withholding liquidated damages due to or in anticipation of late completion, the **Contractor** agrees to allow the **Owner** to deduct liquidated damages from Requests for Payment.

4.2.3. Liquidated damages for each Calendar Day that expires after the Contract Time specified in paragraph 4.1.1 for Substantial Completion of the entire Work – until the Work is substantially complete – shall be in the amount of Two-Hundred Dollars and No/Cents (\$200.00)

4.2.4. Liquidated damages for each Calendar Day that expires after each of the Contract Times designated in Section 00520 Attachment A to the Agreement – until each such part of the Work is sufficiently complete – shall be in the amounts stated in Section 00520 Attachment A to the Agreement.

4.2.5. Liquidated damages for each Calendar Day after Substantial Completion of the entire Work that expires after the Contract Time specified in paragraph 4.1.3 for completion and readiness for final payment – until the entire Work is complete and ready for final payment – shall be in the amount of Two-Hundred Dollars and No/Cents (\$200.00).

Assessment and/or Withholding of Liquidated Damages

4.3. If the **Contractor** fails to complete the Work, or a specified part of the Work, within the corresponding Contract Time, or if at any time after the Work is eighty percent (80%) in place, the **Contractor** does not prosecute the balance of the Work with the diligence required to comply with the Contract Times, the **Contractor** shall be requested to submit a schedule recovery plan acceptable to the **Owner**. The **Contractor's** schedule recovery plan shall describe the cause of schedule slippage or delayed progress and the actions proposed and taken to recover schedule. In addition, to the extent that the **Contractor** believes that an extension in Contract Time is justified, the recovery plan shall include a request for an appropriate extension in Contract Time.

4.3.1. Within fifteen (15) Calendar Days after the **Contractor** receives any such request, the **Contractor** shall meet with the **Owner** and present the **Contractor's** written schedule recovery plan. If, upon evaluation of the **Contractors'** schedule recovery plan, and after consultation with the **Professional**, the **Owner**, in its sole discretion, determines that there is sufficient cause to withhold liquidated damages, the **Owner** may deduct from Requests for

Payment the liquidated damages then due or that would become due using the **Owner's** estimate of late completion of the Work.

4.3.2. For the purposes of returning liquidated damages, schedule recovery implementation shall not be complete until such slippage or delayed progress has been corrected and the Progress Schedule once again supports compliance with the Contract Times. Once late completion has been corrected, the **Contractor** shall be entitled to reimbursement of all liquidated damage sums previously withheld. Any such reimbursement of liquidated damages previously withheld shall not constitute a waiver of any claims that the **Owner** may otherwise have.

ARTICLE 5 PAYMENTS TO CONTRACTOR

*5.1. The **Owner** will pay one hundred percent (100%) of the amount due upon completion of any Schedule of Value *pay item*. The **Professional** may require, for each Request for Payment, sworn statements, consent of surety, waivers of lien (from the **Contractor**, Subcontractors and Suppliers), Record Documents, guarantees, operating and maintenance manuals and such other documents required by the Contract Documents. Payment to the **Contractor** will be made within thirty (30) Calendar Days from receipt by the **Owner** of the **Professional's** certification representing to the **Owner** the amount of payment to be due to the **Contractor**.

*5.2. Processing of Requests for Payment by the **Owner** may be deferred until Work having a prior sequence, as provided in the Contract Documents, is in place and is approved.

5.3. Payments shall be subject to the terms and conditions of Section 00700 General Conditions and the other parts of the Contract Documents and shall be made less such deductions as the **Owner** and/or **Professional** determines are appropriate, as specified in paragraph 12.4 of Section 00700 General Conditions.

5.4. If any portion of the Work is funded by a federal or State agency, the **Owner** will have fifteen (15) Calendar Days after receiving those funds in which to make payment. This provision shall take effect only after the thirty (30) Calendar Day period following certification by the **Professional** has expired.

ARTICLE 6 THE PROFESSIONAL SERVICES CONTRACTOR

6.1. The **Owner** has retained _____

to assume all duties and responsibilities of, and have the rights and authority assigned to, the **Professional Services Contractor** in the Contract Documents with respect to completion of the Work in accordance with the Contract Documents.

ARTICLE 7 CONTRACTOR'S REPRESENTATIONS

7.1. The **Contractor** reiterates and makes each of the representations itemized in Article 2 of the **Contractor's** Section 00300 Bid Form. Article 2 in the **Contractor's** Section 00300 Bid Form is by this reference repeated verbatim in this Section 00500 Agreement as paragraphs 7.2 through 7.13 just as though those paragraphs had been written in this Article 7, except that the term "**Contractor**" shall replace the term "Bidder" in every instance.

ARTICLE 8 MISCELLANEOUS

8.1. If any provision of the Contract Documents is invalid, illegal, or unenforceable, all other provisions of the Contract Documents shall remain in full force and effect. If any provision of the Contract Documents is inapplicable to any Person or circumstance, that provision shall remain applicable to all other Persons and circumstances.

8.2. It is the intent of the **Owner** and **Contractor** that all provisions of Law required to be inserted or referenced in the Contract Documents are in fact so inserted or referenced. If any provision of Law is not so inserted or referenced, or is inserted or referenced improperly, then each such provision shall be considered inserted or referenced in the Contract Documents in proper form at no increase in Contract Price and/or Contract Time.

8.3. The duties, obligations, criteria or procedure imposed by, and the rights and remedies made available in, the Contract Documents are in addition to, and not in any way a limitation of, any rights and remedies that are otherwise allowed or imposed by Law, except that in the event a specific part or detailed requirement of a provision, criterion or procedure in the Contract Documents and a specific part or detailed requirement of a provision, criterion or procedure imposed by Law conflict, the specific part or detailed requirement of such provision, criterion or procedure imposed by Law shall govern. All other specific parts or detailed requirements in the provisions, criteria or procedures imposed by Law and the Contract Documents shall remain in full force and effect and be read with the controlling specific part or detailed requirement. These provisions will be as effective as if repeated specifically in the Contract Documents in connection with each duty, obligation, right and remedy to which they apply.

8.4. The **Contractor** shall not sell, assign, transfer or otherwise convey any of the **Contractor's** rights and shall not delegate any of the **Contractor's** duties under this Agreement without the prior written consent of the **Owner** and the sureties for the **Contractor**. In its sole discretion, the **Owner** may refuse to consent to any proposed assignment or delegation. Any attempted sale, assignment, transfer, or other conveyance in violation of this paragraph shall be void and shall relieve the **Owner** of any further liability under the Contract Documents but shall not relieve the **Contractor's** sureties of any liability. If the **Owner** consents in writing to an assignment, unless specifically stated to the contrary in the consent, that assignment shall not release or discharge the **Contractor** from any duty or responsibility set forth in the Contract Documents and shall not release or discharge the **Contractor's** sureties under the Bonds required by the Contract Documents.

8.5. The **Owner** reserves the right to correct any error in any Request for Payment that may have been paid. The **Owner** reserves the right, should proof of Defective Work be discovered after final payment, to claim and recover from the **Contractor** and/or the **Contractor's** surety, sufficient sums to correct or remove and replace the Defective Work.

8.6. Any waiver by the **Owner** of any provision of the Contract Documents shall be specific and in writing and apply only to the specific matter and not to other similar or dissimilar matters. Any waiver of any breach of this Contract shall not be held to be a waiver of any other or subsequent breach.

8.7. Nothing contained in this Agreement shall in any manner authorize, empower, or constitute the **Contractor**, Subcontractors

or Suppliers (a) to act as agents of the **Owner**, (b) to assume or create any obligation or responsibility whatsoever, express, or implied, on behalf of or in the name of the **Owner**; (c) to bind the **Owner** in any manner, or (d) to make any representation, warranty, covenant, agreement, or commitment on behalf of the **Owner**. It is the intent and understanding of the parties that the **Contractor** shall perform the Work as an independent contractor. This Agreement does not create, and shall not be construed as creating, any rights enforceable by any third party.

8.8. If the **Owner** or **Contractor** suffers injury or damage to person or property because of error, omission, or act of the other, any of the other's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observation of that injury or damage. This provision is not and shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or time requirements set forth in Section 00700 General Conditions.

8.9. All computer programs which are not the subject of copyrights by third parties, and which are delivered, developed, produced, or paid for under a specific requirement of the Contract Documents and all plans, drawings, designs, specifications, technical reports, operating manuals, and other data which are delivered, developed, produced, or paid for under the Contract Documents shall be the property of the **Owner**. The **Owner** maintains all rights to such programs and deliverables, including the right to use, duplicate, and disclose the programs and deliverables, in whole or in part, in any manner and for any purpose. If any program or deliverable is copyrightable, the **Contractor** may copyright it subject to the **Owner's** rights. The **Owner** reserves a royalty-free, nonexclusive, and irrevocable license to use, duplicate,

publish, and disclose such programs and deliverables, in whole or in part, and to authorize others to do so.

8.10. The **Contractor** warrants that all costs in proposals and claims for adjustments in Contract Price shall not exceed those allowed under the Contract Documents, and that proposals and claims for adjustments in Contract Price shall grant prices, terms, and warranties comparable to or better than prices, terms and warranties offered to others for similar work.

8.11. This Agreement shall be binding on the **Contractor**, **Owner** and their respective successors and legal representatives and, if the **Owner** has consented to an assignment or other conveyance, on all their respective assigns and delegates.

*8.12. The Contract Documents shall be governed by and construed in accordance with the Laws of the State of Michigan in effect on the date of Bid opening. Any change in Michigan Law after that date shall be binding only to the extent the **Owner** and **Contractor** agree or to the extent such change is beyond the capacity of the parties to avoid.

ARTICLE 9 NOTICE AND SERVICE

9.1. Unless otherwise provided in the Contract Documents or consented to by the **Owner** in writing, any notice, demand, or communication shall be in writing and shall be deemed to have been given when received by the individual required to be given notice at the address designated in this Agreement. A copy of any notice, demand or notification shall be sent to the address below.

9.2. Any written notice or other written communication to the sureties shall be sufficiently given if delivered to the individual required to be given notice at the address designated in the Bond.

IN WITNESS WHEREOF, the **Owner** and **Contractor** have signed this Section 00500 Agreement in triplicate and initialed three (3) full sets of the Contract Documents. One (1) full set of the executed Contract Documents will be delivered to the **Contractor**.

THE STATE OF MICHIGAN

BY:

Director, DTMB, SFA, Design and Construction
NAME:

Witness:

Date:

Address for giving notices:

Department of Technology, Management and Budget
State Facilities Administration
Design and Construction
3111 W. St. Joseph Street
Lansing, MI 48917

THE CONTRACTOR

BY:

Title: _____ Date _____

NAME: _____

Federal ID No. or SS No. (LAST 4 Only)

Telephone No.

Witness:

Date:

Address for giving notices

CERTIFICATE OF PRINCIPAL

(If **Contractor** is Other Than a Sole Proprietor)

I, _____, certify that I am the Secretary of the Corporation _____, or a General Partner _____ or Managing Partner _____ or Partner _____ of the partnership, named as the **Contractor** in the attached Section 00500 Agreement, that _____ who signed Section 00500 Agreement on behalf of the **Contractor**, was then _____ of that corporation _____ or partnership _____; that I know the undersigned's signature, and the signature is genuine; and that Section 00500 Agreement was duly signed, sealed and attested for and on behalf of that corporation _____ partnership _____ by authority of its governing body _____ or partners _____

Signed by the Secretary or Other Authorized Officer of the Corporation _____ Date
or By General Partner or Managing Partner or Authorized Partner Certifying

Name of the Corporation or True Name of the Partnership

Telephone No. _____

(Corporate Seal)

VERIFICATION
(by **Contractor**)

STATE OF _____)

COUNTY OF _____)

Before me, a Notary Public duly commissioned, qualified and acting, personally appeared (enter name of person who signed Section 00500 Agreement on behalf of the Bidder), _____ to me well known, who being by me first duly sworn upon oath, says that he/she is the Attorney-In-Fact for (enter the **Contractor's** name) _____ and that he/she has been authorized by (enter name of individual, partnership name, or that governing body of the Bidder named in the attached corporate resolution) _____ to execute Section 00500 Agreement on behalf of the named **Contractor** in favor of the STATE OF MICHIGAN.

Subscribed and sworn before me this _____ day of _____, A.D., 20_____.

Notary Public, State of _____

My Commission Expires: _____

RESOLUTION OF CORPORATE AUTHORITY
(If **Contractor** is a Corporation)

I, _____, Corporate Officer of _____, a _____
(Print or type) Corporation (the "Company") (Indicate State)

DO HEREBY CERTIFY that the following is a true and correct excerpt from the minutes of the meeting of the Board of Directors, wherein a quorum was present, duly called and held on _____ and that the same is now in full force and effect:

"RESOLVED, that the Chairman, the President, each Vice President, the Treasurer, and the Secretary and each of them, hereby is authorized to execute and deliver, in the name and on behalf of the Company and under its corporate seal or otherwise, any agreement or other instrument or document in connection with any matter or transaction that shall have been duly approved; the execution and delivery of any agreement, document, or other instrument, or document in connection with any matter or transaction that shall have been duly approved; the execution and delivery of any agreement, document, or other instrument by any of such officers to be conclusive evidence of such approval."

I FURTHER CERTIFY that _____ is Chairman of the Board, _____ is President, _____ is Treasurer, and _____ is Secretary.

I FURTHER CERTIFY that any of the officers of the Company named in this Resolution of Corporate Authority are authorized to execute or guarantee and commit the Company to the conditions, obligations, stipulations, and undertakings contained in the Contract Documents for File No. _____ Work _____, _____ and that all necessary corporate approvals have been obtained in relationship thereto.

IN WITNESS THEREOF, I have set my hand this _____ day of _____, 20____.

CORPORATE SEAL

Corporate Officer's Signature

Title

Telephone No. _____

CERTIFICATE OF PARTNERSHIP AUTHORITY
(If **Contractor** is a Partnership)

I, _____, General Partner in _____, a _____
(Print or Type) Partnership (the "Partnership") (Indicate State)

DO HEREBY CERTIFY that I am a General Partner in the Partnership formulated pursuant to a Partnership Agreement dated _____, 20____, and that the following is a true and correct excerpt from the minutes of the meeting of the General Partnership held on _____ and that the same is now in full force and effect:

"That each General Partner is authorized to execute and deliver, in the name and on behalf of the Partnership, any agreement or other instrument or document in connection with any matter or transaction that shall have been duly approved; the execution and delivery of any agreement, document, or other instrument, or document in connection with any matter or transaction that shall have been duly approved; the execution and delivery of any agreement, document, or other instrument by a General Partner to be conclusive evidence of such approval."

I FURTHER CERTIFY that any of the aforementioned General Partners of the Partnership are authorized to execute or guarantee and commit the assets of the Partnership to the conditions, obligations, stipulations, and undertakings contained in the Contract Documents for File No. _____ Work _____, _____ and that all necessary partnership approvals have been obtained in relationship thereto.

IN WITNESS THEREOF, I have set my hand this ____ day of _____, 20____.

General Partner's Signature

Title

Telephone No. _____

END OF SECTION 00500

SECTION 00520 ATTACHMENT "A" TO AGREEMENT

PROFESSIONAL – Commtech Design, Inc.
WORK – Replace Security System Programmable Logic Controllers
FILE No. 491/23066.SDW

CONTRACT ORDER No. Y _____

This Section 00520 Attachment A to Agreement supplements those specific provisions in Section 00500 Agreement designated below. All other provisions in Section 00500 Agreement that are not so supplemented remain in full force and effect. The terms "Agreement", "Contract Documents" and "Contract" have specific intents and meanings assigned as stated in Section 00500 Agreement and Section 00020 Glossary.

**SUPPLEMENTARY TERMS AND CONDITIONS TO
 ARTICLE 4 CONTRACT TIME; LIQUIDATED DAMAGES**

The following separable parts of the Work will be completed, as specified in the Contract Documents:

- (a) within _____ (____) Days from the date when the Contract Time commences to run, or on or before _____, 20____.
- (b) within _____ (____) Days from the date when the Contract Time commences to run, or on or before _____, 20____.
- (c) within _____ (____) Days from the date when the Contract Time commences to run, or on or before _____, 20____.

These interim Contract Times are of the essence so as to: (a) not Delay work by others as provided in Article 13 of the General Conditions; (b) conform to the sequences of Work indicated in or required by the Contract documents; and (c) comply with the coordination requirements of the Contract Documents.

The **Owner** and **Contractor** recognize that the Contract Time(s) specified in this Attachment A is(are) of the essence to this Agreement in that the **Owner** will suffer costs and damages if the Work is not completed within the Contract Time(s) plus any extensions authorized in accordance with Section 00700 General Conditions. Accordingly, liquidated damages will apply based on the following schedule: (a) _____ Dollars and No/Cents (\$ _____); (b) _____ Dollars and No/Cents (\$ _____); and (c) _____ Dollars and No/Cents (\$ _____) for each Calendar Day that expires after each of the respective Contract Times specified in this Section 00520 Attachment A to the Agreement for the completion of each of those designated parts of the Work, respectively, until each of those parts of the Work is complete. Any deduction by the **Owner** of liquidated damages from Requests for Payment shall be undertaken only after consultation with the **Professional** and shall be subject to the procedures outlined in paragraph 4.3, Section 00500 Agreement.

END OF SECTION 00520

SECTION 00610 PERFORMANCE BOND

FILE No. 491/23066.SDW

SURETY COMPANY REFERENCE No. _____

"The Contractor," _____, a corporation ____, individual ____, partnership ____, joint venture __ of the State of _____, qualified to do business in the State of Michigan, as Principal, and "the Surety," _____, of the State of _____, as surety, are held and bound unto the State of Michigan, "the Owner," as Obligee, in the amount of _____ Dollars (\$_____), for the payment of which the Contractor and Surety hereby bind themselves, their respective heirs, successors, legal representatives and assigns, jointly and severally, in compliance with 1963 PA 213, as amended, MCL 129.201 et seq.

The Contractor has entered into "the Contract" with the Owner for _____, "the Work," covered by the Contract Documents, which are incorporated into this Performance Bond by this reference.

If the Contractor faithfully performs and fulfills all the undertakings, covenants, terms, conditions, warranties, indemnifications and agreements of the Contract Documents within the Contract Time (including any authorized changes, with or without notice to the Surety) and during the Correction Period, and if the Contractor also performs and fulfills all the undertakings, covenants, terms, conditions, warranties, indemnifications and agreements of any and all duly authorized modifications of the Contract Documents, then THIS OBLIGATION IS VOID, OTHERWISE TO REMAIN IN FULL FORCE AND EFFECT.

A. No change in Contract Price or Contract Time, "or equal" or substitution or modification of the Contract Documents (including addition, deletion, or other revision) releases the Surety of its obligations under this Section 00610 Performance Bond. The Surety expressly waives notice of any such change in Contract Price or Contract Time, "or equal" or substitution or modification of the Contract Documents (including addition, deletion, or other revision).

B. This Section 00610 Performance Bond shall be solely for the protection of the Owner and its successors, legal representatives or assigns. The prevailing party in a suit on this Bond is entitled to recover as part of that party's judgment reasonable attorneys' fees.

C. It is the intention of the Contractor and Surety that they shall be bound by all terms and conditions of the Contract Documents (including, but not limited to Article 14 of Section 00700 General Conditions and this Section 00610 Performance Bond). However, this Section 00610 Performance Bond is executed pursuant to 1963 PA 213, as amended, MCL 129.201 et seq., and if any provision(s) of this Section 00610 Performance Bond is/are illegal, invalid, or unenforceable, all other provisions of this Section 00610 Performance Bond must nevertheless remain in full force and effect, and the Owner shall be protected to the full extent provided by 1963 PA 213, as amended, MCL 129.201 et seq.

IMPORTANT: The Surety shall be authorized to do business in the State of Michigan by the Department of Licensing and Regulatory Affairs, must be listed on the current U.S. Department of the Treasury Circular 570, and, unless otherwise authorized by the Owner in writing, must have at least an A- Best's rating and a Class VII or better financial size category per current A. M. Best Company ratings.

Name, Address and Telephone of the Surety:

Address and Telephone of Agent, who is either a resident of, or whose principal office is maintained in, the State of Michigan

Signed and sealed this _____ day of _____, 20_____.

THE CONTRACTOR: (Print Full Name and Sign) _____
WITNESS _____

By: _____
Name & Title: _____

THE SURETY: (Print Full Name and Sign)

Telephone No. _____
Agent: _____

WITNESS _____

Attorney-in-Fact: _____

Telephone No. _____

Email: _____

END OF SECTION 00610

SECTION 00620 PAYMENT BOND

FILE No. 491/23066.SDW

SURETY COMPANY REFERENCE No. _____

"The Contractor," _____, a corporation _____, individual _____, partnership _____, joint venture _____ of the State of _____, qualified to do business in the State of Michigan, as Principal, and "the Surety," _____, of the State of _____, as surety, are held and bound unto the State of Michigan, "the Owner," as Obligee, in the amount of _____ Dollars (\$_____), for the payment of which the Contractor and Surety bind themselves, their respective heirs, successors, legal representatives and assigns, jointly and severally, in compliance with 1963 PA 213, as amended, MCL 129.201 et seq.

The Contractor has entered into "the Contract" with the Owner for _____, "the Work," covered by the Contract Documents, which are incorporated into this Payment Bond by this reference.

If the Contractor promptly pays all claimants supplying labor or materials to the Contractor or to the Contractor's Subcontractors in the prosecution of the Work, then THIS OBLIGATION IS VOID, OTHERWISE TO REMAIN IN FULL FORCE AND EFFECT.

A. All rights and remedies on this Section 00620 Payment Bond shall be solely for the protection of all claimants supplying labor and materials to the Contractor or the Contractor's Subcontractors in the prosecution of the Work and must be determined in accordance with Michigan Law.

B. No change in Contract Price or Contract Time, "or equal" or substitution or modification of the Contract Documents (including addition, deletion, or other revision) must release the Surety of its obligations under this Section 00620 Payment Bond. The Surety

hereby expressly waives notice of any such change in Contract Price or Contract Time, "or equal" or substitution or modification of the Contract Documents (including addition, deletion, or other revision).

C. It is the intention of the Contractor and Surety that they must be bound by all terms and conditions of the Contract Documents (including, but not limited to this Section 00620 Payment Bond). However, this Section 00620 Payment Bond is executed pursuant to 1963 PA 213, as amended, MCL 129.201 et seq., and if any provision(s) of this Section 00620 Payment Bond is/are illegal, invalid, or unenforceable, all other provisions of this Section 00620 Payment Bond must nevertheless remain in full force and effect, and the Owner must be protected to the full extent provided by 1963 PA 213, as amended, MCL 129.201 et seq.

IMPORTANT: The Surety shall be authorized to do business in the State of Michigan by the Department of Licensing and Regulatory Affairs, must be listed on the current U.S. Department of the Treasury Circular 570, and, unless otherwise authorized by the Owner in writing, must have at least an A- Best's rating and a Class VII or better financial size category per current A. M. Best Company ratings.

Name, Address and Telephone of the Surety:

Address and Telephone of Agent, who is either a resident of, or whose principal office is maintained in, the State of Michigan

Signed and sealed this _____ day of _____, 20_____.

THE CONTRACTOR: (Print Full Name and Sign) _____
WITNESS _____

By: _____
Name & Title: _____

THE SURETY: (Print Full Name and Sign)

Telephone No. _____
Agent: _____

WITNESS _____

Attorney-in-Fact: _____

Telephone No. _____

Email: _____

END OF SECTION 00620

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STATE OF MICHIGAN MODEL

Developed from FORMSPEC™ Michigan Model

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ARTICLE 1 INTERPRETATIONS

1.1 Section 00020 Glossary:

1.1.1. Section 00020 Glossary assigns specific intent and meanings to capitalized terms and to other defined terms used in this Section 00700 General Conditions, Section 00500 Agreement, Section 00520 Attachment A to the Agreement, Section 00610 Performance Bond, Section 00620 Payment Bond, and Section 00800 Supplementary Conditions.

1.1.2. Section 00020 Glossary also provides specific rules for construing any reference to any Article or paragraph that is made in this Section 00700 General Conditions.

1.2 Intent of the Contract Documents:

1.2.1. The intent of the Contract Documents is to describe the *entire* Work, including its various parts, to the extent necessary for the **Contractor** to discharge its obligation to execute and complete the Work in accordance with the Contract Documents. The Contract Documents are complementary; what is required by one shall be as binding as if required by all Contract Documents.

1.2.2. The *entire* Work required by the Contract Documents includes Work, which is reasonably inferable from the Contract Documents or from prevailing custom and trade usage. The **Contractor** shall provide any Work reasonably inferable to the extent such Work is required to properly complete the installation of other Work expressly shown or specified in the Contract Documents. If the **Contractor** disagrees that Work that is not expressly shown or detailed in the Contract Documents is Work reasonably inferable, the **Contractor** shall proceed in accordance with the provisions of paragraph 10.1.3.

1.2.3. The breakdown of the Work by Divisions and Sections, or the identification of any Drawing, shall not delineate or be construed to delineate Work to be performed by any trade. The breakdown shall not control the manner in which the Work may be divided by the **Contractor** among Subcontractors and Suppliers.

*1.2.4. Reference to the State Construction Code Act of 1972, 1972 PA 230, as amended, MCL 125.1501 *et seq.*, or to standard specifications, manuals or codes of any technical society, organization, or association, whether specifically or by implication, means the issue in effect on the date of Bid opening, unless otherwise expressly stated. Work indicated in or required by the Contract Documents that is above standards set in the State Construction Code shall be provided to the higher standard.

1.2.5. The provisions of the Contract Documents shall govern over any standard specification, manual or code of any technical society, organization, or association. Unless otherwise provided in the Contract Documents, words with an accepted technical or trade meaning used to describe any Work shall be interpreted in accordance with that meaning.

1.2.6. If any Work indicated in, or required by, the Contract Documents is above the standards set by any Law applicable to the Work and the Project, the higher standard shall govern.

1.2.7. The terms "the Contract Documents," "as specified in the Contract Documents," "in accordance with the Contract Documents" or such other similar terms shall be construed as including all valid Change Orders and Change Authorizations.

1.2.8. "Execution of the Work" and "shall provide" includes the furnishing and/or performance of the Work. "Work" as in "Unit Price Work," or "any Work" or "acceptable Work," etc. refers to a specific part(s) of the Work.

1.2.9. Subject to the **Contractor's** continuing responsibilities for the acts of Subcontractors and Suppliers, whenever in the Contract Documents the term "the **Contractor**" is used concerning any action, obligation, cost, or event, it shall cover, even if not expressly stated, actions or obligations or costs of, or events involving, any Subcontractor, Supplier, or anyone for whom any of them may be liable, unless the context requires otherwise.

1.2.10. Use of the terms "as ordered," "as directed," "as required," "as allowed," "as approved" or similar terms, or the adjectives "reasonable," "suitable," "acceptable," "proper" or "satisfactory" or similar adjectives, to describe a requirement, direction, review, or judgment of the **Professional** or **Owner** as to the Work will be solely to evaluate the Work for compliance with the Contract Documents. No use of any such term or adjective, or provision of any standard specification, manual or code (whether expressly incorporated by reference in the Contract Documents or not), or Suppliers' instructions, shall be effective to (a) change the duties and responsibilities of the **Owner** or **Professional** from those assigned in the Contract Documents, (b) assign to the **Owner** or **Professional** any duty or authority to supervise or direct the furnishing or performance of the Work or assume responsibility contrary to the provisions of the Contract Documents.

1.2.11. A provision stating "the **Contractor** shall bear its proportionate share of the Delay and costs" shall be construed as entitling the **Owner** to an appropriate decrease in Contract Price and Contract Time for all the **Owner's** direct, indirect, and consequential costs and damages that are attributable to the **Contractor**.

1.2.12. Contract Time computations shall be made in Calendar Days. The Progress Schedule shall be in the form of a Critical Path Method schedule, Total Float and Contract Float values stated in Business Days shall be converted to Calendar Days when used for the purpose of calculating changes in Contract Time.

1.2.13. Any computation of a Contract Time which adds Calendar Days to a date shall include both the first and last Day. Any computation of a notice period shall exclude the first Day and include the last Day. In any case, if the computed Day falls on a non-Business Day, it shall be omitted from the computation.

1.2.14. In the Contract Documents, the terms "substantially completed" and "substantially complete" have in context the same meaning as Substantial Completion.

1.3 Priority of the Contract Documents:

1.3.1. Whenever an issue of priority involves two Sections within the Contract Documents, the following will apply: Unless the **Owner** and **Contractor** mutually agree otherwise, a Section of the Contract Documents will *supersede* another *conflicting* Section if the *superseding* Section is listed in paragraph 2.2 of Section 00500 Agreement ahead of the *conflicting* Section.

1.3.2. Whenever an issue of priority involves Work called for in the technical Specifications or Drawings – figured dimensions shall govern scaled dimensions, detail Drawings shall govern general Drawings and Drawings shall govern Submittals. Whenever specifications, dimensions, notes, schedules, or details conflict (whether within the Specifications or Drawings, or between the Specifications and Drawings, or between Change Order Drawings and the Drawings), the **Contractor** shall be required to provide the higher performance requirement only to the extent such outcome results in Work reasonably inferable.

1.4 Interpretation of Indemnification Provisions:

1.4.1. Paragraphs 1.4.2 and 1.4.3 will be as effective as if repeated in paragraphs 4.5.2, 4.6.1, 4.9.1, 10.4.4, 13.3.1 and in any other paragraph requiring the **Contractor** to defend, indemnify and hold harmless the **Owner** and **Professional**.

1.4.2. Any indemnification provision requiring the **Contractor** to defend, indemnify and hold harmless the **Owner** and **Professional** against all claims, or covering liability of the **Owner** or **Professional**, shall include claims caused in part by the negligence or other liability-creating conduct or omission of the **Contractor**.

1.4.3. The terms "against all claims" in any such obligation shall be construed as covering all claims, of whatever type and nature, and all judgments, costs, losses, and damages, whether direct, indirect, or consequential (including, but not limited to, charges of architects, engineers, attorneys and others and all court, hearing, and any other dispute resolution costs).

1.5 Additional Interpretations:

1.5.1. The term "the **Professional**" shall be construed as covering, even if not expressly stated, the **Professional's** consultants, agents, and employees. This interpretation shall not be construed as relieving the **Professional** of its sole responsibility for the performance of the **Professional's** obligations and responsibilities, whether performed by the **Professional** directly or through any consultant, agent, or employee.

1.5.2. The expression "any act or omission within the control of" shall include, but is not limited to, the fault or negligence of the party involved and any other act, cause, and event for which that party is responsible. The expression "any cause beyond the control of" shall include any act or omission not within the reasonable control of the party involved and any other act, cause, and event for which that party is not responsible.

1.5.3. Whenever in the Contract Documents, the term "first tier" is used concerning a Subcontractor or Supplier, it means a Subcontractor or Supplier having a direct Sub agreement with the **Contractor**. Relatedly, the term "lower tier" refers to a Subcontractor or Supplier having a direct Sub agreement with another Subcontractor.

1.5.4. The expression "materials and/or equipment" shall not be construed to equate materials with equipment, but rather shall be interpreted as a general reference to materials or equipment, whichever actually applies. The term "stored materials" shall include materials and equipment. Where a differentiation between materials or equipment is necessary, such as for payments for approved equipment Shop Drawings, use of the term "equipment" shall exclude materials. In any such case, examples of equipment shall be conveying equipment, tanks, pumps, vessels, fans, boilers, air handling units, heat exchangers, compressors, incineration equipment, motor control centers, switchgears, transformers, control panels and so forth; and such components as pipe fittings and specialties, valves, ductwork, plumbing fixtures, cable tray, conduit and cable, electrical fixtures, panel boards and so forth shall be materials and not equipment.

1.5.5. The term "registered mail" includes registered U.S. mail and certified U.S. mail with return receipt requested. The term "hand delivered" includes delivery by private carriers.

1.5.6. The term "self-performed Work" means Work performed by the **Contractor**, as opposed to Work performed by a Subcontractor, which is referred to as "Subcontractor Work."

1.5.7. An "early completion" Progress Schedule is a **Contractor**-prepared Revision Progress Schedule Submittal that anticipates completion of the entire Work, or of any portion of the Work having a separate, specified Contract Time, ahead of the correspondingly specified Contract Time.

1.6 Ownership and Use of the Contract Documents:

1.6.1. Neither the **Contractor** nor any Subcontractor or Supplier shall have or acquire title to or ownership rights in any of the Drawings, Specifications or documents identified in Section 00210 Information for Bidders, and they shall not reuse any of them on extensions of the Project or any other project without prior written consent of the **Owner** and **Professional**.

1.6.2. The **Contractor**, Subcontractors and Suppliers are granted a limited license to use and reproduce parts of the Contract Documents and those documents identified in Section 00210 Information for Bidders as appropriate for their use in the furnishing and performance of their Work. All copies of the Drawings and Project Manual and other documents made under this license shall retain all copyright and trademark notices, if any.

1.7 Copies of the Contract Documents:

1.7.1. The **Owner** will furnish, at no cost to the **Contractor**, one (1) electronic copy of the Drawings and Project Manual. If the **Contractor**, or the Contractor's Subcontractors or Suppliers request hard copy sets, reproduction of these documents will be the responsibility of the **Contractor**.

ARTICLE 2 THE OWNER – GENERAL PROVISIONS

2.1 Availability of Lands, Areas, Properties and Facilities:

2.1.1. The Contract Documents indicate the lands, areas, properties, and facilities upon which the Work is to be performed and those rights-of-way and easements for access to the site furnished by the **Owner**. Easements for permanent structures or for permanent changes in any existing lands, areas, properties, and facilities will be obtained by the **Owner**, unless otherwise expressly stated elsewhere in the Contract Documents.

2.1.2. The **Contractor** shall obtain, at no increase in Contract Price or Contract Time, any other lands, areas, properties, facilities, rights-of-way, and easements the **Contractor** requires for temporary facilities, storage, disposal of spoil or waste material or any other such purpose. If public property, the **Contractor** shall obtain all required permits from the federal agency, State agency, Political Subdivision or Public Utility with jurisdiction. If private property, the **Contractor** shall obtain prior permission by written agreement. The **Contractor** shall submit copies of the permits and written agreements to the **Owner**.

2.2 Reference Points; Base Lines and Benchmarks:

2.2.1. Unless noted otherwise, the **Owner** or **Professional** will provide engineering surveys to establish reference points for

construction that the **Professional** considers necessary for the **Contractor** to proceed with the Work. The **Contractor** shall be responsible for surveying and laying out the Work from those reference points. The **Contractor** shall be responsible for protecting and preserving those reference points as well as any base lines and benchmarks provided for the Work.

2.2.2. The **Contractor** shall make no changes on any reference points, base lines, and benchmarks without the **Professional's** prior written approval. The **Contractor** shall report to the **Professional** whenever any reference point, base line or benchmark is lost, destroyed, or requires relocation. The **Contractor** shall replace and relocate any lost or destroyed reference points accurately, with professionally, licensed personnel, if so, directed by the **Professional**.

2.2.3. The **Contractor** shall bear its proportionate share of the Delay and costs resulting from any loss, destruction, replacement and/or relocation of reference points, base lines and/or benchmarks, to the extent any such loss, destruction, replacement and/or relocation results in whole or in part from any act or omission within the control of the **Contractor**.

2.3 Stop Work Order:

2.3.1. The **Owner** may order the **Contractor** in writing to stop the Work, in the whole or in part, in the event any of these situations occur: (a) any Work is Defective, (b) any Work, when completed, will not conform to the Contract Documents, (c) any materials or equipment are unsuitable, or (d) any workers are insufficiently skilled. The **Contractor** shall bear its proportionate share of the Delay and costs resulting from any such stop Work order unless the **Contractor** is/was not at fault.

2.3.2. If the **Contractor** is/was not at fault, the **Owner** will amend the Contract Documents to provide for any adjustments in Contract Price and/or Contract Time made necessary by any resulting Delay which is unreasonable under the circumstances. This authority to stop the Work or any Work shall not create or impose any duty or responsibility on the **Owner** to exercise such authority for the benefit of the **Contractor** or of any Subcontractor, Supplier, surety to any of them or any other third party.

2.4 Limitations on the Owner's Responsibilities:

2.4.1. The **Owner** is not responsible for the **Contractor's** Means and Methods, safety precautions and programs related to safety, or the **Contractor's** failure to execute the Work in accordance with the Contract Documents. Nor is the **Owner** responsible for any act or omission of the **Contractor** or of any Subcontractor, any Supplier or anyone for whose acts the **Contractor** or any Subcontractor or Supplier may be liable.

2.4.2. The **Owner** is not responsible for verifying whether the **Contractor's** Progress Schedule Submittals, any certificates and/or policies of insurance or any technical Submittals are in accordance with the Contract Documents, or for verifying their accuracy or completeness in any way.

2.4.3. Neither the **Owner's** authority to review any of those Submittals, nor the **Owner's** decision to raise or not raise any objections about any such Submittals, shall create or impose any duty or responsibility on the **Owner** to exercise any such authority or decision for the benefit of the **Contractor**, any Subcontractor or Supplier, any surety to any of them or any other third party.

2.5 Additional General Provisions:

2.5.1. Written communications from the **Owner** to the **Contractor** will generally be issued through the **Professional**. If there is need to issue communications directly, a copy will be sent concurrently to the **Professional**. Written communications from the **Contractor** to the **Owner** may be issued directly to the **Owner** or through the **Professional** if such is more appropriate. Any such communication shall also include concurrent copy of both parties.

2.5.2. The **State Facilities Administration** Representative shall be the representative for the **Owner**. The **State Facilities Administration** Representative may be represented on-site by a Field Representative(s). Neither the **State Facilities Administration** Representative nor the Field Representative shall have authority to interpret the requirements of the Contract Documents. Unless delegated by specific written notice from the **Owner**, the Field Representative does not have any authority to order any changes in the Work or authorize any adjustments in Contract Price or Contract Time.

2.6 Partnering Charter:

2.6.1. If the Contract Documents indicate the **Owner's** intent to implement a bilateral partnering charter, unless the **Contractor** declines in writing, the **Contractor** shall cooperate with the **Owner** in implementing such a partnering charter for the Contract. Unless the possibility is expressly allowed for in the Contract Documents, no provision, requirement, or other aspect of the Contract Documents shall be open for change, revision, or modification in any such partnering charter.

ARTICLE 3 THE PROFESSIONAL – GENERAL PROVISIONS

3.1 Owner's Representative:

3.1.1. The **Professional** shall be the **Owner's** representative during the Contract Time period. The **Professional's** duties, responsibilities and limits of authority set forth in the Contract Documents shall not be changed without the prior written consent of both the **Owner** and **Professional**.

3.1.2. The **Professional** will make On-Site Inspections at intervals appropriate to the stages of the Work to observe the quality and quantity of progress and completed Work; to determine actual quantities of Unit Price Work completed by the **Contractor** and to determine whether the Work is being executed so that the Work, when completed, will be in accordance with the Contract Documents. Based on the On-site Inspections, the **Professional** will endeavor to guard the **Owner** from Defective Work and to keep the **Owner** informed of the progress of the Work.

3.1.3. If the **Professional** assigns Resident Project Representatives, their duties, responsibilities, and limits of authority will be given in the Contract Documents or at the pre-construction conference. Unless delegated by specific written notice from the **Owner**, the Resident Project Representative does not have any authority to order any changes in the Work or authorize any adjustments in Contract Price or Contract Time.

3.1.4. The **Professional** will have authority to disapprove or reject Work that the **Professional** believes to be Defective, and to require inspection or testing of any Work, whether or not such Work

is fabricated, installed, or completed. The **Contractor** shall take prompt corrective action upon receiving any Defective Work notice from the **Professional**.

3.1.5. On-Site Inspections by the **Professional** and/or Resident Project Representatives shall not create or impose any duty on the **Professional** or Resident Project Representatives to make the On-Site Inspections for the benefit of the **Contractor** or any other third party. On-Site Inspections will not relieve the **Contractor** from its obligation to provide the Work in accordance with the Contract Documents or represent acceptance of Defective Work.

3.1.6. Inspections by the Field Representative(s) shall not create or impose any duty on such Field Representative to make the observations for the benefit of the **Contractor** or any other third party. Any such inspection will not relieve the **Contractor** from its obligation to provide the Work in accordance with the Contract Documents or represent acceptance of Defective Work.

3.2 Clarifications and Interpretations:

3.2.1. The **Professional** will issue with reasonable promptness written clarifications or interpretations as the **Professional** may determine necessary or in response to a **Contractor** written request for interpretation. If the **Contractor** believes that a written clarification or interpretation issued by the **Professional** justifies an adjustment in Contract Price or Contract Time, the **Contractor** shall promptly notify the **Professional** in writing before proceeding with the Work Involved.

3.2.2. In any such case, if the **Contractor** is properly authorized in writing to proceed with the Work Involved before full agreement is reached on the extent of any such adjustments (if any are determined to be due at all), the **Contractor** shall furnish to the **Professional**, upon request from the **Professional**, those actual cost Records specified in paragraphs 11.4 and 11.5.

3.3 Minor Variations and No-Cost Changes; Minor Delays:

3.3.1. The **Professional** may authorize minor variations in the Work, order no-cost changes consistent with the Contract Documents or cause minor Delay if, in the **Professional's** judgment, such variation, no-cost change or Delay does not justify any adjustment in Contract Price or Contract Time. Minor variations will be ordered in writing; no-cost changes will be authorized by Change Authorization. If the **Contractor** believes any minor variation or no-cost change justifies an increase in Contract Price or Contract Time, the **Contractor** shall promptly notify the **Professional** in writing before proceeding with the Work Involved and follow the procedures in paragraph 3.2. Notice requirements for minor Delays are provided in paragraph 8.7.4.

3.4 Determinations by the Professional:

3.4.1. The **Professional** will be the interpreter of the requirements of the Contract Documents and, in such capacity, will render determinations on the acceptability of the Work. Notices, proposals, claims, or other matters relating to the acceptability of the Work, the interpretation of the requirements of the Contract Documents or any adjustment in Contract Price or Contract Time shall be referred to the **Professional** in writing requesting a formal, written determination, which the **Professional** will render within a reasonable time. If the **Contractor** disagrees with any such

Professional determination, the **Contractor** may deliver notice of a claim and a claim submittal within thirty (30) Calendar Days in accordance with the procedures and within the deadlines set forth in Article 15 Disputes.

3.4.2. The rendering of any interpretation or of any determination on any notice, proposal, claim, or other matter relating to the acceptability of the Work or to any adjustment in Contract Price or Contract Time will be a prerequisite to the exercise by the **Contractor** of any rights or remedies the **Contractor** may otherwise have under the Contract Documents or by Law concerning any such issue.

3.5 Limitations on the Professional's Responsibilities:

3.5.1. The **Professional's** authority to act under this Article 3 or elsewhere in the Contract Documents, or any decision made by the **Professional** in good faith to exercise or not to exercise such authority, shall not give rise to any duty or responsibility of the **Professional** to the **Contractor**, to any Subcontractor or any Supplier, to any surety or to any third party.

3.5.2. The **Professional** is not responsible for the **Contractor's** Means and Methods, safety precautions and programs related to safety, or for the **Contractor's** failure to execute the Work in accordance with the Contract Documents. Furthermore, the **Professional** is not responsible for any act or omission of the **Contractor** or of any Subcontractor, Supplier, or anyone for whose acts the **Contractor** or any Subcontractor or Supplier may be liable.

ARTICLE 4 CONTROL OF WORK – GENERAL PROVISIONS

4.1 Review of the Contract Documents:

4.1.1. Before undertaking each part of the Work, the **Contractor** shall study and compare the Contract Documents with each other and against manufacturers' recommendations for installation and handling. Before undertaking each part of the Work, the **Contractor** shall verify dimensions and take field measurements, and the **Contractor** shall coordinate the location, dimensions, access, fit, completeness, etc. of dependent Work. The **Contractor** shall promptly notify the **Professional** in writing of any conflict, error or omission in the Contract Documents and deviation from manufacturers' recommendations for installation and handling discovered.

4.1.2. The **Contractor** shall bear its proportionate share of the Delay and costs resulting from any Work undertaken before apprising the **Professional** and/or obtaining a written clarification or interpretation from the **Professional**, if the **Contractor** knows or has reason to know that any such Work (a) involves a conflict, error or omission, or (b) is subject to a specified Means and Method which is inappropriate, unworkable or unsafe, or (c) is subject to a specified method of installation, performance or test procedure and/or result which is contrary to the recommendations provided by or for the respective manufacturer.

4.2 Management, Supervision and Personnel:

4.2.1. The **Contractor** shall manage, supervise, and direct the Work competently, applying the management, supervision, skills, expertise, scheduling, coordination, and attention necessary to provide the Work in accordance with the Contract Documents, while insuring timely and unhindered access to the site. The **Contractor** shall be responsible for any Means and Methods unless a specific

Means and Method is indicated in or required by the Contract Documents. The **Contractor** shall verify that completed Work complies with the Contract Documents, all approved Submittals and all clarifications and interpretations.

4.2.2. The **Contractor** shall maintain a competent, full-time superintendent on the Work at all times during its progress. The superintendent shall be the **Contractor's** representative at the site and shall have authority to act on behalf of the **Contractor**. The Superintendent shall not be assigned or replaced without the **Owner's** consent. If the **Owner**, in the reasonable exercise of its discretion, objects to the superintendent, the **Contractor** shall use a replacement superintendent at no increase in Contract Price or Contract Time. All communications given to the superintendent shall be as binding as if given to the **Contractor**. The DTMB Superintendent Designation [form](#) must be completed by the Contractor and submitted before beginning any work.

4.2.3. The **Contractor** shall provide competent, suitably qualified personnel to survey and lay out the Work. As part of this responsibility, the **Contractor** shall engage a registered land surveyor to accurately locate base lines and Project elevations. The **Contractor** shall be required to furnish certifications that lines and grades for all concrete slabs were checked before and after placing of concrete, and that final grades are as required by the Contract Documents.

4.2.4. The **Contractor** shall provide competent and suitably qualified trade foremen and craft workers to construct the Work, in all cases as required by the Contract Documents. At all times, the **Contractor** shall maintain good discipline and order at the site.

4.2.5. Whenever activities of the **Contractor** are carried out beyond the limits of the site or the indications of temporary fences or barricades, the **Contractor** shall schedule trenching, utility Work, site development, landscaping and all other activities in the way that will cause minimum disturbance to or interference with adjoining property, service to the public or the normal operation of the **Owner** or others affected by such activities.

4.2.6. If a Means and Method is indicated in, or required by, the Contract Documents, a substitute Means, and Method may be used by the **Contractor** only after obtaining the **Professional's** approval that it meets the applicable criteria in paragraph 5.2 without increasing Contract Price or Contract Time. If any such substitution causes earlier completion of the Work, the **Owner** and **Contractor** may negotiate an appropriate shortening in Contract Time, a level of liquidated damages appropriate to the shortened Contract Time, and a decrease in the Contract Price. If the **Owner** and **Contractor** are unable to agree on the extent of any such adjustments, the **Owner** may deliver a claim in accordance with the procedures and within the deadlines set forth in Article 15.

4.2.7. The **Contractor** shall post appropriate construction signs to advise the occupants and visitors of occupied facilities of the limits of construction work areas, hardhat areas, excavations, construction parking and staging areas, etc.

4.3 Materials and Equipment:

4.3.1. Unless otherwise specified in the Contract Documents, the **Contractor** shall furnish and be responsible for all materials, equipment, transportation, construction equipment, tools, supplies, fuel, utilities, water for flushing and testing, temporary facilities and all other facilities and incidentals necessary for the furnishing and

performance, which includes, without limitation, the testing and completion of the Work.

4.3.2. All materials and equipment shall be of good quality, free of defect and new, unless otherwise allowed in the Contract Documents. For each material and equipment, the **Contractor** shall provide complete information on preventive maintenance, operating requirements, parts lists, ordering of parts and other applicable conditions. Materials and equipment shall be protected against any damage at all times so that they remain new.

4.3.3. If required for the **Professional's** acceptance of any materials or equipment, the **Contractor** shall furnish satisfactory evidence (which shall include test procedures and reports of required tests) as to the kind and quality of the materials and equipment. Materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned following the manufacturer's and Suppliers' instructions, except as otherwise provided in the Contract Documents.

4.3.4. Paragraph 7.3, Section 00100 Instructions to Bidders, dealing with materials and equipment *listed* in Schedule 1.6 of Section 00440 Schedule of Materials and Equipment is made part of this Section 00700 General Conditions by this reference.

4.4 Concerning Control of Work:

4.4.1. The **Contractor** shall prosecute the Work in the way that will cause the least practicable interference with and avoid prolonged interruption of, or damage to, existing facilities. The **Contractor** shall obtain written approval from the **Owner** ten (10) Calendar Days before connecting to existing facilities or interrupting service. If the **Contractor's** Means and Methods require tapping into an existing system(s), the **Contractor** shall be responsible for the restoration of such system and of any extensions of such systems.

4.4.2. To the extent specified Work on an existing system may cause damage to, or imbalances in extensions of such systems, and restoration of the entirety of such systems is not designated in the Drawings and/or Specifications as required Work, the **Contractor** shall be responsible for seeking an appropriate clarification or interpretation from the **Professional** before proceeding with the Work Involved.

4.4.3. The **Contractor** shall perform Work and operate vehicles and construction equipment in a safe manner and without becoming a hazard to the public, while at the same time ensuring the least practicable interference with pedestrians and traffic. In addition, such operations shall be carried out without interfering with overhead utilities. When transporting materials or equipment, vehicles shall not be loaded beyond the capacity set by their manufacturers or applicable Laws. When crossing sidewalks, curbs or landscaped areas, the **Contractor** shall protect them from damage. Safe and adequate pedestrian and vehicular access shall be maintained to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, hospitals, fire, and police stations and like establishments.

4.4.4. The **Contractor** shall be responsible for performing the pumping, draining, and controlling of surface water and groundwater in the way that will not endanger the Work or any adjacent facility or property, or interrupt, restrict or interfere with the use of any adjacent facility or property.

4.4.5. Paragraph 3.10, Section 00100 Instructions to Bidders, invoking the "Soil Erosion and Sedimentation Control," 1994 PA 451, Part 91, as amended, MCL 324.9101 et seq., is made part of Section 00700 General Conditions by this reference.

4.4.6. To the extent the **Contractor** knows, or has reason to know, the **Contractor** shall be responsible for performing the Work taking fully into account any dewatering, blasting, etc. operations from other work bearing a potential impact on the Work.

4.4.7. Any damaged Work corrected by the **Contractor** shall be corrected and made equal in all respects (quality, finish, appearance, function, etc.) to similar non-damaged Work otherwise required by the Contract Documents.

4.4.8. The **Contractor** shall verify that Work already *in-place* is in proper condition to receive *dependent* Work, and that dependent Work connecting to the *in-place* Work is properly coordinated. Whether or not expressly specified in the Contract Documents, the **Contractor** shall be responsible for all cutting, fitting, drilling, fixing-up and patching of concrete, masonry, gypsum board, piping and other materials that may be necessary to make *in-place* Work and *dependent* Work fit together properly.

4.4.9. The **Contractor** shall not obstruct access to municipal structures, hydrants, valves, manholes, fire alarms, etc., nor operate valves or otherwise interfere with the operation of any Public utilities without first securing the necessary approvals and permits. Except as may be otherwise provided in the technical Specifications, the **Owner** will charge the **Contractor** for all utilities used based on the charges the **Owner** actually incurs.

4.4.10. In the event of any unauthorized interruption of service to any operating facility, the **Contractor** shall take immediate action to restore that service as soon as practicable. The **Contractor** shall be directly responsible for the charges of any manufacturer's representative called to the site to repair or adjust any systems damaged by the **Contractor**.

4.4.11. Whenever the **Contractor** has caused an operating security system to go out of service or left unsecured openings in existing facilities or security fences, the **Contractor** shall furnish a security guard acceptable to the **Owner** to maintain security of the facility outside of normal working hours. The **Contractor** will be held responsible for any losses on account of the **Contractor's** interruption of security systems or barriers at existing facilities.

4.4.12. The **Contractor** shall take steps, procedures or means as may be required to prevent dust nuisance resulting from the **Contractor's** operations. The dust control measures shall be maintained at all times to the satisfaction of the **Owner** and any Political Subdivision with jurisdiction.

4.4.13. The **Contractor** shall, before final inspection, mark in a permanent and readily identifiable manner, all reference points provided by the **Owner**.

4.5 Patent Fees and Royalties:

4.5.1. The **Contractor** shall be responsible for paying all royalties and license fees and assuming all costs resulting from the use in the furnishing and performance of the Work and/or the incorporation into the Work of any invention, design, process, product, or device covered by patent rights or copyrights, whether specified in the Contract Documents or chosen by the **Contractor**.

The **Contractor** shall sign suitable agreement(s) with the patentee or copyright owner and, if requested, provide copies to the **Owner**.

4.5.2. The **Contractor** shall defend, indemnify, and hold harmless the **Owner** and **Professional** from and against all claims, as construed in paragraph 1.4, arising from any patent or copyright infringement by the Contractor including, but not limited to, patent or copyright infringements resulting from "or equal" substitution of any invention, design, process, product, or device that is specified in the Contract Documents.

4.5.3. If the **Contractor** knows, or should know, that the specified invention, design, process, product, or device infringes on a patent or copyright, the **Contractor's** obligation to defend, indemnify and hold harmless **Owner** and **Professional** from and against all claims arising from any patent or copyright infringement shall apply, unless the **Contractor** promptly furnishes that information to the **Professional** in writing.

4.6 Use of Premises:

4.6.1. The **Contractor** shall confine its operations (including, but not limited to construction equipment and laydown and storage) to the site and lands, areas, properties, facilities, rights-of-way, and easements ("the premises") identified and permitted by the Contract Documents and shall not unreasonably encumber the premises. The **Contractor** shall be responsible for any damage to the premises (including, but not limited to, damage to any real and personal property) and for any damage to any adjacent lands, areas, properties, facilities, rights-of-way, and easements (including, but not limited to, damage to any real and personal property) resulting from the **Contractor's** operations. The **Contractor** shall defend, indemnify, and hold harmless the **Owner** and **Professional** against all claims, as construed in paragraph 1.4, arising from any damage to such premises or adjacent lands, areas, properties, facilities, rights-of-way, and easements (inclusive of real and personal property), including loss of use, to the extent resulting from the **Contractor's** operations.

4.6.2. The **Contractor** shall keep the premises free from accumulations of waste materials, rubbish, and other debris, and shall not remove, injure, cut, alter, or destroy trees, shrubs, plants, or grass, unless otherwise provided elsewhere in the Contract Documents. At the completion of the Work, the **Contractor** shall remove all obstructions, waste and surplus materials, rubbish, debris, tools, and construction equipment and shall leave the site clean and ready for occupancy by the **Owner**.

4.6.3. The **Contractor** shall restore to pre-existing conditions all walks, roadways, paved or landscaped areas and other real and personal property not designated for alteration by the Contract Documents. To the extent the **Contractor** refuses, fails or neglects to replace all such altered premises and/or restore to its pre-existing condition any walk, roadway, paved or landscaped area and other property not designated for alteration by the Contract Documents, the **Contractor** shall bear its proportionate share of the Delay and costs resulting from the **Contractor's** refusal, failure, or neglect to do so.

4.6.4. The **Contractor** shall not load or permit any part of any structure to be loaded in any way that will endanger the structure. The **Contractor** shall not subject any part of the Work or adjacent property to stresses or pressures that will damage or endanger the Work or adjacent property, or both.

4.7 Record Documents:

4.7.1. The **Contractor** shall maintain at the site one copy of all Record Documents in good order and annotated in a neat and legible manner using a contrasting, reproducible color to show (a) all revisions made, (b) dimensions noted during the furnishing and performance of the Work, and (c) all deviations between the as-built installation and the Contract Documents, all approved Submittals and all clarifications and interpretations.

4.7.2. Record Documents, along with a properly annotated copy of all approved Submittals, shall be available to the **Professional** and **Owner** at all times during the progress of the Work. The finalized Record Documents and approved Submittals shall be required for processing final payment to the **Contractor**.

4.7.3. The **Contractor** shall maintain and make available to the **Owner** and **Professional** daily field reports and digital photos recording the on-site labor force and equipment (**Contractor** and Subcontractors); materials/equipment received (at the site or at another location); visits by Suppliers; significant in-progress and completed trade Work within major areas; and other pertinent information.

4.7.4. Such daily field reports shall be furnished by the **Contractor** promptly to the **Professional** and **Owner** upon their request and shall be accepted by the **Owner** for information only. Neither the **Owner** nor **Professional's** review of any daily field report shall be construed as agreement with the information contained in any such daily field report.

4.8 Emergencies:

4.8.1. In Emergencies affecting the safety or protection of Persons, the Work or property at or adjacent to the site, the **Contractor**, without any special instruction or authorization from the **Professional** and/or the **Owner**, is obligated to act to prevent threatened damage, death, injury, or loss.

4.8.2. The **Contractor** shall give the **Owner** prompt written notice of any changes in the Work resulting from the action taken. If the **Owner** concurs, the **Owner** will amend the Contract Documents to provide for those changes and, unless the Emergency results in whole or in part from any act or omission within the control of the **Contractor**, to provide for any corresponding adjustment in Contract Price and/or Contract Time.

4.9 Indemnification:

4.9.1. The **Contractor** shall defend, indemnify and hold harmless the **Owner** and **Professional** from and against all claims, as construed in paragraph 1.4, for bodily injury, sickness, disease or death, or injury to the destruction of property, including loss of use, arising out of, relating to, or being in any way connected with the Work, that are in any way (a) caused by any negligent act or omission of the **Contractor**, any Subcontractor or Supplier or anyone for whose acts any of them may be liable, or (b) related to the **Contractor's** failure to maintain the required insurance and coverages. As a point of emphasis, and as set forth in paragraph 1.4, such claims shall include, but are not limited to charges of architects, engineers, attorneys and others and all court, hearing, and other dispute resolution costs.

4.9.2. As a point of emphasis, as set forth in paragraph 1.4, this indemnification obligation shall include claims caused in part by

the negligence or other liability-creating conduct or omissions of the **Owner** (including State departments, agencies, boards, commissions, officers, and employees) or **Professional**; however, the **Contractor** shall not be required to indemnify the **Owner** or **Professional** against liability for loss or damage resulting from the sole negligence of the **Owner** and/or **Professional**.

4.9.3. With respect to claims against the **Owner** or **Professional** by any employee of the **Contractor**, the indemnification obligation under this paragraph 4.9 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the **Contractor**, any Subcontractor or Supplier under workers' compensation, disability benefit or other benefit acts.

ARTICLE 5 SUBCONTRACTORS AND SUPPLIERS

5.1 Employment of Subcontractors:

5.1.1. Upon due investigation, the **Owner** may revoke, because of subsequent violation of a material requirement of the Contract Documents, the **Owner's** consent to any Subcontractor previously given pursuant to the provisions of Article 8 of Section 00100 Instructions to Bidders and Section 00430 List of Subcontractors. Any such revocation of the **Owner's** consent shall not justify any increase in Contract Price or Contract Time.

5.1.2. After Contract Award, if the **Contractor** intends to add or substitute a Subcontractor for Work in a Division, Specification and/or trade for which Subcontractor nomination was required in Section 00430 List of Subcontractors, the **Contractor** shall nominate that Subcontractor for review by the **Owner** and/or **Professional**. The **Contractor** shall not award such Work to any Subcontractor to whom the **Owner** objects for good cause. No adjustment in Contract Price or Contract Time shall be allowed for any such newly nominated Subcontractor.

5.1.3. Whenever the **Owner** objects, for its convenience, to any Subcontractor nominated, but not objected to, before Contract Award or to any Subcontractor nominated after Contract Award, the **Contractor** shall nominate a substitute Subcontractor or shall proceed to self-perform the Work involved if the **Contractor** is so qualified. If any such **Owner** objection requires a Subcontractor substitution or the **Contractor** to self-perform the Work Involved, in either case at an increase of the **Contractor's** cost for the part of the Work Involved, the **Owner** will amend the Contract Documents to provide for a corresponding adjustment in Contract Price and/or Contract Time made necessary by the Subcontractor substitution or self-performance and by any resulting Delay which is not reasonably anticipatable under the circumstances and which is attributable to the **Owner** and/or **Professional**.

5.1.4. Failure of the **Owner** to object to any nominated Subcontractor shall not constitute a waiver of any right of the **Owner** or **Professional** to reject Defective Work; nor shall the authority given to the **Owner** under this paragraph create or impose any duty on the **Owner** or **Professional** to exercise such authority for the benefit of the **Contractor** or any other third party.

5.1.5. Installation of any self-performed or Subcontractor Work shall constitute acceptance by the **Contractor** of all previously placed dependent Work. Consistent with this responsibility, the **Contractor**, directly or through the **Contractor's** choice of Subcontractors, shall supply, install and/or cause items to be built into previously placed Work, shall verify dimensions of previously

placed Work, and shall notify the **Professional** of previously placed Work that is unsatisfactory for, or prevents satisfactory installation of, other dependent Work.

5.1.6 Work performed by any Subcontractor or Supplier shall be through an appropriate written Sub agreement that expressly binds the Subcontractor or Supplier to the requirements of the Contract Documents and contains the waiver of rights of subrogation provisions of Article 7.

5.2 "Or Equal" and Substitute Materials and Equipment:

5.2.1. Materials or equipment described in the Contract Documents by using a brand name, make, manufacturer, supplier, or specification shall be intended to denote the essential characteristics desired and establish a standard.

5.2.2. For materials and equipment which are actually *listed* in Schedule 1.6 of Section 00440 Schedule of Materials and Equipment, no "or equal" or substitute material or equipment will be acceptable or permitted unless the **Contractor** complies with the terms and conditions of paragraphs 5.2.2.1 through 5.2.2.5.

5.2.2.1. Unless words are used in a technical Specification indicating that no "or equal" or substitution is permitted, a proposal for an "or equal" or substitution may be accepted by the **Professional** if, in the **Professional's** judgment, the proposal (a) meets the criteria set forth in paragraphs 5.2.2.2 through 5.2.2.5, (b) demonstrates a net positive deduction, i.e., the deductive value of the proposal exceeds all direct, indirect and consequential costs and damages attributable to the "or equal" or substitution, and (c) offers a Contract Price decrease of one hundred percent (100%) of the net deduction, or another percentage reflecting a sharing of the savings which is agreed between the **Owner** and **Contractor**.

5.2.2.2. The **Contractor's** written application for the "or equal" or substitute material or equipment shall provide sufficient information to allow the **Professional** to determine whether the material or equipment proposed (a) will equally perform the functions and achieve the results called for by the Contract Documents, (b) is at least of equal materials of construction, quality and necessary essential design features, (c) is suited to the same use as that named or specified, (d) conforms substantially to the desired detailed requirements, e.g., durability, strength, appearance, aesthetics (if aesthetics are significant), safety, useful life, reliability, economy of operation and ease of maintenance, (e) evidences a proven record of performance and the availability of responsive service, and (f) will not extend any Contract Times.

5.2.2.3. Each such application shall certify whether or not acceptance of the proposed "or equal" or substitute material or equipment will require a change in any of the Work or any of the Means and Methods indicated in or required by the Contract Documents, or in work performed by the **Owner** or others, and whether or not incorporation or use of the proposed material or equipment is subject to payment of any license fee or royalty. All variations of the proposed material or equipment from the material or equipment named or specified shall be identified (operation, materials or construction finish, thickness or gauge of material, dimensions, loads, tolerances, deleted and added features, etc.), and information regarding available maintenance, repair and replacement service shall be indicated.

5.2.2.4. The application shall contain an itemized estimate of all direct, indirect, and consequential costs and damages that will

result from evaluation and acceptance of the proposed "or equal" or substitute material and equipment, including but not limited to costs and delays of redesign, or claims of other contractors affected by the proposed item, and changes in operating, maintenance, repair, replacement, or spare part costs. The **Professional** may require the **Contractor** to furnish a manufacturer's performance Bond, an analysis of the effects of the evaluation/acceptance of the "or equal" or substitution on the Progress Schedule, a list of locations of similar installations that have been in service for at least three (3) years before the date of the application, and any other relevant data.

5.2.2.5. The **Contractor** shall be responsible for verifying that "or equal" or substitute materials and equipment conform to the Contract Documents, and that all dimensions, arrangement, design and construction details and other features are suited to the specified purpose. If any "or equal" or substitute material or equipment differs materially from the material or equipment named or specified, and that difference was not expressly identified in the **Contractor's** application, or results in changes in the Work, the **Professional** has authority to require removal and replacement of that "or equal" or substitute material or equipment. The **Contractor** shall bear its proportionate share of the Delay and costs resulting from (a) any such removal and replacement of "or equal" or substitute materials or equipment, (b) making "or equal" or substitute materials or equipment conform to the requirements of the Contract Documents, and (c) any changes in the Work and/or in other work required to accommodate the "or equal" or substitute material or equipment, or both.

5.2.2.6. The **Contractor** shall reimburse the **Owner** for any costs incurred by the **Owner** in the evaluation of any "or equal" or substitution proposal. Such costs shall include, but are not limited to, related charges of the **Professional** made necessary by the evaluation and acceptance or rejection, as the case may be, of the proposed "or equal" or substitute material or equipment.

5.2.3. For materials and equipment *not listed* in Schedule 1.6 of Section 00440 Schedule of Materials and Equipment, no substitute material or equipment will be acceptable or permitted unless the **Contractor** meets with the requirements of paragraphs 5.2.2.1 through 5.2.2.5. Further, the reimbursement provisions of paragraph 5.2.2.6 shall apply equally to such substitutions.

5.2.4. Unless approved by the **Professional**, for materials and equipment *not listed* in Schedule 1.6 of Section 00440 Schedule of Materials and Equipment, no "or equal" material or equipment will be acceptable or permitted unless the **Contractor** complies with the requirements of paragraphs 5.2.2.2 – 5.2.2.5.

5.2.5. No "or equal" or substitute item shall be ordered, installed, or utilized without the **Owner's** prior acceptance. The **Owner's** acceptance shall be evidenced by a signed Change Order or Change Authorization, or if so, specifically designated by the **Professional**, by an approved Shop Drawing or sample.

5.3 The Contractor's Continuing Responsibilities:

5.3.1. The **Contractor** shall be fully responsible to the **Owner** and **Professional** for all acts and omissions of Subcontractors and Suppliers, at any tier, to the same extent as the **Contractor** is responsible for the **Contractor's** own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between the **Owner** or **Professional** and any Subcontractor or Supplier. No provision in Article 12 or in the other Contract Documents shall create or impose any express or implied duty or

obligation on the **Owner** or **Professional** to any Subcontractor or Supplier or the **Contractor's** sureties to pay or to see to the payment of any monies owed to any of them.

ARTICLE 6 SUBMITTALS

6.1 Shop Drawing, Sample and Other Technical Submittals:

6.1.1. After complying with those requirements in paragraphs 6.1.2 through 6.1.5 and the technical Specifications, the **Contractor** shall submit to the **Professional** (a) an electronic file(s) of the drawing(s) compatible with the latest version of AutoCAD of all Shop Drawings required by the Contract Documents and bond copies if requested by the **Owner** or **Professional**; (b) all required samples (whether color or otherwise); and (c) all other technical Submittals (test results, test procedures, safety procedures, O&M manuals, etc.) that are required by the Contract Documents.

6.1.2. Submissions shall be delivered to the **Professional** with due diligence, as delineated in or required by the Progress Schedule, and shall allow reasonable times, per 6.5.1, for the **Professional's** review and turnaround. Each Submittal shall be uniquely identified as the **Professional** and **Contractor** may agree.

6.1.3. Each Submittal shall bear a stamp or specific written indication certifying that the **Contractor** has satisfied the requirements of this Article and the technical Specifications and the **Contractor's** responsibilities for prior review of the submission. In addition, each sample shall have been checked and be accompanied by a certificate guaranteeing that the material sampled complies with the Contract Documents. Unless otherwise allowed by the **Professional**, Submittals without the **Contractor's** indication of approval will be returned without review.

6.1.4. Before each submission, the **Contractor** shall (a) determine and verify all field measurements, quantities, dimensions, instructions for installation and handling of equipment and systems, installation requirements (including location, dimensions, access, fit, completeness, etc.), materials, color, catalog numbers and other similar data as to correctness and completeness, and (b) have reviewed and coordinated that technical Submittal with other technical Submittals and the requirements of the Contract Documents. Technical Submittals of a Subcontractor or Supplier shall be coordinated with those of other Subcontractors or Suppliers (location, dimensions, fit, completeness, consistency, integration, etc.), and so represented in the **Contractor's** stamp or specific written approval before submission to the **Professional**.

6.1.5. With each submission, the **Contractor** shall give the **Professional** specific written notice of each variation from the requirements of the Contract Documents, and the **Contractor** shall cause a specific notation of each variation to be made on that Shop Drawing, sample, or other technical Submittal.

6.1.6. Where a Shop Drawing, sample or other technical Submittal is required by the technical Specifications, any related Work performed by the **Contractor** before the **Professional's** approval of the pertinent technical Submittal will be at the sole expense and responsibility of the **Contractor**.

6.1.7. The **Professional** shall be entitled to rely upon the accuracy or completeness of any designs, calculations or certifications made by licensed or certified professionals attached to a specific technical Submittal, whether or not that stamp, or written certification is required by the Contract Documents

6.2 Review and Return of Technical Submittals:

6.2.1. The **Professional's** review of a technical Submittal will be to evaluate whether the items covered by the Submittal, after installation or incorporation into the Work, will conform to the general design intent of the Contract Documents and for compatibility with the design of the completed Work as a functioning whole as indicated in the Contract Documents.

6.2.2. The review of Submittals by the **Professional** shall not be conducted for the purpose of determining the accuracy and completeness of such details as dimensions or quantities shown or indicated on the Submittals, or for substantiating instructions for installation or performance of equipment and systems developed by or for the **Contractor**, the correctness of which shall remain the sole responsibility of the **Contractor**. Further, any such **Professional's** review and approval will not extend to any Means and Methods (except where a specific Mean and Method is indicated in or required by the Contract Documents) or to safety precautions or programs related to safety.

6.2.3. Approval by the **Professional** of a separate item or partial Submittal shall not translate to approval of the assembly in which the item functions or to the approval of related Submittals not yet reviewed and approved by the **Professional**.

6.3 Progress Schedule Submittals:

6.3.1. After complying with the appropriate Progress Schedule requirements in the technical Specifications, the **Contractor** shall submit to the **Professional** electronic copies of the Progress Schedule Submittal then due, which shall include both PDF format and active software files with the **Contractor's** specific schedule data. Each Progress Schedule Submittal shall bear the **Contractor's** stamp or written indication of approval as representation to the **Owner** that the **Contractor** has determined or verified all data on that Progress Schedule, and that the **Contractor** and Subcontractors and Suppliers have reviewed and coordinated the sequences in that Progress Schedule with the requirements of the Work. Progress Schedule Submittals are not Contract Documents.

6.3.2. Progress Schedule Submittals are intended to show: (a) the priority and sequencing by which the **Contractor** intends to execute the Work (or Work remaining) to comply with the Contract Times, those sequences of Work indicated in or required by the Contract Documents and any other requirements of the Contract Documents; (b) how the **Contractor** anticipates foreseeable events, site conditions and all other general, local and prevailing conditions that may in any manner affect cost, progress, schedule, performance and furnishing of the Work; (c) how the Means and Methods chosen by the **Contractor** translate into Activities and sequencing; (d) the actual timing and sequencing of completed Work; and (e) if required by the Contract Documents, the allocation of the Contract Price to the Activities.

6.4 Review and Return of Progress Schedule Submittals:

6.4.1. The **Owner's** and **Professional's** review of Progress Schedule Revision 0 Submittals may result in comments relating to conformance with (a) the Contract Times, (b) those sequences of Work indicated in or required by the Contract Documents, and (c) any other Contract Document requirements that may have a

significant bearing on the use of Revision 0 Progress Schedule Submittals to resolve issues affecting Contract Price and/or Contract Time. Progress Schedule review comments may also result in the selection of Targets and recording of Target Times.

6.4.2. The review of Progress Schedule Revision Submittals may, in addition to the types of comments outlined in paragraph 6.4.1, result in comments as to whether the **Contractor's** scheduling of Work remaining continues to conform with the Contract Times and those sequences of Work indicated in or required by the Contract Documents. Progress Schedule Revision Submittal review comments may also respond to suggested **Contractor** schedule recovery plans, when and as appropriate, and to **Contractor** requests for extensions in Contract Time.

6.4.3. Progress Schedule reviews shall not impose on the **Owner** or **Professional** any responsibility for verifying whether Work is omitted; Activity durations are reasonable; the adequacy of the level of labor, materials, and construction equipment; the reasonableness of the **Contractor's** chosen Means and Methods; or whether Work sequences and Activity timing are practicable. Even if any comments or objections are noted from the reviews of Progress Schedule Submittals, no such reviews or objections noted shall be effective or construed to create or impose on the **Owner** or **Professional** any responsibility for the timing, planning, scheduling, or execution of the Work or for the correctness of any such Progress Schedule details. The correctness of the Progress Schedule shall remain the sole responsibility of the **Contractor**.

6.5 Additional Provisions Concerning Submittals:

6.5.1. Unless otherwise designated in a more specific technical Specification, a Submittal will be returned to the **Contractor** within fifteen (15) to twenty (20) Calendar Days, as designated by the **Professional** in writing. If a Submittal cannot be returned when it comes due, the **Professional** shall give appropriate notice to the **Contractor** of its return date. The **Contractor** shall revise, and correct Submittals returned for revision and resubmittal, and resubmit them to the **Professional** directing specific attention in writing to revisions other than the corrections called for by the **Professional** on previous submissions of the same Submittals.

6.5.2. No review or approval of Submittals shall relieve the **Contractor** of responsibility for the following: (a) variation from the requirements of the Contract Documents, unless the **Contractor** has called attention to each variation, as provided in paragraph 6.1.5, and the **Professional** has given written approval of that variation by a specific notation within or attached to the returned Submittal, (b) compliance with the "or equal" and substitution requirements of paragraph 5.2, (c) errors or omissions in the Submittal, or (d) compliance with the requirements of this Article.

6.5.3. Unless the **Professional** determines that additional resubmissions are reasonable under the circumstances, all costs incurred by the **Owner** made necessary by the **Professional's** review of a Submittal after the first resubmission of that Submittal shall be reimbursed by the **Contractor** to the **Owner**.

6.5.4. All time consumed by the resubmissions and rereviews of a particular Submittal shall constitute time required to furnish that Submittal or shall represent Delays not justifying any increase in Contract Time or Contract Price, or both.

ARTICLE 7 LEGAL REQUIREMENTS; INSURANCE**7.1 Laws; Permits (Which Include Approvals and Licenses):**

7.1.1. The **Contractor** shall comply with and shall require all Subcontractors and Suppliers to comply with, all applicable Laws. The **Contractor** shall insure that everyone employed on the Work discharge their responsibilities consistent with all Laws.

*7.1.2. The **Contractor** shall secure from the State Department of Labor and Economic Growth and from all Political Subdivisions with jurisdiction, all construction permits necessary for the commencement, prosecution, and completion of the Work before starting any Work at the site. All fees for securing the permits shall be paid by the **Contractor**, including all inspection costs which may be legally assessed by the Bureau of Construction Codes according to authority granted under 1972 PA 230, as amended, MCL 125.1501 et seq. The time incurred by the **Contractor** in obtaining construction permits shall constitute time required to complete the Work and shall not justify any increases in Contract Time or Contract Price, except to the extent any related Delay is attributable to the fault of the Drawings or Specifications or to revisions to the Drawings and/or Specifications required by the Political Subdivision with jurisdiction.

7.1.3. Unless expressly required by any Laws or permits, neither the **Owner** nor **Professional** shall be responsible for monitoring the **Contractor's** compliance with any Law, the State Construction Code, or any permits. The **Contractor** is not responsible to make certain that the Contract Documents comply with applicable Laws and the State Construction Code; however, if the **Contractor** believes the Contract Documents deviate from the requirements of any Law, the State Construction Code or any permit, the **Contractor** shall give the **Professional** prompt written notice. If the **Contractor** provides any Work knowing or having reason to know such Work conflicts with any Laws, or the State Construction Code or any permits, the **Contractor** shall be responsible for that performance. The **Contractor** shall be proportionately responsible for the time required and the costs involved in complying with the obligations stated in this paragraph.

*7.1.4. All Work shall be provided in accordance with the State Construction Code and the requirements of paragraph 1.2.4. If the **Contractor** observes that any Contract Document is at variance with any Laws or the State Construction Code in any respect, the **Contractor** shall promptly notify the **Professional** in writing, and any necessary changes shall be accomplished by an appropriate Change Order. The **Contractor** shall pay all charges of Public Utilities for connections to the Work, unless otherwise provided by Cash Allowances specific to those connections.

*7.1.5. In accordance with the Michigan State Construction Code Act, 1972 PA 230, as amended, MCL 125.1501 et seq., the State Department of Labor and Economic Growth, Construction Code Commission has adopted and filed with the Secretary of State the following Construction Code Reference Standards: (a) Michigan Building Code; (b) Michigan Plumbing Code; (c) National Electric Code; (d) Michigan Mechanical Code; (e) State Elevator Code; (f) State Boiler Code; and (g) State Barrier Free Design Rules.

7.2 Sales and Use Tax and Other Similar Taxes:

7.2.1. The **Contractor** shall be responsible for and pay all Michigan sales and use taxes and any other similar taxes covering the Work that are currently imposed by legislative enactment and as administered by the Michigan Department of Treasury, Revenue Division. The **Owner** shall make a corresponding adjustment in Contract Price for any increase or decrease in sales, use and other similar taxes (excluding payroll taxes) covering the Work that are enacted after the date of Bid opening.

7.3 Safety and Protection:

7.3.1. The **Contractor** shall comply with and shall require all Subcontractors and Suppliers to comply with, all Laws governing the safety and protection of persons or property, including, but not limited to the Michigan Occupational Safety and Health Act (1974 PA 154, as amended, MCL 408.1001 et seq.) and all rules promulgated under the Act. The **Contractor** shall be responsible for all fines and penalties imposed for any related violation(s) of federal and State health and safety requirements. The **Contractor's** safety representative at the site shall be the superintendent required by the provisions of paragraph 4.2.2, unless otherwise designated in writing by the **Contractor**.

7.3.2. The **Contractor** shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs. The **Contractor** shall take all necessary precautions for the safety of, and shall erect and maintain all necessary safeguards and provide the necessary protection to prevent damage, injury or loss to: (a) all employees on the Work and other persons who may be affected by the Work, (b) all the Work and materials and equipment to be incorporated into the Work, whether stored on or off the site, and (c) other property at or adjacent to the site, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Utilities not designated for removal, relocation or replacement. In the event of severe weather, the **Contractor** shall immediately inspect the Work and the site and take all reasonably necessary actions and precautions to protect the Work and ensure that public access and safety are maintained.

7.3.2.1. All damage, injury or loss to the Work, materials and equipment and such other property caused, directly or indirectly, in whole or in part, by the **Contractor** shall be remedied by the **Contractor**, except to the extent due to fault of the Drawings or Specifications or to act or omission of the **Owner** or **Professional**, and not due to, directly or indirectly, in whole or in part, to the fault or negligence of the **Contractor** or any Subcontractor or Supplier.

7.3.2.2. The **Contractor** shall notify owners of adjacent property and Underground Utilities when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

7.3.2.3. Except as the division of responsibilities for safety may be otherwise delineated in writing between the **Owner** and **Contractor** in a Substantial Completion certificate, the **Contractor** duties and responsibilities for safety and protection shall continue until such time as the **Professional** is satisfied that the Work, or Work inspected, is completed and ready for final payment.

7.3.3. Use of Explosives – The **Contractor** shall comply with all federal, state, and local Laws governing the use of explosives, obtain and pay for any required permits before their use and furnish a copy of the permits to the **Professional** before using explosives.

The **Contractor** shall, under the supervision of competent and suitably trained and qualified personnel, exercise the utmost care not to endanger life or damage property in the transportation, storage, handling, use and disposal of explosives, and in the use of Means and Methods. The **Contractor** shall be responsible for all injury, damage and adverse impacts outside the permit area resulting from the use of explosives (including an appropriate portion of the Delay and costs resulting from such injury, damage, and impacts).

7.4 Bonds and Insurance – General Requirements:

7.4.1. Both the Section 00610 Performance Bond and Section 00620 Payment Bond shall remain in full force and effect from the date of Contract Award until final completion of the Work or the end of the Correction Period, whichever comes later. The **Contractor** shall furnish any other bonds (e.g., manufacturer performance Bond or maintenance Bond) required by Section 00800 Supplementary Conditions or the technical Specifications.

7.4.2. The **Contractor** shall purchase and maintain insurance providing the coverages and limits designated in this Article. Insurance shall be provided by insurers authorized to do business as insurer in the State, as evidenced by a Certificate of Authority issued by the Department of Consumer and Industry Services – Insurance Bureau. Also, and unless otherwise authorized in writing by the **Owner**, insurers shall have an "A-" A.M. Best Company Rating and a Class VII or better financial size category as shown in the most current A.M. Best Company ratings. The **Contractor** shall not start to perform and furnish the Work, or continue with any part of the Work, unless the **Contractor** has in full force and effect all the required insurance.

7.4.3. Insurance policies shall contain a provision or endorsement stating that coverage will not be canceled or materially changed, or renewal refused unless at least thirty (30) Calendar Days prior written notice has been personally delivered or sent by registered mailed to the **Owner** and **Contractor**. Any coverage nearing expiration during the period in which it is to remain in full force and effect shall be renewed before its expiration, and an acceptable certificate of insurance shall be filed with the **Owner** at least thirty (30) Calendar Days before it expires.

7.4.4. If any of the **Contractor's** sureties or insurers is declared bankrupt or placed into receivership, ceases to meet the requirements of the Contract Documents or its authority to do business in the State is revoked or expires, the **Contractor** shall immediately substitute other Bonds/sureties or insurers/policies, which shall meet the requirements of the Contract Documents.

7.5 The Contractor's Liability Insurance:

7.5.1. The **Contractor** shall maintain Workers' Compensation and Employer's Liability, Commercial General Liability, Commercial Automobile Liability, Excess Liability, and such other insurance as may be designated in Section 00800 Supplementary Conditions or as is appropriate for the Work. The **Contractor's** liability insurance shall provide protection from claims which may arise out of or result from the **Contractor's** performance and furnishing of the Work and the **Contractor's** other obligations under the Contract Documents, whether performed or furnished by the **Contractor**, any Subcontractor, any Supplier, or anyone for whose acts any of them may be liable.

7.5.2. Liability Insurance shall be endorsed to list as additional insureds the **State of Michigan** (Owner), its departments, divisions,

agencies, offices, commissions, officers, employees and agents, the **Owner's** consultants, and agents, the **Professional**, and the **Professional's** consultants and agents, including their respective subsidiaries and affiliates and their respective directors, officers, shareholders, agents, or employees. The **Contractor** shall use the current Insurance Services Office (ISO) Form CG 20 09 for general liability insurance or equivalent, ISO Form CA 20 01 for automobile liability insurance or equivalent, and manuscript form for excess liability insurance. The insurance afforded to the additional insureds shall be primary, and neither the coverages nor limits under the **Contractor's** policies shall be reduced or prorated by the existence of any other insurance applicable to any loss that the additional insureds may have sustained. Workers' Compensation, Employer's Liability Insurance and all other liability insurance policies shall be endorsed to include a waiver of rights to recover from the **Owner**, **Professional** and the other additional insureds.

7.5.3. The **Contractor's** liability insurance shall remain in effect through the Correction Period and through any special correction periods that are implemented pursuant to the requirements of paragraph 9.5.3. Liability insurance issued on a claims-made basis and completed operations insurance shall be maintained for two (2) years after final payment, and evidence of coverage shall be furnished to the **Owner** yearly.

7.5.4. For any employee, resident of and hired in Michigan, the **Contractor** shall have insurance for benefits payable under Michigan's Workers' Compensation Law. For any other employee protected by Worker's Compensation Laws of any other state, the **Contractor** shall have insurance or participate in a mandatory state fund, where applicable, to cover the benefits payable to any such employee.

7.5.5. Commercial General Liability Insurance shall be equivalent to that provided by the current edition of standard ISO Form CG 00 01, and shall include contractual liability and underground, explosion and collapse hazard exposure operations and pile driving operations (if risk is present).

7.5.6. Commercial Automobile Liability Insurance coverage shall be equivalent to that provided by the current edition of the ISO Form CA 00 01 and include Michigan statutory requirements.

7.5.7. Excess Liability Insurance shall provide the following protections: employer's liability, general liability, and automobile liability. Excess Liability Insurance shall be at least as broad as the underlying policies of liability insurance.

7.5.8. Coverage Limits - Workers' Compensation and Employer's Liability Insurance shall conform to statutory limits under Michigan Law. Commercial General Liability limits shall be \$2,000,000.00 each occurrence, \$2,000,000.00 general aggregate, \$2,000,000.00 products and completed operations aggregate, and \$2,000,000.00 personal and advertising injury. Commercial Automobile Liability limits shall be \$2,000,000.00 combined single limit. Excess Liability limits shall be \$2,000,000.00 each occurrence and aggregate, if the Contract Price is less than \$10,000,000.00, and \$5,000,000.00 each occurrence and aggregate, otherwise. Deductible amounts shall not exceed \$25,000.00.

7.5.9. The **Contractor** shall promptly notify the **Owner** in writing of (a) any reduction in coverage limits over \$100,000.00 resulting from Work under the Contract Documents or otherwise, and (b) any claim notice involving the Work. Notification of a claim shall provide full details and an estimate of the amount of loss or

liability. If it turns out that the aggregate limits have been impaired to the extent that they are no longer adequate for the Work, the **Contractor** shall promptly reinstate the coverage limits and submit to the **Owner** certificates of insurance confirming that coverage has been reinstated to the specified limits.

7.5.10. These requirements shall not be construed to limit the liability of the **Contractor** or its insurers. The **Owner** does not represent that the specified coverages or limits of insurance are sufficient to protect the **Contractor's** interests or liabilities.

7.6 Pollution Liability Insurance

(...*** Professional to include Pollution Liability Insurance if needed ***...)

7.6.1. Pollution Liability Insurance in the amounts of not less than \$2,000,000 per occurrence is required.**7.7 Property Insurance (Builders Risk Insurance)**

*7.7.1. The **Contractor** shall purchase and maintain property insurance for one hundred percent (100%) of the actual cash replacement value of the insurable Work (minimum amount to be the contract award amount) while in the course of construction, including foundations, additions, attachments, and all fixtures, machinery and equipment belonging to and constituting a permanent part of the building structure. The property insurance also shall cover temporary structures, materials and supplies of all kinds, to be used in completing the Work, only while on the building site premises or within five hundred (500) feet of the site. The property insurance shall insure the interests of the **Owner**, **Contractor** and all Subcontractors and Suppliers at any tier as their interests may appear. The property insurance shall insure against "all risk" of physical loss or damage to the extent usually provided in policy forms of insurers authorized to transact this insurance in Michigan. Any deductible shall be both the option and responsibility of the **Contractor**.

*7.7.2. A certificate or other proof of coverage shall be provided prior to final contract execution or issuance of a purchase order by the State. A copy of the master insurance policy will be made available to the **Owner** upon request.

7.7.3. The **Contractor** and **Owner** will cooperate in determining the actual cash replacement value of any insured loss. Any deductible amount shall be assumed or shared by the **Contractor** and Subcontractors, at any tier, in accordance with any agreement the parties in interest may reach.

7.7.4. The **Owner** may purchase and maintain for its benefit boiler and machinery insurance for boiler and machinery required to be registered and inspected by Law.

7.8 Waiver of Rights:

7.8.1. To the extent any losses and damages caused by any of the perils covered by property insurance covering the Work (whether under paragraph 7.7 or otherwise) are covered and payments are made, the **Owner** and **Contractor** waive all rights against each other for any such losses and damages and also waive all such rights against the **Professional** and all other Persons named as insureds or additional insureds in such policies. Each Sub agreement shall contain similar waiver provisions by the Subcontractor or Supplier in favor of the **Owner**, **Professional**, and all other Persons named as insureds or additional insureds. None of these waivers shall extend to the rights that any of the insureds

may have to the proceeds of insurance held by the **Owner** as trustee or otherwise payable under a policy so issued.

7.8.2. The **Owner** and **Contractor** intend that the required policies of property insurance shall protect all the parties insured and provide primary coverage for all losses and damages caused by the perils covered. Accordingly, all such policies shall be endorsed to provide that in the event of payment of any loss or damage the insurer will have no rights of subrogation or other recovery against any of the parties named as insureds or additional insureds, and if the insurers require separate waiver forms to be signed by the **Professional** or the **Owner's** and **Professional's** consultants, the **Owner** will obtain such waiver forms, and if required of any Subcontractor or Supplier, the **Contractor** will obtain such waiver forms as well.

7.9 Receipt and Application of Proceeds:

7.9.1. Any insured loss under the policies of property insurance will be adjusted with the **Owner** and will be made payable to the **Owner** as trustee for the insureds, as their interests may appear, subject to the conditions of paragraph 7.9.2. The **Owner** shall deposit, in a separate account, and shall distribute monies received based on any agreement the parties in interest may reach. If no other distribution agreement is reached, the damaged Work shall be replaced or repaired, the monies received shall be used for that purpose and the Work Involved and resulting costs shall be covered by Change Order.

7.9.2. The **Owner**, as trustee, shall have power to adjust and settle any loss with the insurers unless a party in interest objects in writing within fifteen (15) Calendar Days after the occurrence of loss to the **Owner's** exercise of this power. If an objection is made, the **Owner** as trustee shall settle with the insurers pursuant to any agreement the parties in interest may reach.

*7.10 Unfair Labor Practice:

*7.10.1. The **Owner**, pursuant to 1980 PA 278, as amended by MCL 423.321(b), may void and rescind the Contract if, at any time, the **Contractor** or any Subcontractor or Supplier appears on the register maintained by the Michigan Department of Consumer and Industry Services of employers who have been found in contempt of court by a Federal Court of Appeals on not less than three occasions involving different violations during the preceding seven (7) years for failure to correct unfair labor practices as prohibited by Section 8 of Chapter 372 of the National Labor Relations Act, 29 U.S.C. 158.

*7.11 Michigan Right-To-Know Law:

*7.11.1. The **Contractor** shall comply with Section 14a-14n of the Michigan Occupational Safety and Health Act (MIOSHA), 1974 PA 154, as amended, MCL 408.1014a – MCL 408.1014n, commonly referred to as the "Michigan Right-to-Know Law" and the rules promulgated under the Act. The Act places certain requirements on employers to develop a communication program designed to safeguard the handling of hazardous chemicals through labeling of chemical containers and development and availability of Safety Data Sheets (SDS), and to provide training for employees who work with these chemicals and develop a written hazard communications program.

*7.11.2. Provisions of the Michigan Right-to-Know Law may be found in those sections of the Michigan Occupational Safety and

Health Act (MIOSHA), which contain Right-to-Know provisions, and the Federal Hazard Community Standard, which is part of the MIOSHA Right-to-Know Law through adoption. The Act, rules and standards should be reviewed for additional requirements.

*7.11.3. The Michigan Right-to-Know Law also provides for specific employee rights, including the right to be notified of the location of SDS and to be notified at the site of new or revised SDS within five (5) Business Days after receipt and to request SDS copies from their employers. The **Contractor**, employer or Subcontractor shall post and update these notices at the site.

*7.12 Nondiscrimination:

*7.12.1. The **Contractor** and each Subcontractor and Supplier covenants to comply with the following requirements:

*7.12.1.1. Not to discriminate against any employee or employment applicant because of race, religion, color, national origin, age, sex (as defined in *Executive Directive 2019-09*), height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position.

*7.12.1.2. To take action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position. Such action shall include, but is not limited to employment upgrading, demotion or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

*7.12.1.3. To state, in all solicitations or advertisements for employees, that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position.

*7.12.1.4. To send, or have its collective bargaining representative send, each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice advising that labor union or worker's representative of commitments under this provision.

*7.12.1.5. To comply with the Elliot-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2201 et seq.; the Michigan Persons With Disabilities Civil Rights Act, 1976 PA 220, as amended, MCL 37.1101 et seq.; *Executive Directive 2019-09*, and all published rules, regulations, directives, and orders of the Michigan Civil Rights Commission which may be in effect on or before the date of Bid opening.

*7.12.1.6. A breach of the covenants set forth in paragraphs 7.12.1.1 through 7.12.1.5 shall be regarded as a material breach of the Contract.

*7.12.2. The **Contractor** shall furnish and file compliance reports within the times, and using the forms, prescribed by the Michigan Civil Rights Commission. Compliance report forms may also elicit information as to the practices, policies, programs, and employment statistics of the **Contractor** and Subcontractors. The **Contractor** shall permit access to Records by the Michigan Civil

Rights Commission and its agent for the purposes of ascertaining compliance with the Contract Documents and with rules, regulations, and orders of the Michigan Civil Rights Commission.

*7.12.3. If, after a hearing held pursuant to its rules, the Michigan Civil Rights Commission finds that the **Contractor** has not complied with the nondiscrimination requirements of the Contract Documents, the Michigan Civil Rights Commission may, as part of its order, certify said findings to the **Board**. Upon receipt of certification, the **Board** may order the cancellation of the Contract and/or declare the **Contractor** ineligible for future contracts with the State, until the **Contractor** complies with said order of the Michigan Civil Rights Commission.

*7.13 Michigan Residency for Employees:

*7.13.1. Fifty percent (50%) of the persons employed on the Work by the **Contractor** shall have been residents of the State of Michigan for not less than one year before beginning employment on the Work. This residency requirement may be reduced or omitted in writing, at the sole discretion of the **Owner**, to the extent that Michigan residents are not available or to the extent necessary to comply with federal Law concerning federal funds used for the Project. A breach of this requirement shall be considered a material breach of the Contract.

*7.13.2. This residency requirement shall not apply to the **Contractor** or to any Subcontractor if the **Contractor** or any such Subcontractor is signatory to collective bargaining agreements which allow for the portability of employees on an interstate basis (The Management and Budget Act, 1984 PA 431, as amended, MCL 18.1241a).

*7.14 Prevailing Wages:

*7.14.1. To the extent applicable, Contractor will comply with federal and state (2023 PA 10, MCL 408.1101 to 408.1126), prevailing wage requirements.

*7.14.2. Federal Prevailing Wages -The federal prevailing wage requirements in the attached Federal Provisions Addendum apply when the Davis-Bacon Act ([40 USC 3141-3148](#)) as supplemented by Department of Labor regulations ([29 CFR Part 5](#), "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction") applies.

7.14.3. State Prevailing Wages-The following provisions of this Article 7.14.3 apply when 2023 PA 10 applies.

7.14.3.1. Prevailing Wage and Fringe Benefits--The rates of wages and fringe benefits to be paid to each class of Construction Mechanic by Contractor and Subcontractors, shall not be less than the wage rates and fringe benefit rates prevailing in the locality in which the work is performed.

7.14.3.2 Nondiscrimination, Nonretaliation- Contractor or a Subcontractor shall not discharge, discipline, retaliate against, or otherwise discriminate against a Construction Mechanic, or threaten to do any of these things, because the Construction Mechanic reported or was about to report a violation or suspected violation of the act.

7.14.3.3. Construction Mechanics under this Contract are intended beneficiaries of the contractual prevailing wage, fringe benefit, and nondiscrimination nonretaliation requirements of the

Contract. Any such Construction Mechanic aggrieved by failure of a contractor or subcontractor to pay prevailing wages or benefits as specified in the Contract, or by violation of section 7 of 2023 PA 10, in addition to any other remedies provided by law, may bring an action in a court of competent jurisdiction against such contractor or subcontractor for damages or injunctive relief and may be awarded reinstatement or other appropriate relief, and all damages sustained, together with actual costs and attorney fees at trial and on appeal.

7.14.3.4. Contractor and Subcontractors shall keep posted on the construction site, in a conspicuous place, a copy of all prevailing wage and fringe benefit rates prescribed in this Contract and shall keep an accurate record showing the name and occupation of and the actual wages and benefits paid to each Construction Mechanic employed by it in connection with the Contract. This record shall be available for reasonable inspection by the State.

ARTICLE 8 PROSECUTION; SUBSTANTIAL COMPLETION

8.1 Starting the Work:

8.1.1. Within fifteen (15) Calendar Days after the **Owner** executes the Section 00500 Agreement, a pre-construction conference will be held. The conference will be intended, without limitation, to (a) review the **Contractor's** Schedule of Shop Drawing submissions; (b) review the qualifications of key **Contractor** personnel; (c) review the **Contractor's** proposed normal working hours and plans for laydown, staging, construction traffic, access to the site, parking and other similar matters; (d) review procedures for Submittals, clarifications and interpretations (including reasonable times for response turnaround), Change Orders, Change Authorizations and Record Documents; and (e) exchange twenty-four (24) hour emergency telephone numbers for key personnel.

8.1.2. The **Contractor** shall start the Work on the Date of Commencement of the Contract Time. No Work shall be started at the site before such is allowed by the Contract Documents.

8.2 Revision 0 (Rev. 0) Schedule and Cost Submittals:

8.2.1. The **Contractor** shall deliver the interim Rev. 0 Progress Schedule, Schedule of Shop Drawing submissions and Rev. 0 Progress Schedule as required in the Contract Documents. The **Contractor** shall correct and adjust any Rev. 0 Submittal returned for revision. The finalized Revision 0 *As-Planned* Schedule shall be the Progress Schedule from which Revision Schedules shall be developed and used by the **Contractor** when making proposals or claims for adjustments in Contract Time and/or Contract Price.

8.3 Compliance with Contract Time Requirements:

8.3.1. The **Contractor** shall prosecute the Work with the diligence necessary to ensure its completion within the Contract Times. The **Contractor** shall provide sufficient management, supervision, labor, materials and equipment, and the **Contractor** shall undertake appropriate action promptly to recover schedule when necessary to comply with the Contract Times.

8.3.2. Unless disallowed by any Law or modified in another Section of the Specifications, a daily schedule from 06:00 AM to 06:00 PM, during Business Days, shall be normal working hours. Except in an Emergency, or as may be required by the **Contractor's** safety and protection obligations, or as the **Owner** and **Contractor** may otherwise agree, all Work at the site shall take place during

normal working hours. The **Contractor** shall provide written notice to the **Owner** at least twenty-four (24) hours and up to seventy-two (72) hours if so, noted for projects specific requirements such as Correctional Facilities, before performing Work outside of normal working hours.

8.3.3. Unless otherwise agreed in writing by the **Owner**, for any Work actually performed outside of normal working hours, the **Contractor** shall reimburse the **Owner** any related increases in costs the **Owner** incurs, provided those costs are costs which the **Contractor** could reasonably have foreseen, and which are not offset through the earlier completion of the Work resulting from working outside of normal working hours. Examples of **Owner** costs include, but are not limited to, overtime charges of the **Professional** and payments for custodial and security personnel.

8.3.4. Early Dates in the Progress Schedule shall be based on proceeding with all or part of the Work exactly on the date when the corresponding Contract Time commences to run. Late Dates shall be based on completing all or part of the Work exactly on the corresponding Contract Time, regardless of whether the **Contractor** anticipates early completion or not. If sequences of Work are indicated in or required by the Contract Documents, the Progress Schedule shall show in sufficient detail the **Contractor's** approach to conforming with those sequences.

8.3.5. The Progress Schedule shall reflect the **Contractor's** approach to Work remaining, be employed when reporting on progress or schedule recovery and facilitate the evaluation of Requests for Payment, as provided in the Contract Documents.

8.3.6. The **Contractor** shall carry on the Work with due diligence during all disputes or disagreements with the **Owner**. No Work shall be delayed or postponed pending resolution of any disputes or disagreements. The **Contractor** shall exercise reasonable precautions, efforts, and measures to avoid or mitigate situations that would cause Delays.

8.4 Substantial Completion:

8.4.1. The **Contractor** shall conduct inspections of the Work to verify the extent of completion. The **Contractor** shall provide to the **Owner** a list of items to be completed or corrected resulting from the inspections whenever the **Contractor**, upon completing all pre-requisite testing of the Work, considers that the Work, or any portion of the Work designated in the Contract Documents as having a separate, specified Substantial Completion, has progressed to the point that it is substantially complete.

8.4.2. Within a reasonable time after receiving the **Contractor's** list of items to be completed or corrected, the **Owner**, **Professional** and **Contractor** shall jointly conduct a Substantial Completion inspection. If, after consulting with the **Owner**, the **Professional** does not consider the Work, or portion of the Work inspected, substantially complete, the **Professional**, within twenty (20) Calendar Days after the inspection, will deliver to the **Owner** and **Contractor** a list of incomplete or Defective Work sufficient to demonstrate the basis for that determination.

8.4.3. If the **Professional** and **Owner** agree that the entire Work, or that the portion of the Work inspected, is substantially complete, the **Professional** will deliver to the **Owner** and **Contractor** a certificate of Substantial Completion with a Punch List.

The certificate shall (a) fix a reasonable date of Substantial Completion, (b) fix a date for completion of the Punch List to the satisfaction of the **Professional**, and (c) recommend the division of responsibilities between the **Owner** and **Contractor**. Neither the Work, nor any portion of the Work inspected, shall be substantially complete, unless the **Owner** can use the Work, or designated portion of the Work inspected, for the use intended.

8.4.4. Upon Substantial Completion of the Work, or designated part of the Work on which separate Substantial Completion and Contract Price are specified, payment may be made in full subject to (a) a withholding of two hundred percent (200%) of the value of any uncompleted Work, as determined by the **Professional**, and (b) any other deductions as the **Professional** may recommend or the **Owner** may withhold to cover Defective Work, liquidated damages and the fair value of any other items entitling the **Owner** to a withholding.

8.4.5. To the extent **Owner** training is required before Substantial Completion, the **Contractor** will provide the **Owner** copies of all related operating and maintenance (O&M) documentation before the start of training. Where **Owner** training for a portion of the Work is not required before Substantial Completion, the related O&M documentation will be provided no later than Substantial Completion. Final O&M documentation (with revisions made after Substantial Completion), will be furnished by the **Contractor** to the **Owner** before the request for final payment.

8.5 Partial Use:

8.5.1. Before Substantial Completion of the entire Work, the **Owner** may, at its sole option, use any portion of the Work for which a separate Substantial Completion has been specified in the Contract Documents. Before Substantial Completion of the entire Work, the **Owner** may, at its sole option, use any portion of the Work considered by the **Owner**, **Professional** and **Contractor** to be separately functioning Work that can be used without significant interference with the **Contractor's** completion of the balance of the Work, even though a Substantial Completion for such Work is not specified in the Contract Documents.

8.5.2. If the **Owner** decides to use any portion of the Work, it shall inform the **Contractor** in writing. Unless such portion of the Work has undergone a Substantial Completion inspection under paragraph 8.4.2, within a reasonable time after receipt of the notice, the **Owner**, **Contractor** and **Professional** shall jointly make an inspection to determine the extent of completion. If the portion of the Work inspected is substantially complete, the provisions of paragraph 8.4.3 shall be followed by the **Owner**, **Professional** and **Contractor**. If the portion of the Work inspected is not substantially complete, the **Professional** will prepare a list of items remaining to be completed or corrected before that portion of the Work is considered substantially complete. Upon completing the list, the **Professional** will deliver the prepared list of items to the **Owner** and **Contractor**.

8.5.3. There shall be attached to the list a written recommendation about the division of responsibilities between the **Owner** and **Contractor** for those matters enumerated in paragraph 8.6.1 with respect to that portion of the Work, pending Substantial Completion of that portion of the Work and the entire Work. During Partial Use, and before Substantial Completion of the portion of the Work under Partial Use, the **Owner** shall allow the **Contractor** reasonable access to complete or correct listed items and to complete other Work. The **Owner** will not start any Partial Use unless the property insurer, by endorsement or like acceptable

procedure, has acknowledged receipt of notice of and consent to Partial Use.

8.6 Division of Responsibilities:

8.6.1. A certificate of Substantial Completion will include the **Professional's** recommendation about the division of responsibilities between the **Owner** and **Contractor** for utilities, security, safety, insurance, maintenance, etc. The **Owner** and **Contractor** will accept the division of responsibilities recommended by the **Professional** or shall negotiate a mutually agreeable split of responsibilities, which shall bind the **Owner** and **Contractor** when the **Owner** starts Partial Use.

8.7 Suspension of Work:

8.7.1. Suspension of Work Order – The **Owner** may, at any time, order the **Contractor** in writing to defer, stop, slow down, suspend or interrupt all or any part of the Work for such period as the **Owner** may determine appropriate for its convenience. If any such written order Delays performance for an unreasonable period, the **Owner** will amend the Contract Documents to provide for a corresponding adjustment in Contract Time and/or Contract Price (excluding Fee under paragraph 11.11).

8.7.2. Constructive Suspension of Work – If performance of all or any part of the Work is, for an unreasonable period, deferred, stopped, slowed down, suspended or interrupted by any other act or failure to act of the **Owner** or **Professional**, or act or event attributable to the **Owner** under the Contract Documents, the **Owner** will negotiate with the **Contractor** or authorize an adjustment in Contract Time and/or Contract Price (excluding Fee under paragraph 11.11.1) for any increase in the time required to complete the Work and/or the **Contractor's** cost of performance.

8.7.3. Suspension of Work Limitation – No adjustment in Contract Price under paragraphs 8.7.1 or 8.7.2 shall be made to the extent performance is delayed by any other cause, including any act or omission within the control of the **Contractor**. Further, no suspension of Work shall justify an increase in Contract Price or Contract Time unless the resulting Delay exceeds the time allowed in the Contract Documents for the act or failure to act.

8.7.4. If the **Contractor** believes a suspension of Work justifies an increase in Contract Price or Contract Time, the **Contractor** shall give prompt written notice to the **Owner** and submit a written proposal promptly after the extent of the Delay becomes known. However, no proposal or claim by the **Contractor** on account of a suspension of Work shall be allowed (a) for any Delay or costs incurred more than thirty (30) Calendar Days before the **Contractor** gives written notice (except for written orders under paragraph 8.7.1), or (b) if made after final payment.

8.8 Sharing of Total Float On Non-Critical Paths:

8.8.1. The Progress Schedule shall be in the form of a Critical Path Schedule, Total Float on non-Critical Paths shall be available to the **Owner**, to the extent the **Owner's** use is reasonable given the Total Float remaining for the Work affected. If any such **Owner's** use of Total Float causes Delay which materially increases the **Contractor's** cost to complete the Work affected, and the **Contractor** notifies the **Owner** in writing and proceeds to support the assertion to the **Owner's** satisfaction, the **Owner** will correspondingly adjust Contract Price for any such material changes in the **Contractor's** cost to complete the Work.

8.8.2. The amount of Total Float available in the Progress Schedule shall not be artificially reduced by suppressing Total Float merely for the sake of voiding Total Float. Total Float hidden through the use of such techniques as preferential sequencing; slow or late starts of follow-on trades; restraining a Contract Time by Work actually required for a later Contract Time; the use of small crews, extended durations, imposed dates; and so forth, shall be Total Float otherwise available for sharing with the **Owner** under the provisions of paragraph 8.8.1.

ARTICLE 9 WARRANTY; TESTS, INSPECTIONS AND APPROVALS; CORRECTION OF WORK

9.1 Warranty:

9.1.1. The **Contractor** warrants to the **Owner** that all Work will conform to the Contract Documents and will not be Defective. Reasonably prompt notice of Defective Work of which the **Owner** or **Professional** has actual knowledge shall be given to the **Contractor**, but failure to do so will not void the **Contractor's** warranty unless actual prejudice results from such untimely notice. The **Contractor's** warranty excludes defect or damage caused by (a) abuse, modification by others, insufficient or improper operation or maintenance, or (b) normal wear and tear under normal usage.

9.1.2. Manufacturer warranties for materials and equipment received by the **Contractor** shall be assigned and promptly delivered to the **Owner**. Manufacturer warranties shall be in full force and effect for the entire duration of the Correction Period.

9.2 Tests, Inspections and Approvals:

9.2.1. The **Owner**, **Professional**, their representatives and consultants, testing agencies and those State agencies and Political Subdivisions with jurisdiction shall be permitted access to the Work at reasonable times while the Work is in progress for On-Site Inspection and/or inspection, testing or approval. The **Contractor** shall provide proper and safe conditions for such access. The **Contractor** shall give the **Professional** timely notice whenever any Work is ready for inspections, tests, or approvals, so that the **Professional** may observe such inspections, tests, or approvals. Tests, inspections, or approvals shall not in any way relieve the **Contractor** from the **Contractor's** obligations to perform the Work in accordance with the Contract Documents or warrant the Work as provided in the Contract Documents.

9.2.2. Unless otherwise provided in Section 00800 Supplementary Conditions, the **Owner** will retain a testing agency, directly or through the **Professional**, to perform inspections, tests or approvals required by the Contract Documents except for those inspections, tests or approvals specifically designated to the Contractor in the Contract Documents. The **Owner** will pay the charges of the testing agency, except if related to tests, inspections or approvals required by Law or otherwise charged to the **Contractor** under the provisions of paragraph 9.2.4 or 9.3.

9.2.3. The **Contractor** shall assume full responsibility for any testing, inspection, or approval (a) required by Law, (b) indicated in or required by the Contract Documents as designated to the Contractor, or (c) required for the **Professional's** acceptance of a Supplier, materials or equipment or mix designs submitted for prior approval by the **Contractor**. The **Contractor** shall (a) pay all related costs, except costs assumed by the **Owner** under paragraph 9.2.2, (b) schedule related activities, and (c) secure and furnish to the

Professional the required certificates of inspection, testing or approval.

9.2.4. The **Contractor** shall be responsible for any testing, inspection or approval that reveals Defective Work, including an appropriate portion of the Delay and costs occasioned by such discovery of Defective Work. Examples of such costs assumed by the **Contractor** include, but are not limited to, charges of the **Professional** for repeated On-Site Inspections and, to the extent designated in the pertinent Specification, repeat testing, inspection, or approval charges by testing agencies.

9.3 Uncovering Work:

9.3.1. Any Work covered without the **Professional's** prior written concurrence shall, when requested by the **Professional**, be uncovered, exposed, or otherwise made available for On-Site Inspection, testing, inspection, or approval as the **Professional** may require, and replaced, if necessary. This requirement applies to Work, which requires On-Site Inspection by the **Professional**, based on the Contract Documents or on specific On-Site Inspection procedures of which the **Professional** notifies the **Contractor** in advance. This requirement also applies to Work, which is to be inspected, tested, or approved by others. The **Contractor** shall be responsible for any such uncovering, exposure, On-Site Inspection, testing, inspection, and satisfactory reconstruction, including an appropriate portion of the Delay and costs, unless the **Contractor** gave the **Professional** timely written notice of the **Contractor's** intentions to cover such Work and the **Professional** failed to act with reasonable promptness in response to such written notice.

9.3.2. The **Contractor**, at the **Professional's** request, shall uncover, expose, or otherwise make available for On-Site Inspection, inspection, testing or approval any covered Work otherwise not required to be observed or inspected, tested, or approved before covering, if the **Professional** determines that such covered Work shall be on-site inspected by the **Professional** or inspected, tested, or approved by others. The **Contractor** shall be responsible for any such uncovering, exposure, On-Site Inspection, inspection, testing and satisfactory reconstruction, including an appropriate portion of the Delay costs, whenever any such uncovered Work is found to be Defective. If, however, any such Work uncovered at the **Professional's** request is not found Defective, the **Owner** will amend the Contract Documents to provide for a corresponding adjustment in Contract Price and/or Contract Time.

9.4 Correction of Work:

9.4.1. Before the Correction Period – If required by the **Professional**, the **Contractor** shall correct all Defective Work, whether fabricated, installed or completed or not. If any Work is rejected by the **Professional** or if any testing, inspection, or approval reveals Defective Work, the **Contractor** shall promptly, as direct, remove the Defective Work from the site and replace it with non-Defective Work. The **Contractor** shall bear responsibility for its proportionate share of the Delay and costs resulting from the correction and/or the removal and replacement of Defective Work.

9.4.1.1. If the **Contractor**, within reasonable time after receipt of written notice, (a) fails to correct Defective Work or remove and replace rejected Work, or (b) fails to correct or complete items on any Punch List, or (c) fails to perform Work in accordance with the Contract Documents, or (d) fails to comply with any other provision of the Contract Documents, the **Owner**, after seven (7) Calendar

Days' written notice to the **Contractor**, may correct and remedy the deficiency. To the extent necessary to correct and remedy such deficiency, the **Owner** shall be allowed to exclude the **Contractor** from all or part of the site; take possession of all or part of the Work and stop related operations of the **Contractor**; take possession of the **Contractor's** tools, plant and office and construction equipment at the site; and incorporate into the Work materials and equipment for which the **Owner** has paid the **Contractor**. The **Contractor** shall allow the **Owner** and **Professional** access to the site as the **Owner** may require completing corrective and remedial action. The **Owner** shall be entitled to an appropriate decrease in Contract Price for all claims, costs, losses, damages, and Delay incurred or sustained by the **Owner** which are attributable to the **Contractor**. Costs assumed by the **Contractor** under this provision include, without limitation, costs of correction or removal and replacement of Defective Work, costs of repair and replacement of other work destroyed or damaged by the action and related charges of the **Professional**.

9.4.1.2. Instead of requiring correction or removal and replacement of any Defective Work, the **Owner**, with the advice of the **Professional**, may prefer to accept any Defective Work. In any such case, the **Contractor** shall bear its proportionate share of the Delay and costs associated with the **Owner's** determination to accept the Defective Work. If the **Owner's** acceptance of the Defective Work takes place before the **Professional's** recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents, and the Contract Price shall be adjusted accordingly.

9.4.2. Correction Period – The Contract Documents provide for one Correction Period for the entire Work, whether Partial Use of any portion of the Work is designated as eligible by the Contract Documents or not. The Correction Period shall start on the date of Substantial Completion of the Work, or on a later date, if so, provided in the Contract Documents. The Correction Period shall last one year, or longer, if so, specified in the Contract Documents.

9.4.3. Correction of Work During the Correction Period – The **Contractor** shall correct Defective Work or, if rejected by the **Owner**, remove from the site, and replace any Defective Work with non-Defective Work. The **Contractor's** corrective action shall be in accordance with the **Owner's** written instructions and shall be accomplished at the **Contractor's** sole expense. If the Defective Work causes an Emergency or unacceptable risk of loss or damage, the **Contractor** shall take immediate action to correct or remove and replace the Defective Work.

9.4.3.1. If the **Contractor** fails to take corrective action in accordance with the terms of any such **Owner** written instruction, the **Owner**, directly or through others under contract with the **Owner**, may correct or remove and replace the Defective Work. In any such case, the **Contractor** shall bear its proportionate share of all resulting claims, costs, losses, and damages. If the **Owner** and the **Contractor** are unable to agree as to the amounts due by the **Contractor** to the **Owner** under the provisions of this paragraph, the **Owner** may deliver a claim, in accordance with the procedures and within the deadlines set forth in Article 15. If the discovery of the Defective Work takes place after final payment and the **Contractor** fails to pay the **Owner** any of the amounts due under the provisions of this paragraph, the **Owner** shall demand due performance under Section 00610 Performance Bond and Article 14 or deliver a claim, in accordance with the procedures and within the deadlines set forth in Article 15, or both.

9.4.4 After the Correction Period – Until the period of limitation provided by Michigan Law, the **Contractor** shall promptly correct

Defective Work upon receipt of written notice from the **Owner**. If appropriate under the circumstances or, in the event of an Emergency or unacceptable risk of loss or damage, the **Owner**, directly or through others under contract with the **Owner**, may correct or remove and replace the Defective Work.

9.4.5. It is not the intent of paragraph 9.4 or paragraph 9.5 to establish a period of limitations for the **Contractor's** warranty or to limit the obligations of the **Contractor** to warrant that the Work will not be Defective. The specified correction of Work requirements relates only to the specific obligation of the **Contractor** to correct or remove and replace Defective Work. The specified correction of Work requirements has no limitation on the rights of the **Owner** to have Defective Work corrected or removed and replaced, if rejected, except as otherwise provided by Michigan Law.

9.5 Special Correction Period Requirements:

9.5.1. Whenever the **Owner** undertakes Partial Use of any portion of the Work specifically designated as eligible for Partial Use in the Contract Documents, the warranties for all materials and equipment incorporated into that portion of the Work shall remain in full force and effect between the start of such Partial Use and the date when the Correction Period starts. If no separate price for such special correction period was requested in Section 00300 Bid Form and made part of the Contract Documents, the **Owner** will appropriately adjust the Contract Price.

9.5.2. Whenever the **Owner** undertakes Partial Use of any portion of the Work because any act or omission within the control of the **Contractor** Delays completion of the Work, or any portion of the Work, within a designated Contract Time, the warranties for all materials and equipment incorporated into that portion of the Work shall, at no adjustment in Contract Price, be maintained in full force and effect between the beginning date of such Partial Use and the date when the Correction Period starts.

9.5.3. The correction period for any Defective Work that is corrected or rejected and replaced within the last three (3) months of the Correction Period shall be extended by an additional six (6) months, starting on the date such Work was made non-Defective.

9.5.4. The Contract Documents may require the Correction Period to start on a date later than the date of Substantial Completion of the entire Work. If such is the case, and the **Owner** advances or defers the start of the Correction Period, the **Contractor** shall maintain the warranties for materials and equipment until the revised starting date of the Correction Period. If no separate price for such advance or deferment was requested in Section 00300 Bid Form and made part of the Contract Documents, the **Owner** will amend the Contract Documents to appropriately adjust the Contract Price.

9.6 Special Maintenance Requirements:

9.6.1. If the Contract Documents specify that the entire Work, or a portion of the Work, upon reaching Substantial Completion, shall not be placed in use by the **Owner**, the **Contractor** shall maintain the Work, or specified part of the Work, in good order and proper working condition and shall take all other actions necessary for its protection between the certified date of Substantial Completion and the date when the Work, or designated part of the Work, is placed in use.

9.6.2. If no separate price for such special maintenance period was requested in Section 00300 Bid Form and made part of the

Contract Documents, the **Owner** will amend the Contract Documents to appropriately increase the Contract Price.

ARTICLE 10 CHANGES

10.1 Changes in the Work:

10.1.1. Changes in the Work – The **Owner** is entitled to make changes within the general scope of the Work consisting of (a) additions, deletions or other revisions in the Specifications and Drawings, any Means and Methods or the **Owner**-furnished lands, equipment, materials, or services, or (b) directing acceleration of the Work. Changes in the Work may be accomplished through negotiated, *bilateral* Change Orders or *unilateral* Change Orders or result from any other properly authorized written order from the **Owner** or **Professional** which represents a constructive change.

10.1.2. Negotiated Changes – The **Owner** may negotiate changes in the Work by directing the **Professional** to prepare a Bulletin in numerical sequence describing the change being considered. Upon receiving a Bulletin, the **Contractor** (with the appropriate Subcontractors) shall evaluate the described change and quote the Bulletin. In estimating adjustments in Contract Price and/or Contract Time, the **Contractor** shall follow the provisions, including the breakdown requirements, specified in Article 11.

10.1.3. Constructive Changes – Any written order (including instruction, interpretation, determination, authorization, or approval) from the **Owner** or **Professional** that causes a change in the Contract Documents shall constitute a change in the Work, provided the **Contractor** or the **Owner** gives prompt, written notice of a change to the other (with copy to the **Professional**) stating the date, circumstances, and source of the change.

10.1.3.1. Upon receipt and evaluation of the written notice, if the **Owner** agrees, with the **Professional's** advice, that a change within the general scope of the Work has been ordered, the **Owner** shall, by Change Order or Change Authorization, correspondingly amend the Contract Documents. If the **Owner** finds that a change within the general scope of the Work has not been ordered, and the **Contractor** disagrees, the **Contractor** may deliver notice of a claim and a claim Submittal in accordance with the procedures and within the deadlines set forth in Article 15.

10.1.3.2. **No proposal or claim** by the **Contractor** on account of changes under paragraphs 3.2.1, 10.1.3 or any other matter for which Contractor asserts added cost or time **shall be allowed unless initiated by written notice** of such proposal or claim to the Professional and Owner **within 21 days after the occurrence of the event giving rise to such proposal or claim or within 21 days after the contractor first recognizes the condition giving rise to the proposal or claim.** A full and detailed breakdown of cost and time requested, with supporting documentation, if not provided with initial notice shall be delivered to Professional and Owner within 15 days of the notice, as noted in article 11.1.2, unless otherwise agreed in writing, by the Owner prior to expiration of such time.

10.1.4. Unilateral Changes – If, in negotiations, the **Owner** and **Contractor** are unable to agree on the adjustment in Contract Price or Contract Time corresponding to any change in the Work, the **Owner** may issue a *unilateral* Change Order. Upon receiving any such Change Order, the **Contractor** shall promptly proceed or continue with the Work Involved as required by the Change Order.

10.1.4.1. *Unilateral* Change Orders may adjust Contract Price and/or Contract Time, as the **Owner**, with the advice of the **Professional**, may determine appropriate. Contract Price may be adjusted on a *lump sum* basis or an *actual cost, not to exceed* basis. If the **Contractor** disagrees with the extent of the adjustments in Contract Price and/or Contract Time made by any such *unilateral* Change Order, the **Contractor** may deliver notice of a claim and a claim Submittal in accordance with the procedures and within the deadlines set forth in Article 15.

10.2 Differing Subsurface or Physical Site Conditions:

10.2.1. The Contract Documents make available Authorized Technical Data concerning subsurface site conditions and physical conditions of existing surface and subsurface facilities at the site. Consistent with Section 00100 Instructions to Bidders, except for reasonable reliance on the accuracy of Authorized Technical Data, the **Owner** does not warrant that Authorized Technical Data is necessarily sufficient and complete for the purposes of selecting Means and Methods, initiating, maintaining, and supervising safety precautions and programs or discharging any other obligation assumed by the **Contractor** under the Contract Documents.

10.2.2. The **Contractor** or **Owner** shall notify the other in writing if the **Contractor** or **Owner**, respectively, discovers that (I) actual subsurface conditions or latent physical conditions of existing surface and subsurface facilities encountered at the site differ materially from those shown or indicated in the Contract Documents, or (II) unknown subsurface conditions or unknown physical conditions of existing surface and subsurface facilities encountered at the site, of an unusual nature, differ materially from those ordinarily encountered and recognized as inherent in work similar in character to the Work. A written notice from the **Contractor** shall be delivered promptly before the conditions are disturbed and before proceeding with the affected Work. A written notice from the **Owner** shall be delivered promptly after the **Owner** has knowledge of the differing subsurface or physical conditions.

10.2.2.1. Upon receipt or delivery of any such notice, the **Owner** shall investigate the differing conditions asserted. If, with the **Professional's** advice, the **Owner** determines that conditions on which the **Contractor** is entitled to rely do differ materially, the **Owner** will amend the Contract Documents to provide for any changes in the Work and adjustments in Contract Price and Contract Time made necessary by the differing conditions and any resulting Delay which is not reasonably anticipatable under the circumstances and which is attributable to the **Owner** and/or **Professional**. Unless the **Owner** and **Contractor** otherwise agree, no increase in Contract Time shall be made for any suspension of Work made necessary by any differing subsurface conditions, if the suspension of Work lasts less than ten (10) Calendar Days.

10.2.2.2. If the **Owner** determines that the actual conditions encountered and those conditions on which the **Contractor** is entitled to rely do not differ materially, and the **Contractor** disagrees with the **Owner's** determination, the **Contractor** may deliver notice of a claim and a claim Submittal in accordance with the procedures and within the deadlines set forth in Article 15.

10.2.2.3. No proposal or claim by the **Contractor** due to differing site conditions shall be allowed (a) if the **Contractor** knew of their existence before submitting its Bid or if those conditions could have been discovered by any reasonable examinations for which the **Contractor**, as Bidder, was made responsible under the Bidding Requirements, and/or (b) unless the **Contractor's written notice** is provided **within not more than 21 days after the contractor first**

recognizes the condition giving rise to the proposal or claim and gives the Owner adequate opportunity to investigate the asserted differing site conditions. A full and detailed breakdown of cost and time requested, with supporting documentation, if not provided with initial notice shall be delivered to Professional and Owner within 15 days of the notice, as noted in article 11.1.2, unless otherwise agreed in writing, by the Owner prior to expiration of such time.

10.2.3. The provisions of paragraph 10.2.2 through 10.2.2.3 also shall apply to situations where the Contractor or Owner discovers that any reference points provided by the Owner need correction to enable the Contractor to proceed with the Work.

10.3 Responsibilities for Underground Utilities:

10.3.1. The Contractor shall comply with 2013 PA 174, as amended, MCL 460.721 et seq., and all other Laws concerning Underground Utilities. In addition, the Contractor shall be responsible for immediately notifying the Owner of any contact with or damage to Underground Utilities, and for the safety, protection of and repairing of any damage done to any Work and any surface and subsurface facilities. Except as provided under 2013 PA 174, as amended, MCL 460.721 et seq., paragraph 10.3.2 or by any Allowance specific to Underground Utilities, the Contractor shall bear an appropriate portion of the Delay and costs relating to the obligations set forth in this paragraph.

10.3.2. Shown or Indicated – If the Contractor encounters Underground Utilities shown or indicated (whether in the Contract Documents or those documents itemized in Section 00210 Information for Bidders) that are inaccurately shown or are inaccurately located, responsibility for any damage shall be as provided in MCL 460.701 et seq. To the extent the Drawings and/or Specifications inaccurately show or locate, through error or omission, the actual physical conditions and/or location of existing Underground Utilities (when compared with the information and data provided by the owners of such Underground Utilities), the Owner will amend the Contract Documents to provide for a corresponding adjustment in Contract Price and/or Contract Time.

10.3.3. Not Previously Located – If the Contractor encounters not previously located Underground Utilities, which could not reasonably have been foreseen, the Owner will amend the Contract Documents to provide for any changes in the Work and corresponding adjustments in Contract Price and/or Contract Time made necessary by such changes in the Work and by any resulting Delay which is not reasonably anticipatable under the circumstances and which is attributable to the Owner and/or Professional.

10.4 Hazardous Material Conditions:

10.4.1. The Contractor shall use, handle, store, dispose of, process, transport and transfer any material considered a Hazardous Material in accordance with all federal, state, and local Laws. If the Contractor encounters material reasonably believed to be a Hazardous Material and which may present a substantial danger, the Contractor shall immediately stop all affected Work, give written notice to the Owner of the conditions encountered, and take appropriate health and safety precautions.

10.4.2. Upon receipt of the written notice, the Owner will investigate the conditions. If (a) the material is a Hazardous Material that may present a substantial danger and which was not described in the Drawings and/or Specifications, or identified in the Contract

Documents as Work under the Contract Documents, and (b) the Hazardous Material was not brought to the site by the Contractor, or does not result in whole or in part from any violation by the Contractor of any Laws covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Materials, the Owner shall order a suspension of Work in writing. The Owner shall proceed to have the Hazardous Material removed or rendered harmless by negotiating a change in the Work with the Contractor, by means of separate contract or as the Owner may deem otherwise expedient. In the alternative, the Owner shall terminate the affected Work or the Contract for the Owner's convenience.

10.4.3. Once the Hazardous Material has been removed or rendered harmless by any of the means outlined in paragraph 10.4.2, the affected Work shall be resumed as directed in writing by the Owner. Any determination by the Michigan Department of Health & Humans Services and/or the Michigan Department of Environment, Great Lakes, and Energy (whichever is applicable) that the Hazardous Material has either been removed or rendered harmless shall be binding upon the Owner and Contractor for the purposes of resuming the Work. If any such incident with Hazardous Material results in Delay not reasonable anticipatable under the circumstances and which is attributable to the Owner or Professional, the Owner will amend the Contract Documents to provide for a corresponding adjustment in Contract Price or Contract Time, or both, made necessary by such Delay.

10.4.4. If the Hazardous Material was brought to the site by the Contractor, or results in whole or in part from any violation by the Contractor of any Law covering the use, handling, storage, disposal of, processing, transport and transfer of Hazardous Materials or from any other act or omission within its control, the Contractor shall bear its proportionate share of the Delay and costs involved in cleaning up the site and removing and rendering harmless the Hazardous Material to the satisfaction of the Owner, State and all Political Subdivisions with jurisdiction. If the Contractor fails to proceed with due diligence to take appropriate action pursuant to applicable Law and consistent with the Owner requirements, the Owner may act accordingly, in which case the Contractor shall defend, indemnify, and hold harmless the Owner from and against all claims, as construed in paragraph 1.4, arising from the Owner's exercise of such appropriate action.

10.5 Incidents with Archaeological Features:

10.5.1. The Contractor shall at once notify in writing the Owner of any Archaeological Feature deposits that are encountered or unearthed during the execution of the Work. The Contractor shall protect the deposits in a satisfactory manner and no further disturbance of the Archaeological Features shall take place until Work is allowed to be resumed in the affected areas.

10.5.2. If the Owner, with the advice of the Professional, concludes that the Contract Documents require changes because of Archaeological Features encountered, the Owner will amend the Contract Documents to provide for any changes in the Work and corresponding adjustment in Contract Price and/or Contract Time made necessary by the changes due to the Archaeological Features encountered and by any resulting Delay which is not reasonably anticipatable under the circumstances, and which is attributable to the Owner and/or Professional

10.6 Unit Price Work:

10.6.1. If the Contract Documents specify Unit Price Work, the Contract Price shall contain the sum of each unit price times its estimated quantity. The **Contractor** shall be responsible for completing, within the Contract Times, one hundred twenty (120%) of the estimated quantities of Specified Unit Price Work and reasonable quantities of Contingent Unit Price Work.

10.6.2. The **Contractor** shall promptly, **before proceeding with any affected Unit Price Work**, deliver a written notice to the **Professional** (a) whenever actual quantities for an item of Specified Unit Price Work differs materially from those estimated and request an adjustment in the estimated quantity, or (b) requesting authorization to provide any or differing quantities of any item of Contingent Unit Price Work. The **Contractor** or the **Owner** shall submit to the other and the **Professional**, a proposal for adjusting that item's unit price and/or the Contract Time. The proposal shall be properly substantiated.

10.6.2.1. Promptly after being notified by the **Contractor**, the **Professional** will evaluate the affected Unit Price Work and provide its determination to the **Owner** and **Contractor**. If the **Owner** adjusts the estimated quantity of Specified Unit Price Work or authorizes any, or any additional, quantities of Contingent Unit Price Work, the **Contractor** shall proceed with that Unit Price Work as directed by the **Professional**. The **Contractor** shall proceed with the Unit Price Work regardless of whether the **Owner**, after conferring with the **Professional** determines that a variation in quantity justifies an adjustment in the unit price, or that the existing unit price is valid for the additional or reduced quantities, or that no adjustment in the Contract Time is warranted. In the event the **Contractor** disagrees with any such determination, the **Contractor** shall deliver a notice of claim and a claim submittal in accordance with the procedures and within the deadlines set forth in Article 15.

10.6.2.2. Any adjusted Unit Price agreed upon by the **Owner** will only apply to the actual quantities above one hundred twenty percent (120%) or to the actual quantities less than eighty percent (80%) of the estimated quantity. For additional quantities over one hundred twenty percent (120%) or reduced quantities below eighty percent (80%) of the estimated quantity, the **Owner** may negotiate a Unit Price with the **Contractor**, or direct a unilateral change as provided by Article 10 or rebid that Work. In no case, however, will a Unit Price change resulting from a reduction in quantity be renegotiated such that the changed Unit Price produces a modified Bid Price for any line item that exceeds the initial Bid Price for that line item.

10.6.3. No adjustment due to quantity variations shall be allowed (a) unless the **Contractor** met the notice requirements of paragraph 10.6.2, (b) to the extent that the Bid Price for a line item will increase due to reduced quantities at a higher unit, (c) for under runs in any quantities of Contingent Unit Price Work, unless the unit price times the estimated quantity exceeds the lesser of \$50,000.00 or two percent (2%) of the Contract Price, or (d) if any unit price increase results in whole or in part from any act or omission within the control of the Contractor (errors in the Contractor's Bid, unbalanced unit prices, etc.).

10.7 Cash Allowances; Provisionary Allowances:

10.7.1. The **Contractor** shall obtain the **Professional's** written acceptance before providing materials, equipment or other items covered by a Cash Allowance. Payments under a Cash Allowance shall be on actual costs, and exclude costs for supervision, handling, unloading, storage, installation, testing, etc., which shall be considered to be included within other elements of the Contract Price. Payments within the limits of an Allowance shall exclude Fee and Bond and insurance premiums since these are already included within other elements of the Contract Price.

10.7.2. The **Contractor** shall complete Work covered by Provisionary/Contingency Allowances as approved in writing by the **Owner** and directed by the **Professional**. The Cost of the Work Involved for Work authorized under any Provisionary/Contingency Allowance shall be determined pursuant to Article 11, except those payments within the limits of any Allowance shall exclude Bond and insurance premiums under paragraph 11.8.1.5, since these costs are already included within other elements of the Contract Price.

10.8 Change Orders; Change Authorizations:

10.8.1. The terms "Change Order" and "Change Authorization" are defined in Section 00020 Glossary. Further, Division 1 includes prototype Change Order and Change Authorization forms which shall be used by the **Owner** and **Contractor** in connection with modifications to the Contract.

*10.8.2. A *bilateral* Change Order which does not incorporate a **Contractor** reservation of rights to claim additional adjustments, shall memorialize the **Owner's** and **Contractor's** agreement as to the adjustments in Contract Price and/or Contract Time made by the Change Order. Any such *bilateral* Change Order shall constitute an all-inclusive settlement for all changes, Delay, and costs, whatsoever, and the **Contractor's** signature on the Bulletin and proposal incorporated into that Change Order represents a waiver of all rights to file a subsequent proposal or a claim under Article 15 on account of that Change Order or the Work.

10.8.3. A presumed *bilateral* Change which includes a proposal signed by the **Contractor** with a reservation to claim additional adjustments shall be regarded as a notice of claim as to those adjustments and shall be pursued as provided in Article 15, except as the **Owner** and **Contractor** may otherwise agree.

10.8.4. A Change Order issued by the **Owner** after unsuccessful Contract Price and/or Contract Time negotiations with the **Contractor** and stating the **Owner's** proposed basis for the necessary adjustments in Contract Price and/or Contract Time shall be a *unilateral* Change Order.

10.8.5. The **Owner** will issue Change Orders to amend the Contract Documents for changes in the Work and for any adjustments in Contract Price or Contract Time agreed to in total or in part by both the **Owner** and **Contractor**; or to correspondingly adjust the Contract Price for Work furnished under Cash Allowances, Work completed that was authorized under Provisionary/Contingency Allowances and actual quantities of Unit Price Work. Amounts for Work Involved in a Change Order signed by the **Owner** may be included in subsequent Requests for Payment.

10.8.6. The **Owner** may use Change Authorizations (a) to document agreed-upon minor variations in the Work, and/or (b) to document or order changes in the Work not warranting any adjustment in Contract Price or Contract Time. Examples of the second category include but are not limited to the **Owner's** authorization for drawing payments against a Provisionary/Contingency Allowance or the **Owner's** consent to quantity variations not increasing the Contract Price.

10.8.7. Before, or in conjunction with, the **Professional's** certification of final payment, an appropriate Change Order will be issued, with the **Professional's** advice, to correspondingly adjust the Contract Price for the value of Work furnished under Cash Allowances, Work completed that was authorized under Provisionary/Contingency Allowances and actual quantities of Unit Price Work.

10.8.8. Subject to the provisions of paragraphs 10.8.2 through 10.8.4, it is a requirement of the Contract Documents that all Change Orders duly signed and issued by the **Owner** shall incorporate Bulletins, which are duly signed by the **Contractor**, regardless of whether the **Contractor** uses a reservation of rights.

ARTICLE 11 CHANGES IN CONTRACT PRICE; CHANGES IN CONTRACT TIME

11.1 General Provisions:

11.1.1. Contract Price or Contract Time may be changed only by Change Order duly signed by the **Owner**. Neither Contract Price nor Contract Time may be changed by Change Authorization (subject to the provisions for constructive changes).

11.1.2. **Contractor** proposals for adjusting Contract Price and/or Contract Time shall be due within fifteen (15) Calendar Days after the **Contractor** receives a Bulletin or delivers to the **Owner** a notice of a change or a Delay. Proposals not complying with the requirements of paragraphs 11.1.4 and 11.1.5 shall be returned for resubmission. This turnaround period is of the essence and any Delay in delivering a bulletin or resulting from resubmission of an incomplete Bulletin shall not justify any increase in Contract Price or Contract Time. The **Owner**, in its sole discretion, may extend or shorten the 15-Day period for Bulletin quotations estimated at more than \$250,000 or less than \$25,000.

11.1.3. The **Professional** will review each **Contractor** proposal, and the **Professional** will recommend to the **Owner**, within a reasonable time, whether or not the Bulletin quotation is acceptable. Due to the time required to obtain **Board** and **Director** approvals, a **Contractor** proposal shall be irrevocable for sixty (60) Calendar Days after it is submitted to the **Professional**.

11.1.4. **Contractor** proposals or claims for Work Involved shall detail all affected items of Work, whether increased, revised, added, or deleted, and shall be fully documented and itemized as to (a) individual adds and deducts in Work quantities and labor manhours; (b) corresponding itemized Cost of Work Involved (paragraphs 11.4 through 11.9; and (c) Fee. Proposals or claims including Fee of five percent (5%) for Work Involved of a Subcontractor shall nominate the performing Subcontractor and enclose the Subcontractor's pricing data, if available.

11.1.5. For **Contractor** proposals or claims for adjustments in Contract Price arising from Delays (whether or not such Delays extend any Contract Time or any early completion date), the

Contractor's estimates shall be as comprehensive and detailed as may be appropriate to support the proposal or claim. Examples of germane information include labor productivity, labor manpower levels, production data and Progress Schedule revisions.

11.1.6. If the **Contractor's** surety requires notice of any adjustment in Contract Price and/or Contract Time, whether made pursuant to Article 11 or otherwise; any "or equal" material or equipment or substitution approved by the **Professional**; any change within the scope of Article 10; or any other addition, deletion or revision in the requirements of the Contract Documents, whether made by Change Order or Change Authorization, it shall be the **Contractor's** responsibility, and not the **Owner's**, to give notice to the **Contractor's** surety. It is agreed that none of these modifications to the Contract Documents and/or the Work shall invalidate the Agreement.

11.2 Changes in Contract Time:

11.2.1. An extension in Contract Time will be justified only to the extent that the **Contractor** demonstrates, with comprehensive and detailed documentation, that the Delay is not reasonably anticipatable under the circumstances, is not caused by act or omission within the control of the **Contractor**, and, furthermore, that the Delay necessarily extends the Work, or portion of the Work in question, beyond the pertinent Contract Time. If the **Owner** determines that the **Contractor's** documentation is insufficient to allow a thorough evaluation of the time extension request, the **Contractor** shall further support the request through a detailed analysis of the Progress Schedule Revision Submittal.

11.2.2. Examples of events that may justify an extension in Contract Time include acts of God or the public enemy; acts of the U.S. Government, the State or a Political Subdivision, each acting in its public capacity (including acts as permitting agency); acts of a Public Utility acting in its public capacity; fires, floods, epidemics, quarantine restrictions; strikes, freight embargoes; unusual weather (unusual in the sense of frequency or severity vis-à-vis the prior five (5) year average); unusually severe shortages of construction materials (considering all feasible sources of supply); Underground Utilities which the Contract Documents, through error or omission, inaccurately show or indicate; Underground Utilities not previously located; objection, for the **Owner's** convenience, to a nominated Subcontractor; Archaeological Features; suspension of Work; changes in the Work, differing site conditions; variation in quantities; and Delay, as provided in this paragraph, of Subcontractors or Suppliers, at any tier, not caused in whole or in part by any act or omission within the control of both the **Contractor** and any such Subcontractors and Suppliers.

11.2.3. If upon evaluation of the **Contractor's** analysis, the **Owner** approves an extension in Contract Time for Delay not caused in whole or in part by any act or omission within the control of the **Owner** and/or **Professional**, the **Owner** shall authorize the necessary adjustment in Contract Time only. If the **Owner** approves an extension in Contract Time for Delay caused in whole or in part by any act or omission within the control of the **Owner** and/or **Professional**, the **Owner** shall authorize the necessary adjustments in Contract Time and Contract Price.

11.3 Methods for Making Adjustments in Contract Price:

11.3.1. The method to be used to determine any adjustment in Contract Price shall be selected by the **Owner** from one of the

methods in paragraph 11.3.1.1 through 11.3.1.3, or otherwise shall be limited to the methods in paragraph 11.3.1.4 or 11.3.1.5.

11.3.1.1. If any Work Involved is covered by lump sum prices or unit prices contained in the Contract Documents, those prices shall be used (subject to the terms and conditions of paragraph 10.6 Unit Price Work). In the latter case, the unit prices shall be applied to the quantity of Unit Price Work Involved.

11.3.1.2. If any Work Involved is not covered by lump sum or unit prices contained in the Contract Documents, then application of a lump sum price may be negotiated using the **Contractor's** itemized estimate of the *anticipated* Cost of the Work Involved, as specified in this Article, and a Fee for the Work Involved, as specified in paragraph 11.11.1.

11.3.1.3. If the Work Involved is not covered by the first two methods, the **Owner** may direct the **Contractor** to proceed with the Work Involved on an *actual cost* basis, with or without a guaranteed maximum, based on an itemized breakdown of the *actual* Cost of the Work Involved, as specified in this Article, and a Fee for the Work Involved, as specified in paragraph 11.11.2.

11.3.1.4. If the Work Involved is not covered by the first two methods, the **Owner** may direct the **Contractor** to proceed through a *unilateral* Change Order on a lump sum basis or a not-to-exceed basis, based on the **Professional's** estimate of the anticipated Cost of Work Involved and a Fee for the Work Involved, as specified in paragraph 11.11.1 or 11.11.2.

11.3.1.5. If payment for the Work Involved is to be determined by the Michigan Court of Claims or a AAA arbitration panel, it is agreed by the **Contractor** that the *actual cost and Fee* method in paragraph 11.3.1.3 shall represent the appropriate method for determining such payment.

11.3.2. Items making-up the Cost of the Work Involved shall be allowable to the extent (a) consistent with those prevailing in the Project locality, (b) necessary, reasonable, and clearly allocable to the Work Involved, and (c) limited to labor costs, Subcontract costs, material and equipment costs, construction equipment costs and general conditions costs, as specified in this Article.

11.4 Labor, Subcontract and Material/Equipment Costs:

11.4.1. The Cost of any Work Involved includes the **Contractor's** payroll costs for craft workers resident at the site (through crew foremen) assigned to furnishing and incorporating materials and equipment into the Work Involved. If craft labor manhours exceed those that can be gleaned from the Means Cost Data, or other cost guide acceptable to the **Owner**, the **Contractor** shall provide proper justification, which shall be acceptable to the **Professional**.

11.4.1.1. Payroll costs shall include wages, labor burdens and a factor for field supplies and purchase costs (less market value if not consumed) of tools not owned by the workers. Labor burdens shall be certified by an authorized financial representative of the **Contractor** and may include social security, unemployment taxes, workers' compensation, health and retirement benefits, vacation, and holiday pay. The factor for field supplies and tools (individually valued at less than \$1,000.00) shall not exceed four percent (4%) of the wages without burdens, unless the **Contractor** furnishes detailed data which supports a higher factor. For actual payroll costs, **Contractor** time sheets verified by the **Professional** and/or

certified payrolls shall be the only valid Records. For actual payroll costs under paragraph 11.3.1.5, time sheets shall be valid only if they expressly correlate to the Work Involved and were recorded at that time and/or used for certified payrolls.

11.4.2. The Cost of the Work Involved includes the **Contractor's** costs for the labor costs, (lower tier) Subcontract costs, material and equipment costs and general conditions costs of Subcontractors nominated for the Work Involved. Except for a higher six percent (6%) limit on the factor for field supplies and small tools, the methods for calculating Subcontractors' costs shall be the same as those for **Contractor** costs, except that the term "Subcontractor" shall replace the term "**Contractor**," context permitting. If the **Owner** and **Contractor** agree in advance, the **Contractor** shall obtain detailed quotations and shall nominate at least two (2) Subcontractors, acceptable to both the **Contractor** and **Professional**, for selection by the **Owner**.

11.4.3. The Cost of any Work Involved includes the **Contractor's** costs for materials and equipment, including transportation, storage, and necessary Suppliers' field services. All trade discounts, rebates and refunds and returns from surplus sales that can be realized at the time of pricing shall accrue to the **Owner**, and the **Contractor** shall make arrangements so that they may be obtained. If the Bulletin for the Work Involved *lists* specific Suppliers, the **Contractor** shall obtain written quotations from them and shall nominate one of the *listed* Suppliers to allow a comprehensive review of the proposal by the **Professional**. Invoices segregating items relating to the Work Involved shall be valid Records in support of actual Supplier costs.

11.5 Construction Equipment Costs:

11.5.1. The cost of any Work Involved includes costs for individual construction equipment with replacement value in excess of \$1,000.00. Transportation, loading and unloading, installation, dismantling and removal and shipping costs shall be allowed to the extent required by the Work Involved and reasonable under the circumstances. Equipment costs shall cease when the equipment is no longer needed for the Work Involved. Payroll costs for labor operating the equipment are as specified in paragraph 11.4.1. Equipment costs shall be computed using the same accounting and estimating rules and prices, whether related to added or deleted Work.

11.5.2. When determining actual construction equipment costs (a) under paragraph 11.3.1.3, daily logs of the equipment, operators, and actual usage, verified by the **Professional**, shall be the valid Records; (b) under paragraph 11.3.1.5, such daily Records shall be valid only if developed when any such Work Involved was performed and used for accounting purposes.

11.5.3. Rented (or owned) equipment, idled solely by actions of the **Owner** or **Professional**, shall be paid at the rate for rented equipment (or at fifty percent (50%) of the rate for owned equipment) provided the idle period exceeds what is normal for the equipment and occurs during normal working hours.

11.6 Rented or Leased Construction Equipment:

11.6.1. Construction equipment rented or leased from third parties shall be priced using the rates negotiated between the **Owner** and **Contractor**. If no agreement is reached, those rates listed in the Rental Rate "Blue Book" published by PRIMEDIA Information Inc. of San Jose, Ca, for the region where the Project is

located applicable to the equipment (model number and year) shall be used. For equipment leased or rented on an hourly basis, the rate for second or third shifts shall not exceed fifty percent (50%) of the base rate. Operating costs shall not exceed the hourly operation rate in the Blue Book. Hourly rates for equipment previously in use at the site for a month or longer shall use the monthly rate divided by 176 hours. Equipment previously in use for only one week or not previously in use at the site shall be invoiced to the **Owner** using the following schedule of equipment use:

Less than 8 hours	Hourly Rate
1 Day but less than 7 Calendar Days	Daily Rate
1 week but less than 30 Calendar Days	Weekly Rate
30 Calendar Days or more (when in use)	Monthly Rate

11.7 Owned Construction Equipment:

11.7.1. Construction equipment owned by the **Contractor** or rented or leased from lessors associated with or owned by the **Contractor**, shall be priced using the rates negotiated between the **Owner** and **Contractor** based on the **Contractor's** normal accounting practices. If no agreement is reached, the hourly rates in the "Contractor's Equipment Cost Guide," published by PRIMEDIA Information Inc. for the region where the Project is located shall be used. Operating costs shall not exceed the hourly operation rate in the Blue Book. For multiple shifts, rates shall not exceed the shift Work adjustments recommended in the Cost Guide.

11.8 General Conditions Costs:

11.8.1. The Cost of any Work Involved may include necessary general conditions costs to the extent those costs increase or decrease on account of, or are directly attributable to, the performance of Work Involved, or are required due to an extension in Contract Time or Delay under paragraph 11.13.5. Categories of general conditions which are allowable under this paragraph (subject to the provisions of paragraph 11.9) include:

11.8.1.1. To the extent agreed to in advance by the **Owner**, payroll costs for the **Contractor's** project manager or construction manager, but not both, for Work activities conducted at the site.

11.8.1.2. Payroll costs for the **Contractor's** superintendent and full-time general foremen, if any are assigned to the Work, for Work Involved performed beyond normal working hours and/or to the extent those costs and subsistence expenses arise solely from an extension in Contract Time or Delay under paragraph 11.13.5.

11.8.1.3. If agreed to in advance by the **Owner**, payroll costs for management personnel resident and working at the site and for workers not covered under paragraph 11.4.1, resident at the site and engaged as support workers (i.e., loading/unloading, clean-up, etc.) to workers covered under paragraph 11.4.1.

11.8.1.4. Costs of office and temporary facilities at the site, including office materials, office supplies, office equipment, minor expenses, utilities, fuel, sanitary facilities, internet, and telephone service at the site, provided those cost arise solely from an extension in Contract Time or Delay under paragraph 11.13.5.

11.8.1.5. Costs of liability insurance premiums for insurance not included within the labor burdens charged under paragraph 11.4.1, and costs of Bond premiums.

11.8.1.6. Costs of consultants not in the direct employ of the **Contractor**, or Subcontractors not covered under paragraph 11.4.2; to the extent authorized by the **Owner** before proceeding with the Work Involved, and provided that those costs are neither covered by paragraph 11.4 nor excluded by paragraph 11.10; and

11.8.1.7. Taxes on the Work Involved, and for which the **Contractor** is liable; and royalty payments and fees for permits and licenses, provided they relate solely to the Work Involved.

11.9 Limitations on Allowable Costs:

11.9.1. The **Contractor** shall not include as part of the Cost of any Work Involved any construction equipment costs, small tool costs, or general conditions costs that do not increase on account of, or are not directly attributable to, the furnishing and/or performance of any Work Involved. Examples of such unallowable costs include:

11.9.1.1. Charges for **Contractor's** superintendent, general foremen and management personnel assigned full-time to the Work, if the charges relate to Work Involved which does not extend the Contract Time or cause Delay under paragraph 11.13.5, or to Work Involved not performed beyond normal working hours.

11.9.1.2. Fixed percent mark-ups for construction equipment (as opposed to specific construction equipment costs); or

11.9.1.3. Cost of field supplies and/or small tools solely for extensions in Contract Time or Delay under paragraph 11.13.5.

11.9.2. Changes in Contract Price for extensions in Contract Time or Delay under paragraph 11.13.5 shall exclude any costs that are unaffected or do not relate to the extension in Contract Time or the Delay in early completion. Examples include:

11.9.2.1. Operating costs of construction equipment assigned to the Work for the duration, to the extent used in the incorporation of materials and equipment into the Work, provided the equipment is not subject to increased usage because of the extension in Contract Time or the Delay in early completion.

11.9.2.2. Operating costs plus owned/rental costs of construction equipment brought to the site for a specific activity (crane used for specific lifts, concrete pump used for pours, etc.), provided the equipment is not subject to increased usage because of the extension in Contract Time or the Delay in early completion.

11.9.2.3. Construction equipment and site facilities which are fully paid under the Contract Price for the Work, as awarded.

11.9.3. The **Contractor** shall not include as part of the Cost of any Work Involved acceleration costs incurred, for the **Contractor's** benefit, to make-up Delay which warrant extensions in Contract Time but do not justify increases in Contract Price.

11.10 Costs Covered by the Fee for the Work Involved (and not Allowable as Cost of the Work Involved):

11.10.1. **Contractor** administrative costs and home office overhead, whether at the **Contractor's** principal or branch offices, shall not be allowable as elements of the Cost of Work Involved. Rather, those administrative costs and home office overhead shall be non-reimbursable expenses covered by the Fee for the Work

Involved. Examples of administrative costs or home office overhead covered by this provision include, without limitation:

11.10.1.1. Payroll costs and other compensation of executives, general and administrative managers, estimators (except to the extent agreed to in advance by the **Owner**), claim consultants, attorneys, accountants, labor relation coordinators, purchasers, expeditors, and other administrative staff, whether resident at the **Contractor's** principal or branch offices.

11.10.1.2. Payroll costs and other compensation of project managers, construction managers, architects, engineers, schedulers, detailers, safety personnel, clerks, and other administrative staff not resident at the site and who are not part of the **Contractor's** general conditions personnel contingent.

11.10.1.3. Costs of engineers, architects, accountants, consultants, attorneys, and others, in the direct employ of the **Contractor** or otherwise, utilized for services related to a controversy or claim about the acceptability of the Work.

11.10.1.4. Costs incurred in the preparation of Contract Change Orders (whether or not ultimately authorized by the **Owner**), except as otherwise authorized by the **Owner**; and costs incurred in the preparation or filing of claims; and

11.10.1.5. Any interest on the Work Involved, unless otherwise allowed by the Michigan Court of Claims or an arbitration panel; charges for delinquent payments; lost interest on unpaid withholdings; lost profits and lost opportunities; and home office storage and yard facilities.

11.11 Limits on the Fee for the Work Involved:

11.11.1. Any adjustment in Contract Price made by *bilateral* Change Order which stipulates a lump sum price (developed from the **Contractor's** itemized estimate of the *anticipated* Cost of the Work Involved) without incorporating a **Contractor** reservation of rights to claim additional adjustments, shall include a Fee for costs under paragraph 11.10 and for profit, not to exceed the following:

11.11.1.1. For Work Involved to be self-performed by the **Contractor**, the **Contractor's** Fee shall not exceed fifteen percent (15%) of the Cost of the Work Involved. For Work Involved to be performed by any nominated Subcontractor, regardless of tier, the nominated, performing Subcontractor's Fee also shall not exceed fifteen percent (15%) of the Cost of the Work Involved.

11.11.1.2. For Work Involved to be performed by any nominated Subcontractor, the **Contractor's** Fee shall be five percent (5%) of the performing Subcontractor's Cost of the Work Involved, excluding that Subcontractor's Fee. For Work Involved of any nominated lower tier Subcontractor, any corresponding higher tier Subcontractors and the Contractor shall share equally a Fee of five percent (5%) of the performing lower tier Subcontractor's Cost of the Work Involved, excluding the lower tier Subcontractor's Fee.

11.11.2. Any adjustment in Contract Price made by a *bilateral* Change Order (whether based on a *lump sum* or on the *actual cost* of the Work Involved) which incorporates a **Contractor** reservation of rights to claim additional adjustments, shall include a Fee of only two-thirds (2/3) of the Fee otherwise resulting from the application of paragraphs 11.11.1 or 11.11.2.

11.11.3. The credit to be allowed to the **Owner** for any individual change consisting of deletions, or additions and deletions, that yields a negative net Cost of the Work Involved, shall be the amount of the net decrease and, if the negative net Cost of the Work Involved exceeds \$10,000.00, a Fee credit of one-fifth of the Fee resulting from the application of paragraphs 11.11.1.1 through 11.11.1.3 shall be added to that amount.

11.11.4. For any change in the Work combining additions, revisions, and deletions, one single Fee for the Work Involved shall be added to the net Cost of the Work Involved, unless the change in the Work combines self-performed **Contractor** Work and Subcontractor Work, or Work of more than one Subcontractor, or both, in which case separate Fees for the **Contractor** Work and for the Subcontractor Work shall be calculated, as appropriate.

11.11.6. In the event unrelated changes in the Work are grouped in a Bulletin, or included in a claim, and each of the changes yields a net increase or decrease in the Cost of the Work Involved, the combined Fee for the changes in the Work so grouped shall be computed as the sum of the individual Fees otherwise calculated under paragraphs 11.11.1 through 11.11.5.

11.12 Fee for Unabsorbed Home Office Overhead:

11.12.1. It is intended that the Fee for the Work Involved allowed under paragraph 11.11 shall be included with any adjustment in Contract Price for any Cost of Work Involved. However, the Fee under paragraph 11.11.1 shall not be intended to cover unabsorbed home office overhead resulting from an extension of the Contract Time stated in paragraph 4.1.1 of Section 00500 Agreement. When justified under the Contract Documents, Fee for unabsorbed home office overhead shall be calculated as detailed in paragraph 11.12.2.

11.12.2. If an extension of the Contract Time stated in paragraph 4.1.1 of Section 00500 Agreement and an increase in Contract Price for such an extension in Contract Time is justified under the Contract Documents, the **Owner** shall negotiate with the **Contractor** the reimbursement of an amount for the **Contractor's** home office overhead (under paragraph 11.10) that will be or were unabsorbed before the expiration of that Contract Time. Any such reimbursement shall be based on the lesser of: (a) the product of the ratio of the **Contractor's** home office overhead to its contract billings times the Contract Price in paragraph 3.1 of Section 00500 Agreement that remains unbilled on the expiration of that Contract Time, or (b) that amount derived from the Eichleay formula.

11.13 Changes in Contract Time for Early Completion:

11.13.1. The Contract Times specified in paragraph 4.1 of Section 00500 Agreement represent the **Professional's** best estimate of the time required to complete the Work and take into account comparisons with completed work similar in scope and character to the Work and constructed under similar conditions.

11.13.2. Since "time is of the essence" in performing this Contract, any early completion Rev. 0 Progress Schedule considered acceptable by the **Owner** shall be construed as setting forth a corresponding amount of Contract Float, unless the **Contractor** delivers notice of a request for a shortening of the Contract Time within thirty (30) Calendar Days after receiving the **Owner's** written notice of "no objection" to such Rev. 0 Progress Schedule.

11.13.3. If the **Contractor** requests that the Contract Times be shortened to eliminate the Contract Float on any such early completion Progress Schedule, and the **Owner** agrees to the **Contractor's** request, the **Owner** and **Contractor** may negotiate a reduction in the affected Contract Time. Concurrently, the **Owner** will develop a level of liquidated damages appropriate to the revised Contract Time(s) or, if more appropriate under the circumstances, the **Owner** will specify actual damages, applicable from the negotiated, earlier Contract Time to the Contract Time under revision. In such case, the aggregate actual damages shall not exceed the sum liquidated damages that may have resulted from the originally specified liquidated damages. Such agreement shall be memorialized through an appropriate Change Order.

11.13.4. If the **Owner** and **Contractor** are unable to agree to such reduction in the Contract Times, or the **Contractor** rejects the **Owner's** assessment of liquidated or the stipulation of actual damages, or both, the Contract Times in question shall remain unaltered and the early completion Progress Schedule shall be employed as provided in the Contract Documents.

11.13.5. To the extent that the Progress Schedule supports an early completion date, and a Delay extends performance of the Work beyond the **Contractor's** early completion date but not beyond the corresponding Contract Time, if the **Contractor** pursues an increase in Contract Price for such Delay in early completion, the **Owner** shall consider such request, subject to the following: (a) the early completion is reasonably achievable, i.e., includes proper allowances for weather, **Owner** and **Professional** activities, rework and other foreseeable events within the control of the **Contractor**, (b) the Progress Schedule used to support the request is loaded with Activity manpower data, and (c) the adjustment in Contract Price shall equal fifty percent (50%) of the **Contractor's** Delay costs otherwise allowable under this Article.

11.13.6. As a point of emphasis, under these provisions, an increase in Contract Time and an increase in Contract Price equaling the **Contractor's** costs occasioned by the Delay (as opposed to only fifty percent (50%) of the **Contractor's** Delay costs), shall be justified only if the Delay attributable to the **Owner** and/or **Professional** necessarily extends Substantial Completion of the Work, or the portion of the Work having a specified Contract Time, beyond the correspondingly specified Contract Time.

11.14 Access to Records:

11.14.1. The **Contractor** shall maintain and keep and shall require all Subcontractors and Suppliers to maintain and keep, in accordance with generally accepted accounting principles, Records pertaining to the bidding, award and performance of the Work, including, but not limited to payroll and employment Records and all data used in estimating the **Contractor's** Bid and in pricing and negotiating Work covered by any Change Order, Change Authorization, proposal or claim.

11.14.2. For changes payable on an *actual cost* basis, or in the event of any claim, dispute, litigation, audit exception or appeal or termination, the **Owner** and any of the **Owner's** duly authorized representatives shall have access to those Records for the purpose of inspection, audit/review and scanning/copying. The **Contractor** shall provide appropriate facilities for access promptly after receiving a request. The **Owner** and any of its duly authorized representatives shall have the right to interview **Contractor** employees. The **Contractor** shall make employees available on Business Days between 8:00 AM and 4:00 PM, as requested.

11.14.3. Payroll and other employment Records of workers assigned to the site, including apprentices and trainees, maintained to comply with the requirements of this provision, shall contain the name and address of each worker, correct wage classification, rate of pay (including contributions, or costs assumed to provide, for fringe benefits), daily and weekly number of hours worked, deductions made, and actual wages paid. The **Contractor** shall maintain Records that show: (a) the anticipated costs or actual costs incurred in providing such benefits, (b) that the commitment to provide such benefits is enforceable, and (c) that the plan or program is financially responsible and has been communicated in writing to the workers affected.

11.14.4. Access to Records, as prescribed in this paragraph, shall be allowed at any time during the execution of the Work and shall remain in full force and effect for five (5) years after final payment, or termination (in the event of termination), or date of final resolution of any dispute, litigation, audit exception or appeal – whichever event actually applies to this Contract.

11.15 Price Reduction for Defective Cost and Pricing Data:

11.15.1. If at any time during the prosecution of the Work, there is good cause to doubt the **Contractor's** compliance with the Defective Cost and Pricing Data requirements of this paragraph 11.15, the **Owner** shall be entitled to make an appropriate withholding from any payment otherwise owed to the **Contractor**.

11.15.2. Whenever the **Contractor** signs a proposal for a Contract Price or Contract Time adjustment, a Change Order or a claim settlement, the **Contractor** will be deemed to have certified, to the **Contractor's** best knowledge and belief, that the representations made and data submitted in pricing and negotiating the Cost of the Work Involved in that price proposal, Change Order, or claim settlement: (a) were made in good faith and are consistent with the facts, (b) are consistent with the provisions of Articles 10 and 11, and (c) are complete, accurate and current as of the date agreement was reached on the corresponding adjustments in Contract Price and/or Contract Time. This certification shall apply in each and every respect to any Subcontractor and Supplier who signs any cost and pricing data attached to any such a proposal for a Contract Price or Contract Time adjustment, Change Order or claim settlement.

11.15.3. If any adjustment in Contract Price or Contract Time made by any Change Order, claim or dispute settlement was increased by a material and significant amount because the **Contractor**, or any Subcontractor or Supplier, at any tier, made representations or furnished cost or pricing data of any kind that were false, contained math errors or were incomplete, the Contract Price shall be correspondingly reduced by Change Order.

ARTICLE 12 PROGRESS PAYMENTS; FINAL PAYMENT

12.1 Schedule of Values:

12.1.1. The Schedule of Values shall be approved by the **Professional** and divide the Work into pay items for significant Sections and areas, facilities, or structures, with subtotals for first tier Subcontractors. If required in Division 1, the Schedule of Values shall be supported by a more detailed breakdown allocating the pay items to the Progress Schedule Activities.

12.1.2. The Schedule of Values shall tabulate labor costs, Subcontract costs and material and equipment costs. Labor costs

shall include appropriate sums for construction equipment costs, general conditions costs, administrative costs (paragraph 11.10) and profit, unless separate pay items are itemized for those costs.

*12.1.3. The Schedule of Values shall include the following close-out pay items: (a) two percent (2%) of the Contract Price for Fire Marshall approval, certificate of occupancy and other code approvals, as specified in the Contract Documents, (b) two percent (2%) of the Contract Price for manufacturer warranties, finalized operating and maintenance documentation, **Owner** training documentation, and test and balance reports, and (c) two percent (2%) of the Contract Price to cover finalized Record Documents.

12.2 Requests for Payment:

12.2.1. Once each month, the **Contractor** shall submit to the **Professional** a Request for Payment on the **Owner's** form signed by the **Contractor** certifying Work completed and enclosing all supporting documentation. Each Request for Payment shall certify that all monies owed by the **Contractor** to Subcontractors and Suppliers for which payment previously has been sought has been paid from payments received and include a sworn statement. No Request for Payment shall include amounts for a Subcontractor or Supplier if the **Contractor** does not intend to use the payments requested, when received, to reduce the **Contractor's** outstanding obligations on the Work.

12.2.2. **The State will only disburse payments under this Contract through Electronic Funds Transfer (EFT).** Contractor must register with the State at <http://www.michigan.gov/SIGMAVSS> to receive electronic fund transfer payments. If Contractor does not register, the State is not liable for failure to provide payment. Without prejudice to any other right or remedy it may have, the State reserves the right to set off at any time any amount then due and owing to it by Contractor against any amount payable by the State to Contractor under this Contract.

12.2.3. Payment to the **Contractor**, if approved by the **Owner**, will be made within thirty (30) Calendar Days after the **Owner** receives and approves a certified Request for Payment from the **Professional**. Payment for authorized reimbursable expenses shall be made monthly in the amount incurred before the cut-off date, provided each payment request expense is properly documented in spreadsheet form detailing the information about the request. The **Contractor** will provide a certification in writing that the payment request submittal is true and accurate.

12.2.4. If payment is requested based on materials and equipment stored at the site or at another location agreed to in writing, the Request for Payment also shall be accompanied by (a) consent of surety, (b) a bill of sale, invoice or other documentation warranting that the **Owner** has received the materials and equipment free and clear of all liens, and (c) evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect them and the **Owner's** interests. If the documentation provided by the **Contractor** to comply with the intent of this paragraph is unsatisfactory, the **Owner** shall be entitled to withhold an appropriate amount from that Request for Payment until the **Contractor** provides documentation acceptable to the **Owner**.

12.2.5. The **Contractor** warrants and guarantees that title to all Work, materials and equipment covered by any Request for Payment, whether incorporated in the Work or not, will pass to the **Owner** free and clear of all liens no later than at the time of payment by the **Owner** to the **Contractor**.

12.3 Review of Request for Payment; Intent of Review:

12.3.1. Within ten (10) Calendar Days after receipt of a Request for Payment, the **Professional** shall certify to the **Owner** the amount the **Professional** determines to be due or shall return the Request for Payment to the **Contractor** indicating the reasons for withholding certification. Certification shall be based on the **Professional's** review of the Request for Payment and enclosed documentation, On-Site Inspections, and on-site Project representation, if any has been provided. If a Request for Payment is returned to the **Contractor**, the **Contractor** shall make the necessary corrections and resubmit that Request for Payment.

12.3.2. The **Professional's** certification of any Request for Payment constitutes a representation to the **Owner** that the Work has progressed to the point indicated; that to the best of the **Professional's** knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents; and that the **Contractor** is entitled to payment in the amount certified. Any such representation by the **Professional**, however, shall be subject to an evaluation of the Work as a functioning whole before and upon Substantial Completion; to the results of any subsequent tests called for in the Contract Documents; to a final determination of quantities and classifications of Unit Price Work (if any is specified) and to any other qualifications stated in the certification.

12.3.3. In the case of final payment, the **Professional's** certification of final payment and recommendation that the Work is acceptable shall be a further representation that conditions governing final payment to the **Contractor** have been met.

12.4 Refusal to Make or to Recommend Payment:

12.4.1. The **Owner** may withhold from any payment an amount based on the **Professional's** refusal to recommend payment or the **Owner's** estimate of the fair value of items entitling the **Owner** to a withholding. Such may include, but not be limited to liquidated damages, claims made against the **Owner** arising out of or related to the Work, payment claims, or failure by the **Contractor** to reimburse the **Owner** any costs the **Owner** is entitled to recover. The **Owner** will give the **Contractor** reasonably prompt written notice supporting such action.

12.4.2. The **Professional** may refuse to recommend all or any part of any payment, or because of subsequently discovered evidence, inspections or tests or the value of the Punch List, nullify all or any portion of any payment previously recommended, as the **Professional** may consider necessary to protect the **Owner** from loss because (a) the Work is Defective or completed Work has been damaged requiring correction or replacement, (b) the Contract Price has been reduced by Change Order, (c) it has been necessary that the **Owner** correct Defective Work or complete Work, (d) reasonable evidence exists that all or a part of the Work will not be completed within the corresponding Contract Time, (e) of the **Contractor's** failure to comply with all material requirements of the Contract, including, but not limited to the failure to submit Progress Schedule Submittals or Record Documents when due, (f) stored materials for which payment has been made or is sought has been determined by the **Professional** to be damaged or missing, (g) amounts are requested for a Supplier which is not the Supplier named in the **Contractor's** completed Section 00440 Schedule of Materials and Equipment or a Supplier approved by the **Professional** through an "or equal" or substitution procedure, or (h) the **Professional** reasonably believes or knows of the occurrence of an event justifying termination for cause.

12.5 Request for Final Payment:

12.5.1. The **Contractor** shall complete the Substantial Completion Punch List within the Contract Time and date fixed by the 12.5.2. Upon written notice from the **Contractor** that the **Contractor** considers the entire Work, or a part of the Work for which final payment is specified in the Contract Documents, to be complete and ready for final payment, the **Professional** will make a final completion inspection with the **Owner** and **Contractor** and notify the **Contractor** in writing of all instances of incomplete or Defective Work revealed by the final inspection. The **Contractor** shall immediately undertake all necessary measure to complete Work in the final completion inspection.

12.5.3. The **Contractor** may request final payment after completing the incomplete or Defective Work to the satisfaction of the **Professional** and delivering final operating and maintenance documentation (with revisions made after Substantial Completion), warranties, inspection certificates, Record Documents (with revisions made after Substantial Completion), release of payment claim forms and all other required documents.

12.5.4. The **Contractor's** request for final payment shall enclose evidence of completed operations insurance and affidavit certifying that the insurance coverage will not be canceled, materially changed or renewal refused except as provided in paragraph 7.4.3, and an affidavit certifying that the surety agrees that final payment shall not relieve the surety of any of its obligations under the Performance Bond and Payment Bond. The **Contractor's** request for final payment shall further include (a) a **Contractor's** "Guarantee and Statement" (available from the **Owner**, form DTMB-0437) containing a statement of guaranteed indebtedness acceptable to the **Owner** in the full amount of the Contract Price, or a release of payment claims in the form of a release of liens, or a Bond or other security acceptable to the **Owner** to indemnify the **Owner** against any payment claim, and (b) a list of all pending insurance claims arising out of or resulting from the Work being handled by the **Contractor** and/or its insurer.

12.6 Final Payment and Acceptance:

12.6.1. If the **Professional** is satisfied that the Work, or a part of the Work for which separate final payment is specified in the Contract Documents, has been completed and the **Contractor's** other obligations under the Contract Documents have been fulfilled, the **Professional** will, within thirty (30) Calendar Days after receipt of the final payment request, furnish to the **Owner** and **Contractor** the **Professional's** certification of final payment and acceptance. If the **Professional** is not satisfied, the **Professional** will return that request to the **Contractor**, indicating in writing the reasons for not certifying final payment, in which case the **Contractor** shall make the necessary corrections and request that final payment again be considered.

12.6.2. If the **Owner** concurs with the **Professional's** certification of final payment, the **Owner** will, within thirty (30) Calendar Days after receipt by the **Owner** of the **Professional's** certified recommendation of final acceptance, pay the balance of the Contract Price, subject to those provisions governing final payment specified in the Contract Documents. If the **Owner** does not concur with the **Professional's** determination, the **Owner** will return the request for final payment to the **Contractor** indicating in writing the reasons for refusing final payment and acceptance. In that case, the **Contractor** shall make the necessary corrections and shall request that final payment be again considered by the **Owner**. The **Owner's** written determination will be binding upon the **Contractor**, unless

Professional. The **Contractor** shall assemble all requisite documentation before requesting final inspection.

the **Contractor** delivers a notice of a claim and a claim Submittal within the deadlines set forth in Article 15.

12.6.3. If final completion of the Work is significantly delayed through no fault of the **Contractor**, the **Owner** may, upon receipt of the **Contractor's** final Request for Payment, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. Payment of the balance due shall be made under the provisions for final payment but shall not constitute a waiver of claims.

12.6.4. The **Owner** shall pay with reasonable promptness any amounts deducted from the final payment, upon resolution of the claims justifying withholding of such monies.

12.7 Contractor's Continuing Obligation:

12.7.1. The following does not constitute acceptance of the Work in the event the Work or any Work is not in accordance with the Contract Documents, and therefore does not release the **Contractor** from its obligation to perform and furnish the Work in accordance with the Contract Documents: (a) a certification by the **Professional** of any Request for Payment or final payment; (b) the issuance of a Substantial Completion certificate; (c) any payment by the **Owner** to the **Contractor**; (d) any Partial Use; (e) any act of acceptance by the **Owner** or any failure to do so; (f) any review and approval of a Shop Drawing, sample, test procedure or other Submittal; (g) any review of a Progress Schedule; (h) any On-Site Inspection; (i) any inspection, test or approval; (j) any issuance of a notice of acceptability by the **Professional**; or (k) any correction of Defective Work or any completion of Work by the **Owner**.

12.8 Waiver of Claims:

12.8.1. The making and acceptance of final payment do not constitute a waiver by the **Owner** of any rights as to the **Contractor's** continuing obligations under the Contract Documents, nor will it constitute a waiver of any claims by the **Owner** against the **Contractor** still unsettled, or arising from unsettled payment claims, Defective Work appearing after final inspection or failure by the **Contractor** to comply with the Contract Documents or the terms of any special warranties provided by the Contract Documents or by Law.

12.8.2. The making and acceptance of final payment will constitute a waiver of all claims by the **Contractor** against the **Owner**, other than those claims previously made in writing, on a timely basis in accordance with Article 15, and still unsettled.

ARTICLE 13 OTHER WORK**13.1 Related Work at Site:**

13.1.1. During the period allowed for the furnishing and performance and completion of the Work, the **Owner** may undertake other work at the site with its own forces, or have other work performed at the site by other parties (including, but not limited to contractors or Public Utilities). If the Contract Documents do not note the performance of any such other work, written notice will be given to the **Contractor** before starting that work.

13.1.2. Whenever work to be performed by the **Contractor** interfaces with other work, the **Contractor** shall coordinate that work with the interfacing work. Paragraphs 13.2 and 13.3 outline representative duties and responsibilities assumed by the **Contractor** under this requirement. Such duties and responsibilities are for the benefit of the parties on the other work to the extent there are comparable provisions for the benefit of the **Contractor** in the contracts between those parties and the **Owner**.

13.2 Coordination Requirements:

13.2.1. If other work is ongoing concurrently with the Work, the **Contractor** shall afford the responsible party proper and safe access to the site. The **Contractor** shall afford the other party a reasonable opportunity for the handling, unloading and storage of their materials and equipment and for the execution of their work.

13.2.2. If any part of the Work, for proper execution or results, interfaces on the work of the **Owner** or another party, the **Contractor** shall inspect and promptly report to the **Professional** in writing conditions in that work that render it unavailable or unsuitable for proper execution and results. The **Contractor's** failure to do so will constitute an acceptance of such other work as fit and proper for integration with the Work except for latent or non-apparent defects and deficiencies in the other work.

13.2.3. The **Contractor** shall do all cutting, fitting, patching, and interfacing of the Work that may be required to make any part of the Work come together properly and integrate with other work. The **Contractor** shall not cut, excavate, or otherwise alter any other work without prior written consent of the party responsible for such other work. The **Contractor** shall supply, install and/or cause items to be built into interfacing Work, verify dimensions of interfacing Work, and notify the **Professional** of interfacing work that is unsatisfactory for, or prevents satisfactory installation of, any Work. Installation of any Work shall constitute acceptance by the **Contractor** of all previously placed interfacing work.

13.2.4. The **Contractor** shall be responsible for cooperating with the **Professional** fully in the coordination of the **Contractor** Submittals with interfacing submittals of other parties whose work in any way integrates with the Work or vice versa. Any such coordinated Submittal of the **Contractor** shall identify, by specific written notation, Work which integrates with the other work and of which the **Contractor** knows or has reason to know.

13.2.5. If the **Owner** contracts for other work, the **Owner** will have authority and responsibility for coordinating the operations of the **Contractor** and the other work. The **Owner** may delegate the specific authority and responsibility for coordinating the operations of the **Contractor** and of those parties performing the other work to another organization either by provision in Section 00800 Supplementary Conditions or at the pre-construction conference.

13.3 Claims Between the Contractor and Other Parties:

13.3.1. If the **Contractor** causes damage to the work or property of others, or if a claim arising out of the **Contractor's** execution of Work is made by another party against the **Contractor**, **Owner** or **Professional**, the **Contractor** shall promptly attempt to settle with that party by agreement or otherwise resolve the claim. The **Contractor** shall in any event, defend, indemnify, and hold harmless the **Owner** and **Professional** from and against all claims, as provided in paragraph 1.4, and/or judgments arising out of or

resulting from damage by the **Contractor** to the work or property of others.

13.3.2. If another party causes damage to the Work or property of the **Contractor**, or if the performance of other work results in any claim by the **Contractor**, the **Contractor** shall promptly resolve the issue by agreement or otherwise resolve the claim. The **Contractor** shall not begin any action against the **Owner** (or its departments, agencies, boards, commissions, officers, and employees) or **Professional** (or their consultants, agents or any of their directors, officers, shareholders, agents, or employees), or permit any action against them to be maintained in the **Contractor's** name or for the **Contractor's** benefit before any court or tribunal, which action seeks to impose liability or recover damages from the **Owner** or **Professional** for such claim.

13.3.3. If the **Contractor** becomes involved in settling or otherwise resolving claims and disputes with other parties performing other work from events covered under paragraphs 13.3.1 or 13.3.2, or because of any other similar controversy, including damage to the Work or other work, or a dispute about responsibility for clean-up or any other issue, neither the **Owner** or **Professional** nor any of their respective consultants, agents, directors, shareholders, officers or employees will be involved in any way in such action (unless subpoenaed or ordered by a court). If the **Owner** incurs costs or damages of the types barred by the provisions paragraphs 13.2.1 and 13.2.2, the **Contractor** shall reimburse those costs and damages to the **Owner**.

13.3.4. Except as excluded in paragraph 13.3.5, if any party performing other work causes Delay upon the Work and if, upon a request from the **Contractor**, the **Owner** determines that any such Delay justifies an increase in Contract Price and/or Contract Time, the **Owner** shall amend the Contract Documents to provide the necessary adjustment in Contract Price or Contract Time, or both.

13.3.5. If a party performing other work is granted an extension in a contract time only (on account of Delay not reasonably anticipatable under the circumstances nor caused, in whole or in part, by any act or omission of the other party, the **Owner**, **Professional** or the **Owner's** representative on that other work), and if, upon a request from the **Contractor**, the **Owner** determines that the time extension granted to the other work requires a change in a coterminous Contract Time in the Contract Documents, the **Owner** shall amend the Contract Documents to provide for the necessary change in Contract Time only.

ARTICLE 14 TERMINATION

14.1 Notice Requiring Assurance of Due Performance:

14.1.1. The **Owner** may request the **Contractor** (with copy to the surety) to provide written assurance of due performance if, at any time, any of the following non-conformances occur, any of which, if not corrected, may justify defaulting the **Contractor**:

14.1.1.1. The **Contractor** fails to complete the Work, or a specified part of the Work, within the corresponding Contract Time; fails or refuses to supply sufficient management, supervision, workers, materials, or equipment; or otherwise fails to prosecute the Work, or any specified part of the Work, with the diligence required to comply with the Contract Time(s).

*14.1.1.2. The **Contractor** persistently disregards the authority of the **Professional** or violates or disregards a provision of the

Contract Documents or the Laws of any Political Subdivision with jurisdiction; or

that the **Contractor** has the financial resources necessary to complete the Work within the Contract Time.

14.1.2. Within seven (7) Calendar Days after the **Contractor** receives a notice requiring assurance of due performance, the **Contractor** shall meet with the **Owner** and present the **Contractor's** plan to correct the non-performance with supporting documentation. If the **Owner** determines that the **Contractor's** plan provides adequate assurance of due performance, that determination shall not waive the **Owner's** right to subsequently default the **Contractor** or affect any rights or remedies of the **Owner** against the **Contractor** and/or surety then existing or that may accrue in the future.

14.2 Contractor Default and Termination for Cause:

14.2.1. The **Owner**, after giving the **Contractor** and surety seven (7) Calendar Days' written notice of intent to default, may declare the **Contractor** in default and terminate the services of the **Contractor** for cause upon the occurrence of one or more of the following events:

14.2.1.1. At or after the meeting referred to in paragraph 14.1.2, the **Owner** determines that there is sufficient cause, giving the issues raised, to default the **Contractor**.

*14.2.1.2. The **Contractor** fails to comply with the Michigan Residency requirements (1984 PA 431, as amended, MCL 18.1241a); or is found to be in violation of Section 4 of 1980 PA 278 concerning unfair labor practices, or any nondiscrimination requirements imposed by Law.

14.2.1.3. The **Contractor** violates or breaches any material provision of the Contract Documents which provides contractually for the for-cause termination or rescission of the Contract or of the **Contractor's** right to complete the Work.

14.2.1.4. A trustee, receiver, custodian, or agent of the **Contractor** is appointed under contract, as opposed to under bankruptcy Law, whose appointment or authority to take over the **Contractor's** property is for the purpose of enforcing a lien against such property or for the general administration of such property for the benefit of the **Contractor's** creditors; or

14.2.1.5. It is determined that gratuities, including, but not limited to entertainment, gifts or donations were given by or on behalf of the **Contractor** to an official, agent, servant, or employee of the **Owner** or **Professional** to secure the Contract or favorable treatment with respect to the awarding or amending or the making of any determination relative to the execution of the Work.

14.2.2. Unless otherwise agreed between the **Owner** and **Contractor**, at the expiration of the seven (7) Day (intent to default) period, the **Contractor** shall immediately stop all Work and proceed in accordance with the **Owner's** instructions. Following receipt, and expiration, of a second seven (7) Day written notice period intended to allow the surety to complete an investigation of the default, the surety shall immediately:

14.1.1.3. The **Contractor** admits in writing, or the **Owner** otherwise establishes, the **Contractor's** inability or refusal to pay the **Contractor's** debts generally as they become due; or in response to the **Owner's** demand, fails to provide adequate, written assurance

14.2.2.1. If approved by the **Owner**, arrange for the **Contractor** to continue with performance and prosecution of the Work to completion; or

14.2.2.2. Undertake to perform and complete the Work, in accordance with the Contract Documents, in place of the **Contractor**, either through the surety's agents or by executing Sub agreements with qualified contractors (excluding the **Contractor** and any of the **Contractor's** affiliates), or both; and

14.2.2.3. If agreed to by the **Owner**, waive the surety's rights set forth elsewhere in this Article, and with reasonable promptness under the circumstances, after investigating in good faith and with due care and diligence, determine the amount for which it may be liable to the **Owner**, and present that determination to the **Owner**. If the **Owner** rejects that amount, the surety shall negotiate a sum acceptable to the **Owner** and promptly pay that amount to the **Owner** in full and with interest from the date the termination of the **Contractor's** services became effective. If the **Owner** rejects the sum determined by the surety, or if the surety fails to negotiate an agreement with the **Owner** on the amount of the surety's liability, the **Owner** shall have full power and authority to default the surety.

14.2.3. If the **Owner** has terminated the **Contractor**, and the surety elects to act under paragraph 14.2.2.2, the **Owner** will determine in good faith the amount necessary to cover the total direct, indirect and consequential costs (including, but not limited to liquidated damages, costs of correcting Work, fees and charges of engineers, architects, attorneys and others and any other costs and damages for which the surety is liable under Section 00610 Performance Bond) that the **Owner** believes it will sustain from that default. The **Owner** will communicate its determination to the surety, and the **Owner** will deduct that amount in its entirety from Requests for Payment under the Contract Documents. Upon completion of the Work, if the unpaid balance of the Contract Price is not sufficient to reimburse the **Owner** for all actual direct, indirect, and consequential costs resulting from the default of the **Contractor**, the surety and **Contractor**, jointly and severally, are liable to the **Owner** for the difference, which they shall pay to the **Owner** promptly.

14.2.4. If the **Owner** has terminated the **Contractor**, and the surety elects to act under paragraph 14.2.2.2, the surety's contract with another contractor makes that contractor a Subcontractor under the Contract, in which case: (a) the provisions of Article 11 shall remain in full force and effect, (b) the methods and criteria to be used to compute the surety's (in lieu of the **Contractor's**) and that contractor's Cost of and Fee for any Work involved shall be limited to those provided in Article 11, and (c) all Work performed by any such contractor pursuant to a Sub agreement with the surety shall be governed by the flow-through requirement in paragraph 5.1.6, the waiver of rights of subrogation provision in paragraph 7.8 and any other requirements of the Contract Documents governing Sub agreements.

14.2.5. If the **Owner** has terminated the **Contractor**, any such termination will not affect any rights or remedies of the **Owner** against the **Contractor** or surety, or both, then existing or that may accrue after termination. All provisions of the Contract Documents that, by their nature, survive final acceptance of the Work shall remain in full force and effect after a termination for cause of the **Contractor** or default of the surety, or both.

14.2.6. The **Owner** may, in its sole discretion, permit the **Contractor** to continue to perform Work when the **Contractor** is in default or has been defaulted. Such decision by the **Owner** shall in no way operate as a waiver of any of the **Owner's** rights under the Contract

14.3 Surety Default:

14.3.1. If upon receipt of a notice of termination for cause, the surety fails to proceed immediately and as provided in paragraph 14.2.2, the **Owner** shall declare the surety in default under Section 00610 Performance Bond in accordance with the terms and conditions of this paragraph.

14.3.1.1. No default of the surety under the Section 00610 Performance Bond shall be declared, however, until the expiration of fifteen (15) Calendar Days after receipt by the surety of an additional written notice from the **Owner** demanding that the surety perform its obligations under Section 00610 Performance Bond.

14.3.2. If the **Owner** declares the surety in default, the **Owner** shall have full power and authority to exclude the surety and **Contractor** from the site, assume any Sub agreements that the **Owner** so selects and take possession of the Work and of all the surety's and **Contractor's** tools, plant and office, and construction equipment at the site (without liability to the surety or **Contractor** for trespass, rent or conversion). The **Owner** will (a) proceed to the full extent that the surety and **Contractor** could have proceeded, (b) incorporate into the Work all materials and equipment stored at the site or elsewhere, and (c) prosecute the Work to completion as the **Owner** may deem expedient. When the **Owner** exercises any of the rights or remedies provided in this paragraph, the **Owner** shall not be required to obtain the lowest price for Work performed.

14.3.3. If the **Owner** has defaulted the surety, any such termination or default will not affect any rights or remedies of the **Owner** against the **Contractor** or surety, or both, then existing or that may accrue after termination. Any retention or payment of monies due the **Contractor** or surety by the **Owner** will not release the **Contractor** or surety from liability. All provisions of the Contract Documents that, by their nature, survive final acceptance of the Work shall remain in full force and effect after a termination for cause of the **Contractor** or default of the surety, or both.

14.4 Termination for Convenience of the Owner:

14.4.1. Upon fifteen (15) Calendar Days' written notice to the **Contractor** and surety, or sooner if reasonable under the circumstances, the **Owner** may, without cause and without prejudice to any other right or remedy it may have, elect to terminate any part of the Work, or the Agreement in whole or in part, as the **Owner** may deem appropriate for its convenience. Upon receipt of any such termination notice, the **Contractor** shall immediately proceed in accordance with any specific instructions, protect and maintain the Work, and make reasonable and diligent efforts to mitigate costs associated with the termination.

14.4.2. In any termination for convenience, the **Contractor** shall be paid for (a) Work completed, in accordance with the Contract Documents, before receipt of the notice of termination, and (b) reasonable termination settlement costs for commitments that had become firm before the termination. The **Contractor** shall not be paid any anticipated and unrealized general conditions costs, administrative expenses, and profit for uncompleted Work. If no agreement can be reached as to reasonable termination costs, the **Owner** will make a determination in writing which shall be final and binding on the **Contractor** unless the **Contractor** delivers notice of

Documents or Section 00610 Performance Bond, nor in the event of a subsequent default, entitle the **Contractor** or surety to continue to perform or prosecute the Work to completion.

a claim and a claim Submittal in accordance with the procedures and within the deadlines set forth in Article 15.

14.4.3. Upon termination for convenience, the **Owner** shall have full power and authority to take possession of the Work, assume any Sub agreements with Subcontractors and Suppliers that the **Owner** selects, and prosecute the Work to completion by contract or as the **Owner** may deem expedient.

14.4.4. If after notice of termination of the services of the **Contractor**, it is determined the **Contractor** was not in default, the termination shall be deemed to have been for the convenience of the **Owner**. In such event the **Contractor** may recover from the **Owner** payment in accordance with paragraph 14.4.2.

14.5 The Contractor May Suspend Work:

14.5.1. In addition to being entitled to earning interest on unpaid Requests for Payment, the **Contractor** may, upon fifteen (15) Calendar Days written notice to the **Owner**, suspend the Work for the **Owner's** convenience if, through no act or fault of the **Contractor**, the **Professional** fails, for thirty (30) Calendar Days, to initiate processing of any Request for Payment or the **Owner** fails, for ninety (90) Calendar Days, to pay the **Contractor** any Request for Payment finally certified by the **Professional** to be due.

14.5.2. Except as specifically provided in paragraph 14.5.1, this provision shall not relieve the **Contractor** of the **Contractor's** obligations to prosecute the Work in accordance with the Progress Schedule and without Delay during any disputes and disagreements with the **Owner**.

ARTICLE 15 DISPUTES

15.1 Claims Under This Article:

15.1.1. All claims, counterclaims, disputes, and other matters in question between the **Owner** and **Contractor** arising out of or relating to the Contract Documents or the breach thereof, shall be submitted in writing to the **Professional** and otherwise processed and resolved as provided in this Article.

15.1.2. A claim means a written demand or assertion by the **Owner** or **Contractor**, which is properly certified, seeking an adjustment in Contract Price and/or payment of moneys due, an extension or shortening in Contract Time, the adjustment or interpretation of Contract terms, or other relief arising under or relating to the Contract, which becomes a claim or dispute after a written determination by the **Professional** or **Owner** under the appropriate provision of the Contract Documents.

15.1.3. Unless otherwise agreed between the parties, any claim that can be resolved under a provision of the Contract Documents providing for or excluding the relief sought by the claimant shall be resolved in accordance with that provision.

15.1.4. Notice of Claim - Except for **Owner** claims for liquidated damages, no claim shall be valid unless it is based upon written notice delivered by the claimant to the other party promptly, but in no event later than thirty (30) Calendar Days after the **Professional's**

or **Owner's** determination giving rise to the claim. The notice shall include a supporting statement stating the nature of the dispute, the amount involved, if any, and the remedy sought. The claim submittal with all supporting data shall be delivered within sixty (60) Calendar *15.1.5. A claim by the **Contractor** shall be submitted to the **Professional** and **Owner** for a recommendation or decision from the **Professional** and, if necessary, an **Owner** determination. A claim by the **Owner** shall be submitted to the **Contractor** and the **Professional** for a written recommendation or decision by the **Professional**. The **Owner** reserves the right to audit, using the provisions in paragraph 11.14, any **Contractor** claim (or claim package) that the **Contractor** values at more than \$50,000.00.

15.1.6. Pending final resolution of any claim under this Article, the **Contractor** shall proceed diligently with the Work and comply with any decision of the **Owner** and/or **Professional**

15.2 Requirement for Certification of Contractor Claims:

15.2.1. For all **Contractor** claims seeking an increase in Contract Price or Contract Time, the **Contractor** shall submit an affidavit, certifying that the amount claimed accurately reflects any Delay and all costs that the **Contractor** is entitled from the occurrence of the claimed event and that supporting cost and pricing data are current, accurate, complete and represent the **Contractor's** best knowledge and belief. The affidavit shall be executed by an officer or partner of the **Contractor** with proper authority or his/her designee.

15.3 Recommendations or Decisions from the Professional:

*15.3.1. For **Contractor** claims under \$100,000.00, if requested in writing by the **Contractor**, the **Professional** will render a recommendation or decision within thirty (30) Calendar Days after the request and the **Owner** will issue, if necessary, a determination within thirty (30) Calendar Days after the **Professional's** recommendation or decision. For **Contractor** claims exceeding \$100,000.00, the **Professional** will issue its recommendation or decision and the **Owner**, if necessary, will issue its determination, within sixty (60) Calendar Days after completing an audit of the claim, or after deciding not to conduct such an audit or, in the alternative, will notify the **Contractor** of the date when the determination will be made. In the latter case, a final determination will be concluded within sixty (60) Calendar Days from the date of such notification.

*15.3.2. For **Owner** claims under \$100,000.00, the **Professional** will render a recommendation or decision within thirty (30) Calendar Days of the request. For **Owner** claims over \$100,000.00, the **Professional**, within sixty (60) Calendar Days, will render a recommendation or decision or notify the **Owner** and **Contractor** when such will be rendered.

*15.3.3. To the extent any **Professional's** decision is to deny a **Contractor** claim or to agree with an **Owner** claim, that decision shall be final and binding on the **Contractor**, without any determination by the **Owner**, unless the **Contractor** files a request for a presentation with the **Director-DCD** within thirty (30) Calendar Days as required by paragraph 15.4.1. Unless a claim is made in accordance with these requirements, it shall be waived.

*15.3.4. To the extent that any recommendation from the **Professional** is partly or wholly adverse to a claim from the **Owner**, that determination shall be final and binding on both the **Owner** and **Contractor** unless either party files a request for a presentation with the **Director-DCD** as required in paragraph 15.4.1.

Days after the determination giving rise to the claim (unless the **Professional** allows an extension). The responsibility to substantiate claims shall rest with the claimant.

*15.3.5. To the extent the **Professional** recommends payment of any **Contractor** claim which increases the Contract Price, that recommendation shall be subject to a determination from the **Owner** in a written opinion. In the event any such determination from the **Owner** is partly or wholly adverse to the preceding recommendation from the **Professional**, that determination shall be final and binding on the **Contractor** unless the **Contractor** files suit in the Michigan Court of Claims within thirty (30) Calendar Days after receipt of such determination. Unless a claim is made in accordance with these requirements, it shall be waived.

15.4 Determinations by the Director-DCD:

*15.4.1. If either the **Contractor** or **Owner** is not satisfied with any decision of the **Professional** rendered pursuant to paragraph 15.3.3 or 15.3.4, that party shall, within thirty (30) Calendar Days of receiving that decision, file a written appeal with the **Director-DCD**. If a **Contractor** or **Owner** appeal is timely filed, the claimant shall be entitled to present its claim, unless waived, to the **Director-DCD**, or his/her designee, provided that a claim narrative with complete supporting documentation is delivered to the **Director-DCD**, or his/her designee, within thirty (30) Calendar Days of that party's written notice of appeal.

*15.4.2. Within thirty (30) Calendar Days after receipt of any such claim narrative, the **Director-DCD**, or his/her designee, shall schedule the time to start the presentations taking into account the dispute's complexity and the urgency of its resolution. Subject to any recognized privilege, discovery shall be available to either party as provided by the **Director-DCD**, and his/her designee, and shall be concluded thirty (30) Calendar Days before the start of the presentations.

*15.4.3. During the presentations, the **Director-DCD**, or his/her designee, shall hear presentations and receive evidence on the matters in dispute, as supported by the statement of the dispute. The **Director-DCD**, or his/her designee, shall have discretion concerning the allowability of evidence submitted, and shall not be bound to any rules of evidence other than those he/she promulgates.

*15.4.4. If the right to a presentation is waived or if a presentation is conducted and the dispute remains unresolved, the **Director-DCD**, or his/her designee, at his/her sole option, shall specify in which forum the dispute shall thereafter be conducted by issuing a written determination to the **Contractor** that the dispute if the **Contractor** so elects, be submitted in writing to:

*15.4.4.1. The Court of Claims maintained by the State of Michigan for the purpose of adjudicating claims against the State or other appropriate court, or

*15.4.4.2. Arbitration in accordance with the construction industry rules of arbitration of the American Arbitration Association, subject to the provisions of paragraphs 15.5.1 and 15.5.2, unless the parties mutually agree otherwise.

*15.4.5. The **Director-DCD's**, or his/her designee's, determination on the forum in which the dispute shall be conducted is final and binding upon the **Owner** and **Contractor**. The **Director-DCD's**, or his/her designee's determination on the dispute shall be final and binding on the **Contractor** unless the **Contractor** files a lawful

action in the forum so chosen (Michigan Court of Claims or arbitration) within thirty (30) Calendar Days after receiving the **Director-DCD's**, or his/her designee's, determination.

the Michigan Court of Claims or requests arbitration, and the final determination of either forum does not increase the **Contractor's** recovery by thirty (30%) percent or more above that awarded by the **Director-DCD**, or his/her designee, or voluntarily withdraws the action, the **Contractor** shall pay all resulting expenses of the **Owner** (including, but not limited to reasonable charges of attorneys, engineers, others and court or arbitration costs)

15.5 Supplements to AAA Arbitration:

*15.5.1. No arbitration, arising out of, or relating to the Contract Documents shall include, by consolidation, joinder or in any other manner, any additional party not a party to this Contract, except by written consent containing a specific reference to the Agreement and signed by all the parties involved. Consent shall be deemed given by any party who has executed an agreement directly with the **Owner** affected by the Project and containing provisions comparable to those in this Article 15. Any consent to arbitration involving any additional party or parties shall not constitute consent to arbitration of any dispute not permitted in this Article. The agreement to arbitrate with any additional party or parties duly consented to by the parties to this Contract shall be specifically enforceable under the prevailing arbitration Law.

15.5.2. Subject to any recognized privilege, discovery shall be available to each party to the arbitration as it would be available under the general court rules of the Michigan Court of Claims which shall be enforced by the American Arbitration Association. All discovery and amendments to the prehearing summary shall conclude thirty (30) Calendar Days before the arbitration date. Failure to provide the foregoing discovery shall render any claim supported by witnesses or documents not so disclosed excludable by the arbitration panel in its discretion.

*15.4.6. If, after such determination from the **Director-DCD**, or his/her designee, the **Contractor** properly submits the dispute to

15.6 Interest on a Judgment; Payment of Judgment:

*15.6.1. If, subsequent to a determination by the **Director-DCD**, or his/her designee, the **Owner** or **Contractor** files a Michigan Claims Court or AAA arbitration action, and the party filing for such action increases its recovery by thirty (30%) percent or more above that awarded by the **Director-DCD**, or his/her designee, that party shall be entitled to interest calculated in accordance with MCL 600.6013, as amended, whether the action is filed with the Michigan Court of Claims or the American Arbitration Association.

*15.6.2. After settlement or final adjudication of any claim under this Article if, upon demand, payment by the **Contractor** is not made to the **Owner**, the **Owner** may offset the appropriate amounts against (a) payments due to the **Contractor** under any other contract between the **Owner** and the **Contractor**, or (b) any amounts for which the **Owner** may be obligated to the **Contractor** in any capacity.

15.7 Venue; Flow-Through Provision:

15.7.1. The **Contractor** agrees to waive jurisdiction and venue, to consent and submit to the jurisdiction of, and not commence any action in other than, a competent State court in Ingham County, Michigan, unless original jurisdiction is vested in the Michigan Court of Appeals, the Michigan Court of Claims, or the Michigan Supreme Court, regardless of residence or domicile, for any action or suit at law or in equity arising out of or under the Contract Documents. The **Contractor** further agrees that it will have each of its Suppliers and Subcontractors provide similar waivers as those required in this paragraph.

15.7.2. The **Contractor** shall insert the provisions of this Article in all Sub agreements, altering those paragraphs only to identify properly the contracting parties.

END OF SECTION 00700

SECTION 00800 SUPPLEMENTARY CONDITIONS

PROFESSIONAL – Commtech Design, Inc

WORK – Replace Security System Programmable Logic Controllers

FILE No. - 491/23066.SDW

The provisions of this Section 00800 Supplementary Conditions amend or supplement Section 00700 General Conditions and those other provisions of the Contract Documents, as indicated below. All other provisions of the Contract Documents that are not so amended or supplemented remain in full force and effect.

ARTICLE 4 CONTROL OF THE WORK – GENERAL PROVISIONS

ADD Section 4.4.14 as follows:

4.4.14 The Contractor shall note and comply with APPENDIX I SPECIAL WORKING CONDITIONS and APPENDIX II SPECIAL PROJECT PROCEDURES as part of and in conjunction with all other contract requirements. APPENDIX I & II immediately follow and are attached hereto SECTION 00800.

ARTICLE 7 LEGAL AND CONTRACTUAL REQUIREMENTS; INSURANCE

ADD Section 7.14.3 for projects with Federal Funding:

7.14.3 FEDERALLY FUNDED PROJECT PREVAILING WAGE REQUIREMENTS

If a project is funded in whole or in part by federal dollars, the Contractor and all Subcontractors must comply with the most recent version of Federal Provisions Addendum and all Laws pertaining to occupational classifications and prevailing wage requirements as follows:

1. FEDERAL PROVISIONS ADDENDUM
 - a. The most current version of Federal Provisions Addendum shall apply to this contract and is included in Appendix III.
2. DAVIS BACON ACT WAGE AND CLASSIFICATIONS
 - a. If applicable, the Contractor (and its Subcontractors) for prime construction contracts in excess of \$2,000 must comply with the Davis-Bacon Act ([40 USC 3141-3148](#)) as supplemented by Department of Labor regulations ([29 CFR Part 5](#), "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").
 - b. The Contractor (and its Subcontractors) shall pay all mechanics and laborers employed directly on the site of the work, unconditionally and at least once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the advertised specifications, regardless of any contractual relationship which may be alleged to exist between the Contractor or subcontractor and the laborers and mechanics.
 - c. The Contractor will post the scale of wages to be paid in a prominent and easily accessible place at the site of the work.
 - d. There may be withheld from the Contractor so much of accrued payments as the contracting officer considers necessary to pay to laborers and mechanics employed by the Contractor or any Subcontractor on the work the difference between the rates of wages required by the Contract to be paid laborers and mechanics on the work and the rates of wages received by the laborers and mechanics and not refunded to the Contractor or Subcontractors or their agents.
 - e. The Contractor shall maintain payrolls and basic records relating thereto for a period of three (3) years after the project; contractor shall submit Certified Payroll Reports using US Department of Labor Wage and Hour Division Form WH-347 for each weekly payroll to support and document compliance with the Davis Bacon Wage rates.
 - f. Davis Bacon wage and classification schedules applicable for this project/location are included in Appendix III.

ARTICLE 15 DISPUTES

REPLACE Section 15.1.2 with the following:

15.1.2. A claim means a written demand or assertion by the Owner or Contractor, which is properly certified, seeking an adjustment in Contract Price and/or payment of moneys due, an extension or shortening in Contract Time, the adjustment or interpretation of Contract terms, or other relief arising under or relating to the Contract. If a Bulletin or specific request for proposal has been issued by the Professional or Owner and quoted by the Contractor, it may become a claim or dispute with proper written notice per 15.1.2.1 should the Contractor is object to a written determination and/or rejection by the Professional or Owner under the appropriate provision of the Contract Documents.

ADD Section 15.1.2.1 – Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker (Professional/PSC). Claims by either party must be initiated within 21 days after the occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognized the condition giving rise to the claim. Provided such timely notice is delivered, a full and detailed breakdown of cost and time requested, with supporting documentation, if not provided with initial notice shall be delivered to Professional and Owner within 15 days of the notice, as noted in article 11.1.2, unless otherwise agreed in writing, by the Owner prior to expiration of such time.

ADD Section 15.1.2.2 – Pending final resolution of a Claim, except as otherwise agreed in writing or as provided under conditions of failure of timely progress payment or Article 14, the Contractor shall ensure the Work diligently proceeds with the performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Owner shall prepare Change Orders and PSC shall certify payment requests in accordance with the decisions of the Initial Decision Maker.

REPLACE Section 15.1.4 with the following:

15.1.4. Notice of Claim - Except for **Owner** claims for liquidated damages, no claim shall be valid unless it is based upon written notice delivered by the claimant to the other party and the Professional/PSC within 21 days as per 15.1.2 and 15.1.2.1. The notice shall include a supporting statement stating the nature of the dispute, the amount involved, if any, and the remedy sought. The claim submittal with all supporting data shall be delivered within thirty (30) Calendar Days after Notice (unless the **Professional** allows an extension). The responsibility to substantiate claims shall rest with the claimant.

END OF SECTION 00800**SECTION 01310 PROGRESS SCHEDULE****PART 1 - GENERAL****1.01 SUMMARY**

A. The **Contractor** will submit CPM Progress Schedules to the **Owner** depicting its approach to prosecution of the Work. This includes but is not limited to the **Contractor's** approach to recovering schedule and managing the effect of changes, substitutions, and Delays on Work sequencing.

B. The Progress Schedule will include the Rev. 0 Submittal (par. 3.02), Update Submittals (par. 3.03) and Revision Submittals (par. 3.04). Each Submittal will be assigned a unique number. For a resubmission, the initial number will be modified by the letter A, B, C, etc., as appropriate.

C. Through the Progress Schedule, the **Owner** will seek to stay current on progress, updated Activity and Milestone Dates, and the **Contractor's** approach to Work remaining.

D. References to the Critical Path Method (CPM) are to CPM construction industry standards that are consistent with the requirements of this Section 01310.

1.02 RELATED SECTIONS

A. Section 00440 Schedule of Materials and Equipment; Section 00500 Agreement; Section 00700 General Conditions; and Section 00800 Supplementary Conditions.

1.03 GLOSSARY OF TERMS

A. Capitalized terms not already defined in any Division 0 Specification have the following intent and meanings:

1. Milestone—A key point of progress, designating interim targets toward the Contract Times. They may pinpoint critical path foundations, key deliveries, building framing, start of MEP rough-in, building enclosure, partitions, interior finishes, conditioned space, commissioning stages, Substantial Completion, and other events of like import.
2. Official Schedule—The most recent Revision Submittal returned to the **Contractor** as Resubmittal Not Required. The Rev. 0 Official Schedule is the *As-Planned* Schedule.
3. Revision 0 Submittal—Progress Schedule submitted by the **Contractor** depicting the entire Work as awarded.
4. Update Submittal—A monthly Progress Schedule update reflecting progress and minor adjustments on the Activities, sequencing and restraints for Work remaining.

1.04 QUALITY ASSURANCE

A. The **Contractor** will obtain a written interpretation from the **Professional**, if the **Contractor** believes the selection of Activities, logic ties or restraints requires an interpretation of the

Contract Documents. With each submission, the **Contractor** will point out by specific, written notation, any Progress Schedule feature that may reflect variations from any requirements of the Contract Documents.

B. The **Contractor** is responsible to obtain information from each Subcontractor and Supplier when scoping their respective Activities, Values, logic ties and restraints

C. No review of any Progress Schedule by or on behalf of the **Owner** will relieve the **Contractor** from complying with the Contract Times and any required sequence of Work or from completing Work omitted from the Progress Schedule. No review will imply approval of any variation from or interpretation of the Contract Documents, unless approved by the **Professional** through a written interpretation or by means of a separate, written notation.

1.05 ALLOWANCES

A. Work covered by Cash Allowances will be completed within the Contract Times. To the extent reasonable and consistent with the **Contractor's** plan, Work authorized by contingency allowances will be completed within the Contract Times. The Progress Schedule will incorporate the **Contractor's** best estimate of the Activities, logic and restraints required, using the information in the Contract Documents, or as indicated by the **Professional** in writing.

1.06 "OR EQUALS" AND SUBSTITUTIONS

A. Activities in the Rev. 0 Progress Schedule will be based on materials and equipment required by the Contract Documents and will not reflect any "or equal" or substitute materials or equipment, even if the **Contractor** intends to pursue "or equal" and substitution proposals. This limitation also applies to any Means and Methods indicated in or required by the Contract Documents.

1.07 MEASUREMENT AND PAYMENT

A. The Schedule of Values will include a Progress Schedule *pay item*. Fifteen percent (15%) of this *pay item* will be eligible for payment upon delivery of the *complete* Rev. 0 Submittal. The balance of this *pay item* will be eligible for payment, on a prorated basis, with each Request for Payment attaching an Update Submittal.

PART 2 - WORK PRODUCTS

2.01 PROGRESS SCHEDULE SUBMITTALS

A. Each Progress Schedule Submittal will consist of an electronic disk with the **Contractor's** files, a narrative and three (3) copies of the required reports and plots.

B. The CPM scheduling software will be Primavera Project Planner®, SureTrak® or Microsoft Project®.

2.02 PRINTOUTS

A. Schedule Reports will include Activity (ID) code and description, duration, calendar, Early Dates, Late Dates and Total Float, all of which will comport with the requirements of paragraph 8.3.4 of Section 00700 General Conditions.

1. Late Finish Date for an Activity pinpointing a Contract Time will equal that Contract Time. Early Start Date for an Activity designating a Contract restraint will equal the proper Notice to Proceed date. Schedule Reports may or may not append CPM Plots (time-scaled Activity/logic).

2. For Precedence Diagram Method, separate Schedule Reports will tabulate, for each Activity, all preceding and succeeding logic types and lead times, whether CPM Plots displaying vertical logic ties are appended or not.

B. CPM Schedule Plots will be plotted on a suitable time scale and identify the Contract Times, Critical Paths, and sub-Critical Paths. Activities will be shown on the Early Dates with Total Floats noted by Late Date flags.

C. Line of Balance Plots will reflect industry practice for repetitive construction and will segregate the production lines for all trades within the hammock Activities.

2.03 NARRATIVE REQUIREMENTS

A. In general, a narrative will describe the **Contractor's** approach to prosecution of the Work, subject to the requirements of the Contract Documents. Further, each narrative will list the Critical Path Activities and compare Early and Late Dates with Contract Times and Milestone Dates. The basis for restraint dates will be explained.

B. For each Update Submittal, the narrative will compare current Dates to the respective Milestone Dates, describe changes in crewing and construction equipment and identify new Delays. For each Revision Submittal, the narrative also will itemize changes in Activities, logic ties and restraint dates made necessary by each change, Delay, schedule recovery, substitution and **Contractor**-initiated revision occurring since the previous Submittal.

2.04 ACTIVITY REQUIREMENTS

A. The Progress Schedule will detail Work sequencing only to the extent necessary to allow the **Owner** to correlate percent complete, compare actual dates with Milestones and Contract Times and the data in Requests for Payment.

B. Separate Activities will designate permits, construction, Submittal preparation/review (and resubmission and re-review, for same); MEP coordination drawings; deliveries; commissioning; and Punch List. Separate Activities will designate **Owner**-furnished items, interface with other work and the **Owner** and **Professional's** responsibilities.

B. Activities will be detailed only to the extent required to show the transition of trade Work. Activities will detail the progression through site/excavation, foundations, building framing, start/completion of interior partitions, MEP rough-in, building enclosure, interior finishes, conditioned space, and commissioning.

1. Submittal Activities will segregate long-lead items, any item requiring structural access and other procurements that, in the **Contractor's** judgment, may bear on the rate of progress. Separate MEP coordination drawing Activities will be used for each floor. Beyond these requirements, it is not necessary to burden the Progress Schedule with Activities for less significant Submittals and deliveries.

2. For multiunit Work (e.g., rough-in overhead MEP for each floor, etc.), detailed Activities will be shown for a typical (often, the first) unit). Other or follow-on units may be replicated, as appropriate, or modeled with a hammock Activity combining the sum total of the typical detailed Activities. Separate Activities, as may be suitable to the Divisions of Work involved, will be identified for single-unit

Work. This requirement applies to such scope as Work in mechanical rooms, building framing, commissioning, etc.

3. Activities will not combine separate or non-concurrent items of Unit Price or lump sum Work, Work in separate structures and Work in distinct areas, locations or floors within an area or structure; or rough-in and finish Work.

C. Activity durations will equal the Business Days required to sufficiently complete the Work designated by the Activity (i.e.,

PART 3 – EXECUTION

3.01 FLOAT TOLERANCES

A. Any Progress Schedule with Early Dates after a Contract Time will yield negative Total and Contract Floats, whether shown/calculated or not. Any Revision Submittal with less than negative twenty (20) Days of Float will be returned as "Revise and Resubmit," unless a time extension is requested, or the **Owner** withholds liquidated damages or asserts intent to do so in the event schedule is not recovered.

B. Floats calculated from the definitions given in Section 00020 Glossary supersede any conflicting Float values calculated within any early completion Progress Schedule.

3.02 REVISION 0 (Rev. 0) SUBMITTAL

A. The complete Revision 0 Submittal will be due with the first Request for Payment. The Rev. 0 Submittal will show the Work as awarded, without Delays, "or equal" or substitutions, Change Orders or Change Authorizations.

1. The Rev. 0 narrative will detail the **Contractor's** management of the site (lay down, parking, etc.). Further, the Rev. 0 narrative will identify shifts, weekend Work, Activity calendars, Delays since award and all pending and anticipated "or equal" and substitution proposals.

E. Once endorsed by the **Owner** and returned as "Resubmittal Not Required," the Rev. 0 Progress Schedule (or Rev. 0A, etc.) will be the As-Planned Schedule and the basis for Update Submittals until the Rev. 1 Official Schedule is established. Once the As-Planned Schedule is established, the **Owner** will select Milestones and note Milestone Early and Late Dates. As the Official Schedule evolves, Milestone Dates will be revised accordingly.

F. If the **Owner** refuses to endorse the Rev. 0 Submittal (or Rev. 0A, for a resubmission) as "Resubmittal Not Required," the As-Planned Schedule will not be established. In that event, the **Contractor** will continue to submit Update and Revision Submittals reflecting progress and the **Contractor's** approach to remaining Work. The **Owner** will rely on the available Update and Revision Submittals, subject to whatever adjustments it determines appropriate.

when finish-to-start successors may start, even if the Activity is not quite 100% complete). Installation Activities will last from twenty (20) to forty (40) Days.

D. Activities will be assigned consistent descriptions and identification codes. Sort codes will group Activities by building or structure, floor or area, Change Order and Change Authorization and other meaningful scheme

3.03 UPDATE SUBMITTALS

A. Update Submittals with progress up to the closing date and updated Early and Late Dates for progress and remaining Activities will be due with each Request for Payment. As-built data will consist of actual start dates, percent complete, actual finish dates, changes, Delays, and other significant events occurring before the closing date.

3.04 REVISION SUBMITTALS

A. Progress Schedule Revisions will be submitted with the third Request for Payment and every two (2) months after that, or more often, if necessary due to schedule recovery or other Progress Schedule revisions. Revisions will revise the Update Submittal attached to the prior Request for Payment.

B. Progress Schedule revisions will detail all impacts on pre-existing Activity scope, logic ties and restraint dates and reflect the Contractor's current approach to Work remaining. Revisions may be required because of changes in the Work, substitutions, schedule recovery and Delays.

C. Once endorsed by the **Owner** and returned as "Resubmittal Not Required," a Revision Submittal becomes the Rev. 1, Rev. 2, etc. Official Schedule and the basis for subsequent Update Submittals until a more current Official Schedule is established. If the **Owner** refuses to endorse a Revision Submittal as "Resubmittal Not Required," the **Contractor** will continue to submit Update and Revision Submittals when and as required in this Section.

3.05 RETROSPECTIVE DELAY ANALYSIS

A. If the **Owner** refuses to endorse any Revision Submittal as "Resubmittal Not Required," the **Contractor** and **Owner** will use the latest Official Schedule when evaluating the effect of Delays on Contract Time and/or Contract Price. The procedure will consist of progressively revising the latest Official Schedule at key Revision Submittal closing dates. For each Progress Schedule iteration, slippage between actual Milestone Dates and Rev. 0 Milestone Dates will be correlated to Delays occurring solely in that iteration. Revisions affecting Work after any iteration will be included only to the extent consented by the **Owner** at that time and/or if actually confirmed by as-built progress.

END OF SECTION 01310

This 01310 Specification uses the FORMSPEC™ Section 01310 Model Progress Schedule Specification (CPM Short Form). Title to and use of this Specification is strictly restricted. Except as may be appropriate for use in the bidding and execution of the Work, reproduction, translation or substantial use or quotation of any part of this Specification beyond that permitted by the 1976 United States Copyright Act without prior written permission of PMA Consultants LLC is unlawful.

APPENDIX I

SPECIAL WORKING CONDITIONS

DTMB State Facilities Administration
Security Clearance Request

Contractor Instructions

The purpose of this document is to establish security and supervision requirements for contract personnel requiring access to Department of Technology, Management and Budget (DTMB) facilities.

A *DTMB Security Clearance form* must be completed before an individual is granted access to a facility. Access approval will be in effect for one year from date of DTMB Facility Services approval or until estimated project completion date (whichever occurs first).

Contract personnel agree to adhere to all DTMB rules and regulations which in DTMB facilities. Access will only be granted for normal business hours. (Monday-Friday, 8:00 a.m.-5:00 p.m. except State holidays). DTMB State Facilities Administration, Facility Services section must clear any exception in advance.

Contract personnel will be required to submit the following to DTMB Facility Services Manager or Regional Manager before entering a DTMB facility:

Procedure for submitting form electronically (preferred and recommended)

1. Complete a *DTMB Security Clearance form* (using Microsoft Excel) and include the following:
 - Company name
 - Company Contact name and phone number
 - Complete name (**last name first**) and date of birth for all employees requiring access.
2. Email completed form to DTMB Facility Manager for an individual building or DTMB Regional Facility Manager for multiple building requests.

Procedure for submitted in person or mail delivery

1. Complete a *DTMB Security Clearance form* (using Microsoft Excel) and include the following:
 - Company name
 - Company Contact name and phone number
 - Complete name (**last name first**) and date of birth for all employees requiring access.
2. Return completed form to DTMB Facility Manager for an individual building or DTMB Regional Facility Manager for multiple building requests.

Note: This request must be received a minimum of 48 hours before entering a DTMB Facility.

DTMB Facility Access Criteria:

1. Present pictured ID.
2. Name must appear on the clearance list.
3. Sign-in and wear a dated visitor's pass (*must be visibly displayed at all times*).
4. Return visitor pass to security desk at days end.

Note: Individuals whose name does not appear on the clearance list are required to be signed in by a member of the DTMB Facility Services staff.

Failure to comply with the above procedure will result in the individual(s) being delayed and may be cause for denying access to DTMB facilities.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (Community Health Facilities)

The Work comprising this Project will be performed in a hospital for treatment of mentally ill persons and the Contractor must comply with the following special working rules.

1. Contractor must submit a list of names, social security numbers, birth dates, and additional information when requested, on all persons expected to be employed on the Project site. Such list must be submitted directly to the Security Chief's office or to his designee for approval before any person's appearance at the site for Work assignments.
2. Contractor will be allowed to work within or on hospital confines from 8:00 a.m. to 5:00 p.m. No Work must be performed on Saturdays or Sundays without written permission from the State Agency. The Director of Security or their designee may arrange other time schedules.
3. All employees of the Contractor may be subject to individual body search each time they enter the hospital. Packages or containers of any kind may be opened for inspection. Lunch boxes are not permitted inside the security perimeter. All employees of the Contractor will be required to have identification cards or badges furnished by the Contractor.
4. All trucks and other mobile equipment may be subject to inspection both on arrival and departure from the hospital. Absolutely no fraternization between patients and Contractor's employees will be tolerated.
5. No requests for visits with patients will be granted to Contractor's employees except where such visiting originated before award of the Contract.
6. Contractor must follow rules pertaining to security and parking as established by the hospital. Contractor must observe all off-limit restricted areas beyond which no unauthorized personnel may trespass. The Contractor and their workers may not leave the assigned Work areas.
7. All heavy power tools and machinery such as air hammers, acetylene tanks, etc., must be removed from the inside of the security perimeter, through the assigned gate by 4:30 p.m., which is the closing time for the gate. Such heavy equipment as power shovels, compressors, welding machines, etc., can remain inside but must be immobilized in an acceptable manner. Cutting torches and cutting tools in general must be securely locked where and as directed by the State Agency and checked out as needed. No tools, small pipe, copper, or wire must remain on the site overnight unless acceptably locked inside shanties or tool chests.
8. There will be no exchange, loaning or borrowing of tools, equipment or manpower between hospital personnel and the Contractor.
9. The assigned gate through which materials, equipment and vehicles must be transported will be opened upon request between the hours of 8:00 a.m. to 4:30 p.m.
10. Sanitary facilities will be assigned by the hospital for the use of the Contractor's employees.
11. Security personnel may be assigned to the working areas. They may inspect and search areas under construction at any time, including the Contractor's equipment.
12. Areas for employee parking, toolboxes, etc., must be assigned only by hospital authorities. Remove all firearms, weapons, alcoholic beverages, drugs, medicines, or explosives from vehicles before entering hospital property. Lock vehicles when not attended.
13. The Director of this hospital retains the right to revise these "Special Working Conditions" as required to meet hospital needs.
14. The Contractor and her/his workers must not pick up hitchhikers or take anyone off the grounds that do not work for the Contractor.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Work comprising this Project will be performed at a Department of Health and Human Services (DHHS) Facility and the Contractor must comply with the following special working rules:

1. Contractor must submit a list of names, driver's license numbers, birth dates, and additional information when requested, on all persons expected to be employed on the Project site. Such list must be submitted directly to the Superintendent's office or to the Owner Field Representative for approval before any person's appearance at the site for Work assignments.
2. Contractor will be allowed to work within or on State Agency confines from 7:00 a.m. to 6:00 p.m., Monday through Friday only. No Work must be performed outside these hours without written permission from the State Agency.
3. All employees of the Contractor may be subject to individual body search each time they enter the State Agency confines. Packages or containers of any kind may be opened for inspection. All employees of the Contractor will be required to have identification cards or badges furnished by the Contractor.
4. There must be no fraternization between the State residents and the Contractor's employees. Any attempt by any resident to engage in conversation or interfere in any way with a Contractor's employee must be reported immediately to State Agency staff.
5. No firearms, weapons, explosives, alcoholic beverages, drugs, or medicines may be brought into the confines of the Agency.
6. Any tools or material left within the confines of the State Agency overnight must be in locked cabinets, locked rooms or otherwise secured.
7. There will be no exchange, loaning or borrowing of tools, equipment, or manpower between DHHS personnel and the Contractor.
8. Sanitary facilities will be assigned by the State Agency for the use of the Contractor's employees, and it must be the responsibility of the Contractor to keep said sanitary facilities in clean and neat condition.
9. Contractor must follow rules pertaining to foot and vehicle traffic as established by the State Agency. Contractor must observe all off-limit restricted areas beyond which no unauthorized personnel may trespass. The Contractor and his workmen may not leave the assigned Work areas.
10. Security staff may be assigned to the work areas. They may inspect and search areas under construction at any time, including the Contractor's equipment.
11. Keys to certain doors may be assigned to the Contractor. Such doors must be kept locked at all times.
12. The Superintendent of the State Agency reserves the right to revise these rules as required to meet the security needs of the Agency.

APPENDIX II
SPECIAL PROJECT PROCEDURES

SOIL EROSION AND SEDIMENTATION CONTROL PROJECT PROCEDURES FOR CONTRACTORS ON DTMB OWNED AND MANAGED PROPERTIES

1. Comply with Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act 1994 PA 451, as amended.
2. Contact the DTMB, SFA, Design and Construction Division to discuss the implementation of soil erosion and sedimentation control (SESC) on the Project with DTMB SESC Officer. Phone (517) 388-3045 or Email DTMB-SESC@michigan.gov.
3. Following the award of a contract, the Contractor will be required to prepare and issue for approval an SESC Implementation Plan, which indicates the Contractor's intended implementation of SESC on the project including a schedule and sequence. The Environmental Health and Safety Section, upon approval of the implementation plan, will issue to the Contractor an "Authorization to Proceed with Earth Change" document, which is to be posted at the job site. This document is issued in lieu of a permit from the county. Earthwork shall not begin prior to the issuance of this Authorization. Upon receipt of the Authorization document, the Contractor may begin earth change activities.
4. See below the "Checklist for Contractor's SESC Implementation Plan" for details of the required information necessary for the Contractor to create the SESC Implementation Plan. The intent of this plan is to ensure that the Contractor has reviewed and understands the SESC provisions within the plans and specifications.
5. CHECKLIST FOR CONTRACTOR'S SOIL EROSION AND SEDIMENTATION CONTROL IMPLEMENTATION PLAN (For projects that include earth changes or disturb existing vegetation):

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
STATE FACILITIES ADMINISTRATION, DESIGN AND CONSTRUCTION DIVISION
SOIL EROSION AND SEDIMENTATION CONTROL PROGRAM
P.O. Box 30026, Lansing, Michigan 48909

PROJECT TITLE:
PROJECT LOCATION:
PROJECT FILE NUMBER:
INDEX NUMBER:

Prior to the start of earthwork, the Contractor must submit a Soil Erosion and Sedimentation Control (SESC) Implementation Plan to the Michigan Department of Technology, Management and Budget, Soil Erosion and Sedimentation Control Program. The intent of this plan is to ensure that the Contractor has reviewed and understands the SESC provisions within the plans and specifications. The following checklist will provide Contractors with assistance in creating the SESC Implementation Plan.

The SESC Implementation Plan must include:

1. A written plan or letter demonstrating:
 - The Contractor's means and methods for the implementation of SESC provisions included within the plans and specifications and compliance with the provisions of Part 91 of PA 451 of 1994, as amended.
 - The Contractor's plan for dust control.
 - The Contractor's plan for inspection and maintenance of temporary SESC's.
2. A map, location plan, drawing, or amended copy of the Project SESC or grading plan showing:
 - The locations of any stockpiles of soil associated with the Project
 - The temporary SESC controls associated with stockpiles of soil
 - The Contractor's suggested or proposed additions or relocations of any temporary or permanent SESC's. associated with the Project plans and specifications (subject to approval by Engineer and DTMB)
 - Location of site entrances, exits and vehicle routes
 - Location of site superintendent's/project manager's site trailer or office (for SESC Inspector check-in)
3. A schedule for the installation and removal of temporary controls and the installation of permanent soil erosion and sedimentation controls in relation to the overall construction schedule.

Submit the above items to the above address.

Upon approval of the Contractor's plan, an "Authorization to Proceed with Earth Change" will be issued by DTMB, Design and Construction Division

DEMOLITION/REMODELING PROJECT PROCEDURES

Furnish all equipment, materials, labor, and services necessary to complete all building demolition required in connection with the existing building, in order to permit the installation of new Work. The goal of the Owner is to generate the least amount of waste or debris possible. However, inevitable waste and debris that are generated shall be reused, salvaged, or recycled, and disposal in landfills shall be minimized to the extent economically feasible. The Contractor will be required to prepare waste management plan for the collection, handling, storage, transportation, and disposal of the waste generated at the construction site for the Owner's review and approval. The Contractor will be required to produce waste management progress reports.

1. Locations: Notations are made in various places on the Drawings to call attention to building demolition which is required; however, these Drawings are not intended to show each and every item to be removed. The Contractor and the Subcontractors for the various trades must remove the materials related to their respective trades as required to permit the construction of the new Work as shown.
2. Permits: The Contractor must secure from the appropriate agencies all required permits necessary for proper execution of the work before starting work on the project site. All fees for securing the permits must be paid by the Contractor, including all inspection costs which may be legally assessed by the Bureau of Construction Codes in accordance with the authority granted under the Public Act 1980 PA 371, as amended.
3. Enclosures: Where it is necessary to make alterations to walls, floors or roof of the existing building, the Contractor must provide and maintain dustproof partitions to separate the parts where Work is being done from the adjoining parts occupied by the State Agency. Where any parts are opened and exposed to the elements, the Contractor must provide weather tight enclosures to fully protect the structure and its contents.
4. Waste Management Plan: The management plan must address waste source identification and separation, returns, reuse and salvage, recycling, landfill options, alternatives to landfilling, materials handling procedures and transportation.
5. Preparation: Protect all existing Work that is to remain and restore in an approved manner any such Work that becomes damaged.
 - 5.1 Rubbish and debris resulting from the Work must be removed immediately from the site by the Contractor. However, any recyclable materials must be recycled; the Contractor will be required to use alternatives to landfills for waste disposal such as reuse or recycle of asphalt, bricks, concrete, masonry, plastics, paint, glass, carpet, metals, wood, drywall, insulation, and any other waste materials to the extent practical.
 - 5.2 Unless otherwise specified, the Agency will remove existing furniture, drapery tracks, draperies, window blinds, and other equipment items, which might interfere with the new construction.
6. Coordination: Demolition work, in connection with any new unit of Work, must not be commenced until all new materials required for completion of that new item of Work are at hand.
7. Waste Management Plan Progress Reports: Submit an updated report with the payment requests. The progress reports shall include:
 - a. The amount of waste sent to a landfill, tipping fees paid and the total disposal cost. Include supporting documents such as manifests, weight tickets, receipts and/or invoices.
 - b. Records for each material recycled/reused/salvaged from the project including the amount, date removed from the job site, final destination, transportation cost, recycled materials, and the net cost/ savings.
 - c. Breakdown of waste by type generated to date.
 - d. Recycling/salvage/landfill rates.
 - e. Percent of waste recycled/salvaged to date.

HAZARDOUS MATERIALS PROJECT PROCEDURES

1. The Contractor must use, handle, store, dispose of, process, transport and transfer any material considered a Hazardous Material in accordance with all federal, state, and local Laws. If the Contractor encounters material reasonably believed to be a Hazardous Material and which may present a substantial danger, the Contractor must immediately stop all affected work, give written notice to the Owner of the conditions encountered, and take appropriate health and safety precautions.
2. This project has been identified by the DTMB-SFA as having a possibility of containing Hazardous Waste materials to be legally removed from the Project job site in order to complete the Work as described in the Proposal And Contract. If removal of friable asbestos material is required, the Contractor must contact the Air Quality Division, Department of Environment, Great Lakes, and Energy, at **(517) 284-6773**, for a permit and furnish all training, labor, materials, services, insurance, and equipment necessary to carry out the removal operations of all Hazardous Materials from the Project job site, as identified by the Scope of Work, or encountered on the Project job site, in accordance with State and Federal Hazardous Waste Codes. A Contract Change Order will be written to modify the existing Contract to pay for the additional cost.
3. Environmental Hazards (air, water, land and liquid industrial) are handled by the Waste and Hazardous Materials Division, Michigan Department of Environment, Great Lakes, and Energy (EGLE) in carrying out the requirements of the Federal Environmental Protection Agency (EPA). For general information and/or a copy of the latest regulations and publications call (517) 335-2690.
4. The Michigan Occupational Safety and Health Administration (MIOSHA) provides protection and regulations for the safety and health of workers. The Department of Licensing and Regulatory Affairs provides for the safety of workers. The Department of Health & Human Services provides for the health of workers (517/373-3740) (TDD 517/373-3573).
 - 4.1 Contractor must post any applicable State and/or Federal government regulations at the job site in a prominent location.
 - 4.2 Contractor must be responsible for training their workers in safe work practices and in proper removal methods when coming in contact with hazardous chemicals.
5. Applicable Regulations:
 - 5.1 Natural Resources and Environmental Protection Act – PA 451 of 1994, as amended, including Part 111 – Hazardous Waste Management, Part 121 – Liquid Industrial Waste and Part 147 – PCB compounds.
 - 5.2 RCRA, 1976 - Resource Conservation and Recovery Act: This federal statute regulates generation, transportation, treatment, storage, or disposal of hazardous wastes nationally.
 - 5.3 TSCA, 1979 – Toxic Substances Control Act: This statute regulates the generation, transportation, storage, and disposal of industrial chemicals such as PCBs.
6. Definitions: Hazardous substances are ignitable, corrosive, reactive, and/or toxic, based on their chemical characteristics.
 - 6.1 Under Federal and Michigan Law, a Small Quantity Generator of hazardous waste provides from 220 to less than 2,000 lbs./month or never accumulates 2,200 lbs. or more.
 - 6.2 A Generator size provider of hazardous waste provides 2,200 lbs. or more/month or accumulates above 2,200 lbs.
7. Disposals: To use an off-site hazardous waste disposal facility, the Contractor must use the Uniform Hazardous Waste Manifest (shipping paper). Small quantities of hazardous waste may not be disposed of in sanitary landfills used for solid waste.
8. Federal, state, and local Laws and regulations may apply to the storage, handling and disposal of Hazardous Materials and wastes at each State Agency. Contact the **Environmental Assistance Center** of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) at **1-800-662-9278**, Fax to: 517-241-0673 or e-mail to: DEQ-EAD-env-assist@michigan.gov for general EGLE information including direct and referral assistance on air, water and wetlands permits; contaminated site clean-ups; underground storage tank removals and remediation; hazardous and solid waste disposal; pollution prevention and recycling; and compliance-related assistance. The Center provides businesses, municipalities, and the general public with a single point of access to EGLE's environmental programs.

ASBESTOS ABATEMENT PROJECT PROCEDURES

Should this Work require the renovation or demolition of a building or structure initially constructed on or prior to 1980, the Contractor will use the attached copy of a Comprehensive Asbestos Building Survey for those portions of the building or structure being impacted and must plan his or her work to minimize disturbance of any known or assumed asbestos containing materials (ACM). In addition, if this building or structure was constructed on or prior to 1980, the Contractor's On-Site Superintendent and all Subcontractor On-Site Superintendents for trades that could potentially disturb known or assumed ACM, must, as a minimum, have and provide documentation of current Asbestos Awareness Training.

If the Comprehensive Asbestos Building Survey identifies known or assumed ACM that will potentially be disturbed as a part of the Contractor's renovation or demolition activities, the Contractor must remove, transport, and dispose of these materials at no additional cost to the Owner and prior to any other work taking place within the immediate vicinity of said material. If required, the Contractor must provide the Owner a minimum of 10 working day notification prior to the start of any asbestos abatement activities with abatement in occupied buildings being completed even if they will be conducted during off hours (nights, weekends, and state holidays).

If the Contractor encounters a suspected ACM that was not previously identified within the Comprehensive Asbestos Building Survey, the Contractor must immediately stop all affected work, give written notice to the Owner of the conditions encountered, and take appropriate health and safety precautions. If, after providing Owner notification, the Contractor is directed to sample and/or remove the suspected ACM in question, a Contract Change Order will be written to modify the existing Contract to pay for the additional cost. Any abatement shall be completed in accordance with the requirements of this Section.

If removal of ACM is required, removal must be completed by a contractor currently licensed to remove asbestos by the State of Michigan, Department of Licensing and Regulatory Affairs (DLARA) Asbestos Program and abatement must be performed in accordance with all federal, state, and local Laws and Regulations. Prior to commencing any asbestos abatement activities, the licensed abatement contractor must submit, as required by Federal, State and Local Laws and Regulations, a "Notification of Intent to Renovate/Demolish" to both the State of Michigan, Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division and to the DLARA, Asbestos Program, to comply with National Emission Standards for Hazardous Air Pollutants (NESHAP), and the Clean Air Act (CAA). All regulated ACM must be disposed of at an approved Type II (general refuse) landfill and must be in leak-tight wrapping or containers. ACM that is non friable and is not in poor condition or will not become regulated ACM at any time can be disposed of in a Type III (construction debris) landfill.

At the completion of each abatement activity, the Contractor must perform clearance testing in accordance with National Institute for Occupational Safety and Health (NIOSH) 582 "Sampling and Evaluating Airborne Asbestos Dust". All air samples shall indicate concentrations of less than 0.01 fibers/cc for clearance to be met. Clearance testing shall be performed by a third-party Asbestos Consultant. The Asbestos Consultant selected by the Contractor shall be experienced and knowledgeable about the methods for asbestos air sampling and be able to select representative numbers and locations of samples. It is mandatory that the Asbestos Consultant's on-site hygienist performing sampling and analysis have certification that he/she has passed a NIOSH 582 or equivalent course.

The NESHAP asbestos regulations, notification form, guidelines and fact sheets are available on EGLE's web site www.michigan.gov/egle under heading Air; then click on Compliance; then click on Asbestos NESHAP Program. For guidelines on submitting notifications pursuant to the Asbestos Contractors Licensing Act, contact the DLARA, Occupational Health Division, Asbestos Program at (517) 322-1320 or visit DLARA's web site www.michigan.gov/asbestos.

LEAD ABATEMENT PROJECT PROCEDURES

Should this Work require the renovation or demolition of a building or structure, the workers are assumed to be exposed to lead or materials containing lead above acceptable levels until proven otherwise through personal air sampling and analysis. The Contractor shall take all steps necessary to assure that his/her employees, are not exposed to lead at concentrations greater than the Permissible Exposure Limit as per the State of Michigan Department of Licensing and Regulatory Affairs Occupational Health Standards Part 603 "Lead Exposure in Construction". In addition, the Contractor shall convey this same requirement to all subcontractors that may be under his/her control.

The employer shall comply with the Michigan Lead Abatement Act, as amended, and the Lead Hazard Control rules and must communicate information concerning lead hazards according to the requirements of Michigan Occupational Safety and Health Administration (MIOSHA) Part 603 and the Occupational Safety and Health Administration's (OSHA's) Hazard Communication Standard for the construction industry, 29 CFR 1926.59, including but not limited to safety equipment (e.g. personal fit-tested and approved respirators and protective clothing), worker rotation (on a short-cycle and regular basis), working practices (e.g. sanding, cutting, grinding, abraded, burning and heat-gun stripping of lead based paint are not allowed), the requirements concerning warning signs and labels, material safety data sheets (MSDS), and employee information and training. Employers shall comply with the requirements of 29 CFR 1926.62(l) - Employee Information and Training.

If lead or materials containing lead will be disturbed as a part of the work to be performed, the Contractor must remove, transport, and dispose of these materials at no additional cost to the Owner and prior to any other work taking place within the immediate vicinity of said material. The Contractor must provide the Owner a minimum 10 working day notification prior to the start of any lead abatement activities with abatement in occupied buildings being completed even if they will be conducted during off hours (nights, weekends, and state holidays). Abatement is defined as an activity specifically designed to permanently remove lead paint, lead-contaminated dust or other lead containing materials, the installation of a permanent enclosure or encapsulation of lead paint or other lead containing materials, the replacement of lead-painted surfaces or fixtures, the removal or covering of lead-contaminated soil, and any preparation, cleanup, disposal, and post-abatement clearance testing associated with these activities. Renovation, remodeling, landscaping, or other activity, that is not designed to permanently eliminate lead paint hazards, but is instead designed to repair, restore, or remodel a structure, or housing unit even though the activity may incidentally result in a reduction or elimination of a lead paint hazard is not considered abatement.

If abatement of lead or materials containing lead is required, abatement must be completed by a qualified Lead Abatement Contractor. In addition, Specifications for the Lead Abatement should be based upon a Lead Inspection/Risk Assessment report. The Lead Inspection/Risk Assessment report and clearance testing upon completion should be performed by a Certified Inspector or Risk Assessor. Lead abatement including clearance testing shall be performed in accordance with the State of Michigan, Lead Abatement Act, Part 54A Lead Abatement and with all other federal, state, and local Laws and Regulations that may apply

For additional information about certifications, guidance, and regulations for lead hazard control activities, visit www.michigan.gov/lead.

APPENDIX III

**STATE OF MICHIGAN PREVAILING WAGE SCHEDULES AND
& WAGE RATE SCHEDULES**



STATE OF MICHIGAN

Wage and Hour Division

PO Box 30476

Lansing, MI 48909

517-284-7800

Informational Sheet: Prevailing Wages on DTMB Projects

REQUIREMENTS

The purpose of establishing prevailing rates is to provide minimum rates of pay that must be paid to workers on Department of Technology, Management and Budget (DTMB) construction projects that are financed or financially supported by the state. Prevailing rates are compiled from the rates contained in collectively bargained agreements which cover the locations of the state projects. While the DTMB prevailing wage rates are compiled through surveys of collectively bargained agreements, a collective bargaining agreement is not required for contractors to be on or be awarded state projects. The 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. The DTMB prevailing wage is satisfied when wages plus fringe benefits are equal to or greater than the required rate.

State of Michigan responsibilities:

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

DTMB responsibilities

- If a contract is not awarded or construction does not start within 90 days of the date of the issuance of rates, a re-determination of rates must be requested by DTMB
- Rates for classifications needed but not provided on the DTMB Prevailing Rate Schedule, **must** be obtained **prior** to contracts being let out for bid on a state project.

Contractor responsibilities:

- 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. This record shall be available for reasonable inspection by DTMB 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.
- 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 DTMB 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 contractual requirements, the State may consider the Contractor to be in material breach of the contract and may terminate the contract for cause at the States sole discretion.



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

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:

Vacation	40 hours X \$14.00 per hour = \$560/2080 =	\$0.27
Dental insurance	\$31.07 monthly premium X 12 mos. = \$372.84 /2080 =	\$.18
Vision insurance	\$5.38 monthly premium X 12 mos. = \$64.56/2080 =	\$.03
Health insurance	\$230.00 monthly premium X 12 mos. = \$2,760.00/2080 =	\$1.33
Life insurance	\$27.04 monthly premium X 12 mos. = \$324.48/2080 =	\$.16
Tuition	\$500.00 annual cost/2080 =	\$.24
Bonus	4 quarterly bonus/year x \$250 = \$1000.00/2080 =	\$.48
401k Employer Contribution	\$2000.00 total annual contribution/2080 =	\$.96
Total Hourly Credit		\$3.65

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



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

OVERTIME PROVISIONS for MICHIGAN PREVAILING WAGE RATE COMMERCIAL SCHEDULE

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

	Monday thru Friday	Saturday	Sunday & Holidays	Four 10s
First 8 Hours		4		
9th Hour	1	5	8	9
10th Hour	2	6		
Over 10 hours	3	7		

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.**

- 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 *cannot* be worked without paying overtime after 8 hours worked

- 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.

XXXHHHDY - 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.



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

ENGINEERS - CLASSES OF EQUIPMENT LIST

UNDERGROUND 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-swinging, 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, Endloader, 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
Informational Sheet: DTMB Prevailing Wages on State Projects

CARPENTER CRAFT JURISDICTION

Michigan recognizes the Carpenters for any and all work related to weatherization that has historically been the work of the Carpenter. This work shall include, but not be limited to: all work defined under the Federal Weatherization Assistance Program.

The jurisdiction of Carpenters, as to all work that has historically and traditionally been performed consisting of the milling, fashioning, joining, assembling, erecting, fastening or dismantling of all materials of wood, plastic, metal, fiber, cork, or composition and all other substitute materials, as well as the handling, cleaning, erecting, installing and dismantling of all machinery, equipment and all materials used by Carpenters.

The jurisdiction, therefore, extends over the following divisions and subdivisions of the trade: Carpenters and Joiners, Millwrights, Pile Drivers, Bridge, Dock and Wharf Carpenters, Underpinners, Timbermen, and Core-drillers, Shipwrights, Boat Builders, Ship-hand, Stair-Builders, Millmen, Wood and Resilient Floor Decorators, Floor Finishers, Carpet-layers, Shinglers, Siders, Insulators, Acoustic and Drywall Applicators, Sharers and House Movers, Loggers, Lumber and Sawmill Workers, Reed and Rattan Workers, Shingle Weavers, Casket and Coffin Makers, Railroad Carpenters and Car Builders, regardless of material used and all those engaged in the operation of woodworking or other machinery required in fashioning, milling or manufacturing of products used in the trade, and the handling, erecting and installing materials on any of the above divisions or sub-divisions, burning, welding and rigging incidental to the trade. When the term "Carpenter and Joiner" is used, it shall mean all the subdivisions of the trade. The trade autonomy of Carpenters therefore extends over the divisions and subdivisions of the trade, which are set forth as follows:

- (a) The framing, erecting and prefabrication of roofs, partitions, floors and other parts of buildings of wood, metal, plastic or other substitutes; application of all metal flashing used for hips, valleys and chimneys; the erection of Stran Steel section or its equal. The building and setting of all forms and centers for brick and masonry. The fabrication and erection of all forms for concrete and decking, the dismantling of same (as per International Agreement) when they are to be re-used on the job or stored for re-use. The cutting and handling of all falsework for fireproofing and slabs. Where power is used in the setting or dismantling of forms, all signaling and handling shall be done by carpenters. The setting of templates for anchor bolts for structural members and for machinery, and the placing, leveling and bracing of these bolts. All framing in connection with the setting or metal columns. The setting of all bulkheads, footing forms and the setting of and fabrication of, screeds and stakes for concrete and mastic floors where the screed is notched or fitted, or made up of more than one member. The making of forms for concrete block, bulkheads, figures, posts, rails, balusters and ornaments, etc.
- (b) The handling and erecting of rough material and drywall, the handling, assembly, setting and leveling of all fixtures, display cases, all furniture such as tables, chairs, desks, coat racks, etc., all de-mountable or moveable partitions such as Von wall, E Wall, Steel Case, Herman Miller, Haworth, American Seating, Westinghouse, Lazy Boy, rosewood, etc. All rebuilding, remodeling and setting up of all kinds of partitions, finished lumber, metal and plastic trim to be erected by Carpenters shall be handled from the truck or vehicle delivering same to the job by Carpenters.



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

CARPENTER CRAFT JURISDICTION

- (c) The building and moving of all scaffolding runways and staging where carpenters' tools are used, the building from the ground up of all scaffolds over fourteen (14) feet in height including metal and specially designed scaffolding. The building and construction of all hoists and derricks made of wood; the making of mortar boards, boxes, trestles, all shoring, razing and moving of buildings. Lift type trucks are to be considered a tool of the trade. Metal siding and metal roofing fall within the scope of jurisdiction for the carpenters.
- (d) The cutting or framing and fireproofing of the openings for pipes, conduits, ducts, etc., where they pass through floors, partitions, walls, roofs or fixtures composed in whole or in part of wood. The laying out of making and installation of all inserts and sleeves for pipes, ducts, etc., where carpenters' tools and knowledge are required. The making and installing of all wooden meter boards, crippling and backing for fixtures. The welding of studs and other fastenings to receive material being applied by carpenters.
- (e) The installation of all grounds, furring or stripping, ceilings and sidewalks, application of all types of shingling and siding, etc.
- (f) The installation of all interior and exterior trim or finish of wood, aluminum, kalamein, hollow or extruded metal, plastic, doors, transoms, thresholds, mullions and windows. The setting of jambs, bucks, window frames of wood or metal where braces or wedges are used. The installation of all wood, metal or other substitutes of casing, molding, chair rail, wainscoting, china closets, base of mop boards, wardrobes, metal partitions as per National Decisions or specific agreements, etc. The complete laying out, fabrication and erection of stairs. The making and erecting of all fixtures, cabinets, shelving, racks, louvers, etc. The mortising and application of all hardware in connection with our work. The sanding and refinishing of all wood, cork or composition floors to be sanded or scraped, filled, sized and buffed, either by hand or power machines. The assembling and setting of all seats in theaters, halls, churches, schools, auditorium, grandstands and other buildings. All bowling alley work.
- (g) The manufacture, fabrication and installation of all screens, storm sash, storm doors and garage doors; the installation of wood, canvas, plastic or metal awnings or eye shades, door shelters, jalousies, etc. The laying of wood, wood block and wood composition in floors.
- (h) The installation of all materials used in drywall construction, such as plasterboard, all types of asbestos boards, transite and other composition board. The application of all material which serves as base for acoustic tile, except plaster. All acoustical applications as per National Agreement or specific agreement.
- (i) The building and dismantling of all barricades, hand rails, guard rails, partitions and temporary partitions. The erection and dismantling of all temporary housing on construction projects.
- (j) The installation of rock wool, cork and other insulation material used for sound or weatherproofing. The removal of caulking and placing of staff bead and brick mold and all Oakum caulking, substitutes, etc., and all caulking in connection with carpentry work.
- (k) The installation of all chalk boards/marker boards.



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Informational Sheet: DTMB Prevailing Wages on State Projects

CARPENTER CRAFT JURISDICTION

- (l) The operation of all hand operated winches used to raise wooden structures.
- (m) The erection of porcelain enameled panels and siding.
- (n) The unloading and distribution of all furnished, prefabricated and built-up sections such as door bucks, window frames, cupboards, cabinets, store fixtures, counters and show cases or comparably finished or prefabricated materials, to the job sites or points of installation as used in the construction, alteration and remodeling industry.
- (o) The handling of doors, metal, wood or composite, partitions and other finished bulk materials used for trim from the point of delivery.
- (p) All processing of these materials and handling after processing.
- (q) The making up of panels and fitting them into walls, all bracing and securing, all removal of panels from the casting including all braces, walers, hairpins, etc.
- (r) The handling and setting of all metal pans and sections from the stock piles of reasonable distance as required by job needs shall be performed by carpenters. The stripping of such metal pans, panels or sections is to be performed by carpenters.
- (s) The sharpening of all carpenter hand or power tools, or those used by carpenters.
- (t) The layout, fabrication, assembling of and erection and dismantling of all displays made of wood, metal, plastic, composition board or any substitute material; the covering of same with any type of material, the crating and un-crating, the handling from the point of unloading and back to the point of loading of all displays and other materials or components.
- (u) The same shall apply to all other necessary component parts used for display purposes such as turntables, platforms, identification towers and fixtures, regardless of how constructed, assembled or erected or dismantled.
- (v) The make-up, handling, cutting and sewing of all materials used in buntings, flags, banners, decorative paper, fabrics and similar materials used in the display decorative industry for draperies and back drops. The decorative framing of trucks, trailers and autos used as floats or moving displays. The slatting of walls to hand fabrics and other decorative materials, drilling of all holes to accommodate such installations. Setting up and removal of booths constructed of steel or aluminum tubing as stanchions, railings, etc., handling and placing of furniture, appliances, etc., which are being used to complete the booth at the request of the exhibitor. Fabricating and application of leather, plastic and other like materials used for covering of booths. The handling of all materials, fabricating of same. The loading and unloading, erecting and assembling at the exhibit of show area, also in or out of storage when used in booth decorations.



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

CARPENTER CRAFT JURISDICTION

- (w) A display shall be construed as any exhibit or medium of advertising, open to private or public showing, which is constructed of wood, metal, plastic or any other substitute to accomplish the objectives of advertising or displaying.
- (x) Handling, fitting, draping, measuring and installation of fixtures and other hardwares for draperies, all manner of making, measuring, repairing, sizing, hanging and installation of necessary fixtures and hardware for shades and Venetian blinds.
- (y) Work consisting of cutting and/or forming of all materials in preparation for installing of floors, walls and ceilings; the installation of all resilient floor and base; wall and ceiling materials to include cork, linoleum, prefabricated, laminated, rubber, asphalt, vinyl, metal, plastic, seamless floors and all other similar materials in sheet, interlocking liquid or tile form; the installation of all artificial turf, the installation, cutting and/or fitting of carpets; installation of padding, matting, linen crash and all preformed resilient floor coverings; the fitting of all devices for the attachment of carpet and other floor, wall and ceiling coverings; track sewing of carpets, drilling of holes for sockets and pins, putting in dowels and slats; and all metal trimmings used; the installation of all underlayments, sealants in preparation of floors, walls and ceilings, the unloading and handling of all materials to be installed and the removal of all materials in preparing floors when contracted for by the employer, shall be done only by employees covered under this Agreement.
- (z) The installation of all sink-tops and cabinets, to include all metal trim and covering for same. All cork, linoleum, congo-wall, linewall, veos tile, plexiglass, vinawall tile, composition tile, plastic tile, aluminum tile and rubber in sheets or tile form and the application thereof. All bolta-wall and bolta-wall tile and similar products.
- (aa) The handling and placing of all pictures and frames and the assembly of bed frames and accessories. The hanging and placing of all signage.
- (bb) The installation of all framework partitions and trim materials for toilets and bathrooms made of wood, metal, plastics or composition materials; fastening of all wooden, plastic or composition cleats to iron or any other material for accessories.
- (cc) The erection of cooling towers and tanks.
- (dd) The setting, lining, leveling and bracing of all embedded plates, rails and angles. The setting of all stay in place forms.
- (ee) Environmental: Clean room, any type of environmental chamber, walk in refrigerated coolers and all refrigerated rooms or buildings.



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

CARPENTER CRAFT JURISDICTION

PILE DRIVING AND CAISSON DRILLING

(ff) All unloading, handling, signaling and driving of piles, whether wood, steel, pipe, beam pile, composite, concrete or molded in place, wood and steel sheeting, cofferdam work, trestle work, dock work, floating derricks, caisson work, foundation work, bridge work, whether old or new, crib work, pipe line work and submarine work. Cutting of all wood, steel or concrete pile, whether by machine or hand; welding and cutting, peeling, and heading of all wood pile, steel sheeting and wood sheeting. The erecting and dismantling of all pile driving rigs, also derricks whether on land or water; also the moving, shoring and underpinning of all buildings. The loading and unloading of all derricks, cranes and pile driving materials. The tending, maintenance and operation of all valves pertaining to the operation of driving of pile. All diving and tending essential to the completion of jurisdictional claims.

All work done in the established yards of the Company and all work not enumerated above, shall be handled and manned as the Employer decides.

The pile driver will unload all material shipped in by rail from the point that the rail car is spotted.

All cleaning and preparation of all piling prior to driving.

The welding and attachment of all boot plates, pile points, splice plates, connectors, rock crosses, driving crosses, driving rigs, point reinforcements and overboots.

The construction, reconstruction, repair, alteration, demolition and partial or complete removal of all marine work including, but not limited to, docks, piers, wharves, quays, jetties, cribs, causeways, breakwaters, lighthouses and permanent buoys, etc. (mixing and placing of concrete excepted).

The driving and pulling of all wood, steel and concrete foundation piles and sheet piling.

The heading, pointing, splicing, cutting and welding of all piles.

The placing of all wales, bolts, studs, lagging, rods and washers including the cutting, drilling, boring or breaking of all holes or openings thereof.

The removal of all materials and/or obstructions of any nature (rip-rap included) that retard or interfere with the driving of piles or with the placing of wales, bolts and rods.



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

CARPENTER CRAFT JURISDICTION

This is to be subject to the discretion of the contractor who may choose to use blasting specialists or other demolition specialists.

The handling on the job of all materials used in the work.

The manning of all floating equipment (towing equipment excepted) engaged in the work enumerated, including deck engines, except machinery manned by Operating Engineers.

The placing of all rip-rap, fill stone, bedding stone, cover stone and concrete blocks in connection with marine construction. Work normally performed by Employers, such as soil tests, shoring, underpinning of buildings, cribbing, driving of sheet piling, marine divers, tenders, underwater construction workers and similar operations shall continue to be included in the jurisdiction of this Agreement.

All burning, cutting, welding and fabrication of pipe, H-beams, sheet pile (metal or wood), done on the job site or in the yard of the Employer shall be done by pile drivers. The driving of bearing piles, sheet piling with heavy equipment, caissons, pile caps, auger drilling and boring, the setting up for load testing for any type of piling, all layout and spotting for piling, caisson and boring work, all earth retention, ditch boarding, installing tiebacks.

ASBESTOS ABATEMENT CARPENTERS

(gg) All erection and maintenance of barriers and partitions used in the removing of asbestos or any abatement work. The abatement of any materials previously installed by the carpenter such as transite, ceiling and floor tiles. All operating and maintaining of current equipment used in any abatement work.



STATE OF MICHIGAN
Informational Sheet: DTMB Prevailing Wages on State Projects

ELECTRICIAN – SOUND AND COMMUNICATION / DATA/ VOICE JURISDICTION

The installation, testing, service and maintenance, of systems which utilize the transmission and/or transference of voice, sound, vision or digital for commercial, education, security and entertainment purposes for the following: TV monitoring and surveillance, CATV and CCTV, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, radio page, school intercom and sound, burglar alarms, low voltage fire alarm systems, low voltage master clock systems, distributed antenna systems (DAS), IP data networks, and all surface-mounted (non-power) telecommunications wiremold. Shall additionally include the installation of all raceway systems of unlimited length in telecommunications rooms, entrance facilities, equipment rooms, and similar areas. Energy management systems. Security systems; perimeter, vibration, card access, access control and sonar/infrared monitoring equipment. Communications systems that transmit or receive information and/or control systems that are intrinsic to the above listed systems; SCADA (Supervisory Control and Data Acquisition), PCM (Pulse Code Modulation), Digital Data Systems, Broadband and Baseband and Carriers, POS (Point of Sale systems), VSAT Data Systems, RF and Remote Control Systems, Fiber Optic Data Systems and Voice and Data Infrastructure and Backbone.



STATE OF MICHIGAN
DEPARTMENT OF LABOR AND ECONOMIC OPPORTUNITY
WAGE AND HOUR DIVISION

GRETCHEN WHITMER
GOVERNOR

SUSAN CORBIN
DIRECTOR

Prevailing Wage Rates for State Funded Projects Official Rate Schedule

ORS#:	ORS-000450
Date Issued:	07/22/2024
Contract Award By Date:	10/20/2024
Contracting Agency:	DTMB Design & Construction Division (CA-0007)
Contracting Agency Representative:	Don Klein (KleinD4@michigan.gov)
Project Number:	491/23066.SDW
Project Name:	CFP - Replace Security System Logic Controllers
Project Description:	Replace Security System Programmable Logic Controllers

FOR ALL AWARDED CONTRACTS ONLY

- Every Contractor and Subcontractors shall keep Posted on the Construction Site, in a conspicuous place, a copy of all applicable prevailing wage rate schedules contained in a contract.
- The Prevailing rate schedule provides an hourly rate which includes wage and fringe benefit totals for designated classifications.
- Please refer to WHD-9917 & WHD 9918 for any additional information.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Boilermaker	Boilermaker	05/10/2024

Classification Description: Boilermaker

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$72.47	\$107.55	\$142.63
Apprentice: 1st Period	\$53.53	\$79.15	\$104.75
Apprentice: 2nd Period	\$55.14	\$81.56	\$107.97
Apprentice: 3rd Period	\$56.73	\$83.94	\$111.15
Apprentice: 4th Period	\$58.31	\$86.31	\$114.31
Apprentice: 5th Period	\$59.85	\$88.62	\$117.39
Apprentice: 6th Period	\$63.03	\$93.39	\$123.75
Apprentice: 7th Period	\$66.17	\$98.10	\$130.03
Apprentice: 8th Period	\$69.32	\$102.83	\$136.33

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$90.82
10th hour	\$90.82
Beyond 10 hours	\$90.82
Saturday	
First 8 hours	\$90.82
9th hour	\$90.82
10th hour	\$90.82
Beyond 10 hours	\$90.82
Sunday/Holiday	
	\$109.17

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 12 BSP	Bricklayer	05/10/2024

Classification Description: Brick Masonry, Stone Masonry, Pointing, Caulking and Cleaning

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$58.20	\$75.11	\$92.01	Over 8-hour day/40-hour week
Apprentice: 0-749 hours	\$44.68	\$54.83	\$64.97	9th hour \$75.11
Apprentice: 1,500-2,249 hours	\$48.06	\$59.89	\$71.73	10th hour \$75.11
Apprentice: 2,250-2,999 hours	\$49.75	\$62.43	\$75.11	Beyond 10 hours \$75.11
Apprentice: 3,000-3,749 hours	\$51.44	\$64.97	\$78.49	Saturday
Apprentice: 3,750-4,499 hours	\$53.13	\$67.50	\$81.87	First 8 hours \$75.11
Apprentice: 4,500-5,249 hours	\$54.82	\$70.03	\$85.25	9th hour \$75.11
Apprentice: 5,250 hours	\$56.51	\$72.57	\$88.63	10th hour \$75.11
Apprentice: 750-1,499 hours	\$46.37	\$57.36	\$68.35	Beyond 10 hours \$75.11
				Sunday/Holiday \$92.01

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 14 BSP	Bricklayer	05/10/2024

Classification Description: Brick Masonry, Stone Masonry, Pointing, Caulking and Cleaning

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$62.63	\$81.01	\$99.39	Over 8-hour day/40-hour week
Apprentice: 0-749 hours	\$47.93	\$58.96	\$69.99	9th hour \$81.01
Apprentice: 1,500-2,249 hours	\$51.60	\$64.47	\$77.33	10th hour \$81.01
Apprentice: 2,250-2,999 hours	\$53.44	\$67.23	\$81.01	Beyond 10 hours \$81.01
Apprentice: 3,000-3,749 hours	\$55.28	\$69.99	\$84.69	Saturday
Apprentice: 3,750-4,499 hours	\$57.12	\$72.75	\$88.37	First 8 hours \$81.01
Apprentice: 4,500-5,249 hours	\$58.95	\$75.49	\$92.03	9th hour \$81.01
Apprentice: 5,250 hours	\$60.79	\$78.25	\$95.71	10th hour \$81.01
Apprentice: 750-1,499 hours	\$49.76	\$61.71	\$73.65	Beyond 10 hours \$81.01
				Sunday/Holiday \$99.39

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 17 BSP	Bricklayer	05/10/2024

Classification Description: Brick Masonry, Stone Masonry, Pointing, Caulking and Cleaning

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$53.26	\$68.84	\$84.42	Over 8-hour day/40-hour week
Apprentice: 0-749 hours	\$40.80	\$50.15	\$59.50	9th hour \$68.84
Apprentice: 1,500-2,249 hours	\$43.91	\$54.82	\$65.72	10th hour \$68.84
Apprentice: 2,250-2,999 hours	\$45.47	\$57.16	\$68.84	Beyond 10 hours \$68.84
Apprentice: 3,000-3,749 hours	\$47.03	\$59.50	\$71.96	Saturday
Apprentice: 3,750-4,499 hours	\$48.59	\$61.84	\$75.08	First 8 hours \$68.84
Apprentice: 4,500-5,249 hours	\$50.14	\$64.16	\$78.18	9th hour \$68.84
Apprentice: 5,250 hours	\$51.70	\$66.50	\$81.30	10th hour \$68.84
Apprentice: 750-1,499 hours	\$42.35	\$52.48	\$62.60	Beyond 10 hours \$68.84
				Sunday/Holiday \$84.42

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 3 BSP	Bricklayer	05/10/2024

Classification Description: Brick Masonry, Stone Masonry, Pointing, Caulking and Cleaning

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$55.29	\$71.04	\$86.79	Over 8-hour day/40-hour week
Apprentice: 0-749 hours	\$42.69	\$52.14	\$61.59	9th hour \$71.04
Apprentice: 1,500-2,249 hours	\$45.84	\$56.87	\$67.89	10th hour \$71.04
Apprentice: 2,250-2,999 hours	\$47.41	\$59.22	\$71.03	Beyond 10 hours \$71.04
Apprentice: 3,000-3,749 hours	\$48.99	\$61.59	\$74.19	Saturday
Apprentice: 3,750-4,499 hours	\$50.57	\$63.96	\$77.35	First 8 hours \$71.04
Apprentice: 4,500-5,249 hours	\$52.14	\$66.31	\$80.49	9th hour \$71.04
Apprentice: 5,250 hours	\$53.71	\$68.67	\$83.63	10th hour \$71.04
Apprentice: 750-1,499 hours	\$44.27	\$54.51	\$64.75	Beyond 10 hours \$71.04
				Sunday/Holiday \$86.79

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 31 BS	Bricklayer	05/10/2024

Classification Description: Brick Masonry, Stone Masonry, Artificial Masonry

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$53.52	\$67.86	\$82.19
Apprentice: 0-749 hours	\$42.05	\$50.65	\$59.25
Apprentice: 1,500-2,249 hours	\$44.92	\$54.95	\$64.99
Apprentice: 2,250-2,999 hours	\$46.35	\$57.10	\$67.85
Apprentice: 3,000-3,749 hours	\$47.79	\$59.26	\$70.73
Apprentice: 3,750-4,499	\$49.22	\$61.41	\$73.59
Apprentice: 4,500-5,249 hours	\$50.65	\$63.55	\$76.45
Apprentice: 5,250 hours	\$52.09	\$65.71	\$79.33
Apprentice: 750-1,499 hours	\$43.49	\$52.81	\$62.13

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.86
10th hour	\$67.86
Beyond 10 hours	\$67.86

Saturday

First 8 hours	\$67.86
9th hour	\$67.86
10th hour	\$67.86
Beyond 10 hours	\$67.86

Sunday/Holiday	\$82.19
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Four 10-hour days allowed? - No

Make Up Day Allowed? - Yes

MAKE UP DAY DUE TO INCLEMENT WEATHER

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 31 PCC	Bricklayer	05/10/2024

Classification Description: Pointing, Caulking and Cleaning

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$53.52	\$67.86	\$82.19
Apprentice: 0-749 hours	\$43.49	\$52.81	\$62.13
Apprentice: 1,500- 2,249 hours	\$46.35	\$57.10	\$67.85
Apprentice: 2,250 -2,999 hours	\$47.79	\$59.26	\$70.73
Apprentice: 3,000-3,749 hours	\$24.37	\$36.56	\$48.74
Apprentice: 3,750-4,499 hours	\$50.65	\$63.55	\$76.45
Apprentice: 4,500 hours	\$53.52	\$67.85	\$82.19
Apprentice: 750-1,499 hours	\$44.92	\$54.95	\$64.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.86
10th hour	\$67.86
Beyond 10 hours	\$67.86

Saturday

First 8 hours	\$67.86
9th hour	\$67.86
10th hour	\$67.86
Beyond 10 hours	\$67.86

Sunday/Holiday	\$82.19
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 40 BSP	Bricklayer	05/10/2024

Classification Description: Brick Masonry, Stone Masonry, Pointing, Caulking and Cleaning

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$51.72	\$67.29	\$82.86	Over 8-hour day/40-hour week
Apprentice: 0-749 hours	\$39.26	\$48.60	\$57.94	9th hour \$67.29
Apprentice: 1,500- 2,249 hours	\$42.38	\$53.28	\$64.18	10th hour \$67.29
Apprentice: 2,250-2,999 hours	\$43.94	\$55.62	\$67.30	Beyond 10 hours \$67.29
Apprentice: 3,000-3,749 hours	\$45.49	\$57.94	\$70.40	Saturday
Apprentice: 3,750-4,499 hours	\$47.05	\$60.28	\$73.52	First 8 hours \$67.29
Apprentice: 4,500-5,249 hours	\$48.61	\$62.62	\$76.64	9th hour \$67.29
Apprentice: 5,250 hours	\$50.16	\$64.95	\$79.74	10th hour \$67.29
Apprentice: 750-1,499 hours	\$40.82	\$50.94	\$61.06	Beyond 10 hours \$67.29
				Sunday/Holiday \$82.86

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Inclement weather make-up day Saturday at straight time for 8 hours, hours over 8 at time and half.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - 7 BSP	Bricklayer	05/10/2024

Classification Description: Brick Masonry, Stone Masonry, Pointing, Caulking and Cleaning

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$48.60	\$62.44	\$76.27	Over 8-hour day/40-hour week
Apprentice: 0-749 hours	\$37.53	\$45.83	\$54.13	9th hour \$62.44
Apprentice: 1,500-2,249 hours	\$40.30	\$49.99	\$59.67	10th hour \$62.44
Apprentice: 2,250-2,999 hours	\$41.68	\$52.05	\$62.43	Beyond 10 hours \$62.44
Apprentice: 3,000-3,749 hours	\$43.07	\$54.14	\$65.21	Saturday
Apprentice: 3,750-4,499 hours	\$44.45	\$56.21	\$67.97	First 8 hours \$62.44
Apprentice: 4,500-5,249 hours	\$45.83	\$58.28	\$70.73	9th hour \$62.44
Apprentice: 5,250 hours	\$47.22	\$60.37	\$73.51	10th hour \$62.44
Apprentice: 750-1,499 hours	\$38.92	\$47.91	\$56.91	Beyond 10 hours \$62.44
				Sunday/Holiday \$76.27

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - B	Bricklayer	05/10/2024

Classification Description: Bricklayer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$61.93	\$92.90	\$123.86
Apprentice: 1st Period	\$40.60	\$60.90	\$81.20
Apprentice: 2nd Period	\$42.47	\$63.71	\$84.94
Apprentice: 3rd Period	\$44.33	\$66.49	\$88.66
Apprentice: 4th Period	\$46.19	\$69.29	\$92.38
Apprentice: 5th Period	\$48.05	\$72.07	\$96.10
Apprentice: 6th Period	\$49.91	\$74.87	\$99.82
Apprentice: 7th Period	\$51.78	\$77.67	\$103.56
Apprentice: 8th Period	\$53.64	\$80.46	\$107.28

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$80.55
10th hour	\$80.55
Beyond 10 hours	\$80.55

Saturday

First 8 hours	\$80.55
9th hour	\$80.55
10th hour	\$80.55
Beyond 10 hours	\$80.55

Sunday/Holiday	\$99.17
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Bricklayer - UP	Bricklayer	05/10/2024

Classification Description: Bricklayers, Stone Masons, Marble Masons, Mosaic Workers, Cement Masons, Plasterers, Pointer, Cleaner, Caulkers, Plant Masonry Workers, Refractory Specialists, Tuck Pointers, Tile Layers, Terrazzo Workers, and Marble, Tile & Terrazzo Finishers.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$51.92	\$66.19	\$80.46
Apprentice: 1st Period	\$41.93	\$51.20	\$60.48
Apprentice: 2nd Period	\$43.36	\$53.35	\$63.34
Apprentice: 3rd Period	\$44.78	\$55.48	\$66.18
Apprentice: 4th Period	\$46.21	\$57.62	\$69.04
Apprentice: 5th Period	\$47.64	\$59.77	\$71.90
Apprentice: 6th Period	\$49.07	\$61.92	\$74.76

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$66.19
10th hour	\$66.19
Beyond 10 hours	\$66.19
Saturday	
First 8 hours	\$66.19
9th hour	\$66.19
10th hour	\$66.19
Beyond 10 hours	\$66.19
Sunday/Holiday	
	\$80.46

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Carpenter - 687 C - Z1	Carpenter	05/10/2024

Classification Description: Journeyman-Diver Tender

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$65.99	\$83.94	\$101.89

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Saturday

First 8 hours	\$83.94
9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Sunday/Holiday \$101.89

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Carpenter - Z1	Carpenter	05/10/2024

Classification Description: Carpenter 4-10s allowed Mon-Sat; double time due when over 12 hours worked per day

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$65.99	\$83.94	\$101.89
Apprentice: 1st year	\$40.39	\$50.27	\$60.14
Apprentice: 3rd 6 months	\$43.23	\$54.00	\$64.77
Apprentice: 4th 6 months	\$46.08	\$57.75	\$69.42
Apprentice: 5th 6 months	\$48.92	\$61.49	\$74.05
Apprentice: 6th 6 months	\$51.78	\$65.25	\$78.71
Apprentice: 7th 6 months	\$54.61	\$68.97	\$83.33
Apprentice: 8th 6 months	\$57.47	\$72.73	\$87.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Saturday

First 8 hours	\$83.94
9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Sunday/Holiday \$101.89

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturdays

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Carpenter - Z2	Carpenter	05/10/2024

Classification Description: Carpenter-4- 10s allowed Monday thru Saturday; double time due anytime when over 12 hours worked per day

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$65.99	\$83.94	\$101.89
Apprentice: 1st & 2nd 6 months	\$40.39	\$50.27	\$60.14
Apprentice: 3rd 6 months	\$43.23	\$54.00	\$64.77
Apprentice: 4th 6 months	\$46.08	\$57.75	\$69.42
Apprentice: 5th 6 months	\$48.92	\$61.49	\$74.05
Apprentice: 6th 6 months	\$51.78	\$65.25	\$78.71
Apprentice: 7th 6 months	\$54.61	\$68.97	\$83.33
Apprentice: 8th 6 months	\$57.47	\$72.73	\$87.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Saturday

First 8 hours	\$83.94
9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Sunday/Holiday \$101.89

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturdays

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Carpet & Resilient Floor Layer	Carpenter	05/10/2024

Classification Description: Carpet and Resilient Floor Layer, (does not include installation of prefabricated formica & parquet flooring which is to be paid carpenter rate)

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$59.04	\$82.42	\$105.80
Apprentice: 1st 6 months	\$30.46	\$41.20	\$51.93
Apprentice: 2nd 6 months	\$34.04	\$45.73	\$57.44
Apprentice: 3rd 6 months	\$36.52	\$50.29	\$64.05
Apprentice: 4th 6 months	\$39.02	\$54.04	\$69.05
Apprentice: 5th 6 months	\$41.52	\$57.75	\$74.05
Apprentice: 6th 6 months	\$44.02	\$61.54	\$79.05
Apprentice: 7th 6 months	\$46.53	\$65.31	\$84.07
Apprentice: 8th 6 months	\$49.02	\$67.72	\$86.42

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$75.21
10th hour	\$75.21
Beyond 10 hours	\$75.21

Saturday

First 8 hours	\$75.21
9th hour	\$75.21
10th hour	\$75.21
Beyond 10 hours	\$75.21

Sunday/Holiday	\$91.37
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Piledriver - Z1	Carpenter	05/10/2024

Classification Description: Piledriver 4- 10s allowed Monday-Saturday; double time due when over 12 hours worked per day

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$65.99	\$83.94	\$101.89
Apprentice: 1st 6 months	\$40.39	\$50.27	\$60.14
Apprentice: 2nd 6 months	\$46.08	\$57.75	\$69.42
Apprentice: 3rd 6 months	\$51.78	\$65.25	\$78.71
Apprentice: 4th 6 months	\$57.47	\$72.73	\$87.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Saturday

First 8 hours	\$30.09
9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Sunday/Holiday	\$101.89
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Piledriver - Z2	Carpenter	05/10/2024

Classification Description: Piledriver 4- 10s allowed Monday thru Saturday; double time due when over 12 hours worked per day

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$65.99	\$83.94	\$101.89
Apprentice: 1st 6 months	\$40.39	\$50.27	\$60.14
Apprentice: 2nd 6 months	\$46.08	\$57.75	\$69.42
Apprentice: 3rd 6 months	\$51.77	\$65.24	\$78.70
Apprentice: 4th 6 months	\$57.47	\$72.73	\$87.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Saturday

First 8 hours	\$30.09
9th hour	\$83.94
10th hour	\$83.94
Beyond 10 hours	\$83.94

Sunday/Holiday	\$101.89
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$50.76	\$72.40	\$94.04
Apprentice: 1st Year	\$39.26	\$55.15	\$71.04
Apprentice: 2nd year	\$42.54	\$60.07	\$77.60
Apprentice: 3rd year	\$45.83	\$65.01	\$84.18

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.19
10th hour	\$67.19
Beyond 10 hours	\$83.62

Saturday

First 8 hours	\$67.19
9th hour	\$67.19
10th hour	\$67.19
Beyond 10 hours	\$67.19

Sunday/Holiday	\$83.62
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$58.90	\$84.12	\$109.33
Apprentice: 1st Period	\$39.26	\$54.86	\$70.45
Apprentice: 2nd Period	\$41.72	\$58.55	\$75.37
Apprentice: 3rd Period	\$44.22	\$62.30	\$80.37
Apprentice: 4th Period	\$46.73	\$66.06	\$85.39
Apprentice: 5th Period	\$49.19	\$69.75	\$90.31
Apprentice: 6th Period	\$51.71	\$73.53	\$95.35

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$76.45
10th hour	\$76.45
Beyond 10 hours	\$76.45
Saturday	
First 8 hours	\$76.45
9th hour	\$76.45
10th hour	\$76.45
Beyond 10 hours	\$76.45
Sunday/Holiday	
	\$93.99

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 12	Cement Mason	05/10/2024

Classification Description: Cement Mason, Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$52.58	\$68.02	\$83.45
Apprentice: 0-749 hours	\$41.78	\$51.81	\$61.85
Apprentice: 1,500-2,249 hours	\$44.86	\$56.43	\$68.01
Apprentice: 2,250-2,999 hours	\$46.41	\$58.76	\$71.11
Apprentice: 3,000-3,749 hours	\$47.95	\$61.07	\$74.19
Apprentice: 3,750-4,499 hours	\$49.49	\$63.38	\$77.27
Apprentice: 4,500 hours	\$52.58	\$68.01	\$83.45
Apprentice: 750-1,499 hours	\$43.32	\$54.13	\$64.93

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$68.02
10th hour	\$68.02
Beyond 10 hours	\$68.02

Saturday

First 8 hours	\$68.02
9th hour	\$68.02
10th hour	\$68.02
Beyond 10 hours	\$68.02

Sunday/Holiday

\$83.45

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 14	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$57.03	\$74.61	\$92.18
Apprentice: 0-749 hours	\$44.73	\$56.16	\$67.58
Apprentice: 1,500-2,249 hours	\$48.24	\$61.42	\$74.60
Apprentice: 2,250-2,999 hours	\$50.00	\$64.06	\$78.12
Apprentice: 3,000-3,749 hours	\$51.76	\$66.70	\$81.64
Apprentice: 3,750-4,499 hours	\$53.52	\$69.34	\$85.16
Apprentice: 4,500 hours	\$57.03	\$74.60	\$92.18
Apprentice: 750-11,499 hours	\$46.48	\$58.78	\$71.08

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$74.61
10th hour	\$74.61
Beyond 10 hours	\$74.61
Saturday	
First 8 hours	\$74.61
9th hour	\$74.61
10th hour	\$74.61
Beyond 10 hours	\$74.61
Sunday/Holiday	
	\$92.18

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 17	Cement Mason	05/10/2024

Classification Description: Cement Mason, Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$50.99	\$65.44	\$79.89
Apprentice: 0-749 hours	\$40.87	\$50.26	\$59.65
Apprentice: 1,500-2,249 hours	\$43.77	\$54.61	\$65.45
Apprentice: 2,250-2,999 hours	\$45.21	\$56.77	\$68.33
Apprentice: 3,000-3,749 hours	\$46.65	\$58.93	\$71.21
Apprentice: 3,750-4,499 hours	\$48.10	\$61.11	\$74.11
Apprentice: 4,500 hours	\$50.99	\$65.44	\$79.89
Apprentice: 750-1,499 hours	\$42.32	\$52.43	\$62.55

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$65.44
10th hour	\$65.44
Beyond 10 hours	\$65.44

Saturday

First 8 hours	\$65.44
9th hour	\$65.44
10th hour	\$65.44
Beyond 10 hours	\$65.44

Sunday/Holiday	\$79.89
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 2 S	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$55.50	\$79.02	\$102.53
Apprentice: 1st Period	\$36.99	\$51.45	\$65.91
Apprentice: 2nd Period	\$38.74	\$54.07	\$69.41
Apprentice: 3rd Period	\$41.54	\$58.30	\$75.06
Apprentice: 4th Period	\$43.82	\$61.70	\$79.57
Apprentice: 5th Period	\$46.08	\$65.08	\$84.09
Apprentice: 6th Period	\$48.30	\$68.42	\$88.53

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$72.97
10th hour	\$72.97
Beyond 10 hours	\$72.97

Saturday

First 8 hours	\$72.97
9th hour	\$72.97
10th hour	\$72.97
Beyond 10 hours	\$72.97

Sunday/Holiday	\$90.44
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 3	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$54.04	\$68.37	\$82.81
Apprentice: 0-749 hours	\$43.93	\$53.21	\$62.59
Apprentice: 1,500-2,249 hours	\$46.82	\$57.54	\$68.37
Apprentice: 2,250-2,999 hours	\$48.26	\$59.70	\$71.25
Apprentice: 3,000-3,749 hours	\$49.71	\$61.87	\$74.15
Apprentice: 3,750-4,499 hours	\$51.15	\$64.03	\$77.03
Apprentice: 4,500 hours	\$52.60	\$66.21	\$79.93
Apprentice: 750-1,499 hours	\$45.38	\$55.38	\$65.49

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$68.48
10th hour	\$68.48
Beyond 10 hours	\$68.48

Saturday

First 8 hours	\$68.48
9th hour	\$68.48
10th hour	\$68.48
Beyond 10 hours	\$68.48

Sunday/Holiday	\$82.92
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 31	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$47.16	\$60.76	\$74.36
Apprentice: 0-749 hours	\$37.64	\$46.48	\$55.32
Apprentice: 1,500-2,249 hours	\$40.36	\$50.56	\$60.76
Apprentice: 2,250-2,999 hours	\$41.72	\$52.60	\$63.48
Apprentice: 3,000-3,749 hours	\$43.08	\$54.64	\$66.20
Apprentice: 3,750-4,499 hours	\$44.44	\$56.68	\$68.92
Apprentice: 4,500 hours	\$47.16	\$60.76	\$74.36
Apprentice: 750-1,499 hours	\$39.00	\$48.52	\$58.04

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$60.76
10th hour	\$60.76
Beyond 10 hours	\$60.76
Saturday	
First 8 hours	\$60.76
9th hour	\$60.76
10th hour	\$60.76
Beyond 10 hours	\$60.76
Sunday/Holiday	
	\$74.36

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 40	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$47.44	\$61.03	\$74.61
Apprentice: 0-749 hours	\$37.93	\$46.76	\$55.59
Apprentice: 1,500-2,249 hours	\$40.65	\$50.84	\$61.03
Apprentice: 2,250-2,999 hours	\$42.01	\$52.88	\$63.75
Apprentice: 3,000-3,749 hours	\$43.36	\$54.91	\$66.45
Apprentice: 3,750-4,499 hours	\$44.72	\$56.95	\$69.17
Apprentice: 4,500 hours	\$47.44	\$61.03	\$74.61
Apprentice: 750-1,499 hours	\$39.29	\$48.80	\$58.31

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$61.03
10th hour	\$61.03
Beyond 10 hours	\$61.03

Saturday

First 8 hours	\$61.03
9th hour	\$61.03
10th hour	\$61.03
Beyond 10 hours	\$61.03

Sunday/Holiday

\$74.61

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - 7	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.53	\$56.66	\$68.79
Apprentice: 0-749 hours	\$36.04	\$43.93	\$51.81
Apprentice: 1,500-2,249 hours	\$38.47	\$47.57	\$56.67
Apprentice: 2,250-2,999 hours	\$39.68	\$49.39	\$59.09
Apprentice: 3,000-3,749 hours	\$40.89	\$51.20	\$61.51
Apprentice: 3,750-4,499 hours	\$42.10	\$53.01	\$63.93
Apprentice: 4,500 hours	\$44.53	\$56.66	\$68.79
Apprentice: 750-1,499 hours	\$37.25	\$45.74	\$54.23

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$56.66
10th hour	\$56.66
Beyond 10 hours	\$56.66

Saturday

First 8 hours	\$56.66
9th hour	\$56.66
10th hour	\$56.66
Beyond 10 hours	\$56.66

Sunday/Holiday	\$68.79
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - B	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$47.49	\$62.61	\$77.73
Apprentice: 1st Year	\$36.91	\$46.74	\$56.57
Apprentice: 2nd Year	\$39.93	\$51.27	\$62.61
Apprentice: 3rd Year	\$42.95	\$55.80	\$68.65

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$62.61
10th hour	\$62.61
Beyond 10 hours	\$62.61

Saturday

First 8 hours	\$62.61
9th hour	\$62.61
10th hour	\$62.61
Beyond 10 hours	\$62.61

Sunday/Holiday	\$77.73
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - BR	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$43.45	\$56.64	\$69.82
Apprentice: 1st Year	\$34.22	\$42.79	\$51.36
Apprentice: 2nd Year	\$36.86	\$46.75	\$56.64
Apprentice: 3rd Year	\$39.49	\$50.70	\$61.90

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$56.64
10th hour	\$56.64
Beyond 10 hours	\$56.64

Saturday

First 8 hours	\$56.64
9th hour	\$56.64
10th hour	\$56.64
Beyond 10 hours	\$56.64

Sunday/Holiday	\$69.82
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - G	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.21	\$63.42	\$78.63
Apprentice: 1st year	\$37.56	\$47.45	\$57.33
Apprentice: 2nd Year	\$40.61	\$52.02	\$63.43
Apprentice: 3rd Year	\$43.65	\$56.58	\$69.51

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$63.42
10th hour	\$63.42
Beyond 10 hours	\$63.42

Saturday

First 8 hours	\$63.42
9th hour	\$63.42
10th hour	\$63.42
Beyond 10 hours	\$63.42

Sunday/Holiday	\$78.63
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - K	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.49	\$57.87	\$71.25
Apprentice: 1st Year	\$34.95	\$43.64	\$52.34
Apprentice: 2nd Year	\$37.63	\$47.66	\$57.70
Apprentice: 3rd Year	\$40.31	\$51.68	\$63.06

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$57.87
10th hour	\$57.87
Beyond 10 hours	\$57.87
Saturday	
First 8 hours	\$57.87
9th hour	\$57.87
10th hour	\$57.87
Beyond 10 hours	\$57.87
Sunday/Holiday	
	\$71.25

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - L	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$47.09	\$61.77	\$76.45
Apprentice: 1st Year	\$36.81	\$46.35	\$55.89
Apprentice: 2nd Year	\$39.75	\$50.76	\$61.77
Apprentice: 3rd Year	\$42.69	\$55.17	\$67.65

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$61.77
10th hour	\$61.77
Beyond 10 hours	\$61.77

Saturday

First 8 hours	\$61.77
9th hour	\$61.77
10th hour	\$61.77
Beyond 10 hours	\$61.77

Sunday/Holiday	\$76.45
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - M	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$42.88	\$55.60	\$68.32
Apprentice: 1st Year	\$33.98	\$42.25	\$50.52
Apprentice: 2nd Year	\$36.52	\$46.06	\$55.60
Apprentice: 3rd Year	\$39.06	\$49.87	\$60.68

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$55.60
10th hour	\$55.60
Beyond 10 hours	\$55.60

Saturday

First 8 hours	\$55.60
9th hour	\$55.60
10th hour	\$55.60
Beyond 10 hours	\$55.60

Sunday/Holiday	\$68.32
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - s	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.12	\$67.83	\$87.53
Apprentice: 1st 6 months	\$31.72	\$43.23	\$54.73
Apprentice: 2nd 6 months	\$33.60	\$46.05	\$58.49
Apprentice: 3rd 6 months	\$35.49	\$48.88	\$62.27
Apprentice: 4th 6 months	\$37.37	\$51.70	\$66.03
Apprentice: 5th 6 months	\$39.25	\$54.52	\$69.79
Apprentice: 6th 6 months	\$41.14	\$57.36	\$73.57

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$63.24
10th hour	\$63.24
Beyond 10 hours	\$78.35

Saturday

First 8 hours	\$63.24
9th hour	\$63.24
10th hour	\$63.24
Beyond 10 hours	\$63.24

Sunday/Holiday	\$78.35
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - SJ	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$47.08	\$61.76	\$76.43
Apprentice: 1st Year	\$36.81	\$46.35	\$55.89
Apprentice: 2nd Year	\$39.74	\$50.75	\$61.75
Apprentice: 3rd Year	\$42.68	\$55.15	\$67.63

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$61.76
10th hour	\$61.76
Beyond 10 hours	\$61.76

Saturday

First 8 hours	\$61.76
9th hour	\$61.76
10th hour	\$61.76
Beyond 10 hours	\$61.76

Sunday/Holiday	\$76.43
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - TC	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.72	\$58.51	\$72.30
Apprentice: 1st Year	\$35.07	\$44.04	\$53.00
Apprentice: 2nd Year	\$37.82	\$48.16	\$58.50
Apprentice: 2rd Year	\$40.58	\$52.30	\$64.02

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$58.51
10th hour	\$58.51
Beyond 10 hours	\$58.51
Saturday	
First 8 hours	\$58.51
9th hour	\$58.51
10th hour	\$58.51
Beyond 10 hours	\$58.51
Sunday/Holiday	
	\$72.30

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - UP	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.67	\$50.71	\$62.74
Apprentice: 1st Year	\$30.25	\$38.08	\$45.90
Apprentice: 2nd Year	\$32.65	\$41.68	\$50.70
Apprentice: 3rd Year	\$35.06	\$45.29	\$55.52

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$50.71
10th hour	\$50.71
Beyond 10 hours	\$50.71

Saturday

First 8 hours	\$50.71
9th hour	\$50.71
10th hour	\$50.71
Beyond 10 hours	\$50.71

Sunday/Holiday	\$62.74
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Cement Mason - W	Cement Mason	05/10/2024

Classification Description: Cement Mason

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$52.82	\$74.60	\$96.37
Apprentice: 1st 6 Months	\$34.23	\$46.71	\$59.19
Apprentice: 2nd 6 Months	\$36.30	\$49.82	\$63.33
Apprentice: 3rd 6 Months	\$38.39	\$52.95	\$67.51
Apprentice: 4th 6 Months	\$40.47	\$56.07	\$71.67
Apprentice: 5th 6 Months	\$42.54	\$59.18	\$75.81
Apprentice: 6th 6 Months	\$44.63	\$62.31	\$79.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.94
10th hour	\$67.94
Beyond 10 hours	\$83.05

Saturday

First 8 hours	\$67.94
9th hour	\$67.94
10th hour	\$67.94
Beyond 10 hours	\$67.94

Sunday/Holiday	\$83.05
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Communication Technician	Communication Technician	05/13/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24
Saturday	
First 8 hours	\$98.24
9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24
Sunday/Holiday	
	\$128.58

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

ONLY due to inclement weather or customer requirements may Friday be used as a make up day if the normal scheduled work week was interrupted and time lost of five (5) hours or more was incurred by workmen covered under the terms of the 6-17-C/6-876-T agreement.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Diver - D - Z1	Diver	05/10/2024

Classification Description: Diver 4-10s allowed M-Sat; double time due when over 12 hours worked per day

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.40	\$98.48	\$120.55
Apprentice: 1st/2nd 6 mo	\$40.39	\$50.27	\$60.14
Apprentice: 3rd 60 mo	\$43.23	\$54.00	\$64.77
Apprentice: 4th 6 mo	\$46.08	\$57.75	\$69.42
Apprentice: 5th 6 mo	\$25.13	\$46.35	\$61.80

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$98.48
10th hour	\$98.48
Beyond 10 hours	\$98.48

Saturday

First 8 hours	\$98.48
9th hour	\$98.48
10th hour	\$98.48
Beyond 10 hours	\$98.48

Sunday/Holiday	\$120.55
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Drywall - DF	Drywall	05/10/2024

Classification Description: Drywall Finishers

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$51.86	\$67.66	\$83.46
Apprentice: 1st period	\$39.22	\$48.70	\$58.18
Apprentice: 2nd period	\$40.80	\$51.07	\$61.34
Apprentice: 3rd period	\$43.96	\$55.81	\$67.66
Apprentice: 4th period	\$48.70	\$62.92	\$77.14

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.66
10th hour	\$67.66
Beyond 10 hours	\$67.66

Saturday

First 8 hours	\$67.66
9th hour	\$67.66
10th hour	\$67.66
Beyond 10 hours	\$67.66

Sunday/Holiday	\$83.46
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Drywall Taper	Drywall	05/10/2024

Classification Description: Drywall Taper
Four 10s allowed Monday-Thursday

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.91	\$59.74	\$73.56
Apprentice: 4th 6 months	\$41.76	\$53.51	\$65.26
Apprentice: First 3 months	\$32.08	\$38.99	\$45.90
Apprentice: Second 3 months	\$34.85	\$43.14	\$51.44
Apprentice: Second 6 months	\$37.62	\$47.30	\$56.98
Apprentice: Third 6 months	\$40.38	\$51.44	\$62.50

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$59.74
10th hour	\$59.74
Beyond 10 hours	\$73.56

Saturday

First 8 hours	\$59.74
9th hour	\$73.56
10th hour	\$73.56
Beyond 10 hours	\$73.56

Sunday/Holiday	\$73.56
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Friday make-up day for bad weather or holidays

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Electrician - IW	Electrician	05/10/2024

Classification Description: Inside wireman

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$81.89	\$105.17	\$128.45
Apprentice: 1st Period	\$46.80	\$57.51	\$68.21
Apprentice: 2nd Period	\$53.31	\$66.94	\$80.55
Apprentice: 3rd Period	\$59.03	\$73.00	\$86.97
Apprentice: 4th Period	\$64.73	\$81.03	\$97.32
Apprentice: 5th Period	\$70.47	\$87.60	\$106.22
Apprentice: 6th Period	\$76.17	\$97.12	\$118.07

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$105.17
10th hour	\$105.17
Beyond 10 hours	\$128.45
Saturday	
First 8 hours	\$105.17
9th hour	\$128.45
10th hour	\$128.45
Beyond 10 hours	\$128.45
Sunday/Holiday	
	\$128.45

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Electrician - SC	Electrician	05/10/2024

Classification Description: Sound and Communications Installer

Technician BICSI certified & 6,000 OJT Straight time Rate \$54.32 Time and Half \$73.16 Double Time \$91.99

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$51.10	\$66.96	\$83.79
Apprentice: Period 1	\$33.56	\$40.49	\$48.72
Apprentice: Period 2	\$35.31	\$43.02	\$52.07
Apprentice: Period 3	\$37.07	\$45.56	\$55.43
Apprentice: Period 4	\$38.82	\$48.11	\$58.80
Apprentice: Period 5	\$40.57	\$50.63	\$62.14
Apprentice: Period 6	\$44.09	\$55.70	\$68.85
Apprentice: Period 7	\$47.59	\$60.76	\$75.56
Apprentice: Period 8	\$49.34	\$63.29	\$78.92
Apprentice: Technician BICSI certification & 6,000 OJT	\$54.32	\$73.16	\$91.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$65.91
10th hour	\$65.91
Beyond 10 hours	\$80.72

Saturday

First 8 hours	\$65.91
9th hour	\$80.72
10th hour	\$80.72
Beyond 10 hours	\$80.72

Sunday/Holiday

	\$80.72
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Electrician - SC	Electrician	05/10/2024

Classification Description: Sound and Communications Installer

Technician BICSI certified & 6,000 OJT Straight time Rate \$54.32 Time and Half \$73.16 Double Time \$91.99

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.37	\$44.43	\$59.24
Apprentice: Period 1	\$33.56	\$40.49	\$48.72
Apprentice: Period 2	\$35.31	\$43.02	\$52.07
Apprentice: Period 3	\$37.07	\$45.56	\$55.43
Apprentice: Period 4	\$38.82	\$48.11	\$58.80
Apprentice: Period 5	\$40.57	\$50.63	\$62.14
Apprentice: Period 6	\$44.09	\$55.70	\$68.85
Apprentice: Period 7	\$47.59	\$60.76	\$75.56
Apprentice: Period 8	\$49.34	\$63.29	\$78.92
Apprentice: Technician BICSI certification & 6,000 OJT	\$54.32	\$73.16	\$91.99

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$0.00
10th hour	\$0.00
Beyond 10 hours	\$0.00

Saturday

First 8 hours	\$0.00
9th hour	\$0.00
10th hour	\$0.00
Beyond 10 hours	\$0.00

Sunday/Holiday

	\$0.00
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Elevator Constructor Mechanic	Elevator Constructor	05/10/2024

Classification Description: Elevator Constructor Mechanic

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$96.72	\$83.78	\$152.57
Apprentice: 1st year	\$68.96	\$46.08	\$99.68
Apprentice: 2nd year	\$74.88	\$54.45	\$111.18
Apprentice: 3rd year	\$77.85	\$58.65	\$116.95
Apprentice: 4th year	\$84.65	\$67.02	\$129.33

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$152.57
10th hour	\$152.57
Beyond 10 hours	\$152.57
Saturday	
First 8 hours	\$152.57
9th hour	\$152.57
10th hour	\$152.57
Beyond 10 hours	\$152.57
Sunday/Holiday	
	\$152.57

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Fiber Optic Splicer	Fiber Optic Splicer	05/13/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24

Saturday

First 8 hours	\$98.24
9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24

Sunday/Holiday	\$128.58
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

ONLY due to inclement weather or customer requirements may Friday be used as a make up day if the normal scheduled work week was interrupted and time lost of five (5) hours or more was incurred by workmen covered under the terms of the 6-17-C/6-876-T agreement.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Foreman	Foreman	05/10/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Saturday

First 8 hours	\$90.71
9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Sunday/Holiday	\$113.52
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Foreman	Foreman	05/10/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Saturday

First 8 hours	\$90.71
9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Sunday/Holiday	\$113.52
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Foreman	Foreman	05/10/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Saturday

First 8 hours	\$90.71
9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Sunday/Holiday	\$113.52
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Foreman	Foreman	05/10/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Saturday

First 8 hours	\$90.71
9th hour	\$90.71
10th hour	\$90.71
Beyond 10 hours	\$90.71

Sunday/Holiday	\$113.52
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Foreman	Foreman	05/10/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$75.47	\$109.62	\$143.74

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$109.61
10th hour	\$109.61
Beyond 10 hours	\$109.61

Saturday

First 8 hours	\$109.61
9th hour	\$109.61
10th hour	\$109.61
Beyond 10 hours	\$109.61

Sunday/Holiday

\$143.74

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

ONLY due to inclement weather or customer requirements may Friday be used as a make up day if the normal scheduled work week was interrupted and time lost of five (5) hours or more was incurred by workmen covered under the terms of the 6-17-C/6-876-T agreement.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Foreman	Foreman	05/10/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$75.47	\$109.61	\$143.74

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$101.14
10th hour	\$101.14
Beyond 10 hours	\$101.14

Saturday

First 8 hours	\$101.14
9th hour	\$101.14
10th hour	\$101.14
Beyond 10 hours	\$101.14

Sunday/Holiday	\$126.80
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Foreman	Foreman	05/10/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.98	\$111.87	\$146.76

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$103.22
10th hour	\$103.22
Beyond 10 hours	\$103.22

Saturday

First 8 hours	\$103.22
9th hour	\$103.22
10th hour	\$103.22
Beyond 10 hours	\$103.22

Sunday/Holiday	\$129.45
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Glazier	Glazier	05/10/2024

Classification Description: Glazier

If 4 10 hour day workweek is scheduled, four 10s must be consecutive, M-F.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$53.55	\$70.10	\$86.65
Apprentice: 1st 6 months	\$37.00	\$45.27	\$53.55
Apprentice: 2nd 6 months	\$37.75	\$46.40	\$55.05
Apprentice: 3rd 6 months	\$41.97	\$52.73	\$63.49
Apprentice: 4th 6 months	\$43.62	\$55.21	\$66.79
Apprentice: 5th 6 months	\$45.27	\$57.68	\$70.09
Apprentice: 6th 6 months	\$46.93	\$60.17	\$73.41
Apprentice: 7th 6 months	\$48.59	\$62.66	\$76.73
Apprentice: 8th 6 months	\$51.89	\$67.61	\$83.33

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$70.10
10th hour	\$70.10
Beyond 10 hours	\$70.10

Saturday

First 8 hours	\$70.10
9th hour	\$70.10
10th hour	\$70.10
Beyond 10 hours	\$70.10

Sunday/Holiday	\$86.65
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Heat & Frost Insulator - Spray Insulation	Heat and Frost Insulator	05/10/2024

Classification Description: Spray Insulation

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$25.29	\$36.51	\$47.73

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$36.51
10th hour	\$36.51
Beyond 10 hours	\$36.51

Saturday

First 8 hours	\$36.51
9th hour	\$36.51
10th hour	\$36.51
Beyond 10 hours	\$36.51

Sunday/Holiday	\$36.51
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Additional Jurisdiction Detail: Twps of Ann Arbor, Augusta, Lodi, Northfield, Pittsfield, Salem, Saline, Scio, Superior, Webster, Ypsilanti and York

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Heat & Frost Insulator Asbestos	Heat and Frost Insulator	05/10/2024

Classification Description: Heat and Frost Insulators and Asbestos Workers 4-10s must be worked a minimum of 2 weeks consecutively, Monday thru Thursday. Hours worked in excess of 10 will be paid at double time. Hours worked on the fifth day, Monday thru Friday @ time and half

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$62.65	\$78.41	\$94.16
Apprentice: 1st Year	\$46.90	\$54.78	\$62.66
Apprentice: 2nd Year	\$50.05	\$59.50	\$68.96
Apprentice: 3rd Year	\$53.20	\$64.23	\$75.26
Apprentice: 4th Year	\$56.35	\$68.96	\$81.56

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$78.41
10th hour	\$78.41
Beyond 10 hours	\$78.41

Saturday

First 8 hours	\$78.41
9th hour	\$78.41
10th hour	\$78.41
Beyond 10 hours	\$78.41

Sunday/Holiday	\$94.16
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Additional Jurisdiction Detail: Twps of Ann Arbor, Augusta, Lodi, Northfield, Pittsfield, Salem, Saline, Scio, Superior, Webster, Ypsilanti and York

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Heat & Frost Insulator	Heat and Frost Insulator and Asbestos Worker	05/10/2024

Classification Description: Heat and Frost Insulators and Asbestos Workers

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$52.00	\$68.89	\$85.77
Apprentice: 1st year	\$26.38	\$33.69	\$40.99
Apprentice: 2nd year	\$30.15	\$38.92	\$47.68
Apprentice: 3rd year	\$33.92	\$44.15	\$54.37
Apprentice: 4th year	\$37.70	\$49.39	\$61.08
Apprentice: 5th year	\$41.48	\$54.63	\$67.78

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$68.89
10th hour	\$68.89
Beyond 10 hours	\$68.89
Saturday	
First 8 hours	\$68.89
9th hour	\$68.89
10th hour	\$68.89
Beyond 10 hours	\$68.89
Sunday/Holiday	
	\$85.77

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Friday for cancelled work in a 4 10 schedule

Additional Jurisdiction Detail: Bridgewater, Dexter, Freedom, Lima, Lindon, Manchester, Sharon and Sylvan

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Electrician - Installor Technician	IBEW 252	06/18/2024

Classification Description: Installor Technician

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$55.15	\$70.91	\$86.67
Apprentice: Apprentice Level 1	\$36.49	\$15.76	\$15.76
Apprentice: Apprentice Level 2	\$38.08	\$17.34	\$17.34
Apprentice: Apprentice Level 3	\$40.14	\$18.91	\$18.91
Apprentice: Apprentice Level 4	\$42.08	\$20.49	\$20.49
Apprentice: apprentice Level 5	\$43.94	\$22.06	\$22.06
Apprentice: Apprentice Level 6	\$47.68	\$25.22	\$25.22
Apprentice: Apprentice Level 7	\$51.41	\$28.37	\$28.37
Apprentice: Apprentice Level 8	\$53.27	\$29.94	\$29.94

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$55.15
10th hour	\$55.15
Beyond 10 hours	\$55.15
Saturday	
First 8 hours	\$55.15
9th hour	\$55.15
10th hour	\$55.15
Beyond 10 hours	\$55.15
Sunday/Holiday	
	\$55.15

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Ironworker - RF	Ironworker	05/10/2024

Classification Description: Reinforced Iron Work

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$69.51	\$85.85	\$102.19
Apprentice: Level 1	\$52.63	\$64.23	\$75.83
Apprentice: Level 2	\$54.68	\$66.77	\$78.86
Apprentice: Level 3	\$56.56	\$68.98	\$81.40
Apprentice: Level 4	\$59.41	\$72.65	\$85.88
Apprentice: Level 5	\$62.27	\$76.32	\$90.37
Apprentice: Level 6	\$66.76	\$82.48	\$98.19
Apprentice: Level 7	\$66.76	\$82.48	\$98.19
Apprentice: Level 8	\$66.76	\$82.48	\$98.19

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$85.85
10th hour	\$85.85
Beyond 10 hours	\$102.19

Saturday

First 8 hours	\$85.85
9th hour	\$85.85
10th hour	\$102.19
Beyond 10 hours	\$102.19

Sunday/Holiday

\$102.19

Four 10-hour days allowed? - No

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Ironworker - RIG	Ironworker	05/10/2024

Classification Description: Rigging Work

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.08	\$92.93	\$109.78
Apprentice: Level 1	\$51.75	\$62.38	\$73.01
Apprentice: Level 2	\$52.56	\$63.54	\$74.52
Apprentice: Level 3	\$54.83	\$66.33	\$77.83
Apprentice: Level 4	\$57.51	\$69.71	\$81.91
Apprentice: Level 5	\$60.60	\$73.67	\$86.74
Apprentice: Level 6	\$63.27	\$77.04	\$90.80
Apprentice: Level 7	\$66.35	\$80.99	\$95.62
Apprentice: Level 8	\$69.43	\$84.94	\$100.45

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$92.93
10th hour	\$92.93
Beyond 10 hours	\$109.78

Saturday

First 8 hours	\$92.93
9th hour	\$92.93
10th hour	\$92.93
Beyond 10 hours	\$109.78

Sunday/Holiday	\$109.78
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Ironworker - STR	Ironworker	05/10/2024

Classification Description: Structural, ornamental, welder and pre-cast If bad weather, Friday may be a make up day. If holiday celebrated on a Monday, 4 10s may be worked Tuesday thru Friday.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.21	\$102.75	\$129.29
Apprentice: Level 1	\$51.25	\$61.88	\$72.51
Apprentice: Level 2	\$52.56	\$63.54	\$74.52
Apprentice: Level 3	\$54.83	\$66.33	\$77.83
Apprentice: Level 4	\$57.51	\$70.34	\$83.17
Apprentice: Level 5	\$60.60	\$73.67	\$86.74
Apprentice: Level 6	\$63.27	\$77.04	\$90.80
Apprentice: Level 7	\$66.35	\$80.98	\$95.62
Apprentice: Level 8	\$69.43	\$84.94	\$100.45

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$93.64
10th hour	\$93.64
Beyond 10 hours	\$111.06

Saturday

First 8 hours	\$93.64
9th hour	\$93.64
10th hour	\$93.64
Beyond 10 hours	\$111.06

Sunday/Holiday	\$111.06
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Journeyman Signal Technician	Journeyman Signal Technician	05/13/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58
Apprentice: Apprentice 1st 6 months	\$43.61	\$61.82	\$80.02
Apprentice: Apprentice 2nd 6 months	\$46.65	\$66.38	\$86.10
Apprentice: Apprentice 3rd 6 months	\$49.68	\$70.92	\$92.16
Apprentice: Apprentice 4th 6 months	\$52.71	\$75.47	\$98.22
Apprentice: Apprentice 5th 6 months	\$55.75	\$80.03	\$104.30
Apprentice: Apprentice 6th 6months	\$61.82	\$89.13	\$116.44

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24
Saturday	
First 8 hours	\$98.24
9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24
Sunday/Holiday	
	\$128.58

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

ONLY due to inclement weather or customer requirements may Friday be used as a make up day if the normal scheduled work week was interrupted and time lost of five (5) hours or more was incurred by workmen covered under the terms of the 6-17-C/6-876-T agreement.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Journeyman Specialist	Journeyman Specialist	05/13/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.98	\$111.88	\$146.76

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$111.87
10th hour	\$111.87
Beyond 10 hours	\$111.87

Saturday

First 8 hours	\$111.87
9th hour	\$111.87
10th hour	\$111.87
Beyond 10 hours	\$111.87

Sunday/Holiday	\$146.76
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

ONLY due to inclement weather or customer requirements may Friday be used as a make up day if the normal scheduled work week was interrupted and time lost of five (5) hours or more was incurred by workmen covered under the terms of the 6-17-C/6-876-T agreement.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Labor Crew Foreman	Labor Crew Foreman	05/13/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$61.86	\$89.19	\$116.52

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$89.19
10th hour	\$89.19
Beyond 10 hours	\$89.19

Saturday

First 8 hours	\$89.19
9th hour	\$89.19
10th hour	\$89.19
Beyond 10 hours	\$89.19

Sunday/Holiday	\$116.52
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

ONLY due to inclement weather or customer requirements may Friday be used as a make up day if the normal scheduled work week was interrupted and time lost of five (5) hours or more was incurred by workmen covered under the terms of the 6-17-C/6-876-T agreement.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Asbestos & Lead Abatement Laborer	Laborer	05/10/2024

Classification Description: Asbestos & Lead Abatement Laborer

4 ten hour days @ straight time allowed Monday-Saturday, must be consecutive calendar days

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$50.60	\$65.37	\$80.13
Apprentice: Trainee 600 hours +1 year	\$34.07	\$18.89	\$20.54

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$65.37
10th hour	\$65.37
Beyond 10 hours	\$65.37

Saturday

First 8 hours	\$65.37
9th hour	\$65.37
10th hour	\$65.37
Beyond 10 hours	\$65.37

Sunday/Holiday	\$80.13
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - A	Laborer	05/10/2024

Classification Description: Journeyperson - building and heavy construction craft laborer, portable concrete mixer operator, air, electric or gasoline tool operator, hot dope carrier, tar kettle tender, gasoline vibrators, concrete gas buggies, concrete saw, signal person and top pe

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$41.53	\$55.45	\$69.36
Apprentice: 0-1,000 hours	\$40.32	\$50.75	\$61.19
Apprentice: 1,001-2,000 hours	\$41.71	\$52.84	\$63.97
Apprentice: 2,001-3,000 hours	\$43.11	\$54.94	\$66.77
Apprentice: 3,001-4,000 hours	\$45.89	\$59.11	\$72.33

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$55.45
10th hour	\$55.45
Beyond 10 hours	\$55.45

Saturday

First 8 hours	\$55.45
9th hour	\$55.45
10th hour	\$55.45
Beyond 10 hours	\$55.45

Sunday/Holiday	\$69.36
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - A-A	Laborer	05/10/2024

Classification Description: Construction Laborers on Building and Heavy Construction Work, Except Foreman and Others Not Falling Within Specified Classification, Demolition Laborer and Drywall Handlers.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$47.80	\$63.10	\$78.40
Apprentice: 0-1,000 hours	\$40.81	\$55.70	\$70.58
Apprentice: 1,001-2,000 hours	\$42.12	\$57.66	\$73.19
Apprentice: 2,001-3,000 hours	\$43.43	\$59.62	\$75.81
Apprentice: 3,001-4,000 hours	\$46.04	\$63.54	\$81.04

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$61.10
10th hour	\$61.10
Beyond 10 hours	\$61.10

Saturday

First 8 hours	\$61.10
9th hour	\$61.10
10th hour	\$61.10
Beyond 10 hours	\$61.10

Sunday/Holiday	\$74.40
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - A-B	Laborer	05/10/2024

Classification Description: Mortar mixer, material mixer, air, gas or electric tool operator, power buggy operator, stone setter, tender, scaffold builder or dismantler, winlass operator, tar & kettle operator.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.58	\$58.82	\$72.06
Apprentice: 0-1,000 hours	\$38.60	\$48.37	\$58.15
Apprentice: 1,001-2,000 hours	\$39.91	\$50.34	\$60.77
Apprentice: 2,001-3,000 hours	\$41.21	\$52.29	\$63.37
Apprentice: 3,001-4,000 hours	\$43.82	\$56.21	\$68.59

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$58.82
10th hour	\$58.82
Beyond 10 hours	\$58.82

Saturday

First 8 hours	\$58.82
9th hour	\$58.82
10th hour	\$58.82
Beyond 10 hours	\$58.82

Sunday/Holiday	\$72.06
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - A-B2	Laborer	05/10/2024

Classification Description: Jack hammering and chipping on concrete

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.91	\$59.32	\$72.72
Apprentice: 0-1,000 hours	\$38.85	\$48.75	\$58.65
Apprentice: 1,001-2,000 hours	\$40.17	\$50.73	\$61.29
Apprentice: 2,001-3,000 hours	\$41.49	\$52.71	\$63.93
Apprentice: 3,001-4,000 hours	\$44.13	\$56.67	\$69.21

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$59.32
10th hour	\$59.32
Beyond 10 hours	\$59.32

Saturday

First 8 hours	\$59.32
9th hour	\$59.32
10th hour	\$59.32
Beyond 10 hours	\$59.32

Sunday/Holiday	\$72.72
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - A-C	Laborer	05/10/2024

Classification Description: Crock or pipe laborer, caisson worker

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.72	\$59.03	\$72.34
Apprentice: 0-1,000 hours	\$38.71	\$48.54	\$58.37
Apprentice: 1,001-2,000 hours	\$40.02	\$50.51	\$60.99
Apprentice: 2,001-3,000 hours	\$41.33	\$52.47	\$63.61
Apprentice: 3,001-4,000 hours	\$43.95	\$56.40	\$68.85

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$59.03
10th hour	\$59.03
Beyond 10 hours	\$59.03

Saturday

First 8 hours	\$59.03
9th hour	\$59.03
10th hour	\$59.03
Beyond 10 hours	\$59.03

Sunday/Holiday	\$72.34
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - A-D	Laborer	05/10/2024

Classification Description: Watchmen, Civil Engineer Helpers, or Rodmen

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.47	\$57.16	\$69.84
Apprentice: 0-1,000 hours	\$37.79	\$47.16	\$56.53
Apprentice: 1,001-2,000 hours	\$39.03	\$49.02	\$59.01
Apprentice: 2,001-3,000 hours	\$40.28	\$50.89	\$61.51
Apprentice: 3,001-4,000 hours	\$42.78	\$54.65	\$66.51

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$57.16
10th hour	\$57.16
Beyond 10 hours	\$57.16
Saturday	
First 8 hours	\$57.16
9th hour	\$57.16
10th hour	\$57.16
Beyond 10 hours	\$57.16
Sunday/Holiday	
	\$69.84

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - A-E	Laborer	05/10/2024

Classification Description: Final cleaning: washing or cleaning of walls, partitions, ceilings, windows, bathrooms, kitchens, laboratories and all fixtures and facilities therein. Clean-up mopping, washing, waxing and polishing or dusting of all floors or areas.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$42.02	\$53.48	\$64.94

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$53.48
10th hour	\$53.48
Beyond 10 hours	\$53.48

Saturday

First 8 hours	\$53.48
9th hour	\$53.48
10th hour	\$53.48
Beyond 10 hours	\$53.48

Sunday/Holiday	\$64.94
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Class 1 - RZ1	Laborer	06/20/2024

Classification Description: Laborer Road Class 1: Asphalt Shoveler or loader, asphalt plant misc., asphalt raker tender, burlap man, carpenters' tender, yard man, guard rail builder's tender, Earth Retention barrier and wall and M.S.E. Wall installers Tender, Highway and median barrier installers tender (including sound, retaining and crash barriers), fence erector's tender, dumper (wagon, Truck, etc.), joint filling labor, misc., unskilled labor, sprinkler labor, form setting labor, form stripper, pavement reinforcing, handling and placing (e.g., wire mesh, steel mats, dowel bars, etc.), mason's or bricklayer's tender on manholes, manhole builder, headwalls, etc., waterproofing, (other than buildings) seal coating and slurry mix, shoring, underpinning, bridge painting, etc., (spray, roller and brush), sandblasting, pressure grouting, bridge pin and hanger removal, Material Recycling Laborer, Horizontal Paver Laborer (brick, concrete, clay, stone and asphalt), Ground Stabilization and Modification Laborer, grouting, waterblasting, Top Man, and railroad track and trestle laborer, sign installer and remote control operated equipment.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$47.82	\$62.33	\$76.83
Apprentice: 0-1,000 hours	\$41.33	\$52.21	\$63.09
Apprentice: 1,001-2,000 hours	\$42.78	\$54.39	\$65.99
Apprentice: 2,001-3,000	\$44.23	\$56.56	\$68.89
Apprentice: 3,001-4,000 hours	\$47.13	\$60.91	\$74.69

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$62.33
10th hour	\$62.33
Beyond 10 hours	\$62.33
Saturday	
First 8 hours	\$62.33
9th hour	\$62.33
10th hour	\$62.33
Beyond 10 hours	\$62.33
Sunday/Holiday	
	\$76.83

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Class 2 - RZ1	Laborer	06/20/2024

Classification Description: Laborer Road Class 2: Mixer operator, (less than 5 sacks), air or electric tool operator (jack hammer, etc.), spreader, boxman (asphalt, stone, gravel, etc.), concrete paddler, power chain saw operator, paving batch truck dumper, tunnel mucker (highway work only), concrete saw operator (under 40 hp), dry pack machine, and roto-mill grounds person.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.07	\$62.64	\$77.21
Apprentice: 0-1,000 hours	\$41.43	\$52.36	\$63.29
Apprentice: 1,001-2,000 hours	\$42.88	\$54.54	\$66.19
Apprentice: 2,001-3,000 hours	\$44.34	\$56.73	\$69.11
Apprentice: 3,001-4,000 hours	\$47.25	\$61.09	\$74.93

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$62.64
10th hour	\$62.64
Beyond 10 hours	\$62.64
Saturday	
First 8 hours	\$62.64
9th hour	\$62.64
10th hour	\$62.64
Beyond 10 hours	\$62.64
Sunday/Holiday	
	\$77.21

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Class 3 - RZ1	Laborer	06/20/2024

Classification Description: Laborer Road Class 3: Tunnel miner (highway work only), finishers tenders, guard rail builder, highway and median barrier installer, Earth Retention Barrier and wall and M.S.E. wall installer (including sound, retaining and crash barriers), fence erector, bottom man, powder man, wagon drill, and air track operator, curb and side rail setter's tender, diamond and core drills (per agreement between the Laborers and Operating Engineers International Union dated February 3, 1954), grade checker and certified welder.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.25	\$62.91	\$77.57
Apprentice: 0-1,000 hours	\$41.56	\$52.55	\$63.55
Apprentice: 1,001-2,000 hours	\$43.03	\$54.76	\$66.49
Apprentice: 2,001-3,000 hours	\$44.49	\$56.95	\$69.41
Apprentice: 3,001-4,000 hours	\$47.42	\$61.35	\$75.27

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$62.91
10th hour	\$62.91
Beyond 10 hours	\$62.91
Saturday	
First 8 hours	\$62.91
9th hour	\$62.91
10th hour	\$62.91
Beyond 10 hours	\$62.91
Sunday/Holiday	
	\$77.57

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Class 4 - RZ1	Laborer	05/10/2024

Classification Description: Laborer Road Class 4: asphalt raker

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.33	\$62.53	\$77.23
Apprentice: 0-1,000 hours	\$41.62	\$52.15	\$63.17
Apprentice: 1,001-2,000 hours	\$43.09	\$54.35	\$66.11
Apprentice: 2,001-3,000 hours	\$44.56	\$56.55	\$69.05
Apprentice: 3,001-4,000 hours	\$47.50	\$60.97	\$74.93

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$63.03
10th hour	\$63.03
Beyond 10 hours	\$63.03

Saturday

First 8 hours	\$63.03
9th hour	\$63.03
10th hour	\$63.03
Beyond 10 hours	\$63.03

Sunday/Holiday	\$77.73
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Class 5 - RZ1	Laborer	05/10/2024

Classification Description: Laborer Road Class 5: pipe layers, oxy-gun

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.54	\$63.35	\$78.15
Apprentice: 0-1,000 hours	\$41.78	\$52.89	\$63.99
Apprentice: 1,001-2,000 hours	\$43.26	\$55.11	\$66.95
Apprentice: 2,001-3,000 hours	\$44.74	\$57.33	\$69.91
Apprentice: 3,001-4,000 hours	\$47.70	\$61.77	\$75.83

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$63.34
10th hour	\$63.34
Beyond 10 hours	\$63.34

Saturday

First 8 hours	\$63.34
9th hour	\$63.34
10th hour	\$63.34
Beyond 10 hours	\$63.34

Sunday/Holiday	\$78.15
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Class 6 - RZ1	Laborer	05/10/2024

Classification Description: Laborer Road Class 6: line form setter for curb or pavement, asphalt screed checker/screw man on asphalt paving machines

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.84	\$63.80	\$78.75
Apprentice: 0-1,000 hours	\$42.00	\$53.22	\$64.43
Apprentice: 1,001-2,000 hours	\$43.50	\$55.47	\$67.43
Apprentice: 2,001-3,000 hours	\$44.99	\$57.70	\$70.41
Apprentice: 3,001-4,000 hours	\$47.98	\$62.19	\$76.39

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$63.80
10th hour	\$63.80
Beyond 10 hours	\$63.80

Saturday

First 8 hours	\$63.80
9th hour	\$63.80
10th hour	\$63.80
Beyond 10 hours	\$63.80

Sunday/Holiday	\$78.75
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Class 7 - RZ1	Laborer	06/20/2024

Classification Description: Laborer Road Class 7: Concrete Specialist - The Classification of Concrete Specialist shall include the finishing and troweling, of cast in place or precast concrete by any and all methods. Laborers who have the necessary skills to be classified as a Concrete Specialist and perform the work shall be paid the following wage and fringe benefit scale.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$49.91	\$65.40	\$80.89
Apprentice: 0-1,000 hours	\$42.80	\$54.42	\$66.03
Apprentice: 1,001-2,000 hours	\$44.35	\$56.74	\$69.13
Apprentice: 2,001-3,000 hours	\$45.90	\$59.06	\$72.23
Apprentice: 3,001-4,000 hours	\$47.78	\$64.72	\$81.66

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$65.40
10th hour	\$65.40
Beyond 10 hours	\$65.40
Saturday	
First 8 hours	\$65.40
9th hour	\$65.40
10th hour	\$65.40
Beyond 10 hours	\$65.40
Sunday/Holiday	
	\$80.89

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - D	Laborer	05/10/2024

Classification Description: Laborer -- building and heavy construction craft laborer, portable concrete mixer operator, air, electric or gasoline tool operator, hot dope carrier, tar kettle tender, gasoline vibrators, concrete gas buggies, concrete saw, signal person and top person

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.05	\$50.48	\$62.90
Apprentice: 0-1,000 Hours	\$31.84	\$41.16	\$50.48
Apprentice: 1,001-2,000 Hours	\$33.08	\$43.02	\$52.96
Apprentice: 2,001-3,000 Hours	\$34.32	\$44.88	\$55.44
Apprentice: 3,001-4,000 Hours	\$36.81	\$48.62	\$60.42

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$50.48
10th hour	\$50.48
Beyond 10 hours	\$50.48

Saturday

First 8 hours	\$50.48
9th hour	\$50.48
10th hour	\$50.48
Beyond 10 hours	\$50.48

Sunday/Holiday	\$62.90
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - J	Laborer	05/10/2024

Classification Description: Ground burner

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.18	\$50.67	\$63.16

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$50.67
10th hour	\$50.67
Beyond 10 hours	\$50.67

Saturday

First 8 hours	\$50.67
9th hour	\$50.67
10th hour	\$50.67
Beyond 10 hours	\$50.67

Sunday/Holiday	\$63.16
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Four 10-hour days allowed? - No

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - M-A	Laborer	05/10/2024

Classification Description: Construction Laborer, Carpenter Tender, Concrete Laborer, Concrete Chute, Bucket Handler. Demolition

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$49.48	\$66.40	\$83.41
Apprentice: 0-1,000 work hours	\$39.67	\$51.90	\$64.14
Apprentice: 1,001-2,000 work hours	\$41.01	\$53.92	\$66.82
Apprentice: 2,001-3,000 work hours	\$42.35	\$55.92	\$69.50
Apprentice: 3,001-4,000 work hours	\$45.02	\$59.93	\$74.84

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$64.30
10th hour	\$64.30
Beyond 10 hours	\$64.30

Saturday

First 8 hours	\$64.30
9th hour	\$64.30
10th hour	\$64.30
Beyond 10 hours	\$64.30

Sunday/Holiday	\$79.11
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - M-B	Laborer	05/10/2024

Classification Description: Mortar Mixer (inc. concrete & mortar 1/2 cu yd. or smaller machine, or by hand in mortar box); Mason Tender & Cement Mason Tender; Plasterer Tender, Portable Mixer Operator, and Air, Electric & Gasoline Tool Operator (inc. concrete vibrator & acetylene torc

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$50.05	\$67.08	\$84.20

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$64.98
10th hour	\$64.98
Beyond 10 hours	\$64.98

Saturday

First 8 hours	\$64.98
9th hour	\$64.98
10th hour	\$64.98
Beyond 10 hours	\$64.98

Sunday/Holiday	\$79.90
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - M-C	Laborer	05/10/2024

Classification Description: Hazardous Work: Employees required to wear acid resistant clothing, heat resistant clothing or radiation protective clothing

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Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$50.39	\$67.59	\$84.88

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$65.49
10th hour	\$65.49
Beyond 10 hours	\$65.49
Saturday	
First 8 hours	\$65.49
9th hour	\$65.49
10th hour	\$65.49
Beyond 10 hours	\$65.49
Sunday/Holiday	
	\$80.58

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - M-D	Laborer	05/10/2024

Classification Description: Cleaner/Sweeper Laborer; Furniture Laborer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.17	\$56.06	\$68.04

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$56.16
10th hour	\$56.16
Beyond 10 hours	\$56.16

Saturday

First 8 hours	\$56.16
9th hour	\$56.16
10th hour	\$56.16
Beyond 10 hours	\$56.16

Sunday/Holiday	\$68.14
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Saturday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Hazardous - Class A - Z3	Laborer - Hazardous	05/10/2024

Classification Description: 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 regulat

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.36	\$62.74	\$80.12
Apprentice: 0-1,000 work hours	\$38.80	\$52.90	\$67.00
Apprentice: 1,001-2,000 work hours	\$40.11	\$54.87	\$69.62
Apprentice: 2,001-3,000 work hours	\$41.42	\$56.83	\$72.24
Apprentice: 3,001-4,000 work hours	\$44.05	\$60.77	\$77.50

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$58.49
10th hour	\$58.49
Beyond 10 hours	\$58.49

Saturday

First 8 hours	\$58.49
9th hour	\$58.49
10th hour	\$58.49
Beyond 10 hours	\$58.49

Sunday/Holiday	\$71.62
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Hazardous - Class B - Z3	Laborer - Hazardous	05/10/2024

Classification Description: 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.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$46.36	\$64.24	\$82.12
Apprentice: 0-1,000 work hours	\$39.54	\$54.01	\$68.48
Apprentice: 1,001-2,000 work hours	\$40.91	\$56.07	\$71.22
Apprentice: 2,001-3,000 work hours	\$42.27	\$58.11	\$73.94
Apprentice: 3,001-4,000 work hours	\$45.00	\$62.20	\$79.40

Overtime Provisions	
Over 8-hour day/40-hour week	
9th hour	\$59.99
10th hour	\$59.99
Beyond 10 hours	\$59.99
Saturday	
First 8 hours	\$59.99
9th hour	\$59.99
10th hour	\$59.99
Beyond 10 hours	\$59.99
Sunday/Holiday	\$73.62

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Landscape - Class B1 - Z1	Laborer - Landscape	05/10/2024

Classification Description: Class B1: Landscape Operator includes air, gas, and diesel equipment operator, lawn sprinkler installer, skidsteer, mini excavators, backhoe loaders, ride and walk behind trenchers, off road dump vehicle, articulated haulers, hydroseeder, wheel loaders

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$32.40	\$42.43	\$52.95

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$42.93
10th hour	\$42.93
Beyond 10 hours	\$42.93

Saturday

First 8 hours	\$42.93
9th hour	\$42.93
10th hour	\$42.93
Beyond 10 hours	\$42.93

Sunday/Holiday	\$53.45
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Landscape - Class B1 - Z1	Laborer - Landscape	05/10/2024

Classification Description: Class B1: Landscape Operator includes air, gas, and diesel equipment operator, lawn sprinkler installer, skidsteer, mini excavators, backhoe loaders, ride and walk behind trenchers, off road dump vehicle, articulated haulers, hydroseeder, wheel loaders

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$34.62	\$46.26	\$57.89

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$11.35
10th hour	\$46.26
Beyond 10 hours	\$46.26

Saturday

First 8 hours	\$46.26
9th hour	\$46.26
10th hour	\$46.26
Beyond 10 hours	\$46.26

Sunday/Holiday	\$57.89
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Landscape - Class B2 - Z1	Laborer - Landscape	05/10/2024

Classification Description: Class B2: Skilled Landscape Laborer: small power tool operator, lawn sprinkler installers' tender, irrigation installers' tender, material mover

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$30.40	\$39.93	\$49.45

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$39.93
10th hour	\$39.93
Beyond 10 hours	\$39.93

Saturday

First 8 hours	\$39.93
9th hour	\$39.93
10th hour	\$39.93
Beyond 10 hours	\$39.93

Sunday/Holiday	\$49.45
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Landscape - Class C - Z2	Laborer - Landscape	05/10/2024

Classification Description: Class C: landscape laborer with 90 or more calendar days worked

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$24.66	\$33.27	\$41.87

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$31.98
10th hour	\$31.98
Beyond 10 hours	\$31.98

Saturday

First 8 hours	\$31.98
9th hour	\$31.98
10th hour	\$31.98
Beyond 10 hours	\$31.98

Sunday/Holiday	\$39.30
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer - Landscape - Class D - Z2	Laborer - Landscape	05/10/2024

Classification Description: Class D: Inexperienced landscape laborer - individual who has worked less than 90 calendar days

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$15.54	\$23.31	\$31.08

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$22.03
10th hour	\$22.03
Beyond 10 hours	\$22.03

Saturday

First 8 hours	\$22.03
9th hour	\$22.03
10th hour	\$22.03
Beyond 10 hours	\$22.03

Sunday/Holiday	\$28.51
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer Underground - Tunnel, Shaft & Caisson - Class I - Z2	Laborer Underground - Tunnel, Shaft & Caisson	05/10/2024

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.97	\$50.26	\$61.54
Apprentice: 0-1,000 work hours	\$32.85	\$42.64	\$52.43
Apprentice: 1,001-2,000 work hours	\$33.97	\$44.32	\$54.67
Apprentice: 2,001-3,000 work hours	\$35.08	\$45.99	\$56.89
Apprentice: 3,001-4,000 work hours	\$37.31	\$49.33	\$61.35

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$50.26
10th hour	\$50.26
Beyond 10 hours	\$50.26
Saturday	
First 8 hours	\$50.26
9th hour	\$50.26
10th hour	\$50.26
Beyond 10 hours	\$50.26
Sunday/Holiday	
	\$61.54

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer Underground - Tunnel, Shaft & Caisson - Class II - Z2	Laborer Underground - Tunnel, Shaft & Caisson	05/10/2024

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$39.06	\$50.39	\$61.72
Apprentice: 0-1,000 work hours	\$32.92	\$42.75	\$52.57
Apprentice: 1,001-2,000 work hours	\$34.04	\$44.43	\$54.81
Apprentice: 2,001-3,000 work hours	\$35.16	\$46.11	\$57.05
Apprentice: 3,001-4,000 work hours	\$37.39	\$49.45	\$61.51

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$50.39
10th hour	\$50.39
Beyond 10 hours	\$50.39
Saturday	
First 8 hours	\$50.39
9th hour	\$50.39
10th hour	\$50.39
Beyond 10 hours	\$50.39
Sunday/Holiday	
	\$61.72

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer Underground - Tunnel, Shaft & Caisson - Class III -Z2	Laborer Underground - Tunnel, Shaft & Caisson	05/10/2024

Classification Description: 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, con

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$39.16	\$50.54	\$61.92
Apprentice: 0-1,000 work hours	\$32.99	\$42.85	\$52.71
Apprentice: 1,001-2,000 work hours	\$34.12	\$44.55	\$54.97
Apprentice: 2,001-3,000 work hours	\$35.24	\$46.23	\$57.21
Apprentice: 3,001-4,000 work hours	\$37.49	\$49.60	\$61.71

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$50.54
10th hour	\$50.54
Beyond 10 hours	\$50.54
Saturday	
First 8 hours	\$50.54
9th hour	\$50.54
10th hour	\$50.54
Beyond 10 hours	\$50.54
Sunday/Holiday	
	\$61.92

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer Underground - Tunnel, Shaft & Caisson - Class IV -Z2	Laborer Underground - Tunnel, Shaft & Caisson	05/10/2024

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$39.58	\$51.17	\$62.76
Apprentice: 0-1,000 work hours	\$33.11	\$43.03	\$52.95
Apprentice: 1,001-2,000 work hours	\$34.25	\$44.74	\$55.23
Apprentice: 2,001-3,000 work hours	\$35.38	\$46.43	\$57.49
Apprentice: 3,001-4,000 work hours	\$37.64	\$49.83	\$62.01

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$51.17
10th hour	\$51.17
Beyond 10 hours	\$51.17
Saturday	
First 8 hours	\$51.17
9th hour	\$51.17
10th hour	\$51.17
Beyond 10 hours	\$51.17
Sunday/Holiday	
	\$62.76

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer Underground - Tunnel, Shaft & Caisson - Class V -Z2	Laborer Underground - Tunnel, Shaft & Caisson	05/10/2024

Classification Description: 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)

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$39.58	\$51.17	\$62.76
Apprentice: 0-1,000 work hours	\$33.31	\$43.33	\$53.35
Apprentice: 1,001-2,000 work hours	\$34.45	\$45.04	\$55.63
Apprentice: 2,001-3,000 work hours	\$35.60	\$46.77	\$57.93
Apprentice: 3,001-4,000 work hours	\$37.89	\$50.20	\$62.51

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$51.17
10th hour	\$51.17
Beyond 10 hours	\$51.17
Saturday	
First 8 hours	\$51.17
9th hour	\$51.17
10th hour	\$51.17
Beyond 10 hours	\$51.17
Sunday/Holiday	
	\$62.76

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer Underground - Tunnel, Shaft & Caisson - Class VI - Z2	Laborer Underground - Tunnel, Shaft & Caisson	05/10/2024

Classification Description: Class VI - Dynamite man and powder man.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$39.34	\$52.38	\$65.41
Apprentice: 0-1,000 work hours	\$33.54	\$43.67	\$53.81
Apprentice: 1,001-2,000 work hours	\$34.70	\$45.41	\$56.13
Apprentice: 2,001-3,000 work hours	\$35.86	\$47.15	\$58.45
Apprentice: 3,001-4,000 work hours	\$38.18	\$50.63	\$63.09

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$50.94
10th hour	\$50.94
Beyond 10 hours	\$50.94
Saturday	
First 8 hours	\$50.94
9th hour	\$50.94
10th hour	\$50.94
Beyond 10 hours	\$50.94
Sunday/Holiday	
	\$62.53

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer Underground - Tunnel, Shaft & Caisson - Class VII - Z2	Laborer Underground - Tunnel, Shaft & Caisson	05/10/2024

Classification Description: 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.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$32.16	\$40.04	\$47.92
Apprentice: 0-1,000 work hours	\$27.75	\$34.99	\$42.23
Apprentice: 1,001-2,000 work hours	\$28.52	\$36.15	\$43.77
Apprentice: 2,001-3,000 work hours	\$29.29	\$37.30	\$45.31
Apprentice: 3,001-4,000 work hours	\$30.84	\$39.63	\$48.41

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$40.04
10th hour	\$40.04
Beyond 10 hours	\$40.04
Saturday	
First 8 hours	\$40.04
9th hour	\$40.04
10th hour	\$40.04
Beyond 10 hours	\$40.04
Sunday/Holiday	
	\$47.92

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer -Underground Open Cut - Class I - Z2	Laborer -Underground Open Cut, Class I	05/10/2024

Classification Description: Construction Laborer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.17	\$50.57	\$62.97
Apprentice: 0-1,000 work hours	\$32.74	\$42.42	\$52.11
Apprentice: 1,001-2,000 work hours	\$33.83	\$44.06	\$54.29
Apprentice: 2,001-3,000 work hours	\$34.91	\$45.68	\$56.45
Apprentice: 3,001-4,000 work hours	\$37.09	\$48.95	\$60.81

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$49.02
10th hour	\$49.02
Beyond 10 hours	\$49.02
Saturday	
First 8 hours	\$49.02
9th hour	\$49.02
10th hour	\$49.02
Beyond 10 hours	\$49.02
Sunday/Holiday	
	\$59.87

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer -Underground Open Cut - Class II - Z2	Laborer -Underground Open Cut, Class II	05/10/2024

Classification Description: 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.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.28	\$50.74	\$63.19
Apprentice: 0-1,000 work hours	\$32.83	\$42.56	\$52.29
Apprentice: 1,001-2,000 work hours	\$33.92	\$44.20	\$54.47
Apprentice: 2,001-3,000 work hours	\$35.01	\$45.83	\$56.65
Apprentice: 3,001-4,000 work hours	\$37.19	\$49.10	\$61.01

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$49.19
10th hour	\$49.19
Beyond 10 hours	\$49.19
Saturday	
First 8 hours	\$49.19
9th hour	\$49.19
10th hour	\$49.19
Beyond 10 hours	\$49.19
Sunday/Holiday	
	\$60.09

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer -Underground Open Cut - Class III - Z2	Laborer -Underground Open Cut, Class III	05/10/2024

Classification Description: 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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.40	\$50.92	\$63.43
Apprentice: 0-1,000 work hours	\$32.92	\$42.70	\$52.47
Apprentice: 1,001-2,000 work hours	\$34.01	\$44.33	\$54.65
Apprentice: 2,001-3,000 work hours	\$35.11	\$45.98	\$56.85
Apprentice: 3,001-4,000 work hours	\$37.30	\$49.26	\$61.23

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$49.37
10th hour	\$49.37
Beyond 10 hours	\$49.37

Saturday

First 8 hours	\$49.37
9th hour	\$49.37
10th hour	\$49.37
Beyond 10 hours	\$49.37

Sunday/Holiday	\$60.33
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer -Underground Open Cut - Class IV - Z2	Laborer -Underground Open Cut, Class IV	05/10/2024

Classification Description: Trench or excavating grade man.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.47	\$51.02	\$63.57
Apprentice: 0-1,000 work hours	\$32.97	\$42.77	\$52.57
Apprentice: 1,001-2,000 work hours	\$34.07	\$44.42	\$54.77
Apprentice: 2,001-3,000 work hours	\$35.17	\$46.07	\$56.97
Apprentice: 3,001-4,000 work hours	\$37.37	\$49.37	\$61.37

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$49.47
10th hour	\$49.47
Beyond 10 hours	\$49.47
Saturday	
First 8 hours	\$49.47
9th hour	\$49.47
10th hour	\$49.47
Beyond 10 hours	\$49.47
Sunday/Holiday	
	\$60.47

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer -Underground Open Cut - Class V - Z2	Laborer -Underground Open Cut, Class V	05/10/2024

Classification Description: Pipe Layer (including crock, metal pipe, multiplate or other conduits)

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$38.62	\$51.25	\$63.87	Over 8-hour day/40-hour week
Apprentice: 0-1,000 work hours	\$33.08	\$42.94	\$52.79	9th hour \$49.70
Apprentice: 1,001-2,000 work hours	\$34.19	\$44.60	\$55.01	10th hour \$49.70
Apprentice: 2,001-3,000 work hours	\$35.30	\$46.26	\$57.23	Beyond 10 hours \$49.70
Apprentice: 3,001-4,000 work hours	\$37.51	\$49.58	\$61.65	Saturday
				First 8 hours \$49.70
				9th hour \$49.70
				10th hour \$49.70
				Beyond 10 hours \$49.70
				Sunday/Holiday \$60.77

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer -Underground Open Cut - Class VI - Z2	Laborer -Underground Open Cut, Class VI	05/10/2024

Classification Description: Grouting man, top man assistant, audio visual television operations and all other operations in connection with closed circuit television inspection, pipe cleaning and pipe relining work and the installation and repair of water service pipe and appurtenan

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$35.92	\$47.20	\$58.47
Apprentice: 0-1,000 work hours	\$31.06	\$39.90	\$48.75
Apprentice: 1,001-2,000 work hours	\$32.03	\$41.36	\$50.69
Apprentice: 2,001-3,000 work hours	\$33.00	\$42.82	\$52.63
Apprentice: 3,001-4,000 work hours	\$34.95	\$45.74	\$56.53

Overtime Provisions

Over 8-hour day/40-hour

week

9th hour	\$45.65
10th hour	\$45.65
Beyond 10 hours	\$45.65

Saturday

First 8 hours	\$45.65
9th hour	\$45.65
10th hour	\$45.65
Beyond 10 hours	\$45.65

Sunday/Holiday

\$55.37

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Laborer -Underground Open Cut - Class VII - Z2	Laborer -Underground Open Cut, Class VII	05/10/2024

Classification Description: 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.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$32.56	\$42.16	\$51.75
Apprentice: 0-1,000 work hours	\$28.54	\$36.12	\$43.71
Apprentice: 1,001-2,000 work hours	\$29.34	\$37.32	\$45.31
Apprentice: 2,001-3,000 work hours	\$30.15	\$38.54	\$46.93
Apprentice: 3,001-4,000 work hours	\$31.76	\$40.96	\$50.15

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$40.61
10th hour	\$40.61
Beyond 10 hours	\$40.61
Saturday	
First 8 hours	\$40.61
9th hour	\$40.61
10th hour	\$40.61
Beyond 10 hours	\$40.61
Sunday/Holiday	
	\$48.65

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Millwright	Millwright	05/10/2024

Classification Description: Millwright

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$61.90	\$92.85	\$123.80
Apprentice: 1st 6 months	\$40.96	\$61.45	\$81.92
Apprentice: 2nd 6 months	\$43.57	\$65.36	\$87.14
Apprentice: 3rd 6 months	\$46.19	\$69.28	\$92.38
Apprentice: 4th 6 months	\$48.81	\$73.22	\$97.62
Apprentice: 5th 6 months	\$51.42	\$77.13	\$102.84
Apprentice: 6th 6 months	\$54.03	\$81.05	\$108.06

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$75.41
10th hour	\$75.41
Beyond 10 hours	\$88.92
Saturday	
First 8 hours	\$75.41
9th hour	\$88.92
10th hour	\$88.92
Beyond 10 hours	\$88.92
Sunday/Holiday	
	\$88.92

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Friday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Class I	Operating Engineer	05/10/2024

Classification Description: Class I - diver/wet tender, engineer, blaster, leverman

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$82.82	\$107.82	\$132.82

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$32.82
10th hour	\$107.82
Beyond 10 hours	\$107.82

Saturday

First 8 hours	\$107.82
9th hour	\$107.82
10th hour	\$107.82
Beyond 10 hours	\$107.82

Sunday/Holiday

	\$132.82
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Class II (A)	Operating Engineer	05/10/2024

Classification Description: Class II (A) - Crane/backhoe operator, material handler, all self-propelled drill rigs, mechanic/welder, hydraulic dredge, diver tender

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$81.32	\$105.57	\$129.82

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$32.82
10th hour	\$105.57
Beyond 10 hours	\$105.57

Saturday

First 8 hours	\$105.57
9th hour	\$105.57
10th hour	\$105.57
Beyond 10 hours	\$105.57

Sunday/Holiday	\$129.82
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Class II (B)	Operating Engineer	05/10/2024

Classification Description: Class II (B) - friction, lattice boom, tug or tug boat operator

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$84.32	\$110.07	\$135.82

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$110.07
10th hour	\$110.07
Beyond 10 hours	\$110.07

Saturday

First 8 hours	\$110.07
9th hour	\$110.07
10th hour	\$110.07
Beyond 10 hours	\$110.07

Sunday/Holiday

\$135.82

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Class III	Operating Engineer	05/10/2024

Classification Description: Class III - Deck equip. operator, maintenance of crane or excavator, tug/launch operator, loader/dozer on barge/deck machinery, truck-able tug, lead surveyor, ROV operator, AB deckhand, welder

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$76.82	\$98.82	\$120.82	Over 8-hour day/40-hour week
				9th hour \$98.82
				10th hour \$98.82
				Beyond 10 hours \$98.82
				Saturday
				First 8 hours \$98.82
				9th hour \$98.82
				10th hour \$98.82
				Beyond 10 hours \$98.82
				Sunday/Holiday \$120.82

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Class IV	Operating Engineer	05/10/2024

Classification Description: Class IV - Deck equipment operator, machineryman/fireman, off road trucks, deck hand, tug engineer, assistant tug operator, blaster helper, deck hand, jet machine, subsea plow, trencher, tug engineer

Wage Rates	Straight Time	Time and a Half	Double Time	Overtime Provisions
Total Hourly Wage	\$72.32	\$92.07	\$111.82	Over 8-hour day/40-hour week
				9th hour \$32.82
				10th hour \$92.07
				Beyond 10 hours \$92.07
				Saturday
				First 8 hours \$92.07
				9th hour \$92.07
				10th hour \$92.07
				Beyond 10 hours \$92.07
				Sunday/Holiday \$111.82

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Extended Boom Forklift Operator - Over 5,000	Operating Engineer	05/10/2024

Classification Description: Extended boom forklift/forktruck over 5,000lb capacity, 1 drum hoist

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$41.43	\$54.43	\$67.42

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$54.43
10th hour	\$54.43
Beyond 10 hours	\$67.42

Saturday

First 8 hours	\$54.43
9th hour	\$54.43
10th hour	\$54.43
Beyond 10 hours	\$67.42

Sunday/Holiday

\$67.42

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Extended Boom Forklift Operator - Over 5,000	Operating Engineer	05/10/2024

Classification Description: Extended boom forklift/forktruck over 5,000lb capacity, 1 drum hoist

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$58.82	\$73.32	\$87.81

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$73.32
10th hour	\$73.32
Beyond 10 hours	\$87.81

Saturday

First 8 hours	\$73.32
9th hour	\$73.32
10th hour	\$73.32
Beyond 10 hours	\$87.81

Sunday/Holiday

\$87.81

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Extended Boom Forklift Operator - Over 5,000	Operating Engineer	05/10/2024

Classification Description: Extended boom forklift/forktruck over 5,000lb capacity, 1 drum hoist

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$64.70	\$81.75	\$98.80

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$81.75
10th hour	\$81.75
Beyond 10 hours	\$98.80
Saturday	
First 8 hours	\$81.75
9th hour	\$81.75
10th hour	\$81.75
Beyond 10 hours	\$98.80
Sunday/Holiday	
	\$98.80

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Extended Boom Forklift Operator - Over 5,000	Operating Engineer	05/10/2024

Classification Description: Extended boom forklift/forktruck over 5,000lb capacity, 1 drum hoist

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$69.61	\$88.88	\$108.15

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$88.88
10th hour	\$88.88
Beyond 10 hours	\$108.15
Saturday	
First 8 hours	\$88.88
9th hour	\$88.88
10th hour	\$88.88
Beyond 10 hours	\$108.15
Sunday/Holiday	
	\$108.15

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Extended Boom Forklift Operator - Over 5,000	Operating Engineer	05/10/2024

Classification Description: Extended boom forklift/forktruck over 5,000lb capacity, 1 drum hoist

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$63.29	\$79.73	\$96.16

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$79.73
10th hour	\$79.73
Beyond 10 hours	\$96.16
Saturday	
First 8 hours	\$79.73
9th hour	\$79.73
10th hour	\$79.73
Beyond 10 hours	\$96.16
Sunday/Holiday	
	\$96.16

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Journeyman - Class I	Operating Engineer	05/17/2024

Classification Description: Journeyman - Class I

Asphalt Transfer Machine (Shuttle Buggy)

Concrete/Asphalt Pavers

Excavators Installing Utilities over 20 feet in depth

GPS or Electronic Grade Equipment (employee must be able to set up and use it on machine themselves, and employee can install it and calibrate it on their own)

Hydraulic/Lattice Lifting Cranes over 25 tons

Mechanic

**On bridge construction projects when a Class I Crane Operator is erecting structural components as part of a composite crew with Structural Ironworkers, the Base Rate and Vacation and Holiday pay shall be at the Crane Operator rate as set forth in the current agreement between the Union and the Great Lakes Fabricators and Erectors Association.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$69.17	\$88.16	\$107.14
Apprentice: Apprentice Engineer 0-6 months	\$56.03	\$71.32	\$86.60
Apprentice: Apprentice Engineer 13-18	\$60.40	\$77.87	\$95.34
Apprentice: Apprentice Engineer 19-24 months	\$62.21	\$80.59	\$98.96
Apprentice: Apprentice Engineer 25-30 months	\$64.76	\$84.42	\$104.06
Apprentice: Apprentice Engineer 31-36 months	\$67.08	\$87.90	\$108.70
Apprentice: Apprentice Engineer 7-12 months	\$58.21	\$74.58	\$90.96

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$91.03
10th hour	\$91.03
Beyond 10 hours	\$91.03
Saturday	
First 8 hours	\$91.03
9th hour	\$91.03
10th hour	\$91.03
Beyond 10 hours	\$91.03
Sunday/Holiday	
	\$112.88

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

In the event work is unable to be performed on account of weather, Monday through Thursday, the Friday work may be scheduled for ten (10) hours, at straight time, as a make-up day.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Journeyman - Class II	Operating Engineer	05/17/2024

Classification Description: Journeyman - Class II

- Air Compressors in Manifold with throttle valve +750 cfm
- Asphalt Bituminous Compactor / Roller
- Asphalt Planner self-propelled
- Asphalt Plant on project including operating from on site or operating remotely
- Asphalt Screed or Screw (per Employer Past Practice)
- Auto Grade or similar type machine
- Backhoe on Farm Type Tractor 45 H.P. & over
- Ballast Jack Tamper
- Ballast Regulator (R.R.)
- Batch Plant (concrete-central mix)
- Bituminous Paver (self-propelled)
- Blade Grader
- Bull Dozer
- Caisson Drilling Machine
- Cherry Picker – 15 ton or over
- Chip Spreader
- Concrete Batch or Drum Mix Plant on project including operating from on site or operating remotely
- Concrete Belt Placer (Formless)
- Concrete Cure / Finish Machine (burlap, tinning or grooving)
- Concrete Mixer 21 cu. Ft. Or over
- Concrete Pump (Truck Mount)
- Concrete Pump (3 inch and over)
- Concrete / Asphalt Saw Power Driven (3 yrs experience or more)
- Conveyor Loader (Euclid type)
- Core Drilling Machine
- Curb-Barrier Wall Machine CMI type
- Directional Drill / Boring Machine
- Dredge Engineer
- Dredge
- Drilling Machine on which the drill is an integral part
- Earth Mover – rubber tired – (paddle wheel, Cat 619, 631, TS-24 or similar type)
- Earth Mover rubber tired-tandem

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$57.19	\$71.14	\$85.09

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$71.14
10th hour	\$71.14
Beyond 10 hours	\$71.14

Saturday

First 8 hours	\$71.14
9th hour	\$71.14
10th hour	\$71.14
Beyond 10 hours	\$71.14

Sunday/Holiday	\$85.09
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Journeyman - Class III	Operating Engineer	05/17/2024

Classification Description: Journeyman - Class III
Air Compressor with Throttle Valve or Clever Brooks type comb.
Backhoe less than 1 cyd. Including Farm Type
Bituminous Plant Engineer
Chemical / Grout Machine 21 cft. Or larger
Cherry Picker under 15 ton
Chip Spreader (self-propelled)
Crusher
Concrete Barrier Moving Machine (per Employer Past Practice)
Concrete Pump
Concrete Spreader--Power Driven
End Loader under 1-1/2 cu yd.
Grease Truck
Gunit Machine
Lowboy (per Employer Past Practice)
Mesh or Steel Placer (motorized)
Multiple Tamping Machine (R.R.)
Refrigerating Machine--Freezing operation
Roller-Waterbound Macadam, Bituminous Macadam, Brick
Ross Carrier
Self-propelled convey transfer devise.
Side Boom Tractor (smaller than D-4 type or equivalent)
Sweeper (Wayne type and similar equipment)
Macadam, Brick Surface
Trench Machine 24" and under
Tube Float (motorized)

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$56.63	\$70.34	\$84.04

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$29.22
10th hour	\$70.34
Beyond 10 hours	\$70.34

Saturday

First 8 hours	\$70.34
9th hour	\$70.34
10th hour	\$70.34
Beyond 10 hours	\$70.34

Sunday/Holiday	\$84.04
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Journeyman - Class IV	Operating Engineer	05/17/2024

Classification Description: Journeyman - Class IV

- Air Compressor
- All mulching equipment
- All Walk Behind or Remote Control Powered Equipment (autonomous equipment)
- Assistant to Engineer Automatic Dry Batch Plant Belt Spreader (motorized including transfer device by remote, wireless or cable)
- Bituminous Distributor
- Bituminous Patching Machine
- Broom & Belt Machine
- Chair Cart (self-propelled)
- Concrete Pumps (under 3")
- Concrete Breaker
- Curb Machine
- Curing Equipment (self-propelled)
- Deck Hand
- Digger Post Hole (power-driven)
- Dump Truck
- End Dumps (per Employer Past Practice)
- End Loader (under ¾ yard capacity)
- Farm Tractor-incl. farm tractor with all attachments except backhoe and incl. highlift end loaders of 1 cu. Yard capacity or less
- Fireman (on boiler)
- Fork Lift – under 10 ton
- Form Grader (if motorized)
- Georgia Buggy – Power wheel barrel ¾ yard with a seat
- Generator (15 kw or greater)
- Greaser Helper
- Guard Post Driver (power driven)

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$56.46	\$70.09	\$83.72

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$70.09
10th hour	\$70.09
Beyond 10 hours	\$70.09

Saturday

First 8 hours	\$70.09
9th hour	\$70.09
10th hour	\$70.09
Beyond 10 hours	\$70.09

Sunday/Holiday	\$83.72
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Journeyman - Class V	Operating Engineer	05/17/2024

Classification Description: Journeyman - Class V
 Concrete/Asphalt Saw - Power Driven (Less than 3 yrs. experience)
 Density/Soil Engineer
 Directional Boring Utility Man
 Discharge Pumps 4" or less (1-4 units)
 Dumper (Wagon, Truck, Etc.)-1/2 yard or less
 Fence Erector/Power Driven
 Light Plants (1 to 5 units)
 Paving Batch Truck Dumper
 Roto Mill Utility Grade Control
 Sign Installer/Sign Installer with Remote Control Operated Equipment
 Top Man, And Railroad Track and Trestle Engineer
 Utility Engineer
 Water Blasting Utility Engineer
 1 to 4 pcs. of minor equip.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$38.25	\$49.62	\$60.99

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$49.62
10th hour	\$49.62
Beyond 10 hours	\$49.62
Saturday	
First 8 hours	\$49.62
9th hour	\$49.62
10th hour	\$49.62
Beyond 10 hours	\$49.62
Sunday/Holiday	
	\$60.99

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 A120	Operating Engineer	05/10/2024

Classification Description: Crane with boom & jib or leads 120' or longer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.41	\$98.55	\$120.69

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$98.55
10th hour	\$98.55
Beyond 10 hours	\$98.55

Saturday

First 8 hours	\$98.55
9th hour	\$98.55
10th hour	\$98.55
Beyond 10 hours	\$98.55

Sunday/Holiday	\$120.69
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time over 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 A140	Operating Engineer	05/10/2024

Classification Description: Crane with boom & jib or leads 140' or longer

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$77.59	\$100.24	\$122.89

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$100.24
10th hour	\$100.24
Beyond 10 hours	\$100.24

Saturday

First 8 hours	\$100.24
9th hour	\$100.24
10th hour	\$100.24
Beyond 10 hours	\$100.24

Sunday/Holiday	\$122.89
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 hours Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 A220	Operating Engineer	05/10/2024

Classification Description: Crane with boom & jib or leads 220' or longer
Work in excess of 12 per day M-F shall be paid at double time.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$77.86	\$100.63	\$123.40

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$100.63
10th hour	\$100.63
Beyond 10 hours	\$100.63

Saturday

First 8 hours	\$100.63
9th hour	\$100.63
10th hour	\$100.63
Beyond 10 hours	\$100.63

Sunday/Holiday	\$123.40
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 hours Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 B120	Operating Engineer	06/20/2024

Classification Description: Crane Operator w/120' of Boom or Longer w/Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$77.41	\$99.99	\$122.56

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$99.98
10th hour	\$99.98
Beyond 10 hours	\$99.98

Saturday

First 8 hours	\$99.98
9th hour	\$99.98
10th hour	\$99.98
Beyond 10 hours	\$99.98

Sunday/Holiday	\$122.56
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 GM	Operating Engineer	06/20/2024

Classification Description: Ground Man/Light Plants/Welder/Pumps Under 6"

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$43.83	\$57.87	\$71.91

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$57.87
10th hour	\$57.87
Beyond 10 hours	\$57.87

Saturday

First 8 hours	\$57.87
9th hour	\$57.87
10th hour	\$57.87
Beyond 10 hours	\$57.87

Sunday/Holiday	\$71.91
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - Below 5,000lb Capacity	Operating Engineer	06/20/2024

Classification Description: Ind. forklift/forktruck under 5,000lb capacity
power jacks/power packs, composite crew only

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.10	\$85.19	\$103.28

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$85.19
10th hour	\$85.19
Beyond 10 hours	\$85.19
Saturday	
First 8 hours	\$85.19
9th hour	\$85.19
10th hour	\$85.19
Beyond 10 hours	\$85.19
Sunday/Holiday	
	\$103.28

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - Crane Operator w/Oiler	Operating Engineer	06/20/2024

Classification Description: Crane Operator w/Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$77.05	\$99.47	\$121.89

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$99.47
10th hour	\$99.47
Beyond 10 hours	\$99.47
Saturday	
First 8 hours	\$99.47
9th hour	\$99.47
10th hour	\$99.47
Beyond 10 hours	\$99.47
Sunday/Holiday	
	\$121.89

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - Crane, TDH, Excavator	Operating Engineer	06/20/2024

Classification Description: Crane Operator, Job Mechanic, Three Drum Hoist and Excavator

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.05	\$98.04	\$120.02
Apprentice: Apprentice Engineer 0-6 months	\$60.84	\$78.54	\$96.24
Apprentice: Apprentice Engineer 13-18 months	\$65.90	\$86.13	\$106.36
Apprentice: Apprentice Engineer 19-24 months	\$68.42	\$89.92	\$111.40
Apprentice: Apprentice Engineer 25-30 months	\$70.95	\$93.71	\$116.46
Apprentice: Apprentice Engineer 31-36 months	\$73.48	\$97.50	\$121.52
Apprentice: Apprentice Engineer 7-12 months	\$63.40	\$82.38	\$101.36

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$98.03
10th hour	\$98.03
Beyond 10 hours	\$98.03
Saturday	
First 8 hours	\$98.03
9th hour	\$98.03
10th hour	\$98.03
Beyond 10 hours	\$98.03
Sunday/Holiday	
	\$120.02

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - CW	Operating Engineer	05/10/2024

Classification Description: Compressor or welding machine
 Work in excess of 12 per day M-F shall be paid at double time.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$54.86	\$69.72	\$84.58

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.78
10th hour	\$67.78
Beyond 10 hours	\$67.78

Saturday

First 8 hours	\$67.78
9th hour	\$80.70
10th hour	\$80.70
Beyond 10 hours	\$80.70

Sunday/Holiday	\$80.70
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - F	Operating Engineer	05/10/2024

Classification Description: Forklift, lull, extend-a-boom forklift
 Work in excess of 12 per day M-F shall be paid at double time.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$63.36	\$79.81	\$96.25

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$79.81
10th hour	\$79.81
Beyond 10 hours	\$79.81

Saturday

First 8 hours	\$79.81
9th hour	\$96.25
10th hour	\$96.25
Beyond 10 hours	\$96.25

Sunday/Holiday

\$96.25

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - FO	Operating Engineer	05/10/2024

Classification Description: Fireman or oiler

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$53.83	\$68.18	\$82.52

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$66.31
10th hour	\$66.31
Beyond 10 hours	\$66.31

Saturday

First 8 hours	\$66.31
9th hour	\$78.78
10th hour	\$78.78
Beyond 10 hours	\$78.78

Sunday/Holiday	\$78.78
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - FSM	Operating Engineer	05/10/2024

Classification Description: Forklift or Straight Mast

Four 10 hour days may be scheduled M-Th or T-F. Work not performed due to weather on M-Th may be scheduled on Friday

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$57.50	\$71.40	\$85.29

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$71.40
10th hour	\$71.40
Beyond 10 hours	\$71.40
Saturday	
First 8 hours	\$71.40
9th hour	\$85.29
10th hour	\$85.29
Beyond 10 hours	\$85.29
Sunday/Holiday	
	\$85.29

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Friday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - I	Operating Engineer	05/10/2024

Classification Description: Lull or Extend-a-Boom Forklift

Four 10 hour days may be scheduled M-Th or T-F. Work not performed due to weather on M-Th may be scheduled on Friday

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$59.73	\$77.09	\$94.45

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$74.83
10th hour	\$74.83
Beyond 10 hours	\$74.83

Saturday

First 8 hours	\$74.83
9th hour	\$89.92
10th hour	\$89.92
Beyond 10 hours	\$89.92

Sunday/Holiday	\$89.92
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Friday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - os120	Operating Engineer	05/10/2024

Classification Description: Crane with main boom & jib 120' or longer

Four 10 hour days may be scheduled Monday-Thursday or Tuesday-Friday. Worked not performed due to weather, Monday-Thursday may be scheuled Friday

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$63.27	\$82.40	\$101.53

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$79.91
10th hour	\$79.91
Beyond 10 hours	\$79.91
Saturday	
First 8 hours	\$79.91
9th hour	\$96.54
10th hour	\$96.54
Beyond 10 hours	\$96.54
Sunday/Holiday	
	\$96.54

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Friday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - RC	Operating Engineer	05/10/2024

Classification Description: Regular crane, job mechanic, concrete pump with boom

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$64.85	\$84.71	\$104.56

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$82.12
10th hour	\$82.12
Beyond 10 hours	\$82.12

Saturday

First 8 hours	\$82.12
9th hour	\$99.38
10th hour	\$99.38
Beyond 10 hours	\$99.38

Sunday/Holiday	\$99.38
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - RE	Operating Engineer	05/10/2024

Classification Description: Regular engineer, hydro-excavator, remote controlled concrete breaker
 Work in excess of 12 per day M-F shall be paid at double time.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$63.88	\$83.25	\$102.62
Apprentice: 0-999 hours	\$46.35	\$58.48	\$70.61
Apprentice: 1,000-1,999 hours	\$48.09	\$61.10	\$74.09
Apprentice: 2,000-2,999 hours	\$49.82	\$63.68	\$77.55
Apprentice: 3,000-3,999 hours	\$51.55	\$66.28	\$81.01
Apprentice: 4,000-4,999 hours	\$53.29	\$68.90	\$84.49
Apprentice: 5,000-5,999 hours	\$55.01	\$71.47	\$87.93

Overtime Provisions	
Over 8-hour day/40-hour week	
9th hour	\$80.73
10th hour	\$80.73
Beyond 10 hours	\$80.73
Saturday	
First 8 hours	\$80.73
9th hour	\$97.57
10th hour	\$97.57
Beyond 10 hours	\$97.57
Sunday/Holiday	\$97.57

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - Skidsteer Operator	Operating Engineer	06/20/2024

Classification Description: Skidsteer forklift when working with fence and Door companies

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$65.69	\$83.17	\$100.65

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$83.17
10th hour	\$83.17
Beyond 10 hours	\$83.17
Saturday	
First 8 hours	\$83.17
9th hour	\$83.17
10th hour	\$83.17
Beyond 10 hours	\$83.17
Sunday/Holiday	
	\$100.65

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - TDH, Backhoe	Operating Engineer	06/20/2024

Classification Description: Hoisting Operator, Two Drum Hoist, Rubber Tire Backhoe

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$75.41	\$97.11	\$118.82

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$97.11
10th hour	\$97.11
Beyond 10 hours	\$97.11

Saturday

First 8 hours	\$97.11
9th hour	\$97.11
10th hour	\$97.11
Beyond 10 hours	\$97.11

Sunday/Holiday	\$118.82
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Crane Operator - 324 B400	Operating Engineer Steel Work	06/20/2024

Classification Description: Crane Operator w/400' Boom or Longer w/Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$81.86	\$106.37	\$130.88

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$106.37
10th hour	\$106.37
Beyond 10 hours	\$106.37
Saturday	
First 8 hours	\$106.37
9th hour	\$106.37
10th hour	\$106.37
Beyond 10 hours	\$106.37
Sunday/Holiday	
	\$130.88

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time over 12 hours Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 A300	Operating Engineer Steel Work	06/20/2024

Classification Description: Crane with boom & jib or leads 300' or longer
Work in excess of 12 per day M-F shall be paid at double time.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$79.36	\$102.78	\$126.20

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$102.78
10th hour	\$102.78
Beyond 10 hours	\$102.78

Saturday

First 8 hours	\$102.78
9th hour	\$102.78
10th hour	\$102.78
Beyond 10 hours	\$102.78

Sunday/Holiday	\$126.20
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time over 12 hours Mon-Sat.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 A400	Operating Engineer Steel Work	06/20/2024

Classification Description: Crane with boom & jib or leads 400' or longer
Work in excess of 12 per day M-F shall be paid at double time.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$80.86	\$104.94	\$129.01

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$104.93
10th hour	\$104.93
Beyond 10 hours	\$104.93

Saturday

First 8 hours	\$104.93
9th hour	\$104.93
10th hour	\$104.93
Beyond 10 hours	\$104.93

Sunday/Holiday	\$129.01
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time over 12 hours/day Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 A50	Operating Engineer Steel Work	06/20/2024

Classification Description: Tower Crane & Derrick Operator 50' or More

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$77.14	\$99.59	\$122.05

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$99.59
10th hour	\$99.59
Beyond 10 hours	\$99.59

Saturday

First 8 hours	\$99.59
9th hour	\$99.59
10th hour	\$99.59
Beyond 10 hours	\$99.59

Sunday/Holiday	\$122.05
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 B140	Operating Engineer Steel Work	06/20/2024

Classification Description: Crane Operator w/140' of /Boom or Longer w/Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$78.59	\$101.68	\$124.76

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$101.67
10th hour	\$101.67
Beyond 10 hours	\$101.67

Saturday

First 8 hours	\$101.67
9th hour	\$101.67
10th hour	\$101.67
Beyond 10 hours	\$101.67

Sunday/Holiday

	\$124.76
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 B220	Operating Engineer Steel Work	06/20/2024

Classification Description: Crane Operator w/220' of Boom or Longer w/Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$78.86	\$100.76	\$123.97

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$102.06
10th hour	\$102.06
Beyond 10 hours	\$102.06

Saturday

First 8 hours	\$102.06
9th hour	\$102.06
10th hour	\$102.06
Beyond 10 hours	\$102.06

Sunday/Holiday	\$125.27
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 hours Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 B300	Operating Engineer Steel Work	06/20/2024

Classification Description: Crane Operator w/300' of Boom or Longer w/Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$80.36	\$104.22	\$128.07

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$104.22
10th hour	\$104.22
Beyond 10 hours	\$104.22

Saturday

First 8 hours	\$104.22
9th hour	\$104.22
10th hour	\$104.22
Beyond 10 hours	\$104.22

Sunday/Holiday	\$128.07
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time over 12 hours Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 B50	Operating Engineer Steel Work	06/20/2024

Classification Description: Tower Crane & Derrick Operator 50' or more w/Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$78.14	\$101.03	\$123.92

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$101.03
10th hour	\$101.03
Beyond 10 hours	\$101.03

Saturday

First 8 hours	\$101.03
9th hour	\$101.03
10th hour	\$101.03
Beyond 10 hours	\$101.03

Sunday/Holiday	\$123.92
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - 324 PRE60118	Operating Engineer Steel Work	06/20/2024

Classification Description: Oiler/pumps over 6" **Applies to Operators who have previously worked under this classification PRIOR to 6/1/18**

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$61.22	\$76.76	\$92.29

Overtime Provisions

Over 8-hour day/40-hour

week

9th hour	\$76.75
10th hour	\$76.75
Beyond 10 hours	\$76.75

Saturday

First 8 hours	\$76.75
9th hour	\$76.75
10th hour	\$76.75
Beyond 10 hours	\$76.75

Sunday/Holiday

\$92.29

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Overtime Rate Comment: Double time after 12 Mon-Sat

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer - EF	Operating Engineer Steel Work	05/10/2024

Classification Description: Extended boom forklift over 5,000 lb capacity, 1 Drum Hoist

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$72.21	\$92.53	\$112.84

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$92.53
10th hour	\$92.53
Beyond 10 hours	\$112.84

Saturday

First 8 hours	\$92.53
9th hour	\$92.53
10th hour	\$92.53
Beyond 10 hours	\$112.84

Sunday/Holiday	\$112.84
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW120	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane w/ 120' boom or longer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$74.14	\$95.24	\$116.33

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$95.24
10th hour	\$95.24
Beyond 10 hours	\$116.33

Saturday

First 8 hours	\$95.24
9th hour	\$95.24
10th hour	\$95.24
Beyond 10 hours	\$116.33

Sunday/Holiday

	\$116.33
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW120	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane w/ 120' boom or longer w/ Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$75.01	\$96.54	\$118.07

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$96.54
10th hour	\$96.54
Beyond 10 hours	\$118.07

Saturday

First 8 hours	\$96.54
9th hour	\$96.54
10th hour	\$96.54
Beyond 10 hours	\$118.07

Sunday/Holiday	\$118.07
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW140	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane w/ 140' boom or longer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$75.19	\$96.80	\$118.41

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$96.80
10th hour	\$96.80
Beyond 10 hours	\$118.41
Saturday	
First 8 hours	\$96.80
9th hour	\$96.80
10th hour	\$96.80
Beyond 10 hours	\$118.41
Sunday/Holiday	
	\$118.41

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW140	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane w/ 140' boom or longer W/ Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.19	\$98.24	\$120.28

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$120.28

Saturday

First 8 hours	\$98.24
9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$120.28

Sunday/Holiday	\$120.28
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW220	Operating Engineer Steel Work	05/10/2024

Classification Description: Boom & Jib 220' or longer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.46	\$98.62	\$120.78

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$98.62
10th hour	\$98.62
Beyond 10 hours	\$120.78

Saturday

First 8 hours	\$98.62
9th hour	\$98.62
10th hour	\$98.62
Beyond 10 hours	\$120.78

Sunday/Holiday

	\$120.78
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW220	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane w/ 220' boom or longer w/ Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$74.01	\$95.11	\$116.20

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$95.11
10th hour	\$95.11
Beyond 10 hours	\$116.20
Saturday	
First 8 hours	\$95.11
9th hour	\$95.11
10th hour	\$95.11
Beyond 10 hours	\$116.20
Sunday/Holiday	
	\$116.20

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW300	Operating Engineer Steel Work	05/10/2024

Classification Description: Boom & Jib 300' or longer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$76.96	\$99.34	\$121.72

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$99.34
10th hour	\$99.34
Beyond 10 hours	\$121.72

Saturday

First 8 hours	\$99.34
9th hour	\$99.34
10th hour	\$99.34
Beyond 10 hours	\$121.72

Sunday/Holiday	\$121.72
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW300	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane w/ 300' boom or longer w/ Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$77.96	\$100.78	\$123.59

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$100.78
10th hour	\$100.78
Beyond 10 hours	\$123.59

Saturday

First 8 hours	\$100.78
9th hour	\$100.78
10th hour	\$100.78
Beyond 10 hours	\$123.59

Sunday/Holiday	\$123.59
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW400	Operating Engineer Steel Work	05/10/2024

Classification Description: Boom & Jib 400' or longer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$78.46	\$101.49	\$124.52

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$101.49
10th hour	\$101.49
Beyond 10 hours	\$124.52

Saturday

First 8 hours	\$101.49
9th hour	\$101.49
10th hour	\$101.49
Beyond 10 hours	\$124.52

Sunday/Holiday

	\$124.52
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SW400	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane w/ 400' boom or longer w/ Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$79.46	\$102.93	\$126.39

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$102.93
10th hour	\$102.93
Beyond 10 hours	\$126.39
Saturday	
First 8 hours	\$102.93
9th hour	\$102.93
10th hour	\$102.93
Beyond 10 hours	\$126.39
Sunday/Holiday	
	\$126.39

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SWCO	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane Operator, Job Mechanic, 3 Drum Hoist & Excavator

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$73.65	\$94.59	\$115.53
Apprentice: 0-999 hours	\$59.16	\$76.02	\$92.88
Apprentice: 1,000-1,999 hours	\$61.56	\$79.63	\$97.68
Apprentice: 2,000-2,999 hours	\$63.96	\$83.22	\$102.48
Apprentice: 3,000-3,999 hours	\$66.38	\$84.18	\$101.98
Apprentice: 4,000-4,999 hours	\$68.78	\$90.46	\$112.12
Apprentice: 5,000 hours	\$71.20	\$91.09	\$110.99

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$94.59
10th hour	\$94.59
Beyond 10 hours	\$115.53
Saturday	
First 8 hours	\$94.59
9th hour	\$94.59
10th hour	\$94.59
Beyond 10 hours	\$115.53
Sunday/Holiday	
	\$115.53

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SWCO-O	Operating Engineer Steel Work	05/10/2024

Classification Description: Crane Operator w/ Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$74.65	\$96.03	\$117.40

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$96.03
10th hour	\$96.03
Beyond 10 hours	\$117.40
Saturday	
First 8 hours	\$96.03
9th hour	\$96.03
10th hour	\$96.03
Beyond 10 hours	\$117.40
Sunday/Holiday	
	\$117.40

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SWCW	Operating Engineer Steel Work	05/10/2024

Classification Description: Compressor or Welder Operator

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$37.03	\$49.48	\$61.92

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$47.85
10th hour	\$47.85
Beyond 10 hours	\$58.67
Saturday	
First 8 hours	\$47.85
9th hour	\$47.85
10th hour	\$47.85
Beyond 10 hours	\$58.67
Sunday/Holiday	
	\$58.67

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SWHO	Operating Engineer Steel Work	05/10/2024

Classification Description: Hoisting Operator, 2 Drum Hoist, & Rubber Tire Backhoe

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$73.01	\$93.67	\$114.33

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$93.67
10th hour	\$93.67
Beyond 10 hours	\$114.33
Saturday	
First 8 hours	\$93.67
9th hour	\$93.67
10th hour	\$93.67
Beyond 10 hours	\$114.33
Sunday/Holiday	
	\$114.33

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SWO	Operating Engineer Steel Work	05/10/2024

Classification Description: Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$53.42	\$67.61	\$81.80

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$65.74
10th hour	\$65.74
Beyond 10 hours	\$78.06

Saturday

First 8 hours	\$65.74
9th hour	\$65.74
10th hour	\$65.74
Beyond 10 hours	\$78.06

Sunday/Holiday	\$78.06
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SWTD50	Operating Engineer Steel Work	05/10/2024

Classification Description: Tower Crane & Derrick where work is 50' or more

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$74.74	\$96.16	\$117.57

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$96.16
10th hour	\$96.16
Beyond 10 hours	\$117.57
Saturday	
First 8 hours	\$96.16
9th hour	\$96.16
10th hour	\$96.16
Beyond 10 hours	\$117.57
Sunday/Holiday	
	\$117.57

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Steel Work - SWTD50 O	Operating Engineer Steel Work	05/10/2024

Classification Description: Tower Crane & Derrick 50' or more w/ Oiler

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$75.84	\$97.69	\$119.54

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$97.69
10th hour	\$97.69
Beyond 10 hours	\$119.54

Saturday

First 8 hours	\$97.69
9th hour	\$97.69
10th hour	\$97.69
Beyond 10 hours	\$119.54

Sunday/Holiday	\$119.54
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

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

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A1-UC1	Operating Engineer Underground	05/10/2024

Classification Description: Class I Equipment

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$66.39	\$84.19	\$101.98
Apprentice: 0-999 hours	\$52.76	\$67.08	\$81.41
Apprentice: 1,000-1,999 hours	\$54.80	\$70.14	\$85.49
Apprentice: 2,000-2,999 hours	\$56.85	\$73.22	\$89.59
Apprentice: 3,000-3,999 hours	\$58.90	\$76.30	\$93.69
Apprentice: 4,000-4,999 hours	\$60.94	\$79.35	\$97.77
Apprentice: 5,000-5,999 hours	\$62.99	\$82.43	\$101.87

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$84.19
10th hour	\$84.19
Beyond 10 hours	\$84.19
Saturday	
First 8 hours	\$84.19
9th hour	\$84.19
10th hour	\$84.19
Beyond 10 hours	\$84.19
Sunday/Holiday	
	\$101.98

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A1-UC2	Operating Engineer Underground	05/10/2024

Classification Description: Class II Equipment

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$61.68	\$77.42	\$93.16

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$77.42
10th hour	\$77.42
Beyond 10 hours	\$77.42
Saturday	
First 8 hours	\$77.42
9th hour	\$77.42
10th hour	\$77.42
Beyond 10 hours	\$77.42
Sunday/Holiday	
	\$93.16

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A1-UC3	Operating Engineer Underground	05/10/2024

Classification Description: Class III Equipment

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$60.93	\$76.35	\$91.77

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$76.35
10th hour	\$76.35
Beyond 10 hours	\$76.35

Saturday

First 8 hours	\$76.35
9th hour	\$76.35
10th hour	\$76.35
Beyond 10 hours	\$76.35

Sunday/Holiday	\$91.77
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A1-UC4	Operating Engineer Underground	05/10/2024

Classification Description: Class IV Equipment

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$60.36	\$75.54	\$90.71

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$75.54
10th hour	\$75.54
Beyond 10 hours	\$75.54
Saturday	
First 8 hours	\$75.54
9th hour	\$75.54
10th hour	\$75.54
Beyond 10 hours	\$75.54
Sunday/Holiday	
	\$90.71

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A2-UC1	Operating Engineer Underground	05/10/2024

Classification Description: Class I Equipment - Backfiller Tamper, Backhoe, Batch Plant Operator, Clamshell, Concrete Paver 2 drums or larger, Conveyor Loader Euclid type, Crane (crawler, truck type or pile driving), Dozer, Dragline, Elevating Grader, endloader, gradall, grader, hyd

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$65.17	\$82.61	\$100.05
Apprentice: 0-999 hours	\$49.19	\$61.74	\$74.29
Apprentice: 1,000-1,999 hours	\$50.99	\$64.44	\$77.89
Apprentice: 2,000-2,999 hours	\$52.78	\$67.12	\$81.47
Apprentice: 3,000-3,999 hours	\$54.58	\$69.82	\$85.07
Apprentice: 4,000-4,999 hours	\$56.37	\$72.51	\$88.65
Apprentice: 5,000-5,999 hours	\$58.16	\$75.19	\$92.23

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$82.61
10th hour	\$82.61
Beyond 10 hours	\$82.61
Saturday	
First 8 hours	\$82.61
9th hour	\$82.61
10th hour	\$82.61
Beyond 10 hours	\$82.61
Sunday/Holiday	
	\$100.05

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A2-UC2	Operating Engineer Underground	05/10/2024

Classification Description: Class II Equipment - Boom Truck, Crusher, Hoist, Pump 6 inch discharge or larger, side boom tractor, Tractor (pneu-tired other than backhoe or front end loader), Trencher 8 ft. digging capacity and smaller, Vac Truck

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$60.42	\$75.80	\$91.17

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$75.80
10th hour	\$75.80
Beyond 10 hours	\$75.80
Saturday	
First 8 hours	\$75.80
9th hour	\$75.80
10th hour	\$75.80
Beyond 10 hours	\$75.80
Sunday/Holiday	
	\$91.17

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A2-UC3	Operating Engineer Underground	05/10/2024

Classification Description: Class III Equipment - Air Compressors 600 cfm or larger, Air Compressors 2 or more less than 600 dfm, Boom Truck non-swinging non-powered type boom, Concrete Breaker self-propelled or truck mounted, Concrete paver 1 drum 1/2 yd. or larger, Elevator other

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$59.59	\$74.61	\$89.62

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$74.61
10th hour	\$74.61
Beyond 10 hours	\$74.61

Saturday

First 8 hours	\$74.61
9th hour	\$74.61
10th hour	\$74.61
Beyond 10 hours	\$74.61

Sunday/Holiday	\$89.62
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Operating Engineer Underground - A2-UC4	Operating Engineer Underground	05/10/2024

Classification Description: Class IV Equipment - Boiler, Concrete Saw 40 hp or over, curing machine self propelled, end dumps, extend a boom forklift, farm tractor with attachment, finishing machine concrete, firemen, hydraulic pipe pushing machine, mulching equipment, oiler, pumps

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$58.93	\$73.66	\$88.38

Overtime Provisions

Over 8-hour day/40-hour

week

9th hour	\$73.66
10th hour	\$73.66
Beyond 10 hours	\$73.66

Saturday

First 8 hours	\$73.66
9th hour	\$73.66
10th hour	\$73.66
Beyond 10 hours	\$73.66

Sunday/Holiday

\$88.38

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Painter - PT	Painter	05/10/2024

Classification Description: Painter

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$50.12	\$65.05	\$79.98
Apprentice: 1st period	\$35.19	\$42.41	\$49.87
Apprentice: 2nd period	\$38.18	\$46.89	\$55.85
Apprentice: 3rd period	\$41.16	\$51.36	\$61.81
Apprentice: 4th period	\$45.64	\$58.08	\$70.77

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$65.05
10th hour	\$65.05
Beyond 10 hours	\$65.05
Saturday	
First 8 hours	\$65.05
9th hour	\$65.05
10th hour	\$65.05
Beyond 10 hours	\$65.05
Sunday/Holiday	
	\$79.98

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Pipe and Manhole Rehab - 1	Pipe and Manhole Rehab	05/10/2024

Classification Description: General Laborer for rehab work or normal cleaning and cctv work-top man, scaffold man, CCTV assistant, jetter-vac assistant

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$28.20	\$38.20	\$48.19

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$38.20
10th hour	\$38.20
Beyond 10 hours	\$38.20

Saturday

First 8 hours	\$38.20
9th hour	\$38.20
10th hour	\$38.20
Beyond 10 hours	\$38.20

Sunday/Holiday	\$38.20
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Pipe and Manhole Rehab - 2	Pipe and Manhole Rehab	05/10/2024

Classification Description: Tap cutter/CCTV Tech/Grout Equipment Operator: unit driver and operator of CCTV; grouting equipment and tap cutting equipment

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$32.70	\$44.95	\$57.19

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$44.95
10th hour	\$44.95
Beyond 10 hours	\$44.95

Saturday

First 8 hours	\$44.95
9th hour	\$44.95
10th hour	\$44.95
Beyond 10 hours	\$44.95

Sunday/Holiday	\$44.95
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Pipe and Manhole Rehab - 3	Pipe and Manhole Rehab	05/10/2024

Classification Description: CCTV Technician/Combo Unit Operator: unit driver and operator of cctv unit or combo unit in connection with normal cleaning and televising work

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$31.45	\$43.07	\$54.69

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$43.07
10th hour	\$43.07
Beyond 10 hours	\$43.07

Saturday

First 8 hours	\$43.07
9th hour	\$43.07
10th hour	\$43.07
Beyond 10 hours	\$43.07

Sunday/Holiday	\$43.07
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Pipe and Manhole Rehab - 4	Pipe and Manhole Rehab	05/10/2024

Classification Description: Boiler Operator: unit driver and operator of steam/water heater units and all ancillary equipment associated

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$33.20	\$45.70	\$58.19

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$45.70
10th hour	\$45.70
Beyond 10 hours	\$45.70

Saturday

First 8 hours	\$45.70
9th hour	\$45.70
10th hour	\$45.70
Beyond 10 hours	\$45.70

Sunday/Holiday	\$45.70
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Pipe and Manhole Rehab - 5	Pipe and Manhole Rehab	05/10/2024

Classification Description: Combo Unit driver & Jetter-Vac Operator

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$33.20	\$45.70	\$58.19

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$45.70
10th hour	\$45.70
Beyond 10 hours	\$45.70

Saturday

First 8 hours	\$45.70
9th hour	\$45.70
10th hour	\$45.70
Beyond 10 hours	\$45.70

Sunday/Holiday

	\$45.70
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Pipe and Manhole Rehab - 6	Pipe and Manhole Rehab	05/10/2024

Classification Description: Pipe Bursting & Slip-lining Equipment Operator

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$34.20	\$47.20	\$60.19

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$47.20
10th hour	\$47.20
Beyond 10 hours	\$47.20

Saturday

First 8 hours	\$47.20
9th hour	\$47.20
10th hour	\$47.20
Beyond 10 hours	\$47.20

Sunday/Holiday	\$47.20
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - 14 P	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$57.16	\$73.88	\$90.60
Apprentice: 0-749 hours	\$45.46	\$56.33	\$67.20
Apprentice: 1,500-2,249 hours	\$48.80	\$61.34	\$73.88
Apprentice: 2,250-2,999 hours	\$50.47	\$63.84	\$77.22
Apprentice: 3,000-3,749 hours	\$52.14	\$66.35	\$80.56
Apprentice: 3,750-4,499 hours	\$53.82	\$68.87	\$83.92
Apprentice: 4,500 hours	\$57.16	\$73.88	\$90.60
Apprentice: 750-1,499 hours	\$47.13	\$58.84	\$70.54

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$73.88
10th hour	\$73.88
Beyond 10 hours	\$73.88

Saturday

First 8 hours	\$73.88
9th hour	\$73.88
10th hour	\$73.88
Beyond 10 hours	\$73.88

Sunday/Holiday	\$90.60
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - 3 P	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$53.38	\$67.63	\$81.88
Apprentice: 0-749 hours	\$43.41	\$52.68	\$61.94
Apprentice: 1,500-2,249 hours	\$46.26	\$56.95	\$67.64
Apprentice: 2,250-2,999 hours	\$47.68	\$59.08	\$70.48
Apprentice: 3,000-3,749 hours	\$49.10	\$61.21	\$73.32
Apprentice: 3,750-4,499 hours	\$50.53	\$63.36	\$76.18
Apprentice: 4,500 hours	\$53.38	\$67.63	\$81.88
Apprentice: 750-1,499 hours	\$44.83	\$54.80	\$64.78

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.63
10th hour	\$67.63
Beyond 10 hours	\$67.63

Saturday

First 8 hours	\$67.63
9th hour	\$67.63
10th hour	\$67.63
Beyond 10 hours	\$67.63

Sunday/Holiday	\$81.88
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - 40 P	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$51.72	\$67.29	\$82.86
Apprentice: 0-749 hours	\$40.82	\$50.94	\$61.06
Apprentice: 1,500-2,249 hours	\$43.94	\$55.62	\$67.30
Apprentice: 2,250-2,999 hours	\$45.49	\$57.94	\$70.40
Apprentice: 3,000-3,749 hours	\$47.05	\$60.28	\$73.52
Apprentice: 3,750-4,499 hours	\$48.61	\$62.62	\$76.64
Apprentice: 4,500 hours	\$51.72	\$67.29	\$82.86
Apprentice: 750-1,499 hours	\$42.38	\$53.28	\$64.18

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$67.29
10th hour	\$67.29
Beyond 10 hours	\$67.29

Saturday

First 8 hours	\$67.29
9th hour	\$67.29
10th hour	\$67.29
Beyond 10 hours	\$67.29

Sunday/Holiday

\$82.86

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - 7 P	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$46.60	\$59.14	\$71.68
Apprentice: 0-749 hours	\$37.82	\$45.97	\$54.12
Apprentice: 1,500-2,249 hours	\$40.33	\$49.74	\$59.14
Apprentice: 2,250-2,999 hours	\$41.58	\$51.61	\$61.64
Apprentice: 3,000-3,749 hours	\$42.84	\$53.50	\$64.16
Apprentice: 3,750-4,499 hours	\$44.09	\$55.38	\$66.66
Apprentice: 4,500 hours	\$46.60	\$59.14	\$71.68
Apprentice: 750-1,499 hours	\$39.08	\$47.86	\$56.64

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$59.14
10th hour	\$59.14
Beyond 10 hours	\$59.14

Saturday

First 8 hours	\$59.14
9th hour	\$59.14
10th hour	\$59.14
Beyond 10 hours	\$59.14

Sunday/Holiday

\$71.68

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - P-G	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$42.99	\$56.74	\$70.48
Apprentice: 1st Year	\$33.37	\$42.30	\$51.24
Apprentice: 2nd Year	\$36.12	\$46.43	\$56.74
Apprentice: 3rd Year	\$38.87	\$50.56	\$62.24

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$56.74
10th hour	\$56.74
Beyond 10 hours	\$56.74

Saturday

First 8 hours	\$56.74
9th hour	\$56.74
10th hour	\$56.74
Beyond 10 hours	\$56.74

Sunday/Holiday	\$70.48
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - P-L	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.00	\$59.93	\$74.85
Apprentice: 1st Year	\$34.55	\$44.25	\$53.95
Apprentice: 2nd Year	\$37.54	\$48.73	\$59.93
Apprentice: 3rd Year	\$40.52	\$53.21	\$65.89

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$59.93
10th hour	\$59.93
Beyond 10 hours	\$59.93

Saturday

First 8 hours	\$59.93
9th hour	\$59.93
10th hour	\$59.93
Beyond 10 hours	\$59.93

Sunday/Holiday	\$74.85
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - P-S	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$46.28	\$61.67	\$77.06
Apprentice: 1st Year	\$35.51	\$45.52	\$55.52
Apprentice: 2nd Year	\$38.58	\$50.12	\$61.66
Apprentice: 3rd Year	\$41.66	\$54.74	\$67.82

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$61.67
10th hour	\$61.67
Beyond 10 hours	\$61.67

Saturday

First 8 hours	\$61.67
9th hour	\$61.67
10th hour	\$61.67
Beyond 10 hours	\$61.67

Sunday/Holiday	\$77.06
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - P-TC	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$41.14	\$54.19	\$67.23
Apprentice: 1st Year	\$32.01	\$40.49	\$48.97
Apprentice: 2nd Year	\$34.62	\$44.41	\$54.19
Apprentice: 3rd Year	\$37.23	\$48.32	\$59.41

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$54.19
10th hour	\$54.19
Beyond 10 hours	\$54.19

Saturday

First 8 hours	\$54.19
9th hour	\$54.19
10th hour	\$54.19
Beyond 10 hours	\$54.19

Sunday/Holiday	\$67.23
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plasterer - P-UP	Plasterer	05/10/2024

Classification Description: Plasterer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.79	\$60.94	\$76.08
Apprentice: 1st Year	\$35.19	\$45.04	\$54.88
Apprentice: 2nd Year	\$38.22	\$49.58	\$60.94
Apprentice: 3rd Year	\$41.25	\$54.12	\$67.00

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$60.94
10th hour	\$60.94
Beyond 10 hours	\$60.94
Saturday	
First 8 hours	\$60.94
9th hour	\$60.94
10th hour	\$60.94
Beyond 10 hours	\$60.94
Sunday/Holiday	
	\$76.08

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Plumber, Pipefitter, Welder & HVAC	Plumber, Pipefitter, Welder & HVAC	05/10/2024

Classification Description: Plumber, Pipefitter, Welder & HVAC

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$68.20	\$94.78	\$121.36
Apprentice: 1st Year	\$45.02	\$60.01	\$75.00
Apprentice: 2nd Year	\$49.05	\$66.06	\$83.06
Apprentice: 3rd Year	\$53.08	\$72.11	\$91.12
Apprentice: 4th Year	\$57.12	\$78.17	\$99.20
Apprentice: 5th Year-1st 6 months	\$59.13	\$81.18	\$103.22
Apprentice: 5th Year-2nd 6 months	\$61.15	\$84.21	\$107.26

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$88.37
10th hour	\$88.37
Beyond 10 hours	\$88.37
Saturday	
First 8 hours	\$88.37
9th hour	\$88.37
10th hour	\$88.37
Beyond 10 hours	\$88.37
Sunday/Holiday	
	\$108.53

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

4 tens can be worked between Monday and Friday

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Sewer Relining Operator - Class I	Sewer Relining	05/10/2024

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$52.84	\$69.23	\$85.62
Apprentice: 0-6 months	\$41.58	\$54.66	\$67.74
Apprentice: 6-12 months	\$45.31	\$60.26	\$75.20

Overtime Provisions	
Over 8-hour day/40-hour week	
9th hour	\$69.23
10th hour	\$69.23
Beyond 10 hours	\$69.23
Saturday	
First 8 hours	\$69.23
9th hour	\$69.23
10th hour	\$69.23
Beyond 10 hours	\$69.23
Sunday/Holiday	\$85.62

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Sewer Relining Operator - Class II	Sewer Relining	05/10/2024

Classification Description: Class II-Operator of hot water heaters and circulation system; water jetters; and vacuum and mechanical debris removal systems and those assisting.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$50.80	\$68.49	\$86.18

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$66.30
10th hour	\$66.30
Beyond 10 hours	\$66.30

Saturday

First 8 hours	\$66.30
9th hour	\$66.30
10th hour	\$66.30
Beyond 10 hours	\$66.30

Sunday/Holiday	\$81.79
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Sheet Metal Worker	Sheet Metal Worker	05/10/2024

Classification Description: Journeyman -

A 4 10 schedule may be worked, 4 consecutive days Monday thru Friday.

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$74.96	\$95.01	\$115.06
Apprentice: 1st & 2nd Periods	\$48.51	\$59.65	\$70.77
Apprentice: 3rd & 4th Periods	\$50.74	\$62.99	\$75.23
Apprentice: 5th & 6th Periods	\$52.96	\$66.32	\$79.67
Apprentice: 7th & 8th Periods	\$55.19	\$69.67	\$84.13

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$95.01
10th hour	\$95.01
Beyond 10 hours	\$115.06

Saturday

First 8 hours	\$95.01
9th hour	\$115.06
10th hour	\$115.06
Beyond 10 hours	\$115.06

Sunday/Holiday	\$115.06
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Sprinkler Fitter Journeyman	Sprinkler Fitter	05/10/2024

Classification Description: Sprinkler Fitter Journeyman -
 4 ten hour days allowed Monday-Friday
 Double time pay due after 12 hours worked M-F

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$78.57	\$102.66	\$126.74
Apprentice: 10th Period	\$69.91	\$87.12	\$104.33
Apprentice: 1st Period	\$31.91	\$40.00	\$48.09
Apprentice: 2nd Period	\$51.25	\$60.36	\$69.47
Apprentice: 3rd Period	\$53.58	\$63.71	\$73.83
Apprentice: 4th Period	\$55.91	\$67.04	\$78.17
Apprentice: 5th Period	\$58.25	\$70.40	\$82.55
Apprentice: 6th Period	\$60.58	\$73.73	\$86.89
Apprentice: 7th Period	\$62.91	\$77.08	\$91.24
Apprentice: 8th Period	\$65.25	\$80.44	\$95.62
Apprentice: 9th Period	\$67.58	\$83.78	\$99.98

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$102.66
10th hour	\$102.66
Beyond 10 hours	\$126.74
Saturday	
First 8 hours	\$102.66
9th hour	\$126.74
10th hour	\$126.74
Beyond 10 hours	\$126.74
Sunday/Holiday	
	\$126.74

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tile, Marble and Terrazzo - KZ-Finisher	Tile, Marble and Terrazzo	05/10/2024

Classification Description: Tile Finisher

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$40.45	\$54.47	\$66.71
Apprentice: 1st Period	\$31.88	\$41.61	\$49.57
Apprentice: 2nd Period	\$33.10	\$43.44	\$52.01
Apprentice: 3rd Period	\$34.33	\$45.29	\$54.47
Apprentice: 4th Period	\$35.55	\$47.11	\$56.91
Apprentice: 5th Period	\$36.78	\$48.96	\$59.37
Apprentice: 6th Period	\$38.00	\$50.79	\$61.81

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$52.70
10th hour	\$52.70
Beyond 10 hours	\$52.70
Saturday	
First 8 hours	\$52.70
9th hour	\$52.70
10th hour	\$52.70
Beyond 10 hours	\$52.70
Sunday/Holiday	
	\$64.94

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tile, Marble and Terrazzo - KZ-S-Setter	Tile, Marble and Terrazzo	05/10/2024

Classification Description: Tile Setter

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$43.40	\$56.03	\$68.66
Apprentice: 1st Period	\$34.56	\$42.77	\$50.98
Apprentice: 2nd Period	\$35.82	\$44.66	\$53.50
Apprentice: 3rd Period	\$37.08	\$46.55	\$56.02
Apprentice: 4th Period	\$38.35	\$48.46	\$58.56
Apprentice: 5th Period	\$39.61	\$50.34	\$61.08
Apprentice: 6th Period	\$40.87	\$52.24	\$63.60

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$56.03
10th hour	\$56.03
Beyond 10 hours	\$56.03
Saturday	
First 8 hours	\$56.03
9th hour	\$56.03
10th hour	\$56.03
Beyond 10 hours	\$56.03
Sunday/Holiday	
	\$68.66

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tile, Marble and Terrazzo - KZ-T	Tile, Marble and Terrazzo	05/10/2024

Classification Description: Terrazzo Finisher

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$45.11	\$59.24	\$73.36
Apprentice: 1st Period	\$35.22	\$44.40	\$53.58
Apprentice: 2nd Period	\$36.63	\$46.52	\$56.40
Apprentice: 3rd Period	\$38.05	\$48.64	\$59.24
Apprentice: 4th Period	\$39.46	\$50.76	\$62.06
Apprentice: 5th Period	\$40.87	\$52.88	\$64.88
Apprentice: 6th Period	\$42.28	\$54.99	\$67.70

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$59.24
10th hour	\$59.24
Beyond 10 hours	\$59.24

Saturday

First 8 hours	\$59.24
9th hour	\$59.24
10th hour	\$59.24
Beyond 10 hours	\$59.24

Sunday/Holiday	\$73.36
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Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tile, Marble and Terrazzo Finisher	Tile, Marble and Terrazzo	05/10/2024

Classification Description: Tile, Marble and Terrazzo Finisher

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$51.67	\$66.51	\$81.34
Apprentice: 1st Period	\$34.76	\$44.41	\$54.05
Apprentice: 2nd Period	\$36.24	\$46.63	\$57.01
Apprentice: 3rd Period	\$37.72	\$48.85	\$59.97
Apprentice: 4th Period	\$39.21	\$51.08	\$62.95
Apprentice: 5th Period	\$40.69	\$53.30	\$65.91
Apprentice: 6th Period	\$42.17	\$55.52	\$68.87

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$66.51
10th hour	\$66.51
Beyond 10 hours	\$81.34
Saturday	
First 8 hours	\$66.51
9th hour	\$81.34
10th hour	\$81.34
Beyond 10 hours	\$81.34
Sunday/Holiday	
	\$81.34

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tile, Marble Terrazzo Setter	Tile, Marble and Terrazzo	05/10/2024

Classification Description: Tile, Marble Terrazzo Setter

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$58.80	\$77.20	\$95.60
Apprentice: 1st Period	\$38.77	\$49.81	\$60.85
Apprentice: 2nd Period	\$40.61	\$52.57	\$64.53
Apprentice: 3rd Period	\$42.45	\$55.33	\$68.21
Apprentice: 4th Period	\$44.29	\$58.09	\$71.89
Apprentice: 5th Period	\$46.13	\$60.85	\$75.57
Apprentice: 6th Period	\$47.97	\$63.61	\$79.25
Apprentice: 7th Period	\$49.81	\$66.37	\$82.93
Apprentice: 8th Period	\$51.65	\$69.13	\$86.61

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$77.20
10th hour	\$77.20
Beyond 10 hours	\$95.60
Saturday	
First 8 hours	\$77.20
9th hour	\$95.60
10th hour	\$95.60
Beyond 10 hours	\$95.60
Sunday/Holiday	
	\$95.60

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tile, Terrazzo and Mosaic Finisher	Tile, Terrazzo and Mosaic Finisher	05/10/2024

Classification Description: Tile, Terrazzo and Mosaic Finisher

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$42.34	\$54.17	\$65.99
Apprentice: 1st Period	\$35.25	\$43.53	\$51.81
Apprentice: 2nd Period	\$36.43	\$45.30	\$54.17
Apprentice: 3rd Period	\$37.61	\$47.07	\$56.53
Apprentice: 4th Period	\$38.79	\$48.84	\$58.89
Apprentice: 5th Period	\$39.97	\$50.61	\$61.25
Apprentice: 6th Period	\$41.16	\$52.39	\$63.63

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$54.17
10th hour	\$54.17
Beyond 10 hours	\$54.17
Saturday	
First 8 hours	\$54.17
9th hour	\$54.17
10th hour	\$54.17
Beyond 10 hours	\$54.17
Sunday/Holiday	
	\$65.99

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tile, Terrazzo and Mosaic Setters	Tile, Terrazzo and Mosaic Setters	05/10/2024

Classification Description: Tile, Terrazzo and Mosaic Setters

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$48.48	\$62.11	\$75.73
Apprentice: 1st Period	\$40.31	\$49.85	\$59.39
Apprentice: 2nd Period	\$41.67	\$51.89	\$62.11
Apprentice: 3rd Period	\$43.03	\$53.93	\$64.83
Apprentice: 4th Period	\$44.39	\$55.97	\$67.55
Apprentice: 5th Period	\$45.75	\$58.01	\$70.27
Apprentice: 6th Period	\$47.12	\$60.07	\$73.01

Overtime Provisions

Over 8-hour day/40-hour week	
9th hour	\$62.11
10th hour	\$62.11
Beyond 10 hours	\$62.11
Saturday	
First 8 hours	\$62.11
9th hour	\$62.11
10th hour	\$62.11
Beyond 10 hours	\$62.11
Sunday/Holiday	
	\$75.73

Four 10-hour days allowed? - No

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Tower Technician	Tower Technician	05/13/2024

Classification Description:

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$67.89	\$98.24	\$128.58

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24

Saturday

First 8 hours	\$98.24
9th hour	\$98.24
10th hour	\$98.24
Beyond 10 hours	\$98.24

Sunday/Holiday	\$128.58
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

ONLY due to inclement weather or customer requirements may Friday be used as a make up day if the normal scheduled work week was interrupted and time lost of five (5) hours or more was incurred by workmen covered under the terms of the 6-17-C/6-876-T agreement.

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Truck Driver - RB1	Truck Driver	05/10/2024

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

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$53.95	\$70.30	\$86.64

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$69.32
10th hour	\$69.32
Beyond 10 hours	\$69.32

Saturday

First 8 hours	\$69.32
9th hour	\$69.32
10th hour	\$69.32
Beyond 10 hours	\$69.32

Sunday/Holiday	\$84.69
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Truck Driver - RB1A	Truck Driver	05/10/2024

Classification Description: of all trucks of 8 cubic yard capacity or over semi, tractor trailer

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$54.10	\$70.52	\$86.94

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$69.55
10th hour	\$69.55
Beyond 10 hours	\$69.55

Saturday

First 8 hours	\$69.55
9th hour	\$69.55
10th hour	\$69.55
Beyond 10 hours	\$69.55

Sunday/Holiday	\$84.99
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Truck Driver - RB1B	Truck Driver	05/10/2024

Classification Description: on euclid type equipment, Pole drier, lowboy, doubles, fuel, bus, water

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$54.20	\$69.70	\$85.19

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$69.70
10th hour	\$69.70
Beyond 10 hours	\$69.70

Saturday

First 8 hours	\$69.70
9th hour	\$69.70
10th hour	\$69.70
Beyond 10 hours	\$69.70

Sunday/Holiday	\$85.19
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Four 10-hour days allowed? - Yes

Make Up Day Allowed? - Yes

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Truck Driver - RB2	Truck Driver	05/10/2024

Classification Description: of all trucks of 8 cubic yd capacity or over

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.10	\$48.81	\$49.80

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$56.55
10th hour	\$56.55
Beyond 10 hours	\$56.55

Saturday

First 8 hours	\$56.55
9th hour	\$56.55
10th hour	\$56.55
Beyond 10 hours	\$56.55

Sunday/Holiday

\$56.55

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Truck Driver - RB2A	Truck Driver	05/10/2024

Classification Description: of all trucks of 8 cubic yard capacity or less (except dump trucks of 8 cubic yard capacity or over, tandem axle trucks, transit mix and semis, euclid type equipment, double bottoms and low boys)

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.00	\$48.66	\$49.60

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$56.40
10th hour	\$56.40
Beyond 10 hours	\$56.40

Saturday

First 8 hours	\$56.40
9th hour	\$56.40
10th hour	\$56.40
Beyond 10 hours	\$56.40

Sunday/Holiday

\$56.40

Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

Prevailing Wage Rates for State Funded Projects

Official Rate Schedule

Washtenaw

Classification Name	Category	Last Updated
Truck Driver - RB2B	Truck Driver	05/10/2024

Classification Description: on euclid type equipment

Wage Rates	Straight Time	Time and a Half	Double Time
Total Hourly Wage	\$44.25	\$49.04	\$0.00

Overtime Provisions

Over 8-hour day/40-hour week

9th hour	\$56.78
10th hour	\$56.78
Beyond 10 hours	\$56.78

Saturday

First 8 hours	\$56.78
9th hour	\$56.78
10th hour	\$56.78
Beyond 10 hours	\$56.78

Sunday/Holiday	\$56.78
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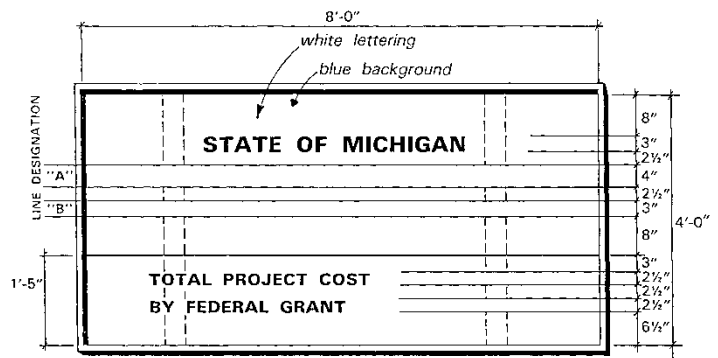
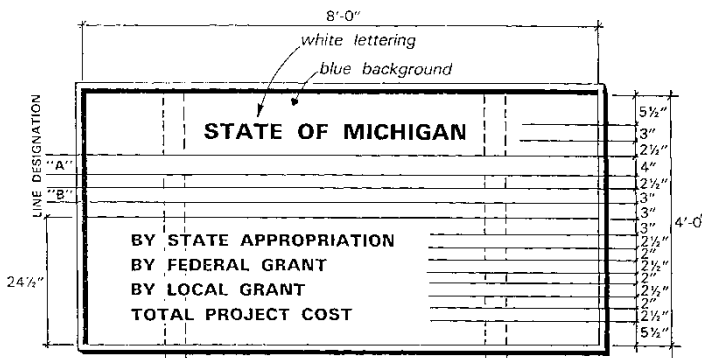
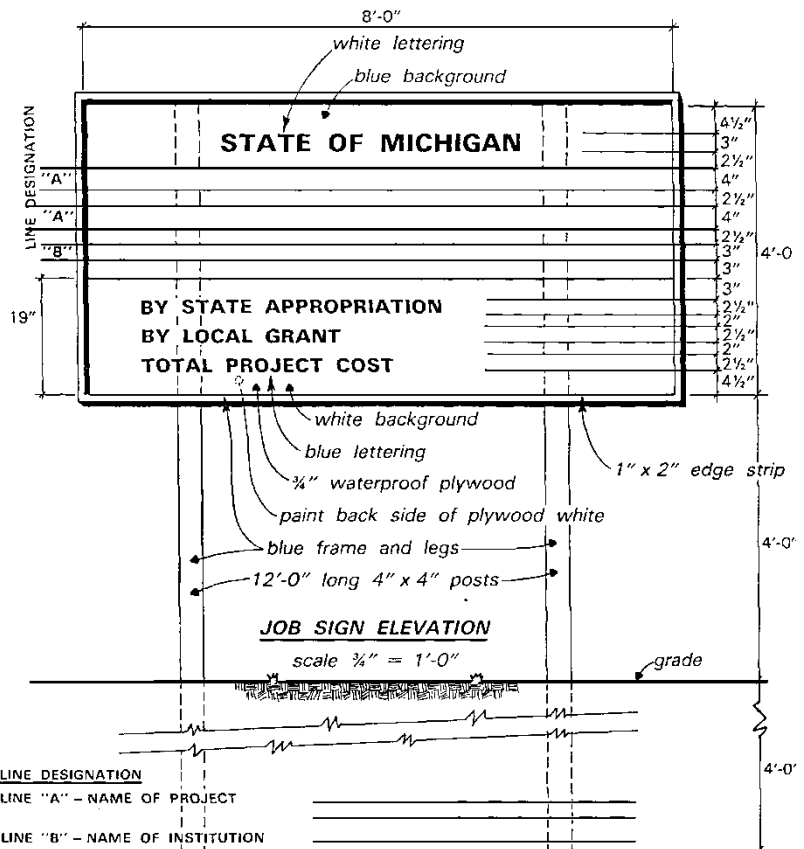
Four 10-hour days allowed? - Yes

Make Up Day Allowed? - No

APPENDIX IV - PROJECT SIGNAGE

REQUIRED PROJECT SIGN FOR PROJECTS COSTING IN EXCESS OF \$500,000.00

Five examples of project signs. Sign lettering corresponds with the funding arrangement of the project. Alternate signs may be considered; please contact the DTMB Project Director.



SECTION 28 1000 – TECHNOLOGY OVERVIEW

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section provides a project overview and general project and Contractor requirements for technology work.
- B. The “Contractor” as referred to in these specifications, shall be the bidder whose bid is eventually chosen as the winner.
- C. The “Engineer” as referred to in these specifications, shall be Commtech Design and its representative on this project.
- D. The “Owner” as referred to in these specifications, shall be State of Michigan and its representatives.
- E. In the detailed specifications and on the contract drawings, the phrases “or equivalent,” “approved equivalent,” “approved equal,” “or equal” and “engineer approved equivalent” shall be used interchangeably and shall mean the same thing.
- F. All equals, equivalents, or alternates shall be approved by the Engineer prior to ordering or installation. Without approval, deviation from the products listed in the specifications and on the drawings, shall be presumed to be nonconforming and shall be removed and replaced at the direction of the Engineer and at the Contractor’s expense.

1.02 DESCRIPTION OF PROJECT

- A. Cabling and communications infrastructure.
 - 1. The communications portion of the project encompasses communications cabling and termination equipment. The work shall include but not be limited to:
 - a. Communications room cable ladder and cable supports
 - b. Communications Cabling and Termination Equipment:
 - a. User UTP Plenum rated CAT-6 cabling
 - b. Fiber optic cabling and termination.
 - 1) Terminate and test each fiber strand. Terminate into panels at each end. Provide panels and fiber splicing equipment.
 - 2. All cables shall be labeled according to the drawings and the specifications.
 - 3. All cables shall be terminated and tested as per the specifications.
 - 4. Contractor shall provide personnel and equipment for full training and commissioning of the system.
 - 2. All cables shall be supported by J-hooks or cable tray/ladder.
 - 3. Label all cables
 - 4. Test all cables.
 - 5. The extent of the work shall be as shown on the drawing and detailed in these specifications
 - 6. Provide raceways as shown on the drawings.
- B. Programmable Logic Controller (PLC) System upgrade / replacement.
 - 1. The site has an existing PLC System at the site that is used to control systems and access control and integrates to the camera system. The system includes software and hardware that allows users to utilize touchpanel screens to control doors and view cameras and turn on and off lights and water throughout the building.
 - 2. The system can no longer be updated and needs to be replaced. The replacement shall include but not be limited to:
 - a. New PLC equipment that is Ethernet network attached.

- b. Low Voltage controllers that are network attached. Replace existing
- c. Updated Intercom system to allow all intercoms to conduct two-way communications between devices throughout the building and the user PC Stations.
- d. New PLC control and Graphical User Interface (GUI) software that integrates the video security (Bosch) security camera system
- e. New User PC's and touchpanel monitors.
- 3. The new PLC system shall be Ethernet network based
 - a. Replace existing devices as noted on drawing and specs to support the new software
- 4. Configure the system as per the owner's requirements. Meet with them to determine configuration parameters
- 5. The extent of the work shall be as shown on the drawing and detailed in these specifications
- C. Data Network
 - 1. The contractor shall provide a new data network. See drawings and specs for system requirements
 - 2. Provide, install and configure an Ethernet network for the updated PLC and intercom system.
 - 3. Meet with the owner prior to installation to configure the system based on their wishes
 - 4. Provide patch cables for all interconnections at the switches and at the wireless access points.
 - 5. The extent of the work shall be as shown on the drawing and detailed in these specifications
- D. Post installation documentation
 - 1. Each contractor shall provide post installation documentation as per the specifications. Shall include but not be limited to:
 - a. Red-lined as-built drawings
 - b. As-built detailed connectivity of AV and Network Systems
 - c. As-built cable locations and cable labels at each location.
 - d. Mark all splice locations
 - e. Update of all access control locations and equipment at each door
 - f. Camera locations and camera numbers.
 - g. Spreadsheet (hard copy and Excel file) for all network, Wireless, telephones and cameras detailing:
 - A) Mfg. Part number
 - B) IP Address
 - C) MAC Address
 - D) Device number (Camera #, Telephone # etc)

1.03 STORAGE OF MATERIALS

- A. All materials shall be secured when not in use by the Contractor.
- B. It shall be the Contractor's responsibility to secure all equipment including all material to be installed as part of the contract. No changes shall be made to the contract due to loss or theft of equipment and materials not officially accepted by the Owner.

1.04 PERMITS

- A. The State of Michigan requires that the Contractor apply for and obtain permits for data telecommunication installation.
- B. This is required under State of Michigan Public Act 230. The inspector at the State of Michigan states that the code never exempted data telecommunications from permits and previous rules had overstepped their bounds. Only exemptions to the permit requirements are found in Public Act 230 MCL125.1528a.

1. There is not a license required to apply for a permit per Public Act 407 MCL339.5737(3)(o).
- C. The Permit is required under Public Act 230. The permit is under 2017 Michigan Electrical Code rules Part 8.
- D. People who can obtain the permit include the Owner of the building or a company representing the owner. See Public Act 230 MCL125.1510.
 1. Contractor shall be required to apply for and obtain the permit
 2. Contractor shall be required to install the data telecommunications system to fully meet all code requirements and requirements of the Inspector and Authority Having Jurisdiction (AHJ)
- E. State inspector has noted that the inspection process for data telecommunications is the same as any other inspection.
 1. Do not cover or conceal any wiring without approval.
 2. Electrical Inspectors will be conducting the inspections.
 3. Contractor shall be responsible for scheduling the inspections and attending the inspections with the inspector
- F. State inspector has noted that the inspectors will be inspecting for code compliance including manufacture's installation instructions for the cables and terminations.
- G. An installation may not pass inspection if there is any Non-compliance with the code.

1.05 REFERENCE SPECIFICATIONS-CABLING

- A. All work applicable shall conform to the following standards:
- B. ANSI/TIA-568-C.0, "*Generic Telecommunications Cabling for Customer Premises*",
- C. ANSI/TIA-568-C.1, "*Commercial Building Telecommunications Cabling Standard*",
- D. ANSI/TIA-568-C.2, "*Balanced Twisted-Pair Telecommunication Cabling and Components Standard*", ANSI/TIA-568-C.3, "*Optical Fiber Cabling Components Standard*",
- E. ANSI/TIA-568-C.4, "*Broadband Coaxial Cabling and Components Standard*",
- F. ANSI/TIA/EIA-569-B Commercial Building Standard for Telecommunications Pathways and Spaces
- G. IA-606-B: Administration Standard for the Telecommunications Infrastructure of Commercial Buildings including all Updates and Addenda.
- H. TIA-607-C: Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises.
- I. EIA-472 General Specification for Fiber Optic Cable
- J. EIA-472A Sectional Specification for Fiber Optic Communication Cables for Outside Aerial
- K. EIA-472B Sectional Specification for Fiber Optic Communication Cables for Underground and Buried Use
- L. EIA-472C Sectional Specification for Fiber Optic Communication Cables for Indoor Use
- M. EIA-472D Sectional Specification for Fiber Optic Communication Cables for Outside Telephone Plant Use
- N. NEC, 2015, or latest edition available
- O. IEEE 802.3af PoE • Ratified in 2003 • 15.4W at the PSE, with min of 12.95W available to the PD
- P. IEEE 802.3at PoE+ • Ratified in 2009 • 34.2W at the PSE, with min of 25.5W available to the PD
- Q. IEEE 802.3bt-2018 - IEEE Standard for Ethernet Amendment 2: Physical Layer and Management Parameters for Power over Ethernet over 4 pairs

1.06 REERENCE STANDARDS NETWORKING

- A. EE 802.3™: Ethernet
- B. IEEE 802.11™: Wireless Lans
- C. IEEE 802.22™: Wireless Regional Area Networks

- D. TIA/EIA-526-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant.
- E. IEEE 802.3af PoE • Ratified in 2003 • 15.4W at the PSE, with min of 12.95W available to the PD
- F. IEEE 802.3at PoE+ • Ratified in 2009 • 34.2W at the PSE, with min of 25.5W available to the PD
- G. IEEE 802.3bt-2018 - IEEE Standard for Ethernet Amendment 2: Physical Layer and Management Parameters for Power over Ethernet over 4 pairs

1.07 CONTRACTOR-ALL

- A. Each contractor shall be responsible for inspecting their own work and ensuring it meets the project requirements.
- B. Contractor shall have a project manager who will be responsible for all work, workers, equipment, cabling and project management for their work. The project manager shall have the authority to make decisions for the contractor and schedule all workers.
- C. Contractor shall attend all project meetings throughout the project.
- D. All work on the project shall meet all applicable state, federal, local and industry codes and be installed according to the requirements of the Authority Having Jurisdiction (AHJ).

1.08 CONTRACTOR -CABLING

- A. The Contractor shall show proof of an existing contractual relationship with the approved equipment manufacturer of the horizontal cabling system, and shall pass through the manufacturer's certification and warranty to purchaser.
- B. All faceplates and termination hardware shall be sourced from the certifying manufacturer to assure quality control and validity of the manufacturer's warranty.
- C. The Contractor shall accept complete responsibility for the installation, certification, and support of the cabling system. Contractor must show proof that he has the certifying manufacturer's support on all of these issues.
- D. All work shall be performed and supervised by Telecommunications Technicians and Project Managers who are qualified to install voice, data, and image cabling systems, and to perform related tests as required by the manufacturer in accordance with the manufacturer's methods.
- E. The Telecommunications Technicians employed shall be fully trained and qualified by the manufacturer on the installation and testing of the equipment to be installed. Evidence that the vendor is a current Certified Installer of the manufacturer must be provided in writing prior to work commencing on the structured cabling for the building.
- F. The Contractor (including Subcontractor(s) if any) shall have a proven track record in cabling projects. This must be shown by the inclusion of details of at least 3 projects involving Category 6 or better cabling and optical fiber, which have been completed by the vendor in the last 2 years. Names, addresses, and phone numbers of references for the 3 projects shall be included.

1.09 CONTRACTOR –PLC

- A. The Contractor shall show proof of an existing contractual relationship with the approved equipment manufacturer of the PLC Control system and intercom system and shall pass through the manufacturer's certification to purchaser.
- B. All hardware shall be sourced from the certifying manufacturer to assure quality control and validity of the manufacturer's warranty.
- C. The Contractor shall accept complete responsibility for the installation, certification, and support of the PLC and intercom system. Contractor must show proof that they have the certifying manufacturer's support on all of these issues.

- D. All work shall be performed and supervised by low voltage technicians and project managers who are qualified to install PLC systems, and to perform related tests as required by the manufacturer in accordance with the manufacturer's methods.
- E. The technicians employed shall be fully trained and qualified by the manufacturer on the installation and testing of the equipment to be installed. Evidence that the vendor is a current certified installer of the manufacturer must be provided in writing prior to work commencing on the video security system.
- F. The Contractor (including Subcontractor(s) if any) shall have a proven track record in PLC projects. This must be shown by the inclusion of details of at least 3 projects similar in scope and requirements which have been completed by the vendor in the last 2 years.
 - 1. Provide Names, addresses, and phone numbers of references for the 3 projects shall be included.

1.10 CONTRACTOR –DATA NETWORK

- A. The Contractor shall accept complete responsibility for the installation, certification, and support of the system.
- B. All work shall be performed and supervised by Network Technicians and Project Managers who are qualified to install Ethernet systems and to perform related tests as required by the manufacturer in accordance with the manufacturer's methods.
- C. The Network Technicians employed shall be fully trained and qualified by the manufacturer on the installation and testing of the equipment to be installed. Evidence that the vendor is a current certified installer of the manufacturer must be provided in writing prior to work commencing on the telephone system.
- D. The vendor (including subcontractor(s) if any) shall have a proven track record in data network system projects. This

PART 2 - PRODUCTS

2.01 FIRESTOPPING

- A. Each contractor shall be responsible for firestopping around their cables and the raceways.
- B. Shall be completed inside and around all conduits after cable installation.
- C. Firestop for the area between the cable and the edge of the conduit shall be Nelson No. FSP, CLK or LBS+. Contractor shall install the best firestop for each individual installation.
 - 1. Firestop shall be installed with regard to local and national building codes.
 - 2. The firestop shall be a putty like substance that expands under heat and will not allow flame to pass for a designated period of time.
 - 3. Firestop shall conform to all NEC, NFPA, and UL requirements.
 - 4. Some wall pass-thru' s are shown on the drawings. The Contractor shall utilize these where possible.
 - 5. Where the contractor must install cables through a wall where there is no pass-thru already provided, the Contractor shall be responsible for installing a fire-rated pass-thru and fire-stopping the conduit after cable installation.
- D. Firestopping is required at all riser conduits and all pass thru's.
 - 1. Each cable tray penetration of a wall shall be firestopped after cable installation. Use pillow type firestop to allow additional cables to be installed in the future.
 - 2. Where riser conduits pass through floors, the area between the concrete and the conduit shall be firestopped. This shall be completed with a putty or liquid firestop product. Fill in the space with mineral wool, and then install the firestop on top. All firestop shall be of sufficient thickness to secure the rating required by code.

3. After final cable installation, install a putty firestop around all cables where they enter and exit conduit pass thru's and conduit risers.
 4. All firestop shall be installed to provide the fire rating as described by local fire code.
 5. It shall be the responsibility of the Contractor to verify that all conduits, walls, and raceways required to be firestopped have been firestopped.
- E. Contractor shall provide a label at each penetration and firestop location detailing the UL rated fireproofing solution that was used in the specific application.**
- 1. Apply sticker to the wall near the firestopped conduit.**
 - 2. Provide a sample of the label to the designer for review as part of the submittals.**

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Contractor shall be familiar with the location(s) where the work will be done. No additional compensation will be made for items the Contractor claims he was not aware of during bidding.
- B. Work Area:
 1. All work areas shall be cleaned at the end of each day. All debris shall be cleaned and removed from the site and disposed of in the approved container for the site.
 2. All equipment shall be moved out of common areas and stored in the Contractor's lay down area, or in other approved storage locations on site.
 3. Any work that is low hanging, or may otherwise impede the general use of the space, and cannot be removed, shall be flagged and cordoned off by the Contractor.
- C. All equipment and parts shall be installed in a neat and workmanlike manner. Good installation principles shall be used throughout the project.
- D. All cables routed above the drop ceiling or in the ceiling area shall be installed square to the building. Diagonal cable runs are not permissible.
- E. All cut edges of conduits, boxes, raceway, etc., shall be trimmed and filed so that no burrs or rough edges will damage cable as it is installed.
- F. All surface raceways, including conduits in exposed areas shall be painted to match the existing colors of the surrounding area.
- G. If, in the course of the work, the Contractor damages, marks, or misplaces any ceiling tiles, the Contractor shall repair, and/or replace the ceiling tile to the original condition.
 1. The Engineer shall decide if ceiling tiles have been damaged. Based on the Contractor's proposed fixes, the Engineer shall decide the best course of action to repair any damage done by the Contractor to the ceiling tiles.
- H. It shall be the responsibility of the Contractor to repair any damage done to the structure or finishes in the building by the Contractor. The building shall be returned to its original condition prior to final sign off of the project.
- I. Firestop shall be installed to meet national and local codes.

3.02 DOCUMENTS

- A. The Contractor shall fully read the contract documents including the detailed specifications, and the detailed drawings.
- B. No additional compensation shall be made for any portion of the project which the Contractor did not know of or understand prior to providing the bid response.
- C. In the case of any discrepancies between the detailed drawings and the detailed specifications, the Contractor shall provide the higher quality or more stringent requirement.

3.03 WORK PLAN-POST BID (CHOSEN CONTRACTOR ONLY)

- A. Along with the submittals the Contractor shall provide a work plan for the implementation of the system they are installing. The plan shall include scheduled dates for major milestones, and all phases required for completion prior to final cutover.
- B. The work plan shall list all items that must be completed by the Contractor or Owner to provide a smooth install of the system. The Contractor shall be responsible for all costs associated with the planning and cutover. The Owners only responsibility is to act as a liaison between the Contractor and the users.
- C. The work plans shall include a time-line and a cutover date for the systems within each building. Contractor shall be responsible for all aspects of scheduling the work, including notification of the users, the administration, and the telephone service provider.
- D. The work shall commence within 10 days of award of the contract. The Contractor shall be responsible for attending weekly project meetings at the Owner's site to report on progress and keep the project team informed of the work being done
- E. The work plan will be reviewed at each project meeting for compliance and updates.
- F. Work shall immediately begin on site surveys to determine the existing infrastructure, conduit and raceway placement and determining placement of new system equipment. The Contractor shall be responsible for moving, relocating, and reconnecting any and all existing equipment required for the installation of the new systems.
- G. After work plan and system approval by the Engineer the Contractor can begin work on infrastructure work that does not impede users.
- H. The Contractor shall be responsible for working with the Owner's Information Technology staff and administrators.

END OF SECTION 28 1000

SECTION 28 1100 – COMMUNICATIONS ROOM

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Parts and equipment required for equipment in the communications room (Comm Room)

1.02 SYSTEM DESCRIPTION

- A. All equipment in the communications room shall be installed so that access is provided to all components, mechanical and electrical.
- B. All components of the communications room shall work together to form a cohesive and complete communications infrastructure.

1.03 COORDINATION

- A. Coordinate rack/cabinet work with the Electrical Contractor for placement of electrical connections.

PART 2 - PRODUCTS

2.01 CABLE LADDER

- A. Install where required to extend cables from the ceiling to a cabinet or rack or panel.
- B. Equip communication racks with cable ladder system for cable support and routing. Refer to Figure 28 110-A below.
 - 1. All cable ladders shall be custom cut to fit.
 - 2. Install cable ladder vertically behind each vertical organizer.
 - 3. Center the cable ladder on the vertical organizer so that when additional racks are added, the cable ladder can be used to serve both racks, and will not interfere with the components mounted in the rack.
- C. Cable Ladder - Black and cut to length.
 - 1. 12" wide, 10' long cable ladder with channels. Hubbell #hsls1012B or equal.
 - 2. Equip with the following as required for a full installation as per the details and specifications:
 - a. Relay Rack Mounting Kit, Hubbell #HLMPK19 or equal
 - b. Wall support angle bracket, Hubbell #HLTSB12B or equal
 - c. Corner clamp for connecting horizontal ladder on the top to the cable ladder that attaches to the wall. Hubbell #HLTK or equal.
 - d. Wall saddle for attaching horizontal cable ladder section to the wall. Equipped with "J" bolts. Hubbell #HLX0612 or equal
 - e. Cable Radius Drop for dropping cables down to vertical cable ladder between and to the side of each rack, Hubbell #HLCD12 or equal
 - f. Foot Kit for Cable ladder at back of rack, Hubbell #HLRF or equal
 - g. Butt Splice Kit, Hubbell #HSBSK or equal
 - h. Swivel Splice kit, Hubbell #HLSSK or equal
 - i. When mounting cable ladder along the wall, install supports to the wall, Hubbell #HLVWBK or equal
 - j. Attach all cable ladders to the rack with unistrut and unistruts "L" and "T" connectors.
 - k. Approved equals, Newton and Hubbell.

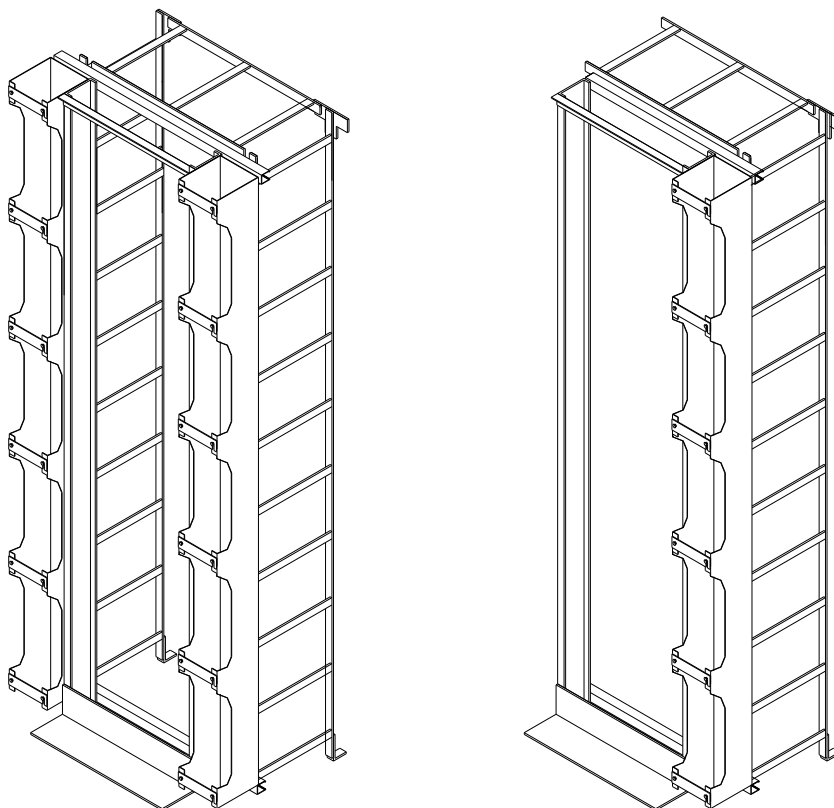


Figure 28 1100-A – Isometric View of Communications Racks

2.02 COMMUNICATIONS ROOM EQUIPMENT

A. Patch Cord Organizers:

1. Patch cords organizers shall be steel and shall allow routing of patch cables from electronics to the patch panels.
2. Single rack unit organizer shall be Hubbell #HS13C with cover. Refer to PCO-1 on detailed drawings.
3. 2 rack unit organizer shall be Hubbell #HS23C with cover. Refer to PCO-2 on detailed drawings.
4. Approved equals, Ortronics and Great Lakes Case and Cabinet.

B. Tie Wraps:

1. Tie wraps shall be used on exterior cables only.
2. Tie wraps should not be used above the drop ceiling or in cable tray. The pathway shall support the cables without the use of extra tie wraps.
3. Tie wraps shall never be used to support cables from building structure, electrical conduits, or lighting systems.
4. Panduit No. PLT2S-C or equal standard tie wrap. For use in general locations that are not plenum rated.
5. Panduit No. PLT2S-C702 or equal plenum rated tie wrap. Use only this type of tie wrap in plenum rated areas.
6. Panduit No. PLT2H-L00 or equal ultraviolet rated outside plant tie wrap. Use only this type of tie wrap for outside uses.

C. Hook and Loop Wraps:

1. Hook and Loop wraps shall be used on the cable ladder of the rack systems to bundle the cables as they pass along the cable ladder. Cables shall be bundled in groups of no more than 24 cables.
 2. Hook and Loop wraps should not be used above the drop ceiling or in cable tray except in limited circumstances. The pathway shall support the cables without the use of extra tie wraps.
 3. Wraps shall never be used to support cables from building structure, electrical conduits, or lighting systems.
 4. Panduit HLT2I or equal.
- D. Grounding and bonding of racks and cable ladder
1. Bond each rack and all parts of the cable ladder as 1 ground system.
 2. Use Erico Eriflex woven copper grounding braids to attach racks and ladder.
 3. Erico # 556700 or other lengths as required.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Location of the communications infrastructure shall be finalized in the communications room prior to installation.
- B. Locate all equipment to be installed and make certain that space is available for maintenance and service during the life of the system.
- C. If any changes from the drawings are required, the Contractor shall submit a proposed layout of the communications room to the Engineer for approval prior to installation.

3.02 PREPARATION

- A. Clean floor prior to installation of the communications racks.
- B. Coordinate with all other Contractors and ensure that the locations of all cable tray and conduits are correct and will feed the rack system adequately.

3.03 INSTALLATION OF COMM ROOM EQUIPMENT

- A. Patch cord organizers shall be installed between all patch panels and electronics.
 1. Horizontal organizers shall be used for routing fiber and copper patch cords between patch panels and electronics.
 2. Refer to Rack layouts on detailed drawings for quantity of organizers to provide.
 3. Organizers shall be installed side by side where multiple racks are installed.
 4. If changes in the rack layout are required, contact the Engineer and get changes approved prior to installation.
- B. Tie wraps shall be used sparingly in the overall installation.
 1. Tie wraps shall not be used in the cable tray or above the drop ceiling for support of cables. All cables shall utilize J-hooks, conduits, cable ladder, or cable tray for support in the ceiling area.
 2. Tie wraps can be used to group cables on the cable ladder of the rack systems. Group cables in bundles of no more than 24 cables.
 3. Trim all tie wraps so that the cut edge is smooth.
- C. Hook and Loop shall be used sparingly in the overall installation.
 1. Hook and Loop should not be used in the cable tray or above the drop ceiling for support of cables. All cables shall utilize J-hooks, conduits, cable ladder, or cable tray for support in the ceiling area.
 2. Hook and Loop can be used to group cables on the cable ladder of the rack systems. Group cables in bundles of no more than 24 cables.

END OF SECTION 28 1100

SECTION 28 1500 – FIBER CABLING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section includes parts and equipment required for installation, termination and testing of a fiber optic cable backbone.

1.02 SYSTEM DESCRIPTION

- A. The fiber optic backbone shall include all components of the system from the patch panels to the backbone fiber and everything in between.

1.03 CONTRACTOR

- A. Contractor company shall have a minimum of 3 years' experience installing and testing fiber optic cabling systems.
 - 1. Unless otherwise specified, multimode and single mode fiber cable must meet the transmission performance parameters as specified in ANSI/TIA/EIA-568-B.3.
 - 2. Test equipment used under this contract shall be from manufacturers that have a minimum of 5 years' experience in producing field test equipment. Manufacturers must be ISO 9001 certified.
 - 3. Test equipment shall be capable of measuring relative or absolute optical power in accordance with TIA/EIA-526-14A, "Optical Power Loss Measurement of Installed Multimode Fiber Cable Plant," and TIA/EIA-526-7 Method A, "Measurement of Optical Power Loss of Installed Single Mode Fiber Cable Plant, Insertion Loss Using An Optical Power Meter."
 - 4. Traces and records shall be provided to the Engineer and Owner in hard (paper) and soft (disk) copy.

1.04 COORDINATION

- A. Coordinate work under provisions in Division 1 of these specifications.
- B. All fiber cables shall be coordinated with the installation of the telecommunications raceways.
- C. Coordinate location of the spare coiled fiber cables with Engineer prior to installation.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Approved vendors for fiber cable are:
 - 1. Optical Cable Corporation.
 - 2. General Cable.
 - 3. Berk-Tek.
 - 4. Corning
 - 5. Hubbell
- B. Approved vendors for fiber termination equipment are:
 - 1. Hubbell.
 - 2. Panduit.
 - 3. Optical Cable Corporation
 - 4. Corning

2.02 FIBER CABLE

- A. All fiber cables shall be of tight buffered construction. A tight buffered optical fiber shall consist of a central glass optical fiber surrounded by a primary polymer buffer and an optional tight fitting secondary buffer.

1. The outer jacket of each fiber strand shall be colored according to the fiber color code in TIA 598-B.
 2. Individual multimode fiber strands shall be 50/125 μ m for the core/cladding measurements.
 3. Individual singlemode fiber strands shall be 9/125 μ m for the core/cladding measurements.
 4. All fiber strands shall be surrounded by synthetic yarn for added strength and crush resistance.
 5. All fiber installed in plenum rated areas shall be UL listed OFNP.
 6. The outer jacket of the cable shall be surface printed with the manufacturer's identification and required UL markings.
 7. All fibers shall be subjected to a minimum fireproof stress of 0.7 GPa (100 kpsi).
 8. The minimum bend radius of the cable under full rated tensile load shall be no larger than 15 times the outside diameter of the cable and no more than 10 times the outside diameter of the cable with no load on the cable.
 9. Optical and mechanical performance shall not be degraded and the cable shall not be damaged in any way by immersion in ground water.
 10. The fiber optic cable shall meet or exceed the requirements of this specification when measured in accordance with the methods of the individual requirements or the following methods as defined in EIA-STD-RS-455.
 - a. Fiber dimensions.
 - b. Attenuation.
 - c. Bandwidth.
 - d. Numerical aperture.
 - e. Fiber proof test.
 - f. Cable bending.
 - g. Tensile load
 - h. Impact resistance.
 - i. Crush resistance.
 - j. Attenuation vs. temperature.
 11. Manufacturer shall provide ISO 9001 certification.
 12. The cable shall withstand an impact force 1500 times per ANSI/TIA/EIA-RS-455 (FOTP-25A).
 13. The cable shall withstand compression load of 1800 N/cm per ANSI/TIA/EIA-RS-455 (FOTP-41A).
 14. Fiber shall be indoor/outdoor rated based on the areas in which the fibers will be installed. Do not install riser rated fiber through a plenum rated area unless the fiber is inside an EMT conduit.
- B. Indoor Armored fiber cable.
1. The multi-fiber sub-cables shall consist of tight buffered optical fibers surrounded by a synthetic yarn strength member and a color-coded flame-retardant elastomeric polymer jacket. The strength member shall be composed of individually and precisely tensioned elements such that tensile loads are equally shared by each element.
 2. Single-mode indoor/outdoor fiber cable
 - a. Wavelength: 1310/1550nm
 - b. Industry Standard: ITU-T G.652.D
 - c. 1 Gigabit Ethernet Distance: 5 km
 - d. 10 Gigabit Ethernet Distance: 10 km
 - e. Max Attenuation: .5/.5 dB/km
 - f. Plenum Rated Armored
 - A) 12-strand Singlemode, OCC # DZ012TSLX9YP18

2.03 RACK MOUNT FIBER PATCH PANELS

- A. 12-36 port, rack mount fiber patch panels.
 - 1. Rack mount fiber patch panels shall be modular in design. Mounting brackets shall be provided for 12 pack adapters. Adapter packs shall sit horizontally in the panel.
 - 2. Panels shall mount into standard 19-inch relay racks.
 - 3. Panels shall be no more than 1-3/4 inch or 1 rack unit high.
 - 4. Provide splice tray and splice shelf or splice cassettes for termination of all fiber strands.
 - 5. Fiber panel shall be Hubbell #FPR3SP or equal
 - a. Equip with Splice trays as required. Hubbell #Stray12F or Stray24F
 - b. Equip with Label Kit, Hubbell #LBLKTFGR1U12
 - 6. Provide Hubbell Fiber Splice cassettes or pigtails and panels for splicing and termination of all fiber strands. See Below:

2.04 FIBER PIGTAIL SPLICE CONNECTORS

- A. All fiber cables shall be terminated with spliced pigtails matching the fiber cable that was installed.
- B. LC Style Connectors pigtails
 - 1. Singlemode connectors shall be LC style.
 - 2. Provide 1-meter, pre-connectorized pigtails for fusion splicing to each fiber strand.
 - 3. Singlemode Pigtails shall be Yellow in color
 - 4. All splicing shall be Fusion splicing. Mechanical splicing is not allowed.
 - 5. Match the size of the glass in the pigtail to the size of the glass in the fiber.
 - 6. Work with fiber cable manufacturer on specifying pigtails that exactly match the fiber cable being terminated.
 - 7. Singlemode LC terminated single strand, fiber pigtails shall be Hubbell #FPBKR12LC6S or equal.

2.05 FIBER CASSETTES

- A. Provide fiber optic termination cassettes for all fiber cables
- B. Provide blank panels for openings in fiber panels that are not used.
- C. Cassettes shall fit into each fiber panel
- D. All fiber cables shall be terminated with splices matching the fiber cable that was installed.
- E. LC Style Connector Cassettes
 - 1. Singlemode connectors shall be LC style.
 - 2. Provide 1-meter, pre-connectorized pigtails for fusion splicing to each fiber strand.
 - 3. All splicing shall be Fusion splicing. Mechanical splicing is not allowed.
 - 4. Match the size of the glass in the pigtail to the size of the glass in the fiber.
 - 5. Work with fiber cable manufacturer on specifying pigtails and cassettes that exactly match the fiber cable being terminated.
 - 6. LC Singlemode cassettes:
 - a. Singlemode OS2, LC terminated, 12 strand, fiber pigtails shall be Hubbell #OCSPLCD12S2 or equal. Blue in color

2.06 FIBER PATCH PANEL ACCESSORIES

- A. Fiber stowage ring
 - 1. Install a ring on the wall near the racks for stowage of 30' of spare fiber or as noted on the drawings.
 - 2. Fiber stowage ring shall be Leviton # 48900-OFR.
 - 3. Label the fiber at the stowage ring with both termination points. Install label Panduit PST-FO or equal

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine all pathways prior to installation of fiber cable.
- B. Identify location of racks, and position of fiber patch panels prior to fiber installation.
- C. Inspect fiber cable prior to installation for damage during shipping. The Contractor shall be responsible for all damaged or nonfunctional fiber cables. If any strands of a fiber cable are not working, the Engineer has the right to order the complete replacement of the entire fiber cable.

3.02 PREPARATION

- A. Contractor shall designate the location of the spare coil of fiber at each end of the run prior to installation.

3.03 INSTALLATION

- A. Installation of fiber cable shall be by a trained installer.
 1. All fiber, if not installed inside cable tray, shall be attached to the building structure with conduit clamps or supports a minimum of every 5 feet.
 2. Fiber shall be continuous from end to end, no splices are allowed unless specifically noted.
 3. At each termination point of the fiber, the Contractor shall provide a service coil consisting of a minimum of 30 feet of fiber cable.
 4. Contractor shall adhere to all manufacturer's recommended pull tensions during installation.
 5. As part of the as-built drawings, provide the actual footage of each fiber cable installed. Mark this on the drawings.
 6. Any fiber strands that do not pass a sufficient signal light signal will be identified as noncompliant, and the Engineer has the right to order the complete replacement of the fiber cable by the Contractor.
 7. Where fiber cable passes vertically through a building, the fiber cable shall be supported against the wall or from the ceiling a minimum of every 5 feet.
 8. Do not exceed recommended bend radius of fiber cable during or after installation.
- B. Fiber patch panels shall be located at the top of the relay rack or cabinet at which they are installed. Install on wall or inside cabinet where shown for wall mounted fiber panels.
 1. Provide patch panels as described on the contract drawings or additional panels as required to terminate all fiber strands of all fiber cables.
 2. Install fiber panels in the top of the rack where possible
 3. If a splice shelf is required for splicing of fibers, install the shelf directly below the associated patch panel.
 - a. Provide and install splice panels as required for splicing of all pigtailed to terminate the fiber strands.
 4. Route fiber cable into side of the panel. Provide a wrap-around label at this location to identify the fiber cable as it enters the fiber panel.
 - a. Label the fiber cable just outside of the fiber panel with a yellow fiber optic cable label, Panduit No. PST-FO.
 5. The sheath of the fiber cable shall extend to the side of the panel. Individual fibers or subgroups shall not be seen outside of the panel, except for the single mode bundles.
 6. Fibers shall be installed in the adapter packs in color code order. For vertical mounted 12 pack adapters, top to bottom then left to right. In panels where the couplers are

horizontally mounted, left to right for each 12 pack, then top to bottom. Contact the Engineer with any questions.

7. All individual fiber strands shall be neatly installed in the back of the panel after termination. Provide a minimum of 4 feet of spare fiber in the back of each panel. This spare shall be coiled in a Figure 8.
 8. Secure the fiber to the entrance of the patch panel with tie wraps.
 9. After installation and termination of the fiber cable, install labels on the patch panel showing what strand each connector is connected to, and where the overall fiber cable is terminated at the other end.
 10. Attach a self-adhesive clear plastic sleeve to the inside of the Plexiglass cover of the rack mount panel. Slide in a laser printed label showing all information about the fiber cable.
 11. Label door of wall mount panels to detail the fiber cable type, strand count and termination locations
- C. Fiber cables shall be terminated with fusion spliced Pigtails.
1. All Singlemode and multimode fiber cables shall be terminated with a pre-terminated fiber optic pigtail which matches the diameter and type of fiber being installed.
 2. Fusion splice all pigtails to the fiber cables. Terminate each strand of the fiber cable.
 3. Each strand shall be thoroughly cleaned and all coverings shall be removed prior to splicing
 4. To cleave the fiber, use the method and equipment recommended by the manufacturer of the fusion splicer that will be used.
 5. Fibers shall be properly aligned prior to splicing.
 6. The splicer used shall be able to inject light directly into the fiber just after it is spliced, and provide an estimate of the loss through the splice.
 7. After splicing, a heat shrink tube with a rigid skeleton shall be used to protect the splice. Coordinate this heat shrink tube with the splice tray to be installed in the splice shelf. Heat shrink tubes shall fit into the grooves in the splice tray.
 8. Loss through the splice shall be no more than .15dB.
 9. Fiber pigtails shall be labeled with a self-laminating, laser printed, wrap around label at the connector. The label shall detail the strand count of the fiber cable, the buildings and rooms in which the fiber is terminated and the color and strand number the pigtail is spliced to.

24MM/12SM
WRT#234-OLS #021
Brown Fiber # 16

END OF SECTION 28 1500

SECTION 28 1600 – CAT-6 CABLING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section includes parts and equipment required for installation, termination, and testing of user communications cables.

1.02 SYSTEM DESCRIPTION

- A. The horizontal cabling consists of all systems from the user faceplate, to the patch panel in the communications room, and all connections in between.
- B. Products and installation detailed in this section shall comply with all applicable requirements.
 1. ANSI/TIA-568-C.0, “Generic Telecommunications Cabling for Customer Premises”,
 2. ANSI/TIA-568-C.1, “Commercial Building Telecommunications Cabling Standard”,
 3. ANSI/TIA-568-C.2, “Balanced Twisted-Pair Telecommunication Cabling and Components Standard”, ANSI/TIA-568-C.3, “Optical Fiber Cabling Components Standard”,
 4. ANSI/TIA-568-C.4, “Broadband Coaxial Cabling and Components Standard”,
 5. ANSI/TIA/EIA-569-B Commercial Building Standard for Telecommunications Pathways and Spaces
 6. IA-606-B: Administration Standard for the Telecommunications Infrastructure of Commercial Buildings including all Updates and Addenda.
 7. TIA-607-C: Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises.
 8. IEEE 802.3af PoE • Ratified in 2003 • 15.4W at the PSE, with min of 12.95W available to the PD
 9. IEEE 802.3at PoE+ • Ratified in 2009 • 34.2W at the PSE, with min of 25.5W available to the PD
 10. IEEE 802.3af PoE • Ratified in 2003 • 15.4W at the PSE, with min of 12.95W available to the PD
 11. IEEE 802.3at PoE+ • Ratified in 2009 • 34.2W at the PSE, with min of 25.5W available to the PD
 12. IEEE 802.3bt -Amendment 2. Ratified in 2018 PoE standards powering all 4 pairs:

1.03 COORDINATION

- A. All cables shall be coordinated with the installation of the telecommunications raceways.

1.04 STANDARDS

- A. Cabling shall be installed in accordance with NEC code for grouping/bundling of cables in relation to Type 3 and Type 4 PoE
- B. Install as per NEC 840.160 in reference to bundling cables:

AWG	Number of 4-Pair Cables in a Bundle																				
	1			2-7			8-19			20-37			38-61			62-91			92-192		
	Temp Rating			Temp Rating			Temp Rating			Temp Rating			Temp Rating			Temp Rating					
	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C	60°C	75°C	90°C
26	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.8	1.0	0.5	0.6	0.7	0.4	0.5	0.6	0.4	0.5	0.6	NA	NA	NA
24	2.0	2.0	2.0	1.0	1.4	1.6	0.8	1.0	1.1	0.6	0.7	0.9	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5
23	2.5	2.5	2.5	1.2	1.5	1.7	0.8	1.1	1.2	0.6	0.8	0.9	0.5	0.7	0.8	0.5	0.7	0.8	0.4	0.5	0.6
22	3.0	3.0	3.0	1.4	1.8	2.1	1.0	1.2	1.4	0.7	0.9	1.1	0.6	0.8	0.9	0.6	0.7	0.8	0.5	0.6	0.7

- C. Cables shall be installed with no more than 24 cables in a single J-hook. Install additional J-hooks as required.
- D. If cables are to be bundled/grouped in larger bundles then the cable shall be LP listed per UL.
- E. All cables shall be no smaller than 23 AWG.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Approved vendors for copper user cables are:
 - 1. Panduit
 - 2. Hubbell
 - 3. Belden
 - 4. CommScope
 - 5. Mohawk
 - 6. Superior Essex
- B. Approved vendors for CAT-6 termination equipment are:
 - 1. Hubbell.
 - 2. Panduit
 - 3. Belden
 - 4. CommScope

2.02 CAT-6 CABLING

- A. All UTP user/cabling installed shall be CAT-6 rated or above.
 - 1. Category 6 cabling shall consist of 4 pairs of unshielded twisted pair, 23 AWG cables.
 - 2. All CAT-6 cables shall be installed in cable tray or supported by J-Hooks.
 - 3. Individual pair shall be marked in the standard 4 pair color code of blue/blue-white, orange/orange-white, green/green-white, and brown/brown-white.
 - 4. Each cable shall be marked sequentially with the footage of the cable. Each cable shall also be marked with the manufacturer of the cable and the type of cable installed or the cable part number.
 - 5. Cable and all connectors and patch panels shall meet or exceed the following electrical and physical requirements:

DC RESISTANCE (max)	23 AWG
Ohms/100m @ 20°C	9.38ohms
DC RESISTANCE UNBALANCED (max)	
Individual Pair %	5%

CHARACTERISTIC IMPEDANCE	
Frequency (f)	Ohms
1-500 Mhz	100 ±15

DELAY SKEW (max)	
ns/100m	45

NOMINAL VELOCITY OF PROPAGATION (NVP)	
% Speed of light	72

INPUT IMPEDANCE	
Frequency (f)	Ohms
1.0-100 Mhz	100 ±15
100-350 Mhz	100 ±20
350-500 Mhz	100 ±25

REFERENCE ELECTRICAL CHARACTERISTICS

FREQ (MHz)	INSERTION LOSS (dB/100m)		NEXT (dB/100m)		ACR (dB/100m)	PS-NEXT (dB/100m)		PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	RL (dB)
	avg	max	avg	min	min	avg	min	min	min	min	min
.772	1.7	1.8	82	76.0	74.2	77	74.0	72.2	-	-	-
1.0	1.9	2.0	80	74.3	72.3	75	72.3	70.3	67.8	64.8	20.0
4.0	3.6	3.8	71	65.3	61.5	66	63.3	59.5	55.8	52.8	23.0
8.0	5.1	5.3	67	60.8	55.5	62	58.8	53.5	49.7	46.7	24.5
10.0	5.7	6.0	65	59.3	53.3	60	57.3	51.3	47.8	44.8	25.0
16.0	7.3	7.6	62	56.2	48.6	57	54.2	46.6	43.7	40.7	25.0
20.0	8.1	8.5	61	54.8	46.3	56	52.8	44.3	41.8	38.8	25.0
25.0	9.1	9.5	59	53.3	43.8	54	51.3	41.8	39.8	36.8	24.3
31.25	10.2	10.7	58	51.9	41.2	53	49.9	39.2	37.9	34.9	23.6
62.5	14.8	15.4	53	47.4	32.0	48	45.4	30.0	31.9	28.9	21.5
100.0	19.0	19.8	50	44.3	24.5	45	42.3	22.5	27.8	24.8	20.1
155.0	24.2	25.2	47	41.4	16.3	42	39.4	14.3	24.0	21.0	18.8
200.0	27.8	29.0	46	39.8	10.8	41	37.8	8.8	21.8	18.8	18.0
250.0	31.5	32.8	44	38.3	5.5	39	36.3	3.5	19.8	16.8	17.3
300.0	35.0	36.4	43	37.1	0.7	38	35.1	--	18.3	15.3	16.8
350.0	38.2	39.8	42	36.1	--	37	34.1	--	16.9	13.9	16.3
400.0	41.3	43.0	41	35.3	--	36	33.3	--	15.8	12.8	15.9
500.0	47.0	48.9	40	33.8	--	35	31.8	--	13.8	10.8	15.2
550.0	49.7	51.8	39	33.2	--	34	31.2	--	13.0	10.0	14.9

- 6. All cables installed above a drop ceiling or fixed ceiling shall be Plenum Rated
- 7. CAT-6, 4 pair cabling shall be plenum rated unless specifically noted.

Cable Use	Manufacturer	Color	Part number	Rating
PLC network	Mohawk	Pink	M58282	Plenum

- 8. Ensure that cable passes all CAT-6 tests after installation.

2.03 UTP JACKS

- A. 8-position modular jacks for termination at user and at the patch panel. Match cable color except where noted on drawings.
 - 1. Each jack shall be an individually constructed unit and shall snap mount in an industry standard keystone opening (.760 inches x .580 inches).
 - 2. Jack housings shall be high impact 94 V-0 rated thermoplastic.
 - 3. Jack housings shall fully encase and protect printed circuit boards and IDC fields.
 - 4. Modular jack contacts shall accept a minimum of 1000 mating cycles with 5.0 milliohm (maximum) increase over initial with the use of an FCC compliant plug.
 - 5. Modular jack contact wires shall be formed flat for increased surface contact with mated plugs.
 - 6. Modular jack contacts shall be constructed of beryllium copper for maximum spring force and resilience.
 - 7. Contact plating shall be a minimum of 50 micro inches of hard gold in the contact area over 50 micro inches of nickel.
 - 8. Jack termination shall follow the industry standard 110 IDC.
 - 9. Jacks shall have a designation indicating CAT-6 or CAT-6A as required.

10. Jacks shall utilize a paired punch down sequence. Cable pair twist shall be maintained up to the IDC, terminating all conductors adjacent to its pair mate to better maintain pair characteristics designed by the cable manufacturer.
11. Jacks shall terminate 22-26 AWG stranded or solid conductors.
12. Jacks shall terminate insulated conductors with outside diameters up to .050 inches.
13. Jacks shall be compatible with single conductor, 110 impact termination tools.
14. Jacks shall include translucent wire retention stuffer cap that holds terminated wires in place and allows the conductors to be visually inspected in the IDC housing.
15. Jacks shall be compatible with EIA/TIA 606A color code labeling.
16. Jacks shall accept snap on icons for identification or designation of applications.
17. Jacks shall be marked for T568A and T568B wiring schemes. TIA 568B wiring shall be used in all terminations throughout the communications system.
18. All CAT-6 modular jacks and panels shall meet or exceed the following transmission characteristics:
 - a. Jacks shall be designed for 100 Ohm UTP cable termination.
 - b. Jacks shall be UL verified for TIA/EIA Category 6 electrical performance.
 - c. Jacks shall be UL listed 1863 and CSA certified.
 - d. Jacks shall be manufactured by an ISO 9002 registered manufacturer.
19. CAT-6, 8-pin modular jacks shall be:
 - a. Data Jacks shall be Hubbell # HXJ6PK or equal. Pink

2.04 SURFACE MOUNT BOXES

- A. Provide surface mount boxes for termination of cables as shown on the drawings.
 1. Install a surface mount box at location for termination of the modular jacks.
 2. One port surface box shall be Hubbell #HSB1OW.
 3. Two port surface box shall be Hubbell #HSB2OW

2.05 CABLE SUPPORTS

- A. All cables shall be supported in the ceiling a minimum of every 5 feet. Support can be provided by installing cable inside cable tray or conduit, or by installing J-hooks every 5 feet.
 1. J-hooks shall provide a smooth steel or plenum rated plastic, support for cables as they route through the ceiling.
 2. Steel supports shall have a galvanized finish.
 3. Steel, UL listed, ultimate static load limit 50 pounds rated to support Category 5e and higher cables, and optical fiber cables.
 4. If required, assemble to manufacturer recommended specialty fasteners, including beam clips and flange clips.
 5. Acceptable products shall be:
 - a. CADDY #CAT HP series with retainer hooks.
 - b. CADDY #CAT-CM SERIES
 6. Provide with interfaces and clamps required to support J-Hooks from the building structure.
 7. Provide threaded rod and associated hardware required to support all J-Hooks
 8. No more than 24 voice/data cables in each J-hook. Provide additional hooks as required.

2.06 RACK MOUNTED PATCH PANELS

- A. Patch panels for termination of UTP cabling shall be provided to terminate all cables installed in the building.
- B. All patch panels shall be installed into 19" racks and/or cabinets as shown on the drawings.
- C. Provide panels to terminate all cables even if the panels are not specifically shown on the rack layout drawings.

1. Provide the quantity and color of Modular jacks to match the color and quantity of all cables installed.
- D. Panels shall be steel and shall allow mounting of all CAT-6 and CAT-6A jacks. Panels shall be blank panels that accept all modular jacks.
- E. CAT-6 patch panels for mounting in a 19-inch rack or cabinet. Shall be;
 1. Panels shall be made of black anodized aluminum, in 24 and 48 port configurations.
 2. Panels shall accommodate 24 ports for each rack mount space or "U" (1U = 44.5 mm [1.75 inch]).
 3. Panels shall be manufactured with a rolled edge at the top and bottom for stiffness.
- F. 24 port empty patch panels shall be Hubbell #HPJ24 or equal
 1. Panels shall have rear cable support bar for strain relief which shall clip to the rear of the patch panel or to the rear of the rack rail.
 2. Each 24-port patch panel shall be equipped with one (1) rear cable organizer. Organizer shall be Hubbell #HPRCMB or equal.
 3. Ports shall be marked 1-24 on top of the openings by factory.
 4. Label all Panels for the panel, communications room and rack with a large laser-printed label.

2.07 PASS THRU'S

- A. Where no pass-thru is provided by others the contractor shall install conduit or UL listed wall pass thru's sized as required to route all cables through all walls.
- B. Pass thru's shall be EMT conduit or another UL listed rated device.
- C. Install thru all drywall, block, concrete walls and through any floors required to be penetrated
- D. Conduit shall be supported mechanically from the wall or floor structure. After installation, the raceway shall be firestopped to meet the requirements of the wall or floor.
- E. Install a sticker on the wall, next to the pass thru, listing the UL approved method that was used to firestop the pass thru or conduit.

2.08 PATCH CORDS

- A. Contractor shall provide one patch cord for each data cable installed. Patch cords shall be at the communications room.
 1. Provide a patch cord for each CAT-6 or CAT-6A cable installed
- B. Patch cords shall match the type of cables installed. Provide CAT-6 patches for CAT-6 cables. Provide CAT-6A patches for CAT-6A cables
- C. Patch cords shall be 8" or 12" long and shall match the color of the cable/jack they are being plugged into.
 1. Provide and install Pink Patch Cords for PLC System connections

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine all pathways prior to installation of all cables.
- B. Identify locations of all user conduits and backboxes prior to cable installation.
 1. Walk the site during conduit installation and ensure that all boxes are installed where required for termination of all cables.
 2. If any missing locations are not noted during electrical raceway installation the contractor shall be required to fish the wall or install surface raceway to support the cable terminations
- C. The Engineer or the Owner has the right to make adjustments to the location of any outlet to a new location within 7 wall-feet of the original location. If the change is made prior to final cable termination, and prior to any raceway being installed, then the changes shall be a no cost change to the contract.

- D. Identify all locations where cable will route through furniture raceway or other nonstandard conduit or raceway installation. Make arrangements to install and terminate all cables in accordance with TIA/EIA 568 standards.

3.02 PREPARATION

- A. Locate main path for all cables and install J-hooks where cable tray or raceway is not provided.
- B. Coordinate with other trades to install a clear, straight path down major corridors for the routing of user cables back to the communications closet.
- C. Plan installation of cables along cable ladder of rack system in communications room. All cable shall be neatly routed in groups of no more than 24 cables.

3.03 INSTALLATION

- A. CAT-6 cabling shall be installed according to TIA/EIA 568 standards, including all updates and addenda.
 - 1. When installing CAT-X cables, care shall be taken to avoid crimping or bending the cable past the manufacturer's recommended bend radius.
 - 2. During installation, the cables shall not be pulled across the ceiling tiles or the structure of the building. This may cause damage to the cable jacket.
 - 3. Adhere to all pulling tensions and bend radii during installation. Excessive pulling or bending can cause the cable to fail tests after installation. Any cable that does not pass the certification tests after installation shall be fixed or replaced at the Contractor's expense.
 - 4. All cables shall route neatly in the ceiling. Whether they route in cable tray or J-hooks, the cables shall be neat and orderly.
 - 5. Cables shall not be laying on or against the building structure. Cables shall not be laying on or against electrical or HVAC pipes.
 - 6. Cables shall not be installed between the building structure and corrugated steel of the roof deck.
 - 7. There shall be no more than 24 cables in each J-hook. Provide additional J-hooks as required.
 - 8. Support all cables at a minimum of every 5 feet.
 - 9. Provide a short coil of extra cable where the cable enters the vertical conduit. The coil shall consist of no less than 1-1/2 feet.
 - 10. Provide enough slack in the backbox to fully remove the faceplate and jack and allow work to be done on the cable.
 - 11. When installing cables in the communications room, all cable shall route neatly through the cable tray and cable ladder.
 - 12. When transitioning from the ceiling area to the cable ladder of the rack system, all cable shall route through conduits or be attached to vertical section of cable ladder. The Contractor shall provide the conduits shown and any additional conduits or cable ladder required to neatly transition cables from the ceiling to the rack.
 - 13. Bundle cables in groups of no more than 24 cables as it routes along the cable ladder.
 - 14. Cables shall route down each side of a rack for termination. Split each panel into 2 sides. The first 12 positions on a panel are on the left, and positions 13 through 24 are on the right. Route the cables for panel positions 1 through 12 down the left cable ladder and route the cables for positions 13 through 24 down the right cable ladder.
 - 15. Each patch panel shall utilize a rear organizer for holding the cables as they route to the punchdown field.
 - 16. Cables shall be bundled in groups of 4 as they route through the rear cable organizer.

17. When terminating cables, ensure that the smallest amount of jacket is removed from the final termination point of the cables.
 18. Pair twists shall be maintained up to the IDC jack for all the cables.
 19. Provide a service loop of the cables on the vertical cable ladder. The loop shall extend no less than 1 foot below the termination point on the patch panel. Route the cables 1 foot below the patch panel, and then back up to the panel. This will provide room for future moves and additions to the rack.
 20. Each cable shall have a self adhesive, self laminating, laser printed label at each end. The label shall show the location identifier of that cable. Labels shall be installed no more than 4 inches from the termination point of the cable.
- B. All work on the project shall meet all applicable state, federal, local and industry codes and be installed according to the requirements of the Authority Having Jurisdiction (AHJ).



Detail 01. Proper routing and support of cables on rear organizer. Where possible route 12 cables from right side and 12 cables from left side. This rack in picture did not have right side organizer.

- C. CAT-6 data jacks shall be installed at the user end of each UTP cable installed in the system.
1. Jacks shall be installed to provide minimal signal impairment by preserving wire pair twists as close as possible to the point of mechanical termination.
 2. Jacks shall be installed per manufacturer's instructions and properly mounted in plates, frames, housings, or other appropriate mounting devices.
 3. Jacks shall be installed such that cables terminated to the jacks maintain minimum bend radius of at least 4 times the cable diameter into the workstation outlet. Cables shall be terminated on jacks such that there is no tension on the conductors in the termination contacts.
 4. See drawings for the color requirements of all modular jacks.
- D. Faceplates shall be mounted straight and level with the floor and walls of the building.
1. Jacks and/or connectors shall be terminated to the appropriate cable and inserted in the correct orientation into the faceplate prior to the mounting of the faceplate.
 2. Jacks shall be inserted into the faceplate left to right, then top to bottom. 2 gang plates shall be labeled left to right, then top to bottom for each gang.

3. Cable slack shall be stored behind the faceplate in such a way that allows the minimum bend radius of the cables to be maintained as per the following:
 4. Care shall be taken when mounting the faceplate to avoid crimping or kinking the cables.
 5. Faceplates shall be securely mounted to a surface mounted housing, a recessed box, or box eliminator bracket.
 6. Each faceplate shall be labeled with laser printed paper inserted behind the clear plastic label strips.
 7. The label shall show the location identifier of the faceplate and the letter designation for each cable. The label shall be as large a font as possible and easily readable.
 8. Each faceplate comes with a label strip at the top and the bottom.
- E. Surface Mount boxes
1. Modular Jacks and/or connectors shall be terminated to the appropriate cable and inserted in the correct orientation into the surface mount box.
 2. When the surface mount jack is mounted above the ceiling the cable shall be coiled and the cable and surface mount box shall be kept off of the ceiling grid
 3. Attach the coil to the building structure with a plenum rated tie-wrap.
 4. Label each surface mount box for the cable number. Also, install a wrap-around label on each cable.
 5. When attaching a surface mount box to a piece of furniture or to a power pole the contractor shall drill a hole in the furniture/pole that is larger than the hole on the back of the surface box.
 6. Screw the surface box to the furniture or to the pole. Adhesive only solutions are not adequate.
- F. Proper support of cables is of paramount importance when installing a cable infrastructure. All cables not in conduit or cable tray shall be supported via J-hooks a minimum of every 5 feet.
1. Routes of cables shall be parallel or perpendicular to the walls of the building.
 2. Install the J-hooks to minimize changes in the level of the cables as they route through the J-hooks.
 3. Do not install more than 50 cables in any 1 J-hook. Provide additional hooks where more than 50 cables route along a main route.
 4. All communications shall route as high in the ceiling as possible while still being accessible and staying away from other utilities.
 5. When installing the cable through the J-hooks, they shall all have relatively the same droop between hooks. All cables shall be installed neatly and squarely.
 6. Secure the J-hooks to the building structure with beam clamps and threaded rod as required to support the cables.
 7. J-hooks shall never be attached to drop ceiling support wires. Cables shall never be supported by drop ceiling wires.
- G. CAT-6 patch panels shall be installed in the racks.
1. Panels shall be installed to provide minimal signal impairment by preserving wire pair twists as closely as possible to the point of mechanical termination. The amount of untwisting in a pair as a result of termination to the modular jack at the patch panel shall be no greater than a 1/2 inch (13 mm).
 2. Panels shall be installed per manufacturer's instructions and properly mounted to a rack, cabinet, bracket, or other appropriate mounting device.
 3. Panels shall be installed such that cables terminated to the panel can maintain minimum bend radius of at least 4 times the cable diameter into the IDC contacts. Cables shall be terminated on the panels such that there is no tension on the conductors in the termination contacts.

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Replace Security System Programmable Logic Controllers
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4. Each patch panel shall have a rear cable organizer for routing cable from the vertical cable ladder to the patch panel. 1 organizer for each row of 24 cables.
 5. The label for each outlet on the panel shall be the same as the wraparound label on each end of the cable.
 6. Each label shall line up directly below or above the outlet on the panel. Misaligned labels will not be permitted.
- H. Patch Cords
1. Provide and install patch cords as required for connectivity of the PLC devices an user PC's

END OF SECTION 28 1600

SECTION 28 3520 – PLC SYSTEM

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section includes parts and equipment required for installation and termination of an updated Programmable Logic Control (PLC) system.
- B. The existing system is no longer able to be updated or added onto. the.

1.02 SYSTEM DESCRIPTION

- A. There is an existing PLC system at the site. The control equipment and software shall be updated as part of this project.
- B. The existing system is a PLC system that connects throughout the building with serial communications "blue hose".
- C. The PLC system shall be supplied and installed by a Contractor able to show examples of similar projects and installations within the last 3 years.
- D. The PLC system shall provide a solution for control of doors, lights and other systems that are currently controlled. Transition all control points and integrations to the new system.
- E. Provide new desktop Computers and touchpanel monitors. Provide all software and hardware required to integrate the new system to the existing control points and other systems currently integrated
- F. Contractor shall provide all software required for connection of the PLC system to the PLC Ethernet network and associated control PC's.

1.03 SUMMARY

- A. Scope: Provide labor, material, equipment, related services, and supervision required, including, but not limited to, manufacturing, fabrication, configuration and installation for Programmable Automation Controllers (PLC or Programmable Logic Controllers) as required for the complete performance of the Work, as shown on the Drawings and as specified herein.
- B. All system components specified or shown on the Drawings shall be provided, as well as any ancillary or incidental equipment or devices, whether identified or not, required for a complete functioning system and allow full use of system capabilities.

1.04 PROJECT PLAN

- A. Prior to ordering equipment and installation, the contractor shall provide a project plan to the owner and contractor that describes the system and its capabilities and the possible configurations.
- B. Provide a project approach which describes the installation and implementation plan and schedule and all sequencing.
- C. Meet with the owner numerous times to determine how the system should work and how it should be monitored.
 - 1. Configure the system prior to installation to meet these requirements. Demonstrate the system use to the owner prior to installation and obtain approval to move forward with the installation.
- D. Generate a testing plan and have that plan approved by the owner and engineer prior to installing the system.
- E. The system shall be installed and tested prior to cutting over any devices to the system.
- F. Conduct all testing of the system
- G. Conduct user training on the system
- H. Provide as-built documentation of the installed system

1.05 RELATED STANDARDS

- A. General, Publications: The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by the basic designation only. The edition/revision of the referenced publications shall be the latest date as of the date of the Contract Documents, unless otherwise specified.
1. Canadian Standards Association (CSA)
 - a. CSA E61131-2 Programmable Controllers – Part 2: Equipment Requirements and Tests
 2. International Automation Association (ISA)
 - a. ISA 71.04 Environmental Conditions for Process Measurement and Control Systems: Airborne Contaminants
 - b. ISA RP 60.11 Crating, Shipping, and Handling for Control Centers
 3. International Electrotechnical Commission (IEC)
 - a. IEC 60068 Environmental Testing
 - b. IEC 60721 Classification of Environmental Conditions
 - c. IEC 61000 Electromagnetic Compatibility (EMC)
 - d. IEC 61131-2 Programmable Logic Controllers – Part 2 Equipment Requirements and Tests
 - e. IEC 61131-3 Programmable Logic Controllers – Part 3 Programming Languages
 - f. IEC 61850 Communication Networks and Systems for Power Utility Automation
 4. National Fire Protection Agency (NFPA)
 - a. NFPA 70 National Electrical Code (NEC)
 - b. NFPA 79 Electrical Standard for Industrial Machinery
 5. Underwriter Laboratories (UL)
 - a. UL 508 – Industrial Control Equipment

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall be a firm engaged in the manufacture of specified products of types and sizes required, and whose products have been in satisfactory use in similar service for a minimum of ten years.
1. The manufacturer shall have a valid ISO 9001 certification and an applicable quality assurance system that is regularly reviewed and audited by a third-party registrar. Manufacturing, inspection, and testing procedures shall be developed and controlled under the guidelines of the quality assurance system.
 2. The PLC manufacturer shall have in place a written policy establishing a commitment for product support for an extended period following the initial introduction of the product. The product life cycle policy shall provide for the following support:
 - a. All work performed and all materials used shall be in accordance with the National Electrical Code, and with applicable local regulations and ordinances. Equipment, assemblies and materials shall be listed and labeled by Underwriter's Laboratories or by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Approved manufacturers for Ethernet network equipment are
1. Netgear
 2. Cisco
 3. Others as approved during submittals that meet system connectivity requirements.

- B. Approved vendors for PLC System and components:
 - 1. Allen Bradley
 - 2. Others as approved thru approval prior to bid. Submit potential alternate manufacturers to the designer prior to bid for approval.
- C. Approved software are:
 - 1. Access control system Syntinel from Securus or equal
 - 2. Graphical User Interface (GUI) software shall be Wonderware or equal
 - 3. Approved software for audio intercoms is by Harding or equal.
- D. As part of the bid the contractor shall explicitly detail the software package that is provided and shall provide a document showing all software available from the manufacturer.
 - 1. The document shall explicitly state which software is provided as part of the bid and shall detail other software available but not provided as part of the bid.
 - 2. We require this to be able to determine the level of software available and will allow us to fully review the system as a whole.

2.02 DESCRIPTION OF PROJECT

- A. The system shall include all equipment, software, cabling, data collection points, and hardware to monitor and control the specified areas and provide reports to a security station as required by the owner.
- B. The existing three (3) PLC modules and numerous Input/Output modules are End of Life by the manufacturer. Therefore, the I/O will be increasingly difficult to acquire for service support.
- C. This project shall be proactive so that the owner can continue to keep the system operational for years to come.
- D. As part of the upgrade the contractor shall complete the following:
 - 1. Replace the old Fiber Interface modules at the perimeter fence detection cabinets with new Ethernet ones which will connect to the existing fiber.
 - 2. Replace the old Block I/O modules with new PLC Ethernet I/O modules.
 - 3. Upgrade the discontinued serial PLCs and I/O and replace with new Ethernet based PLCs and I/O.
 - 4. Upgrade your SLC Rack mounted I/O modules with new Ethernet Rack Mounted I/O modules. Install so that the new modules will reuse the original wiring harnesses making the upgrade go smoothly by reducing the amount of wiring terminations.
 - a. The majority of these I/O modules are used to operate the Door Control system.
- E. Replace the discontinued Flex I/O modules in the Utility Panels and Optical Turnstile Panel with new Ethernet Point I/O modules.

2.03 MATERIALS

- A. All PLC and control cables shall be plenum rated.
 - 1. Contractor shall provide all appropriate cable for the connection of the new control PLC devices to the existing items being controlled. See pictures on drawings for the connections required.
 - 2. There will be requirements for many different types of cabling and the contractor shall provide for each.
 - 3. Provide a coil of cable at each location for moves and maintenance.

2.04 PLC SYSTEM SERVER

- A. Management Server:
 - 1. Provide and install any network attached server required to run the PLC software and GUI interface software
 - 2. Provide and install any network attached server required to run the audio intercom system.
 - 3. Add new licensing and expansion of the software to support all new devices and existing I/O points throughout the building.

2.05 PLC SYSTEM EQUIPMENT.

- A. The programmable logic controller (PLC) shall be an embedded I/O design, with I/O expansion capability.
 - 1. A chassis shall house CPU, memory, embedded I/O circuitry, communications, power supply.
 - 2. The PLC shall be designed to operate in a free airflow environment (convection cooling only, no fans or other air moving devices shall be required).
 - 3. The system shall support expansion modules (input/output, discrete or analog)
 - 4. The expansion modules shall be front accessible.
 - 5. Isolation shall be between all internal logic and external circuits.
- B. CPU
 - 1. The CPU shall be a self-contained unit, and will be capable of:
 - a. Providing system timing and scheduling I/O updates.
 - b. Controlling all I/O scanning and communications service.
 - c. Performing internal diagnostic checks
 - 2. Programming instructions shall include the following:
 - a. Relay-Type (bit)
 - b. Data Comparison (for example: Equal, Greater than or Equal, Less than or Equal)
 - c. Data Manipulation (for example: Copy, Move)
 - d. Math (for example: Add, Subtract, Multiply)
 - e. Program Flow Control (for example: Jump, Subroutine)
 - f. Application Specific (for example: Sequencer)
 - g. Communication (including ASCII)
 - h. Data Logging
 - i. Proportional Integral and Derivative (PID)
 - j. Advanced Timing (for example: Read High-Speed Clock, Compute Time Difference)
 - 3. The system must be capable of storing the following data:
 - a. External Output Status
 - b. External Input Status
 - c. Signed Integer Numbers (16 bit)
 - d. Signed Integer Numbers (32 bit)
 - e. Binary Data (bit, BCD, HEX)
 - f. ASCII String Data
 - g. Internal Processor Status Information
 - 4. Data shall be distinguishable to the CPU by the addressing format.
 - a. Management of the data into memory subsections shall be an automatic function of the CPU operating system.
 - b. Data can be displayed in Binary, Hexadecimal or Decimal.
 - c. Function-specific data such as processor status shall have dedicated displays that annotate the meaning of specific control bits and words within them and allow for selective control where appropriate.
 - 5. The CPU shall have a Real Time Clock.
- C. Memory
 - 1. The program storage medium shall be a solid-state, non-volatile type.
 - a. The PLC shall be capable of addressing up to a minimum of 10K data words, where each word is comprised of 16 data bits.
 - b. Available user memory shall consist of a minimum of 20K words of program and data.
 - 2. Non-volatile memory shall store the operating system, user program and all user data to protect against memory loss in the case of power loss or system shutdown.

3. The memory module shall support:
 - a. The ability to selectively protect multiple areas of user data from being overwritten if/when a download occurs.
 - b. Automatic program download whenever power is applied.
 - D. I/o circuitry
 1. The manufacturer shall have available a variety of I/O options for the PLC that include:
 - a. Inputs: 120VAC, 240VAC, 24VDC, DC sink, DC source, 4-20mA Analog, 0-10V Analog, RTD and Thermocouple.
 - b. Outputs: Relay (some of which must have individual isolation), 24VDC, DC source, 4-20mA Analog, 0-10V Analog and TRIAC.
 2. Inputs shall have adjustable filter time constants to improve input performance in high-speed applications, and to limit the effects of voltage transients.
 - E. Programming environment
 1. The programming port shall be RS-232 or Ethernet/IP.
 2. The programming software shall run on Windows 11 environments.
 - F. Communication
 1. The PLC shall have at least:
 - a. Serial ports which support RS-232-C or RS-485 and one electrically isolated serial port that supports RS-485 signals..
 - b. One RJ-45 port which supports 10/100/1000 Mbps EtherNet/IP. This port must be capable of local and remote programming, troubleshooting and data manipulation.
 2. The PLC shall support direct connection to a modem for remote programming functionality.
 3. The packaged controller shall support full function peer to peer communications (program management, controller to controller messaging, etc.):
 - a. When directly connected by an RS-232 cable, RS-485 cable or Ethernet cable.
 - G. Operating power
 1. The PLC shall operate in compliance with one of three types of electrical service:
 - a. 120VAC, single phase, in power systems that operate on 50/60 Hz. It must be capable of auto-detect to operate with either of these AC voltages or frequencies without the user needing to jumper or set up the unit.
 - b. 24VDC Class 2 SELV.
 - H. Provide and connect all power supplies required to power the new equipment.
 - I. System shall include the core network attached device for PLC control
 - J. Logic input/output devices
 1. System shall include new Logic I/O devices at SEC1, SEC2, SEC3 and all LVRP locations.
 2. New controllers shall be Ethernet attached and shall be connected to PLC controllers that shall be installed in rooms SEC1, SEC2 and SEC3.
 3. New controllers shall reuse the original wiring harnesses that are in place to facilitate ease of upgrade.
 4. IO and controller devices shall be Allen Bradley CompactLogix and Point I/O control equipment.
- 2.06 PLC CONTORL SOFTWARE
- A. Replace the existing Commander Control software that is in place for control of the PLC system currently.
 - B. Replace the existing Wonderware GUI with an updated Wonderware software
 - C. New software for PLC control shall be Syntinel by Securus
 - D. New GUI Interface software shall be Wonderware InTouch
 - E. Remote access

1. Provide, install and configure a device to support remote access from the vendor to the PLC system.
2. Install and configure this for access thru the SOM network.

2.07 ETHERNET TO SERIAL DEVICES

- A. Provide and install Ethernet to serial devices to integrate serial connected devices to the PLC network
- B. Provide and install where required for a complete communications and control system.
- C. Devices shall be:
 1. 1, 2 or 4 software-selectable RS-232/422/485 serial ports to connect a wide variety of serial equipment over IP networks
 2. 10/100/1000 Ethernet (dual Ethernet on 2- and 4-port), with optional Wi-Fi, industrial temp, C1D2 rating and LTE
 3. Shall be utilized for COM ports, serial tunneling or TCP/UDP sockets
 4. Shall optimize performance for the widest range of industry standard and device-specific protocols
 5. Where required shall be an operating temp of -35C to 74C
 6. Shall be Digi Connect EZ or equal

2.08 PLC CONTROL PC AND MONITOR

- A. The PLC Monitoring PC shall meet the following requirements:
 1. Operating system shall be Windows® 11
 2. Processor shall be no less than 3.4 Ghz, I7-2600 processor. Intel or AMD. 64 bit
 3. Shall be equipped with memory of 16 GB.
 4. Equip each unit with a hard drive of no less than 200GB.
 5. Each PC shall have an integrated high speed Video/graphics card capable of no less than 2 separate video monitor outputs. (DVI or HDMI) Include multiple video cards if required.
 - a. Minimum 2 GB memory
 - b. NVidia #GeForce GT 710 or equal
 6. Equip each with an Ethernet controller with 10/100/1000 Mbit connectivity
 7. Equip each with a keyboard and wireless four button optical scroll mouse.
 8. Provide a minimum of two additional USB connections with at least one USB on the front of the unit.
 9. Each PC shall be equipped with One (1), 24", 16x9 aspect ratio, diagonally measured touchanel LCD monitor.
- B. Touchpanel Video Display
 1. LCD Displays shall be installed as shown on the drawings.
 2. Displays shall be 16:9 and shall include desktop mount
 3. Display shall be able to show images at 480i, 480p, 720p and 1080p.
 4. Shall be standard 1920x1080 HD Resolution
 5. Video input shall be a minimum of:
 - a. HDMI Input
 - b. Display port
 - c. USB 3.2 x2
 - d. Audio output
 6. Equipped with VESA compatible mounting holes
 7. Display shall be no thicker than 4-1/2 inches.
 8. 24" Touchpanel display shall be Dell #P2424HT or equal

2.09 ETHERNET EQUIPMENT

- A. Manufacturer of the data network shall be one of the following:
 1. Cisco

2. Comnet
3. Netgear
- B. System shall be in current manufacture and shall not be scheduled for end of life within the period of support.
- C. All components of the system shall be newly manufactured products. Remanufactured, refurbished or show floor equipment is not permissible.
- D. Each component of the data network shall adhere to all ANSI, IEEE, EIA/TIA, ISO, NFPA, and NEC articles and standards that may apply.
- E. The electronics shall be able to be directly mounted in standard 19-inch relay racks or cabinets or on the walls as per the manufacturer's requirements. The Contractor shall provide all mounting hardware required for a complete installation. Some electronics shall be mounted on the wall.
- F. The system shall be installed with the latest revision of all hardware, firmware and software supported by the manufacturer; as of the final completion date of this project.
- G. Multiport unmanaged switch
 1. Install an ethernet switch at the back of each PC to support connectivity of the IP intercom microphone and the PC.
 2. Ethernet Switch shall include:
 - a. Simple set up with no software to install or configuration needed and zero maintenance
 - b. Non-blocking switching architecture for maximum throughput at wire speed
 - c. 4 PoE+ ports with 63W total power budget to power wireless AP, IP Cameras, IP Phones and much more
 - d. The fanless design means zero added noise wherever its located, making it ideal for noise-sensitive environments
 - e. Designed to optimize power usage lowering its cost to operate.
 - f. Supports desktop and wall placement. Includes wall mount kit in the box
 - g. Ensure interoperability with any standards-based PDs
 - h. Shall be Netgear GS305PV3 or equal.
- H. Rack mount 24 port Ethernet switch
 1. Install a rack mounted switch to support 24 ports of connectivity for Ethernet devices and backbone connectivity via SFP modules and the fiber backbone.
 2. Ethernet Switch shall include:
 - a. 24 x PoE+ Gigabit ports with 380W PoE budget
 - b. 2 dedicated Gigabit SFP fiber uplink ports
 - c. Non-blocking switching with 52Gbps
 - d. Flexible rack-mounting option
 - e. Advanced VLAN support for better network segmentation
 - f. Advanced per port PoE controls for remote power management of PoE connected devices including operation scheduling
 3. Ethernet switch shall be Netgear #GS724PP or equal
- I. Core Ethernet switch with Multiple SPF modules
 1. Install a rack mounted Ethernet Switch Chassis and all SFP modules required for connectivity.
 2. Ethernet Switch shall include:
 - a. 12-Slot Modular Stackable Managed Switch with 8-port 10G and 2-port 40G expansion cards
 - b. High Availability (HA)
 - c. Non-stop forwarding (NSF) virtual chassis architectures with hitless failover across the stack
 - d. Stacking and distributed link aggregation allow for zero downtime and load balancing capabilities

- e. Per VLAN Spanning Tree and Per VLAN Rapid Spanning Tree (PVSTP/PVRSTP)
- f. Link Dependency
- g. Enables or disables ports based on link state of different ports
- h. Advanced IPv4/IPv6 security
- i. Malicious code detection, DHCP Snooping, IP Source Guard protection and DoS attacks mitigation
- j. Provide with all SFP modules for connectivity as shown on the drawings.
- k. Provide all fiber optic cables required for connectivity.
- 3. Ethernet switch shall be Netgear MS4300 series or equal.
- J. Fiber to copper transceiver
 - 1. Fiber to Copper Transceivers
 - a. The transceivers from fiber to copper shall be multimode fiber to copper UTP.
 - b. Shall be set for a wide temperature range and manufactured for use outdoors.
 - c. Shall provide PoE power out the UTP ports. Shall be enough power to support the PoE requirements of the Cameras.
 - d. Fiber to UTP transceivers, powered by 120VAC shall be Comnet CNMC series.
 - e. Provide as required for noted connectivity

2.10 WIRES AND CABLES

- A. The contractor shall be responsible for supplying and installing all cabling to make the system operational.
 - 1. Size conductors as required to transmit all power and signal to all devices.
 - 2. All cabling shall be Plenum rated
 - 3. All cabling shall be installed in raceways and in accessible ceiling spaces through cable supports.
 - 4. Provide manufacturer specified cabling based on use and length of signal transmission from panel to device.
 - 5. Generate drawings showing the cables required and get those reviewed by the designer prior to installation.
 - 6. All cabling shall be labeled at each end with laser printed wrap-around labels

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Identify all devices to be replaced and document on red-lined drawings
- B. Identify all existing cabling that is used for connectivity.
- C. Identify existing fiber cable backbone that will be used for PLC system connectivity
- D. Document and download all user names and their rights. Use this to create new software

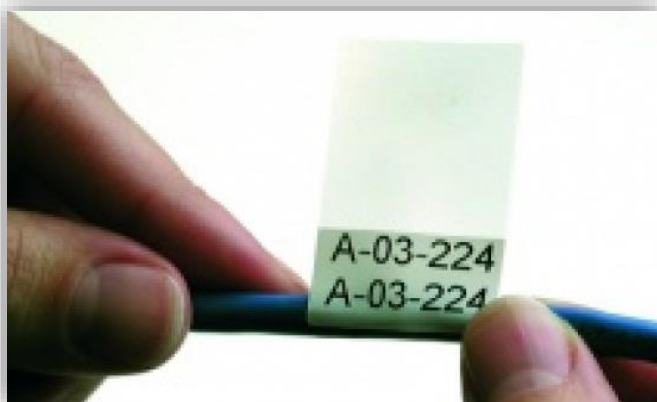
3.02 PREPARATION

- A. Identify location of all new equipment.
- B. Configure all equipment and Ethernet switches. Setup connectivity at the contractors site. Test connectivity and access prior to bringing the equipment onsite.

3.03 INSTALLATION-GENERAL

- A. PLC cable shall be installed per industry standards.
 - 1. Install all cabling required for complete system connectivity. Cabling shall be plenum rated.

2. Care shall be taken to avoid crimping or bending the cable past the manufacturer's recommended bend radius.
3. Adhere to all pulling tensions and bend radii during installation.
4. Provide a service loop of the cables on the wallfield.
5. Each cable shall have a self adhesive, self laminating, laser printed label at each end. The label shall show the location identifier of that cable. Labels shall be installed no more than 4 inches from the termination point of the cable.



6. Cabling at the Panel.
 1. Contractor shall coil all spare cable from the door devices outside the PLC panel and shall neatly coil the cable on the wall. Provide 2' minimum in the coil for future movement of the panel.
 2. Cables shall route into the panels through a grommeted hole that is sized for the cables entering.
 3. All cables shall be installed in a neat and workmanlike manner.
 4. Cables shall be terminated and shall allow for removal of a card without un-terminating the cables.
 5. All cables shall be neatly distributed to the card in the panel.
 6. All labels shall be visible inside the panel near the termination point. Label cables equidistant from their termination point.

3.04 SERVER AND SOFTWARE INSTALLATION

- A. Management Server:
 1. If a new server is required, install and configure the server on the Ethernet network. Load all new software and licensing required for addition of the new PLC Devices and all endpoints that are controlled and intercoms
 2. Verify software version installed.
- B. Control Software:
 1. Contractor shall provide all software required for a fully functional PLC system.
 2. Software shall be installed and fully configured by the Contractor.
 3. Contractor shall schedule meetings with the Owner prior to installation to determine the working of the PLC system and how it integrates with:
 - a. Video Security camera system
 - b. Access Control system
 - c. Audio intercom system
 - d. Ethernet network
 - e. User devices including GUI software
 - f. I/O Control points that are currently being controlled

4. Install control software on the server in the SEC1 room.
 - a. Install software on all system PC's being provided and installed as part of this upgrade.
5. Configuration of the PLC and GUI software shall include but not be limited to the following:
 - a. Number each door and any input and outputs associated with that door and associate it with a standard door name for easy review.
 - b. Meet with the owner to determine how they will use the system. Take information from them that will allow all custom settings of the software system. This shall include but not be limited to:
 - 1) User groups based on building and administrative group
 - 2) Access levels based on groups and times.
 - 3) Door Groups for access and locking and unlocking
 - 4) Associate cameras to each door. This may be more than one camera per door. Setups all links for intercoms and cameras. Camera system is Bosch.
 - 5) Administrative levels and super administrators
 - 6) Build database and interconnections between:
 - A) Intercom system and access control system
 - B) Intercom system and video security system
 - C) When an intercom call is generated the associated camera shall be seen on the users PC touchpanel
 - D) Setup all I/O devices and their control parameters within the software
 - 7) Create GUI touchpoints for all control of the systems and items noted.
 - c. Generate customized maps for each door and camera and control device such as lighting.
 - 1) Create maps from the owner that detail the cameras and doors that are part of this project.
 - 2) The maps shall show icons for each door. The icons shall be green or red based on open or closed door or some other identification of locked and unlocked
 - 3) Setup all icons to allow the owner to click on a door and then have direct access to lock or unlock or pulse the lock on a door.
 - d. Setup all user accounts and install the user software on the PC's.
 - 1) Setup the user accounts based on the systems they can see and control.
 - 2) Work with the owner to determine which panels, doors, maps or buildings the user will be able to see and control.

3.05 FIBER TO COPPER TRANSCEIVERS

- A. The transceivers shall be used to transition from fiber optic cable to UTP copper connections.
- B. At outdoor locations the transceivers shall be mounted to the weatherproof cabinet.
- C. Indoor transceivers shall be mounted into the rack.
- D. Provide all mounting equipment for the transceivers.
- E. Provide all fiber and CAT-6 patch cords required for connection of the transceivers on both the fiber and copper side.
- F. Ensure connectivity through the transceivers. Test each connection to ensure that it passes data.
- G. Where the Transceivers are to be powered from the building or cabinet provide and install the power supply.
 1. Provide and install power cable from the cabinet or building to the transceiver to provide adequate power for cameras and transceiver.

3.06 PC AND TOUCHPANEL MONITOR

- A. Load all required software on the PC and monitor
- B. Mark PC with Serial number and IP address on the top or side with a pre-printed sticker.
- C. Create login and password. Document this for as-builts
- D. Test PC and monitor prior to installation.
- E. Provide with keyboard and mouse.
- F. Install and connect to ethernet cable at noted location. Connect to Ethernet switch where noted.
- G. Integrate touchpanel to PC. Provide all cables and software configuration required for interaction.
- H. Configure the PC to operate with the control software and GUI software.
- I. Fully test complete operation of the PC with the new control system.

3.07 ETHERNET NETWORK CONFIGURATION

- A. The Contractor shall configure and install the data network as per the detailed specifications and the configuration meetings with the Owner.
 1. Meetings shall be scheduled with the Owner to discuss the configurations of all electronics and the capabilities of the system.
 2. The owner shall be made aware of all the capabilities of the data network electronics and all possible configurations and shall be able to decide all aspects of the programming and configuration.
 3. From the meetings, the owner and contractor shall generate a plan for all configuration issues of the data network including but not limited to:
 - a. IP Numbering Scheme
 - b. VLAN settings
 - c. Quality of Service (QoS) settings
 - d. Network Prioritization
 - e. New data connections.
 - f. Wireless connectivity for Visitors and Administrators.
 - g. Security Cameras and servers.
- B. The owner shall be able to be involved in all aspects of the configuration.
- C. The network electronics shall NOT be configured with default usernames, default passwords or default SNMP community strings.
- D. The network electronics shall be configured to synchronize internal clocks to a designated internal NTP server.
- E. The network electronics shall be configured with the same time zone settings and said time zone shall be the local time zone in Michigan.
- F. Configure the system to allow connection of Security cameras and the access control system to their own VLAN.
- G. Configure the system to allow connection of IP telephones and the associated PC's. The traffic from the telephone shall be able to be routed via a separate VLAN than the data traffic that comes through the same connection.
- H. Setup the system to support and segment Bonjour (Apple TV) traffic to ensure transmission of the video information.
- I. Configure the system to allow connection of IP telephones and the associated PC's. The traffic from the telephone shall be able to be routed via a separate VLAN than the data traffic that comes through the same connection.
- J. Configure the system to allow connection of the Wireless Access points throughout the system.

3.08 CONTROL PANEL INSTALLATION

- A. Enclosure and power
 1. Contractor shall mount devices within a new cabinet in the security room.

2. Provide mounting panels for all PLC and PLC devices.
 3. Provide support of cabling as it routes to the PLC and termination panels. See drawings and install much the same as shown but utilizing new, specified equipment.
 4. Locate the 120 volt power outlet and install enclosure in relation to power
 5. Size the enclosure to support all PACS devices noted on the drawings and in the specifications.
 6. Power.
 - a. Install cabling and raceway to connect the power supply in the enclosure to the 120 volt power outlet.
 - b. Shall be hard-wired power. Plug-in power is not allowed
 - c. Provide an electrician for connection of the power supplies if required by AHJ.
 7. Battery backup
 - a. Provide and connect the batteries to the power supply for the enclosure
 - b. Test the battery supports the panel by removing 120 volt power after the system is fully up and operational.
 8. Network connectivity
 - a. Provide and install CAT-6 cable from the enclosure for the power supply to the communications rack. Connect to the Ethernet switch
 9. Other Controllers and I/O Board connectivity.
 - a. Provide and install cabling to connect the Ethernet controller to the other controllers and I/O boards via RS-485.
 - b. Do not install RS-485 between communications rooms. Each comm room shall have an Ethernet attached Controller.
- B. Controller:
1. Controller(s). shall be mounted in the enclosure as shown on the drawings.
 2. Controller shall be sized for all I/O, access, control, and monitoring points existing on the drawings and shall be expandable.
 3. Controller shall be able to be linked to additional controllers in other communications rooms/buildings via the Ethernet network.
 4. Each port in the controller that is connected to a control point shall be labeled inside the controller box.
 5. Label the outside of the panel with the door numbers and list of devices that are connected in that panel. Shall be laser printed adhesive labels.
 6. Label the inside of the panel door with the layout of the panel and which controllers attach to which devices. Include door numbers on the diagram.
 7. Depending on the type of panel the contractor shall provide cable routing hardware and equipment to neatly install cabling.
 - a. Route cable to allow easy change and replacement of the individual control cards in the panel.
 - b. Cabling shall be neatly bundled. See example below of adequate cabling being routed into a panel.
 8. Network connectivity
 - a. Provide and install CAT-6 cable from the controller to the communications rack. Connect to the Ethernet switch
 - b. Connect on the Ethernet to the Switch.

3.09 PLC INSTALLATION

- A. Installation shall be in compliance with all manufacturer requirements, instructions and contract drawings including:
1. Space surrounding the PLC to maintain adequate cooling.
 2. Conditioning of space surrounding the PLC enclosure to maintain the manufacturer's ambient temperature and humidity ranges.

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3. Accessibility of PLC diagnostic lights, communication ports and memory modules – these components shall be free from obstructions at all times.
- B. Control Panels
1. As specified in Section 40 95 13 – Process Control Panels and Hardware.
 2. The supplier shall provide all required cables and connectors to interface with other control system equipment.
 3. The supplier shall ensure that communication media, analog signals and discrete I/O wiring are properly protected in accordance with manufacturer recommendations.

END OF SECTION 28 3520

SECTION 28 3525 – AUDIO INTERCOM SYSTEM

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section provides detailed specifications for the new audio intercom system in the building.

1.02 DESCRIPTION OF PROJECT

- A. The building has an existing intercom system from Dukane
- B. The intercom system is used to communicate from doors to the controller stations to allow people transversing thru the building to identify when they need a door unlocked remotely from the operator/controller station.
- C. Contractor shall update the intercom system while utilizing the existing cabling.
- D. Provide control units and server with audio recording to integrate to the PLC control system.
- E. Intercom update base bid shall include all new intercom equipment and cabling interfaces in the communications rooms.
- F. Alternate #1 shall include replacement of the endpoint intercom devices.
- G. The system shall consist of, but not be limited to
 - 1. Audio server for control
 - 2. Audio control software for recording and management and integration the PLC Control system
 - 3. Wiring interfaces to existing cabling
 - 4. Integration to public hallway audios amplifiers and speakers for general announcements
 - 5. Headend intercom controllers and interfaces to PLC system for intercom call-up on the PLC control PC monitors.

1.03 SHOP DRAWINGS

- A. Shop drawings shall be submitted by the Contractor for approval prior to installation of the work. The shop drawings shall show all data relating to the structural, electrical, wiring diagrams, etc.
- B. The wiring and connectivity to be added to any racks and wallfields shall further be shown. Changes shall be reflected on existing layouts where applicable. For all new racks or wallfields required, the Contractor shall show a total elevation view of the layout.
- C. Shop drawing shall specifically detail speaker zones and their associated zone designations.

1.04 CONTRACTOR

- A. The Contractor shall accept complete responsibility for the installation, certification, and support of the system. Contractor must show proof that they have the certifying manufacturer's support on all of these issues.
- B. All work shall be performed and supervised by technicians and project managers who are qualified to install Integrated intercom systems and cabling and to perform related tests as required by the manufacturer in accordance with the manufacturer's methods.
- C. The vendor (including Subcontractor(s) if any) shall have a proven track record in paging system configuration and installation. This must be shown by the inclusion of details of at least 3 projects involving the installation of like sized systems that have been completed by the vendor in the last 2 years.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. The manufacturer of the paging system shall have been designing, manufacturing, and installing systems for a period of no less than 5 years.
- B. Approved manufacturers,
 - 1. Harding or equal

2.02 SYSTEM UPGRADE

- A. The existing Analog Intercom System is End of Life because the manufacturer has gone out of business . Replacement parts are difficult to find or not available.
- B. The Intercom upgrade shall occur as part of the Base Bid primarily in the headend equipment racks and shall only slightly change how the staff use the intercom system day to day.
- C. At the PLC controller stations, the contractor shall supply a new IP Audio Master Station with a mic.
 - 1. Connect to the Ethernet switch at the back of each Controller station PC.
- D. At the three (3) communications rooms (SEC1, SEC2 and SEC3) locations, the existing intercom relay cards and intercom master units shall be removed and replaced with the new intercom controllers and expansion units.
 - 1. Rewire the existing door Intercom Stations and Cell Talkback Speakers in the light fixtures will be rewired to the new equipment by the contractor.
 - 2. Alternate #1 is a deduct alternate to replace door intercom stations.
- E. Provide and install a new Audio Recording Server. The new Server shall provide storage for hundreds of hours of recordings made via the intercom/paging system and the Touchscreen Control Audio system.
- F. Each time an audio channel is opened on any of the Control stations, the staff and inmate two-way audio conversation shall be time stamped and logged with which master station was used and who is logged in at the Touchscreen Control Station.
- G. System shall also record audio pages through the intercoms system's speakers.

2.03 MATERIALS

- A. The Intercom system shall provide at a minimum the following functions and features:
 - 1. Shall allow administrators to make announcements or sound tone events to any individually wired group of speakers, or any electronically combined group of speakers.
 - 2. Users shall be able to call or answer calls from any individual door intercom.
 - 3. Speaker zones shall be software assignable to different owner required groups. These groups shall be independent of the time groups.
 - 4. Distribution of general announcements shall be possible from any administrative desktop intercom at the control stations.
- B. The electronics of the paging system shall have the following capabilities:
 - 1. The system shall be microprocessor based, and shall be capable of handling the quantity of hardwired zones as shown on the drawings. In addition, provide for no fewer than two additional zone hardwired outputs for future use.
 - a. The system shall be able to have software assigned groups and zones.
 - 2. System shall be modular in design and capable of expanding in increments.
 - 3. Programmable features shall be stored in non-volatile memory and shall not be lost due to power failures.
 - 4. System functionality must include the capability to manually distribute any number of tones or pre-recorded files via pushbuttons, contact closure, or dial up tones from any administrative telephone.

- a. These tones shall be customizable with respect to cadence, type, and duration. Dial up tones must only be accessible by authorized users.
5. The system shall have the ability to control all system relays. All relays must be software programmable with the flexibility to change as required.

2.04 DIGITAL COMMUNICATIONS CONTROLLER (DCC) AND DIGITAL COMMUNICATIONS EXPANDER

- A. Provide and install DCC/DCE devices as required to connect all existing intercoms and devices and zones.
- B. Provide these for additional interconnection to the PLC control system to facilitate camera and door control callup upon completed intercom call from any door
- C. Provide as required to connect to Ethernet network and to connect all the devices
- D. Provide expander modules where required to connect all devices. See drawings for extent of the devices to be connected.
- E. DCC
 1. Each DCC Devices shall contains all processing, control software and configuration data to operate independently as a stand alone exchange.
 2. Exchange networking, host port control, programming, diagnostics, and maintenance shall be performed through the DCCs.
 3. Each DCC shall support
 - a. Two intercom or telephone master stations and 32 intercom stations*.
 - b. Two line-level audio inputs
 - c. Two line-level audio outputs with control and status
 4. Allow connection of microphones, program sources, paging amplifiers, and logging recorders.
 5. DCC devices shall be Harding # DCC-XXAA-BBCC-DDEE-FFGG or equal. See manufacturers documentation and equip as required to support the system at the clients site
- F. DCE
 1. Digital Communication Expanders (DCE) shall be provided to increase the capacity of an exchange.
 2. Up to four DCEs can be connected to each Digital Communication Controller through a "plug and play" Universal Serial Bus (USB) port.
 3. The USB shall carry all the audio and data communications within each exchange.
 4. Each Digital Communication Expander shall support
 - a. Two intercom or telephone master stations,
 - b. 32 intercom stations*,
 - c. Two line- level audio inputs
 - d. Two line-level audio outputs including control and status
 5. DCE devices shall be Harding # DCE-XXAA-BBCC-DD or equal. See manufacturers documentation and equip as required to support the system at the clients site

2.05 QUICK CONNECT BOARD

- A. The existing intercoms have cables routing from the door intercom to the communications room
- B. Contractor shall provide new boards and connect them to the existing intercom cables.
- C. Quick Connect Boards shall include:
 1. Equipment to simplify the field wiring when connecting stations to an exchange.
 2. Shall include a female DB connector and a terminal block arranged in tiers. One end of an interface cable, with two male DB connectors (one on each end), plugs into the station audio card and the other into the QCB.
 - 3.

2.06 ALTERNATE #1 INTERCOM STATIONS

- A. As part of the Deduct Alternate #1 the contractor shall replace all door intercoms at the site.
- B. Intercoms at all locations shown as "IC" on the drawings shall be replaced with new devices.
- C. New intercom devices shall fit onto the existing box and match existing footprint on the wall.
- D. Intercoms shall be:
 - 1. Half-duplex 25V/4-wire intercoms that are compatible with DXI SAB-300 station audio boards and DXL SCC-300 station control cards, as well as other industry standard 25V/4-wire systems.
 - 2. The microphone/loudspeaker shall be an 8-ohm speaker, mylar cone for the 2 and 3 gang versions.
 - 3. These stations shall be designed for installation in high security areas and for superb audio clarity in reverberant acoustic environments.
- E. Intercoms shall be Harding # ICE-322-227-000 or equal.

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION

- A. Contractor shall be familiar with the location(s) where the work will be done. No additional compensation will be made for items the Contractor claims he was not aware of during bidding.
- B. Work Area:
 - 1. All work areas shall be cleaned at the end of each day. All debris shall be cleaned and removed from the site and disposed of in the approved container for the site.
 - 2. All equipment shall be moved out of common areas and stored in the Contractor's lay down area, or in other approved storage locations on site.
 - 3. Any work that is low hanging, or may otherwise impede the general use of the space, and cannot be removed shall be flagged and cordoned off by the Contractor.
- C. All equipment and parts shall be installed in a neat and workman like manner. Good installation principles shall be used throughout the project.
- D. All cables routed above the drop ceiling or in the ceiling area shall be installed square to the building. Diagonal cable runs are not permissible.
- E. All cut edges of conduits, boxes, raceway, etc., shall be trimmed and filed so that no burrs or rough edges will damage cable as it is installed.
- F. If in the course of the work, the Contractor damages, marks, or misplaces any ceiling tiles the Contractor shall repair, and or replace the ceiling tile to the original condition.
 - 1. the Engineer shall decide if ceiling tiles have been damaged, and based on the Contractor's proposed fixes, shall decide the best course of action to repair any damage done by the Contractor to the ceiling tiles.
- G. It shall be the responsibility of the Contractor to repair any damage done to the structure or finishes in the building by the Contractor. The building shall be returned to its original condition prior to final sign off of the project.
- H. The Contractor shall be responsible for locating the speakers of the audio systems in each room. The speakers shall be installed to provide complete coverage with no "dead" spots. Approximate locations are shown on the drawings, the Contractor shall review these and advise the Engineer of any proposed changes prior to installing speakers.

3.02 NEW INTERCOM SYSTEM INSTALLATION

- A. The electronics and components of the intercom system shall be located in the communications room or where directed by the owner.

1. All components shall be mounted in a floor mount rack or cabinet or mounted on the wall.
 2. Locate the components as required for connections to power and the ground bar. Insure that the components are securely mounted to the wall.
 3. The Contractor shall install all cables required for connection of the components to the speakers and the administration PC.
 4. All connectivity cables shall be labeled with laser-printed, wrap around labels detailing what they connect to.
- B. The control software and recording of intercom audio shall be installed on a Server that is provided as part of this project.
1. The control software shall be fully configured and shall be installed with any cabling or associated software required to connect it to the paging system.
 2. Meetings shall be held by the Contractor that includes the Owner and the Engineer. During the meetings, the Contractor shall provide all possibilities for configuration of the system to the Owner. Decisions shall be made on speaker groupings, a numbering scheme, naming, etc.
 - a. See drawings for the extent of the zones and how to connect the speakers.
 3. The Contractor shall be fully responsible for configuring the system per the Owner's requests. This configuration shall be done on site and shall be attended by 2 or more of the Owner's Representatives. This will allow the Owner to better understand the interface and control of the system.
 4. All configurations shall be recorded on a spreadsheet that notes the intercoms, the room numbers, extensions, and the extension numbers of all the different groupings of intercoms and speakers. The spreadsheet shall be up to date at the time of acceptance by the Owner and shall be printed. Handwritten spreadsheets are not acceptable.
 5. Setup intercom system to integrate to the PLC system to allow intercom call to bring up a camera view and door control icon on the controller PC and monitor.
 6. Setup so that touching the screen on the controller PC will momentarily unlock door and end intercom call.
 7. Work with the owner on how this shall work and be integrated.

3.03 CABLING INSTALLATION

- A. All cabling for connection of the intercoms shall be routed above the drop ceiling or in other raceways as required. No speaker cabling shall be visible other than in the communications room.
1. Terminate intercoms cabling shall be terminated on terminal blocks/quick connect blocks on the communications cabinet
 2. All intercom cabling shall be labeled at each end. The labels shall display the extension number of the group of intercoms that are connected.

3.04 MISCELLANEOUS SYSTEM INSTALLATION

- A. The Contractor shall be responsible for all aspects of the intercom of the system once installed.
1. The sound of the system is of utmost importance to the Owner. The Owner requires a system that is intelligible when the space is occupied or unoccupied.
 2. Each room shall be tuned and the tap value of each speaker shall be set to provide the best sound possible.
 3. The Contractor shall go into each room and conduct a listening test to determine that the sound is intelligible and that the gain is not set too high. This shall be done in each room and each area.
 4. Prior to acceptance of the system, the Contractor shall conduct a system walk-thru with the Owner and the Engineer.

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5. The walk-thru shall consist of entering each room, making a call from a telephone and making an announcement into that room through the paging system.
6. The Owner and Engineer will be checking for complete coverage in each room and correct volume setting of the speakers and the associated volume controls. Any changes required shall be the responsibility of the Contractor.

END OF SECTION 28 3525

SECTION 28 7200 – TECHNOLOGY SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section provides the Contractor with requirements regarding Product Data Sheets, Shop Drawings and Product Samples collectively referred to as “Submittals”.
- B. This section provides the Contractor requirements regarding As-Built Documentation after installation and prior to Final Completion and Final Payment
- C. The requirements of this section deal only with those submittals that are required to be provided by the chosen contractor after bid award. No submittals in this section are required to be provided with the Bid Response.
- D. The requirements contained herein should be considered bound and apply to all technology and security specification sections per this contract.

1.02 PRE-INSTALLATION SUBMITTALS

- A. The contractor shall provide material submittals to the Construction Manager or directly to the designer, whichever is managing the project.
- B. Prior to beginning work, the chosen Contractor shall provide PDF files of all material submittals.
 - 1. Highlight the part number of each item specifically. Submittals that are not highlighted will be rejected and sent back immediately.
 - 2. Provide the PDF with the following file names
 - a. Site - Spec Section - Description
 - b. In Example: **Kent City 28 1600: Data Cabling submittal**

1.03 AS-BUILT DOCUMENTATION

- A. The contractor shall provide As-Built documentation to the Construction Manager or directly to the designer, whichever is managing the project.
- B. Provide the As-Built in hard and soft copy
 - 1. Hard Copy shall include all Red-lined Drawings showing what was actually installed and where it was installed.
 - 2. Soft copy on USB Drives (PDF or Microsoft Word or Excel) shall include all documents provided in the hard copy plus any configuration or data files. Include XLS files for all spreadsheets.

PART 2 - PRE-INSTALLATION SUBMITTALS

2.01 PRODUCT DATA SHEETS

- A. Product data sheets shall consist of the manufacturers detailed specification sheets or “cut-sheets” for each product that is to be installed by the contractor or any subcontractors.
- B. Product data sheets shall minimally include, but shall not be limited to:
 - 1. Part Number
 - 2. Manufacturer
 - 3. Description of the product
 - 4. Physical dimensions and characteristics of the product
 - 5. Picture or manufacturers drawing of the item, where applicable
 - 6. Electrical characteristics of the product including heat-load for active electronics.
 - 7. Optical characteristics of the product for Fiber-Optic equipment and cable.
- C. Provide product data sheets for all equipment and cabling that is to be installed by the contractor

- D. Provide a PDF of all the Equipment being submitted. Each actual part number shall be highlighted on the PDF in yellow.
 - 1. Group Product Data Sheets by:
 - a. Data Cabling
 - b. Fiber Optic cabling
 - c. PLC System
 - d. Intercom system
 - e. Ethernet network

2.02 SHOP DRAWINGS

- A. Shop Drawings shall consist of detailed drawings showing actual connectivity, equipment to be installed and cable types for the systems noted below:
 - 1. PLC system and network connectivity
 - 2. Intercom system
- B. Shop drawings shall also be provided for systems that the contractor intends to connect differently than what is shown on the contract drawings or where no connectivity is shown.

2.03 PRODUCT SAMPLES

- A. Product Samples shall consist of a sample of the actual product that is to be installed.
- B. Samples shall be tagged with the part number and specification section to which it pertains.
- C. Product Samples shall be provided for the following:
 - 1. None at this time.

2.04 SUBMITTAL DOCUMENTS

- A. The Contractor shall provide all Submittals to the Construction Manager or the designer
- B. The Contractor shall provide PDF Files for all Product Data Sheets.
 - 1. All Product Data sheets shall be PDF files grouped as shown in 2.01/D
 - 2. The Contractor shall highlight the actual part number on the sheet of the component that they are submitting.
 - 3. If no part number is highlighted or marked with an arrow, then the entire submittal package will be rejected and sent back for re-submission.
- C. The Contractor shall provide 1 set of PDF of Shop Drawings.
 - 1. Shop drawings shall be marked for the specification section of the bid documents to which they pertain. Mark the Detail (TCXXX/Y) to which the Shop Drawing refers.
 - 2. All shop drawings that are required to be drawn on the building background shall be provided on full-size drawings the same scale as those in the bid documents.
 - 3. All lines on the shop drawings shall be highlighted or completed in ink that is not the same color as that provided in the bid documents.
 - 4. The contractor shall provide a drawing legend detailing all symbols used in creation of the shop drawings.
- D. The Contractor shall provide one of each product sample required to be submitted.
 - 1. Provide a cutsheet with each product sample detailing the specifics of the product and what it is proposed to be used for.

2.05 SUBMITTAL REQUIREMENTS

- A. Submittals shall be provided for approval prior to installation of the work.
- B. Any equipment installed that does not have an approved submittal associated with it can and will be removed from the project and replaced with other equipment as defined by the Designer. All replacement costs shall be the responsibility of the Contractor.
- C. It shall be the responsibility of the Contractor to provide the submittals for review in sufficient time to not delay the installation. Work with the Construction manager on the schedule.

- D. It shall be the responsibility of the contractor to ensure they have provided and have on hand "Reviewed" or "Furnish as Corrected" submittals for all equipment they install.
- E. When reviewing submittals marked "Furnish as Corrected" take into account the comments and incorporate the comments into the products and installation of the systems.

PART 3 - AS-BUILT DOCUMENTATION

3.01 MATERIALS

- A. The Contractor shall provide the following to the Designer prior to the issuance of the final payment.
 - 1. Approved submittals and equipment user manuals.
 - 2. As-Built Documentation as detailed below.
 - 3. All spare parts and cover plates for all components of the systems
 - 4. Manufacturer warranty cards for all components.

3.02 AS-BUILT PROCESS

- A. The Contractor shall provide all project as-builts to the designer at substantial completion.
 - 1. Provide them to the designer for review
 - 2. Make any required changes the designer requests
 - 3. Re-submit at the time of Final Completion / final payment. Final Payment is not possible without a complete post installation deliverable package

3.03 PREPARATION

- A. All documents for As-Builts and test results shall be neat and clearly labeled with listing of the project and documents included in each binder.
- B. Quantity:
 - 1. Submit Red Lined, As-Built floorplans for the Systems detailed in 3.04/D.
 - a. Provide one set of physical documents, full size,
 - b. Provide PDF Scans of the As Built Floorplans.
 - 2. Submit Electronic files for As-Built Documentation
 - a. Provide PDF Files. Provide a Coversheet that details:
 - A) Client name.
 - B) Project name.
 - C) Manual title (e.g., "Project Close-out Manual for security system upgrade").
 - D) Date; date format: <month> <day>, <year> (e.g., "January 1, 20xx").
 - E) Installer and General Contractor names and contact information
 - F) Warranty contacts for all systems.
 - b. Submit Electronic files to Owner, Designer and Construction Manager via email or dropbox or directly through USB Drives.
 - 3. Submit (2) USB Drives with all As-Built documentation and software configurations.
 - a. Software configurations shall be provided for:
 - A) Intercom system
 - B) PLC System

3.04 PROJECT DELIVERABLES

- A. Provide a copy of all submittals and manuals and pamphlets.
- B. Provide a copy of all Warranty documents and contact numbers for Warranty requests.
- C. The contractor shall provide one set of full sized as-built prints. Provide a PDF of the as-built prints on the USB drives or via Email or Dropbox.

1. Provide a clean set of the latest drawings with red lines marked for all field changes or bulletins. See above for systems to be included on the As-Built prints
 2. Provide an AutoCAD file of the latest drawings that have been updated with ass as-built information. These drawings shall be generated from an AutoCAD file that is provided by the designer.
- D. The As-Built drawings shall include:
1. Changes to be reflected on the drawings for PLC shall include:
 - a. Changes to hardware installed at each door. Update each door for all devices installed and connected
 - b. Changes to the panel locations
 - c. Panel locations
 - d. PC locations
 - e. One-line connectivity
 - f. Changes to the schematic connectivity of any system shown on the drawings.
 2. Changes to be reflected on the drawings for Intercom shall include:
 - a. Intercom faceplate locations and labels.
 - b. Speaker and microphone locations.
 - c. Rack layout of all components in each rack.
 - d. Changes to the schematic connectivity of any system shown on the drawings.
 - e. Ceiling/wall mounted projector locations
 - f. Label designation of all cables, including system interconnection cables.
 3. Changes to be reflected on the drawings for Cabling Systems shall include:
 - a. Route of exterior conduits and exterior cabling
 - b. Route of backbone cabling, fiber and copper
 - c. Route of major cable paths from outlet to comm room.
 - d. Rack/cabinet locations.
 - e. Faceplate locations
 - f. Rack layout of all components in each rack.
 - g. Changes to the schematic connectivity of any system shown on the drawings.
 - h. Cable numbering for each faceplate.
- E. Documentation for the specific systems shall include. Provide the following for each system:
1. Contractor warranty dates based on Substantial completion date and contact information for warranty work.
 2. Data cabling
 - a. Testing Documentation for copper and fiber cabling
 - A) Include software to read the test results.
 - B) Testing Documentation; This shall include actual cable test results. Tabbed Sections in the binder:
 - 1) Telecommunication Horizontal Cabling Detailed cable test reports
 - 2) Telecommunications Fiber backbone cabling
 - 3) Summary report
 - b. Signed Cabling Warranty from manufacturer
 3. PLC System
 - a. Part list/diagram for each access control panel. To include
 - A) Panel name and IP address (if applicable)
 - B) Panel location. Building and room number
 - b. Diagram showing which devices and doors that are attached to each panel
 - c. Training "Cheat Sheet"
 - d. Server Warranty
 - e. Software Upgrade Protection (SUP) warranty including end date
 - f. Warranty certificate for all PC's
 4. Network Systems

State of Michigan
Department of Technology, Management and Budget
Design and Construction Division
Center For Forensic Psychiatry
Replace Security System Programmable Logic Controllers
File No: 491/23066.SDW
Funding Code No.: 171CODHHS7353

- a. Vendor created network diagram showing all switches and connectivity
- b. Create a floorplan based diagram showing all wireless access point location and names
- c. Spreadsheet detailing:
 - A) Switch manufacturer and part number
 - B) Switch name
 - C) IP address
 - D) WAP name and location
 - E) WAP IP Address
- d. Manufacturer Warranty
- F. Training sign-in sheets detailing what was trained, who was trained and their time in training.

END OF SECTION 28 7200

SECTION 28 7600 – TECHNOLOGY LABELING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. This section provides direction on labeling of cables and devices.

PART 2 - PRODUCTS

2.01 CABLE LABELING PRODUCTS INTERIOR

- A. CAT- 6, access control and audio / video cabling
1. Laser-printed, self-adhesive wrap around shall be Brady LAT-18-361 or equivalent.
 2. Label shall be 1.00-inch width x 1.33 inch high.
 3. Labels shall come on a sheet with 7 labels per row with a white and transparent matte finish.
 4. Sheet size shall be 8-1/2 inch x 11 inch.
 5. Printable area shall be a minimum of 1.00-inch width x 0.50 inch high.
 6. All labels shall be printed through a laser printer using labeling software.
 7. The Contractor shall submit a proposal for the labeling scheme for all audio and video wiring. The Engineer shall approve of the scheme prior to all labeling.
- B. Fiber Cable labeling.
1. Laser-printed, self-adhesive wrap around labels for and fiber cables in the comm rooms and ay the back of the patch panels shall be Brady LAT-19-361 or equivalent.
 - a. Label shall be 1.00-inch-wide x 3.167 inch high.
 - b. Labels shall come on a sheet with 7 labels per row with a white and transparent matte finish.
 - c. Sheet size shall be 8-1/2-inch x 11 inch.
 - d. Printable area shall be 1.00-inch-wide x 0.97 inch high.
 - e. All labels shall be printed through a laser printer using labeling software.
 - f. Install on fiber cable at the patch panel as it enters and at the coil of fiber on the wall or in the cable ladder
 2. Interior exposed fiber cable and fiber cable inside inner duct shall be labeled every 100 feet, label shall be Panduit No. PST-FO.
 - a. Label shall be covered with a clear laminate to protect the legend of the label.
 - b. Attachments for tie wraps shall be available on the label to attach it to the cable or inner duct.
- C. Faceplate Labels
1. Laser-printed, paper labels shall be used to label user faceplates.
 2. Individual paper labels shall be installed behind the clear plastic strips of all user faceplates and surface mount housings.
 - a. The labels shall show the location identifier number and letter of each individual cable.
 3. Where a faceplate or surface mount box does not have a clear plastic strip the contractor shall install an adhesive label on the plate or surface mount box showing the cable number of each cable in the plate.
- D. CAT-6 patch panels in comm rooms
1. Laser-printed, labels shall be used to label Cat-6 Patch panels
 2. Label the side of the patch panel for the panel number in the comm room. "Panel A" etc. label on two spot on each panel
 3. The panels shall be labeled 1-24. Use factory numbering or paper numbering if no factory numbering is provided.

2.02 NETWORK LABELING PRODUCTS

- A. Laser-printed, labels shall be used to label all Access Points and Ethernet Switches
- B. Ethernet switches
 - 1. Label the front panel or on patch panel just above the switch if there is no room on the face of the switch
 - 2. Label shall include the switch name and IP address
 - 3. Label shall be a minimum of 1/2 inch tall
 - 4. White label with black numbers

2.03 PLC PANEL LABELING

- A. Label the front of each access control panel to detail the doors that are connected to the panel.
 - 1. Label the front panel and detail each door number
 - 2. Label shall include the panel name and IP address
 - 3. Text shall be a minimum of 3/8 inch tall
 - 4. White label with black numbers

PART 3 - EXECUTION

3.01 PREPARATION

- A. Terminate all cables in proper color code sequence.
- B. Clean any surfaces where an adhesive label is to be installed.
- C. Prior to beginning the work, the contractor shall submit to the engineer a plan for labeling all the cables. This shall take into account to what components each cable is connected.

3.02 GENERAL LABELING

- A. Everything shall be labeled as per the specs and drawings.
- B. All labels shall be installed to more easily identify the cables and ports on all panels. If there are any questions regarding labeling, contact the Engineer prior to installation.
- C. Engraved lamacoid labels shall be provided and installed whenever there is no location for paper inserts on faceplates, power poles, poke thru's, floor boxes, modular furniture and surface raceway.
 - 1. Engraved lamacoid labels shall provide the same labeling as the paper inserts, but they shall be self-adhesive.
 - 2. These labels shall be adhered to the location closest to the modular jack.
 - 3. Individual letters shall be provided for each cable. An overall location identifier can be provided for all the cables at that faceplate or floor box.
 - 4. Engraved labels for rack shall be at least 1-1/2 inch high with letters 1 inch high.
 - 5. These labels shall be affixed to the top and front of each rack or cabinet. Verify that the label will fit the rack or cabinet prior to purchasing.

3.03 DATA CABLING LABELING EXECUTION

- A. Cable labels for CAT-6 user cables from the faceplate to the patch panel shall be installed within 4 inches of the end of the cable sheath.
 - 1. The location identifier is made up of 3 fields, and a sample might look like this:

A-X-YY

The A stands for the communications room where the cables are terminated.
The X represents that the Patch panel in that comm. room.

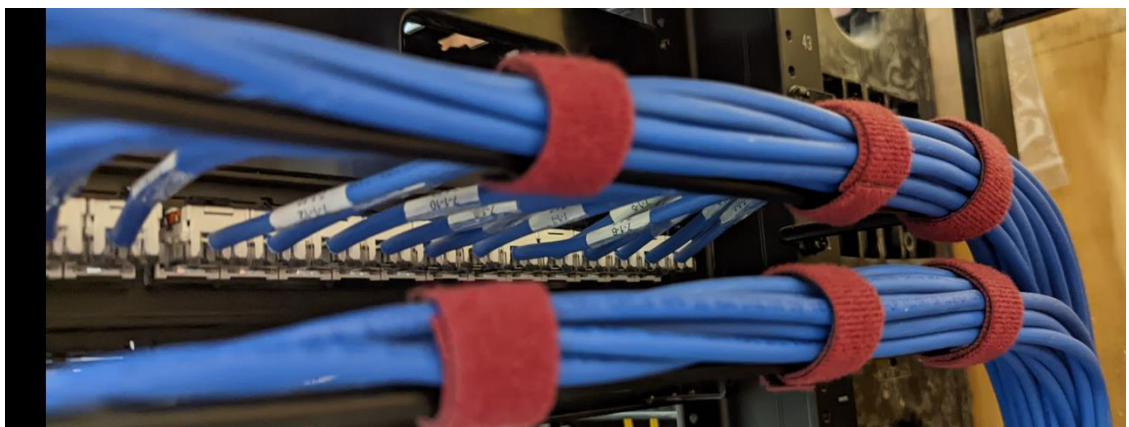
The YY represents the cables number in that panel 01-48.

This system of identification provides the Owner with an easy way to keep track of cables, and where they are located or terminated.

2. The cable label shall be similar to the label below:

A-X-YY
A-X-YY
A-X-YY

3. Provide a sample label to the Engineer for approval prior to installation of all labels.
4. Labels shall be installed at each end of each cable. Shall be within 4" of the termination.
5. Shall be at a uniform distance from termination on the patch panels. See pic below:





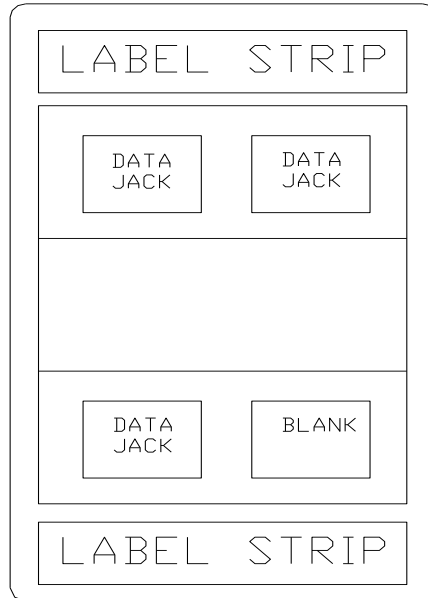
- B. Paper inserts shall be supplied for all faceplates and patch panels labels.
1. Paper inserts for the faceplate shall detail the exact location identifier for each cable.
 2. They shall fully cover the background of the insert space on the faceplate, but all numbers and letters of the identifier shall be visible after installation of the plastic cover plate.
 3. The paper insert for a standard faceplate will look like this:

A-2-24 A-2-5

Top Label Strip

A-2-26

Bottom Label Strip

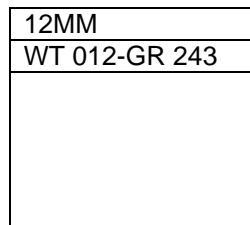


4. Provide a sample label to the Engineer for approval prior to installation of all labels.
- C. CAT-6 Patch panels shall be labeled for the panel they are numbered in the comm room and for the cameras (1-24 or 1-48)
1. See below diagram:
 - a. Install labels at each end detailing the panel number.

Panel A	01	02	03	04	05	06	07	08	09	10	11	Panel A

3.04 FIBER OPTIC CABLING LABELING EXECUTION

- A. Fiber optic cables shall have a wrap around label at each end that details the 2 buildings and/or closets where the cables terminate.
 1. A fiber cable with 12MM strands terminates in White Hall Room 012 and Green Hall Room 243. The wrap around label shall look like this:

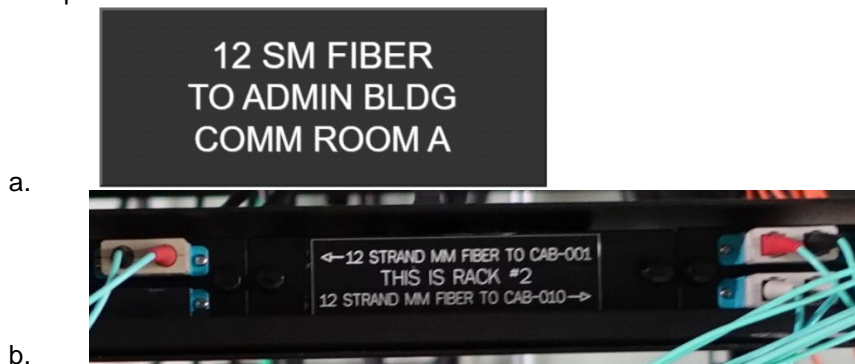


2. The wrap around labels shall be installed within 12 inches of the end of the sheath of the copper and fiber cables.
3. Provide a sample label to the Engineer for approval prior to installation of all labels.
- B. Label the fiber optic stowage ring with the information on the fiber cable
 1. Provide a laminated label in the center of the fiber optic stowage ring that details each fiber cable and its fiber type, strand count and far-end termination of each fiber cable.
- C. Fiber Panel labeling shall be done for the front of each fiber optic patch panel.
 1. The figure below demonstrates the layout of the fiber panel label. Each label shall be customized for each individual panel. The figure below is for the 72 port panel.
 2. Contact the Engineer with questions on the correct labeling prior to installation.

12 SM TO HIGH SCHOOL						12 MM TO COMM RM "B"						12 SM TO COMM RM "C"					
01	03	05	07	09	11	01	03	05	07	09	11	01	03	05	07	09	11
02	04	06	08	10	12	02	04	06	08	10	12	02	04	06	08	10	12

Figure A – Label for 36 Port Fiber Patch Panel

- D. Fiber panel labeling shall be completed with an engraved plastic labels.
 1. Labels shall detail the fiber type, quantity of strand and far end termination building and comm room
 2. Sample:



3.05 PLC CABLE AND DEVICE LABELING

- A. PLC Panels shall be labeled on the outside to indicate panel number and communications room number

Security panel	IP address 111.111.10.112
Panel 04	Comm room XXX

1. Install a label on the inside of the panel that details:
 - a. Door numbers that are connected to this panel
 - b. Diagram of panel showing where each door is connected to the panel.
 - c. Panel name as shown in the access control system
 - d. IP address of the panel
- B. PLC cables shall be labeled.

1. The cables at the panels shall be labeled where they connect to the device to which it connects.
2. Cable labels shall be installed within 3 inches of the end of the cable sheath.
 - a. The cable label shall be similar to the label below:

125A-DC
125A-DC
125A-DC

- b. Provide a sample label to the Engineer for approval prior to installation of all labels.

125A-DC

The 125A stands for the Door Number.

The DC stands for Door Contact. This could be any of the field devices: RX,ES, EL, MX, KP etc.

3.06 NETWORK SYSTEMS CABLE LABELING

A. Ethernet Switches

1. Each switch installed shall be equipped with a label on the side or top that includes:
 - a. Switch name as shown in the management platform
 - b. IP address
 - c. Date of install
 - d. Name of installing company
2. Ethernet switch label shall look like the following:
 - a. Adhere to the front/back or top of each switch. Label location shall be consistent throughout the network.

Lenawee ISD	Install: 2/15/2015
IP: 10.10.25.258	Contractor name here

3. Install a separate label on the front of each switch that includes the name of the switch and the switch IP address

END OF SECTION 28 7600

SECTION 28 7700 – TECHNOLOGY TESTING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. This section provides direction on
 1. Testing of copper and fiber cable,
 2. Testing and commissioning of the technology systems

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Approved vendors for cable testers are:
 1. Fluke or equal

2.02 TESTING PRODUCTS

- A. Category 6 cable shall be tested.
 1. Cable tester shall support Cat 6 channel and permanent link certification.
 2. Tester shall provide accuracy beyond TIA level III requirements traceable to laboratory reference standards.
 3. Through add on fiber optic probes, the tester shall be able to test multimode and single mode fiber cable.
 4. Test results shall be able to be stored on internal or removable compact flash memory cards.
 5. Tester shall have optional talk set for discussions over the cable being tested.
 6. Tester shall support a frequency range of 1-350 MHz with accuracy to the current proposed TIA Level III.
 7. Tester shall support the following tests:
 - a. Near end crosstalk (NEXT).
 - b. Attenuation.
 - c. Equal level far end crosstalk (ELFEXT).
 - d. Return loss.
 - e. Ambient noise.
 - f. Wire map shall identify miswires, shorts, opens, reversals, and split pairs.
 - g. Shall measure cable length and distance to faults (if any).
 - h. Propagation delay.
 - i. Loop resistance.
 8. Tester shall support the following test standards:
 - a. TIA Cat 6 and ISO Class E.
 - b. TIA Cat 5.
 - c. TIA TSB-95.
 - d. TIA Cat 3, 4 and 5 per TIA TSB-67.
 - e. UTP, STP, SFTP coaxial and twinax cabling.
 - f. IEEE: all Ethernet 802.3UTP and fiber PMD interfaces including 1000BASE-T; other 802.x PMD interfaces including token ring and demand priority.
 - g. ATM: All UTP and fiber PMD interfaces.
 9. Tester shall have all required probes and accessories required to perform CAT-6 tests and "Network Tests."

10. Tester shall have been recently calibrated (within 4 months), and shall be utilizing the latest software.
 - B. Fiber Optic Tester:
 1. Fiber cable shall be tested with a light power meter.
 - a. Multimode at 850nm and 1300nm, and single mode at 1310nm and 1550nm shall be tested by the light meter.
 - b. Power meter testing shall have a range of +20 dBm.
 - c. Testing at both wavelengths shall appear on the readout at one time for both multimode and single mode.
 - d. All connector types shall be available for testing.
 - e. Resolution of testing shall be to 1 foot.
 2. All fibers shall be tested prior to any splice (other than pigtails) being closed and secured.
- 2.03 PUNCHLIST PROCESS
- A. The contractor shall be required to go through a punchlist process prior to substantial completion and final completion/payment of each project
 - B. Contractor shall be responsible for reviewing their own work and checking to ensure it has met the project requirements.
 - C. The contractor shall:
 1. Review your work in each room
 2. Review the specifications and drawing and review their work to ensure it meets requirements
 3. Create a punchlist document showing what work is not yet done and what as-builts are yet to be completed. Send document to designer.
 - a. Provide a date when contractor punchlist work will be completed.
 4. Schedule a punchlist and substantial completion meeting with designer.
 5. Present updated punchlist document to the owner
 6. Walk the site with the contractor and demonstrate all systems and review the work completed. Demonstrate how all work is completed
 - D. Designer will create an "Owner Punchlist" document
 1. This will be provided to the contractor
 2. Contractor shall review the list, fix/upgrade/replace all equipment and cabling and finish work on the punchlist
 3. Return punchlist to the designer showing when the work was fixed/completed and a signature on the sheet showing that the contractor has reviewed each item.
 - E. Meet onsite with the designer to review the finished work.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Testing shall be completed after fiber is installed inside the fiber patch panel and the fiber panel has been put together.
- B. All cables and panels where cables terminate shall be labeled with the cable label or name of each individual cable. Identify how each cable and panel will be labeled.

3.02 CATEGORY UTP/STP CABLE TESTING

- A. Cable tests for CAT 6 cables shall be provided for each user CAT-6 cable.

1. Prior to beginning the testing, the Contractor shall provide the Engineer with a notice that testing will begin. Written notice shall be given at least 3 business days prior to testing beginning.
2. Tester shall be calibrated each day with manufacturer provided calibration cable.
3. Tests shall be saved under each cables unique location identifier.
4. Contractor shall provide the correct cables and probes specifically for the cable and modular jacks that are being tested.
5. During the test the tester shall be set to check all "Network Tests."
6. Test results shall be provided in hard copy and soft copy. Along with the soft copy, provide a copy of the software required to read the test results.
7. Contractor shall supply 2 copies of the paper results and 2 copies of the file results.
8. Provide all paper results in 3-ring binders. Binders shall have a cover that shows the job name, job number, building and closet where the cables were tested, and the range in the location identifiers of the cables tests provided.
9. Tester shall be set to match the cable being tested.
10. Contractor is responsible for ensuring that all cables pass the tests. Any cable found not to pass shall be removed and replaced at the Contractor's expense.

3.03 FIBER CABLE TESTING

- A. Fiber cable shall be tested with a light meter for end-to-end tests.
1. Prior to beginning the testing, the Contractor shall provide the Engineer with a notice that testing will begin. Written notice shall be given at least 1 week prior to testing beginning.
 2. Light meter tester shall be calibrated at the beginning of each day.
 3. Light meter test results shall be provided in a spreadsheet format.
 4. Contractor shall supply 2 copies of the paper results and 2 copies of the file results.
 5. Provide all paper results in 3-ring binders. Binders shall have a cover that shows the job name, job number, building and closet where the cables were tested, and the range in the location identifiers of the cables tests provided. Test reports shall include the following information for each cabling element tested:
 - a. Actual measured and maximum allowable attenuation (loss) at the specified wavelengths per Part 2, Section 3 and the margin. An individual test that fails the link criteria shall be marked as FAIL.
 - b. Reference method.
 - c. Number of mated connectors and number of splices (if any).
 - d. Actual length and maximum allowable length per Part 2, Section 3. Any individual test that fails the link length criteria shall be marked as FAIL.
 - e. Group refractive index (GRI) for the type of fiber tested, if length was optically measured.
 - f. Tester manufacturer, model, serial number, and software version.
 - g. Circuit ID number and project/job name.
 - h. Link criteria (autotest) used.
 - i. Overall pass/fail indication.
 - j. Date and time of test.
 6. Contractor shall test all user fiber cables to the following limits:
 - a. Link attenuation shall be tested in accordance with ANSI/TIA/EIA-526-14A. Reference measurements shall be made in accordance with Method B or equivalent
 - b. Multimode loss shall be no more than .6dB per mated connector and shall be no more than 3dB/km at 850nm and 1dB/km at 1300 nm.
 - c. Singlemode loss shall be no more than .6dB per mated connector and shall be no more than .5dB/km at 1310 nm and .4dB at 1550 nm.

- d. If the measured loss is above the limits, the Contractor shall take action to fix the cables and get the tests to be below the loss limits.
7. Contractor is responsible for ensuring that all cables pass the tests. Any cable found not to pass shall be removed and replaced at the Contractor's expense.
8. Testing shall be of the optical link. An optical fiber link is defined as the passive cabling network between 2 optical cross connects (patch panels or outlets). This includes cable, connectors, and splices but does not include active components. The link test contains the representative connector loss at the patch panel associated with the mating of patch cords but does not include the performance of the connector at the equipment interface.

3.04 PLC SYSTEM, COMMISSIONING

- A. After all Work is completed, and prior to requesting the Acceptance test, Contractor shall conduct a final inspection, and pre-test all equipment and system features. Contractor shall correct any deficiencies discovered as the result of the inspection and pre-test.
- B. Contractor shall submit a request for the Acceptance test in writing to the owner no less than fourteen days prior to the requested test date. The request for Acceptance test shall be accompanied by a certification from Contractor that all Work is complete and has been pre-tested, and that all corrections have been made.
- C. During Acceptance test, Contractor shall demonstrate all equipment and system features to the owner. Contractor shall remove covers, open wiring connections, operate equipment, and perform other reasonable work as requested by the owner.
- D. If the contractor has submitted all necessary paperwork and the system seems to be in working order according to the engineer then the system can be considered Substantially Complete after the engineer puts that in writing.
- E. Security System Substantial Completion.
 1. The PLC system shall be considered substantially complete as soon as:
 - a. All PLC Controls are connected via the network.
 - b. All controlled devices are connected and configured in the system and are working as required.
 - c. All devices are connected and have been tested and shown to be fully functional. All cables are labeled at each end.
 - d. Intercoms are functioning and able to release lock on a door.
 - e. All users are entered into the system and able to log on.
 - f. All locking and unlocking schedules are defined and are working.
 - g. User accounts are setup
 - h. As-built drawings have been updated to reflect any changes in the connectivity.
 - i. All manufacturer literature has been turned over to the Owner.
 - j. Maps are setup and populated in the system.
 - k. Training has been completed.
 - l. Copy of the system configuration has been provided to the owner via a CD or thumb drive.
 2. The contractor shall schedule a substantial completion meeting where all PLC systems shall be demonstrated and shown to be in working order and configured as per the specs and the owner's requirements.
 - a. If the system is deemed to be in working order then the engineer shall sign a letter stating that the systems are Substantially Complete. The system is not Substantially Complete until a letter is provided to the contractor and owner.
 3. After substantial completion the systems shall be in good working order for a period of 30 days.

- a. In the event that the system or systems should fail or not work as required during the 30-day period, the Contractor shall be on site the same day to fix and configure the system to make it work as designed.
 - b. A new 30-day period will begin as soon as the system has been demonstrated to be in good working order and the engineer acknowledges in writing that the system has been fixed and is again considered substantially complete.
4. Once the system has been considered Substantially Complete and has been working for 30 consecutive days with no interruption in service, the system shall be thought of as "Finally Complete."
 5. Warranty shall begin immediately after the system is deemed Finally Complete.

PART 4 - EXECUTION DATA NETWORK

4.01 DATA NETWORK PREPARATION

- A. There shall be two stages to the testing of the data system. The first consists of testing during the configuration and before cutover. The second is the full system testing completed after cutover.
- B. All patch cables used for interconnection of the data network in the communications room(s) shall be installed by the Contractor.
- C. The Contractor shall work with the owner prior to the system configuration to determine how the data network will be configured.
 1. The Contractor shall present all of the options on configuration of the system to the Owner. The Owner will then be able to decide how the data network shall function. The Contractor shall also include recommendations on configuration of the data and wireless network.
 2. These decisions and configuration notes shall be finally presented in a document presented by the Contractor.
 3. The letter shall finally list all the features and systems and how they are to be configured. The Contractor shall work off of this list when doing the configuration.

4.02 TESTING DURING CONFIGURATION –DATA NETWORK

- A. During the configuration, the Contractor shall be testing components as they are configured.
 1. The Owner's representative shall be able to be involved in the configuration to gain knowledge on the make-up and configuration of all components of the network.
 2. Each option and protocol required to be passed through the network shall be shown to work prior to cutover.
- B. The Owner and Engineer shall be present to witness that the data system works prior to cutover.
 1. The Contractor shall schedule a check out meeting with the Owner and Engineer a minimum of (1) week prior to the cutover to the new system.
 2. This meeting is the opportunity for the Contractor to demonstrate that the data network passes signals and will serve all of the users as decided at the earlier configuration meetings.
 3. The Contractor shall present a check-off sheet that lists all of the features and functionality required by the Owner.
 4. During the check-out meeting the Contractor shall demonstrate that each system works as configured and as wanted by the Owner.
 5. Only after the Owner and Engineer have decided that the system is working as per the specifications and the Owner's requirements will the cutover be allowed to occur.

4.03 CUTOVER TESTING–DATA NETWORK

- A. During the cutover the Contractor shall test the system to make sure it is working as designed.
 1. Ensure connectivity between wide area connections, where applicable.

2. Once patch cables are installed, the contractor shall test that user PC's can be connected to the network and access all files, applications and the Internet.
3. As users begin to be added, the contractor shall test and ensure that they are able to connect to any local servers, remote servers and the internet.

4.04 POST-CUTOVER TESTING–DATA NETWORK

- A. The Contractor shall schedule a "Substantial Completion" meeting after cutover where all of the features of the entire data communications system shall be demonstrated.
 1. This meeting shall be scheduled for a time when the system has been cutover, is working correctly and is under full usage load.
 2. Prior to the meeting, the Contractor shall provide a checklist of all the features and components of the data system. This checklist will contain all the items required to be working for signoff to occur.
 3. Provide the list to the Engineer for review prior to scheduling the meeting. The Engineer will review the checklist and make sure all components of the system are being reviewed.
 4. Once the list is reviewed and approved by the Engineer, the "Substantial Completion" meeting can be scheduled.
 5. During the "Substantial Completion" meeting, each item on the checklist shall be demonstrated to work as it was intended.
 6. If, at the end of the meeting, the Engineer and Owner sign the checklist, then the installation will be "Substantially Complete."
- B. After Substantial Completion there shall be a 30 day acceptance period. The acceptance period shall be used to show that the system functions under a full load and provides reliable communications services. The acceptance period cannot begin until the data network is being used under full load.
 1. After the Completion of the Acceptance Period, the installation will be deemed complete, and the warranty period can begin.
 2. During the acceptance period, the data network and all of its components shall work, without interruption, as it was designed and configured.
 3. If there is an outage or interruption in service due to a malfunction or misconfiguration of the system, the 30 day acceptance period shall begin again after the malfunction or configuration has been shown to be completely repaired.
- C. During the 30 day acceptance period, the Contractor shall provide the as-built documentation regarding the data network and all its interconnections. The as-built documentation shall include:
 1. Spreadsheet listing all components, part numbers, serial numbers, IP addresses, VLANS and location of the equipment installed.
 2. As-built drawings of the connectivity of different system elements, detailing which cables are used to interconnect the different items.
 3. As-built drawings of the rack layouts.
 4. Configuration details of the system.
 5. All manuals and guides concerning the system.
- D. After the acceptance period has passed with no outages or interruptions, and the as-built documentation is provided, the system shall be deemed finally complete.
 1. As Final Completion is signed, the warranty period begins.
 2. The Owner and Engineer shall sign the notice of "Final Completion."

END OF SECTION 28 7700

SECTION 28 7750 – TECHNOLOGY TRAINING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section includes directions for the Contractor regarding training for technology and security systems.

1.02 SYSTEM DESCRIPTION

- A. The Contractor shall provide training on all the installed systems.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 GENERAL TRAINING REQUIREMENTS

- A. The Contractor shall provide training on all systems installed or upgraded as part of the contract.
 - 1. The Contractor shall involve the personnel from the Owner's office in the implementation and configuration of the systems.
 - 2. Prior to the cutover of the system, the Contractor shall work with the Owner on the training that will be provided. The Owner and the Contractor shall schedule the training at a time beneficial to both.
 - 3. Each system is to have training provided as part of the installation.
 - 4. Each training session shall include.
 - a. This training will give an overview of the capabilities of each system, and the methods to be employed in utilizing the system.
 - b. The Contractor shall provide a syllabus detailing what will be discussed at the training, and notes for the Owner to refer to during the life of the system. The notes shall list directions for general use of the system and possible fixes to general issues that could occur.
 - c. Training shall include as-built diagrams of the connectivity, a walk-thru of the system, a demonstration of actual user interface with the system, and directions on its general use.
 - d. This training is only meant to give an overview of each system. In depth training shall be provided for an in-depth analysis of certain systems as described below.
 - 5. For all training, the Contractor shall pay all expenses.
- B. Create cheat sheets for all systems that the users can keep after the training.
 - 1. Cheat sheet shall include details on how to use the system.
 - 2. A copy of the cheat sheet shall be laminated and installed at the system location.
 - 3. For individual training the contractor shall provide a cheat sheet for each person being trained.
 - 4. Cheat sheet shall be laminated.
 - 5. Provide a cheat sheet in each classroom or conference room.

6. Submit these for approval to the designer and owner prior to training. Have the cheat sheets at the training.

3.02 PLC SYSTEM TRAINING

- A. The Contractor shall provide training as part of this contract
 1. The Contractor shall involve the personnel from the Owner's office in the implementation and configuration of the access control system.
 2. Prior to the cutover of the systems, the Contractor shall work with the Owner on the training that will be provided. The Owner and the Contractor shall schedule the training at a time beneficial to both.
 3. The training shall include two separate training tracks:
 - a. Configuration Training of the Administrators of the Video security system
 - b. General user Training
 4. Contractor shall be at each site four (4) separate times to train and updated users at each building. These will be scheduled as detailed below;
 5. Training class shall be on-site utilizing the actual equipment installed as part of the system and a PC connected to the existing data network. Coordinate with the Owner's IT department on setting up the user interfaces.
 6. Training shall include all travel and other expenses.
- B. Configuration Training: Access Control and Video Security
 1. A minimum of 16 hours of training shall be provided on the configuration of the PLC system to minimum of 4 of the Owner's representatives.
 - a. This training will give an overview of the capabilities of the systems, and the methods to be employed in utilizing the systems.
 - b. The Contractor shall provide a syllabus detailing what will be discussed at the training, and notes for the Owner to refer to during the life of the systems. The notes shall list directions for general use of the system and possible fixes to general issues that could occur.
 - c. PLC Training shall include but not limited to:
 - A) As-built diagrams of the connectivity.
 - B) A demonstration of actual user interface with the system, and directions on its general use.
 - C) Setting locking and unlocking schedules for each building.
 - D) Adding users and removing users as administrators and as employees.
 - E) Setting alarms and time schedules for buildings to be alarmed.
 - F) Responding to alarms and clearing the system of faults.
 - G) Responding to intercom calls and locking/unlocking doors
 - H) Identifying the physical location of a PLC panels.
 - I) Adding and changing parameters and icons on the maps.
 - J) Setting integration of the video security and access control.
 - d. The training shall be provided on the schedule below.
 - A) Training 1. Shall occur during configuration and installation prior to substantial completion. This shall be a formal training class that will detail the system and how it works.
 - B) Training 2. To take place approximately 3 weeks after substantial completion. This shall be a formal class to review how the system works and allow the owner to ask questions and the contractor shall be available to make changes and discuss implementation questions.
 - C) Training 3. Training one month after Final Completion. This shall be an update to the training and shall review the owners list of questions and concerns. Work with the owner prior to the class to identify specific items that should be included in the training.

- D) Training 4. Training shall occur three months after Final Completion. This shall be an opportunity for the contractor to update any software and shall include training on any procedures the owner feels they need more information on.
 - E) The owner shall be able to specify what is to be covered at each training session. This may require that the contractor review current settings or change settings on the system while demonstrating how this can be done.
- C. General User training:
- 1. This training shall be for users of the system.
 - 2. The goal of the training is to allow the users to become familiar on the user software. They shall be able to set up their own interface screen and shall be able to view live and stored video and control the locking/unlocking of doors.
 - 3. A minimum of 40 hours shall be provided for training. This shall be open to no less than fifteen users at the site. This training is designed to allow the owner and their staff to fully review the PLC system
 - a. PLC Training shall include but not limited to:
 - A) As-built diagrams of the connectivity.
 - B) A demonstration of actual user interface with the system, and directions on its general use.
 - C) Setting locking and unlocking schedules for each building.
 - D) Responding to alarms and clearing the system of faults.
 - b. Thoroughly review the use of the remote viewing software and how each user can individually set up their screen to review the cameras they want to view.
 - A) Training 1. Shall occur during configuration and installation prior to substantial completion. This shall be a formal training class that will detail the system and how it works.
 - B) Training 2. To take place approximately 3 weeks after substantial completion. This shall be a training class that will allow the owner to ask questions about the system and have the contractor fix/implement items that were not understood or yet used.
 - C) Training 3. Training one month after Final Completion. This shall be an update to the training and shall review the owners list of questions and concerns. Be prepared to make changes to schedules and camera views during this training session.
 - D) Training 4. Training shall occur three months after Final Completion. This shall be an opportunity for the contractor to update any software and shall include training on any procedures the owner feels they need more information on.
 - E) The owner shall be able to specify what is to be covered at each training session. This may require that the contractor review current settings or change settings on the system while demonstrating how this can be done.

END OF SECTION 28 7500

SECTION 28 7800 – TECHNOLOGY WARRANTY

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section includes directions for the Contractor regarding system and equipment warranties.

1.02 SYSTEM DESCRIPTION

- A. The project is not complete until all paperwork has been provided.

1.03 COORDINATION

- A. Coordinate as-built drawings and records with the Engineer and Owner.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Provide manufacturer's warranty for all equipment installed
- B. Provide contractor warranty for workmanship and equipment
- C. Provide software upgrade protection (SUP) warranty as detailed in the specifications.

2.02 MATERIALS

- A. The Contractor shall provide the following to the owner/designer at Substantial Completion and any updates prior to the issuance of the final payment
 1. Manuals and pamphlets on all electronic equipment.
 2. All spare parts and cover plates for all components of the network.
 3. Red lined set of as-built drawings for the entire project.
- B. Updated hard copy and soft copy of the As-Built Documentation. See associated spec section.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Contractor shall fully examine all components of the system to make sure that all manuals and paperwork are included in the final submittal.
- B. Examine all equipment and cabling to ensure that it is labeled as per the drawings and specifications.

3.02 GENERAL WARRANTY

- A. Warranty Period shall be 1 year after a signed copy of Substantial Completion. This shall be the Warranty Period.
- B. See further specifications for additional warranty requirements that may be longer for certain systems.
 1. Contractor shall be responsible for generating and submitting the Substantial Completion document to the designer for review and signature.

- C. Warranty shall include each and every part, cable or software system provided as part of this project. This includes cabling, PLC and Intercom systems.
 - 1. During the Warranty Period:
 - a. If any part is broken due to a manufacturing defect or installation defect, the Contractor shall fix and/or replace the broken item at their own expense.
 - b. If any equipment loses connectivity or fails for any reason the contractor shall be onsite to diagnose and fix or replace equipment and upgrades software.
 - c. The Contractor shall also supply all configuration and programming necessary to keep all electronic equipment to the latest revision of software during the warranty period.
 - d. If the "system" goes down, and needs configuration to be brought back up, the Contractor shall be liable for any programming or reconfiguration.
 - e. During the warranty period, the Contractor shall make the Owner aware of any software upgrades that are available.
 - f. Contractor shall install all software upgrades for that warranty period or as detailed below for specific systems.
 - g. If the system does not run well during the warranty period the contractor shall be onsite to diagnose and fix the system.
- D. The contractor shall be onsite within 24 hours after a call from the owner or designer regarding system or equipment issues.

3.03 EXTENDED CABLING WARRANTY

- A. The Contractor shall provide to the Owner a "Link Warranty" on all the components of the voice/data cabling system. This includes all components from the faceplate, through the jacks, cable, and back to the patch panels, not including patch cords.
 - 1. This shall include Fiber Optic cabling and termination equipment.
- B. Cable shall be installed that is covered as part of the complete warranty on the data cabling system. Cable that cannot be covered under the warranty shall not be installed.
- C. The warranty shall be provided through the manufacturer of the faceplate, jacks, and patch panels. All components shall be by the same manufacturer.
- D. The warranty shall guarantee that if any part or piece of the "Link" is found to be defective for a period of no less than 15 years, then that part or piece shall be replaced or fixed at no cost to the Owner.
- E. The Contractor shall be responsible for installing the system in such a manner that the manufacturer will provide this warranty to the Owner.
- F. The Contractor is responsible for compiling and submitting all the paperwork required to receive the warranty. This includes gathering all the information, completing any required forms, and submitting these forms and any other records to the manufacturer as required.
- G. It shall be the Contractor's responsibility to receive the approved warranty notification from the manufacturer and provide that and all the associated paperwork to the Owner.
- H. The installation shall not be considered finally complete until the Owner has received notification, from the manufacturer, that the entire cabling system is covered by their warranty

3.04 SERVER WARRANTY

- A. Each Server that is provided as part of this project shall be provided with a three-year (3) next day replacement warranty.
 - 1. The warranty shall include that the contractor be onsite and replace the server and any software required.
 - 2. Coordinate with the manufacturer to facilitate the server replacement.
 - 3. Re-install the server and connect to the network.
 - 4. Re-implement the existing owner's software and configure based on the final initial implementation.

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Design and Construction Division
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Replace Security System Programmable Logic Controllers
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5. Keep a copy of the original configuration of the system to allow easy implementation of the new server.

3.05 PLC CONTROL SOFTWARE WARRANTY

- A. As part of the project the contractor shall provide a three-year (3) PLC system software warranty that provides for all software updates during the years after Substantial Completion.
 1. Contractor shall be required to install all software and firmware updates during the three years.

END OF SECTION 28 7800