



**CONTRACT DOCUMENTS**

**MONTIBELLER PARK**

**PHASE 2 IMPROVEMENTS  
(LWCF GRANT NO.: 26-01847)**

**&**

**PHASE 3: RESTROOM BUILDING  
RENOVATION**

**SITE LOCATION:  
4305 ELLSWORTH ROAD  
YPSILANTI, MI 48197**

**OWNER/GRANTEE:  
PITTSFIELD CHARTER TOWNSHIP**

**PRIME PROFESSIONAL:  
STANTEC CONSULTING MICHIGAN INC.**

**FEBRUARY 2023**



**CONTRACT DOCUMENTS  
FOR THE  
MONTIBELLER PARK  
PHASE 2 IMPROVEMENTS  
&  
PHASE 3 RESTROOM BUILDING RENOVATION**

**PITTSFIELD CHARTER TOWNSHIP**



FEBRUARY 2023

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PITTSFIELD CHARTER TOWNSHIP**

**MONTIBELLER PARK PHASE 3 RESTROOM BUILDING RENOVATION  
PITTSFIELD CHARTER TOWNSHIP**

Specific numbers and titles are as follows:

**PHASE 2**

<u>DRAWING</u>	<u>SHEET</u>	<u>TITLE</u>
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G002	02	General Notes, Legend, Symbols and Abbreviations
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**PHASE 3**

<u>DRAWING</u>	<u>TITLE</u>
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C002	Overall Proposed Site Plan
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PART III

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E601	Electrical One-Line Diagram and Schedules



## ADVERTISEMENT FOR PROPOSALS

**PROJECT:** MONTIBELLER PARK PHASE 2 IMPROVEMENTS & PHASE 3 RESTROOM BUILDING RENOVATION

**BIDS OPENING DATE:** Thursday, March 16, 2023 at 10:00 AM, local time

**OWNER:** Pittsfield Charter Township, 6201 W. Michigan Avenue, Ann Arbor, Michigan 48108

**LOCATION/NAME:** Montibeller Park, 4305 Ellsworth Rd, Ypsilanti, MI 48197

**BRIEF DESCRIPTION (PHASE 2):** Work under this Contract consists of site work at Montibeller Park in Pittsfield Township. It will include gravel resurfacing and drainage improvements to the East parking lot, resurfacing of the East tennis court, construction of aggregate path throughout the park, construction of sidewalk connecting tennis court and baseball fields, pickleball court, installation of LED solar bollards, and detention basin and storm outlet improvements. Alternate site work items include the improvements to the West parking lot, the construction of an arrival point plaza by the west parking lot, welcome plaza by the existing shelter, baseball field renovations, installation of timber steps and railing connecting to the East parking lot, 6-ft wide aggregate path, and demolition of the existing West tennis court pavement and fencing.

**BRIEF DESCRIPTION (PHASE 3):** Work under this Contract consists of the renovation of the existing restroom building at Montibeller Park in Pittsfield Township. The renovation is to bring the restroom up to the ADA Compliance. The work includes the reconfiguration of the restroom entrances, including removing and replacing the wood ceiling, removing and replacing an interior CMU partition wall, new exterior CMU and brick wall, new concrete footings, new concrete slabs, and new hollow metal doors; removal and replacement of light fixtures; installation of recessed hand dryers; removal and replacement of plumbing fixtures; and removal and replacement of restroom accessories, including toilet partitions, grab bars, baby changing stations, signage, lavatory mirrors.

**\*NOTE:** Bidders are encouraged to bid Phase 2 only, Phase 3 only, or both Phases.

**LOCATION OF BID OPENING:** Pittsfield Township, Clerk's Office, 6201 West Michigan Avenue, Ann Arbor, Michigan 48108

### **SPECIAL INSTRUCTIONS:**

**MANDATORY PRE-BID WALKTHROUGH:** No pre-bid walkthrough will be scheduled at this time.

**QUESTIONS:** Any questions regarding the project shall be brought to the attention of Cassandra Wagner at Stantec Consulting Michigan Inc., in writing at [Cassandra.Wagner@stantec.com](mailto:Cassandra.Wagner@stantec.com). Questions by telephone calls are prohibited. Questions will not be accepted if received less than seven (7) calendar days before the bids are due.

**PROPOSAL SUBMITTAL:** All bids shall be submitted in a sealed envelope and shall contain, as a minimum, all of the following: Bidder's Qualification and Experience Statement (QES-1-4), Proposal (P-1-3), Designation of Major Subcontractors and Suppliers (MS-1), Certification Regarding Debarment, Suspension, and other Responsibility Matters (DS-1), Legal Status of



Bidder (LS-1), Bid Certification (BC-1). In addition to the submittal of the original proposal (P-1-3), the CONTRACTOR will also submit two (2) copies of the proposal (P-1-4).

**BID SECURITY:** Each Proposal shall be accompanied by a cashier's check, certified check, money order or bid bond, payable to the OWNER, in an amount not less than five percent (5%) of the amount of the Proposal, as a Bid Security. The Bid Security of the Bidders under consideration will be returned after approval of the Contract by the OWNER. All others will be returned after the Proposal opening.

**CONTRACT SECURITY:** The successful Bidder will be required to furnish a satisfactory Performance Bond and Labor and Material Bond, each in the amount of One Hundred Percent (100%) of the Contract.

**MDOT PRE-QUALIFICATION:** The following CONTRACTOR MDOT pre-qualification is required for this project: N/A

**PROPOSAL WITHDRAWAL:** Withdrawal of any Proposal is prohibited for a period of 90 days after the actual date of the opening thereof.

**OWNER'S RIGHTS:** The OWNER reserves the right to accept any Proposal, to reject any or all Proposals, and to waive any irregularities in any Proposal, in the interest of the OWNER.

**NON-DISCRIMINATION:** The CONTRACTOR and all subcontractors must comply with all requirements of 1976 PA 453 (Elliott-14 IC1912 (Rev. 10/18/2021) Larsen Civil Rights Act), the 1976 PA 220 (Persons with Disabilities Civil Rights Act), and Executive Directive 2019-09, as amended. In accordance with these laws, all contracts the OWNER enters into must contain a covenant by the CONTRACTOR and any subcontractors not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, partisan considerations, or a disability or genetic information that is unrelated to the individual's ability to perform the duties of a particular job or position.

**FUNDING (PHASE 2):** The project is funded by the Land and Water Conservation Fund and all relevant federal requirements apply to the project, including Build America, Buy America requirements.

**DBE REQUIREMENTS (PHASE 2):** In accordance with 43 CFR Subtitle A, Subpart C, the CONTRACTOR must take all necessary affirmative steps to assure that disadvantaged business enterprises, such as minority firms, women's business enterprises and labor surplus area firms are used when possible when contracting with subcontractors.

## **HOW TO OBTAIN:**

The project bid documents can only be obtained electronically from the office of the ENGINEER, by emailing a request to Sheri Winkler at [Sheri.Winkler@stantec.com](mailto:Sheri.Winkler@stantec.com) AND Caitlin Marz at [Caitlin.Marz@stantec.com](mailto:Caitlin.Marz@stantec.com). A non-refundable payment of \$50.00, CHECK ONLY, payable to "Stantec Consulting Michigan Inc." will be required to obtain the electronic link. All checks should be mailed to 1168 Oak Valley Drive Suite 100, Ann Arbor, MI 48108 **(NOTE NEW ADDRESS)**. Document requests shall indicate whether request is by: Prospective Bidder, Prospective Subcontractor, Prospective Supplier, or other.



**NOTE:** The Bidder is advised that to submit a bid on this project, the Bidder shall purchase a set of Plans and Specifications from the ENGINEER and be a registered Plan Holder.

**AVAILABLE AFTER:** Tuesday, February 21, 2023 after 1:00 PM, local time

**DOCUMENT FEES:** Non-refundable Fee – \$50.00 for Electronic Link

**CONTACT NAME:** Cassandra Wagner (Stantec)

**CONTACT EMAIL:** [Cassandra.Wagner@stantec.com](mailto:Cassandra.Wagner@stantec.com)

**The following requirements are required:**

**APPLICABLE WAGE RATES:** Pittsfield Living Wage

**MISCELLANEOUS:** Must have 5-years, minimum, experience with similar projects.



## **INSTRUCTIONS TO BIDDERS**

**I.B.**

### **PROPOSALS**

Each Proposal shall be made on a form prepared therefore by the ENGINEER and included as one of the Contract Documents and shall be submitted in a sealed envelope bound together with the other Contract Documents except the Plans, bearing the title of the Project and the name of the Bidder.

### **DELIVERY OF PROPOSALS**

Proposals shall be delivered by the time and to the place stipulated in the Advertisement for Proposals. It is the sole responsibility of the Bidder to see that his Proposal is received in proper time. Any Proposal received after the bid date and time specified in the Advertisement shall be returned to the Bidder unopened.

### **OPENING**

Proposals will be opened and publicly read aloud at the time and place set forth in the Advertisement.

### **WITHDRAWAL BEFORE OPENING**

Any Bidder may withdraw his Proposal, either personally or by telegraph or written request, at any time prior to the scheduled time for Opening of Proposals.

### **DISCREPANCIES**

In case of a difference between the stipulated amounts in the Proposal written in words and the stipulated amounts written in figures, the stipulated amounts written in words shall govern.

### **MODIFICATIONS**

Proposals shall not contain any recapitulations of the work to be done. Alternate proposals will not be considered unless expressly requested. Oral proposals or modifications will not be considered. Conditional proposals or conditions attached to proposals shall have no force or effect.

### **EXAMINATION OF CONTRACT DOCUMENTS**

Before submitting his Bid, each Bidder should:

- (a) Examine the Contract Documents thoroughly;
- (b) Visit the site to familiarize himself with local conditions that may in any manner affect performance of the work;
- (c) Familiarize himself with Federal, State, and local laws, ordinances, rules, and regulations affecting performance of the work; and
- (d) Carefully correlate his observations with the requirements of the Contract Documents.

Reference is made to the General Requirements (Division I) of the Specifications for the identification of those surveys and investigation reports of subsurface or latent physical conditions at the site or otherwise affecting performance of the work which have been relied upon by ENGINEER in preparing the Drawings and Specifications. OWNER will make copies of such surveys and reports available to any Bidder requesting them. Before submitting his Bid, each Bidder will at his own expense make such additional survey and investigations as he may deem necessary to determine his Bid Price for performance of the work within the terms of the Contract Documents.



The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Article.

**COMPLETE WORK REQUIRED**

It is the intent of the Contract Documents to provide that the Product to be supplied under this Proposal shall be complete and ready for use in every respect. Any minor items not specifically called for in the Plans or Specifications, but which are clearly necessary, are to be included at no increase in the Contract Price.

The Proposal shall include a sum to cover the cost of all items of work to be performed such that the Product to be supplied under this Proposal shall be complete and ready for use in every respect.

**SUBCONTRACTORS: MATERIAL & EQUIPMENT QUOTATIONS**

The Bidder to whom an Award is made will not be entitled to additional compensation or extension of time by reason of his failure to fully understand all subproposals or quotations.

The Bidder is responsible for all coordination between subcontractors and suppliers during the bidding and construction so that a complete project is furnished for the Contract Price and within the Contract Time. The completed project includes the furnishing of all equipment, accessories, and appurtenances necessary for the proper operation and maintenance of the Project.

**AWARD OF CONTRACT**

OWNER reserves the right to reject any and all Bids and waive any and all informalities, and the right to disregard all nonconforming or conditional Bids or counter proposals.

In evaluating Bids, OWNER shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and alternates and unit prices if requested in the bid forms. He may consider the qualifications and experience of subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of subcontractors and other persons and organizations must be submitted as specified in the Supplementary Conditions or Specifications. He may conduct such investigations as he deems necessary to establish the responsibility, qualifications, and financial ability of the Bidders, proposed subcontractors and other persons and organizations to do the work in accordance with the Contract Documents to OWNER's satisfaction within the prescribed time. OWNER reserves the right to reject the Bid or any Bidder who does not pass any such evaluation to OWNER's satisfaction.

If a Contract is to be awarded, it will be awarded to the lowest responsible responsive Bidder. However, OWNER reserves the right to by-pass the low bidder and award a Contract in the best interest of the OWNER.

If the Contract is to be awarded, OWNER will give the apparent successful Bidder a Notice of Award.

Simultaneous with delivery of the executed counterparts of the Agreement to OWNER, the CONTRACTOR shall deliver to OWNER the required Contract Security.

**INTERPRETATIONS**

All questions about the meaning or intent of the Contract Documents shall be submitted to ENGINEER in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Questions received less than seven (7) days prior to the date of Opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.



**ADDENDA**

Any Addenda issued during the time of bidding or forming a part of the Contract Documents shall be included in the Proposal and shall be made a part of the Contract Documents. Receipt of each Addendum shall be acknowledged in the Proposal.

**BID SECURITY**

The amount and type of Bid Security is stated in the Invitation to Bid. The required security must be in the form of a certified or bank cashier's check made payable to OWNER or a Bid bond issued by a surety licensed to conduct business in the state where the Project is located and named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department. The Bid Security of the successful Bidder will be retained until he has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if he fails to execute and deliver the Agreement and furnish the required Contract Security within ten (10) days, Sundays and legal holidays excepted, of receipt of the Notice of Award, OWNER may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom OWNER believes to have a reasonable chance of receiving the Award may be retained by OWNER until the earlier of the seventh day after the executed Agreement is delivered by OWNER to CONTRACTOR and the required Contract security is furnished. Bid Security of other Bidders will be returned within seven (7) days of the Bid Opening. Separate Bid Security to be provided for each project awarded, if awarded separately.

**CONTRACT TIME**

The number of days for the Delivery of Work (the Contract Time) is set forth in the Bid Forms and will be included in the executed Agreement. Any provisions for liquidated damages are set forth in the Contract Documents.

**REQUIREMENT FOR SIGNING PROPOSALS**

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

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

Proposals which are signed for a corporation shall have the correct corporate name thereof and the signatures of the president or other authorized officers of the corporation manually written below the corporate name following the word "By". If such a Proposal is manually signed by an officer other than the president of the corporation, a certified copy of a resolution of the Board of Directors evidencing the authority of such official to sign the Proposal shall be attached to it. Such a Proposal shall also bear the attested signature of the secretary of the corporation and the impression of the corporate seal.

All Bidders shall complete the enclosed form entitled "Legal Status of Bidder".

**BIDDERS INTERESTED IN MORE THAN ONE PROPOSAL**

No person, firm, or corporation shall be allowed to make, file, or be interested in more than one (1) Proposal on this Project, unless Alternate Proposals are called for.

A person, firm, or corporation who has submitted a subproposal to a Bidder or has quoted prices on materials and/or equipment to a Bidder, is not hereby disqualified from submitting a subproposal or quoting Prices to other Bidders.



**EXECUTION OF AGREEMENT**

The Bidder to whom an Award is made will be required to enter into a written Agreement in the form hereto annexed, within ten (10) days, Sundays and legal holidays excepted, after being notified of the acceptance of his Proposal and receipt by him of copies of the Contract Documents to be executed.

In case of failure to comply with this requirement, he shall be considered to have abandoned all rights and interest in the Award, his Proposal Guaranty may be declared forfeited to the OWNER and the Contract may be awarded to another.

**INSURANCE**

The successful Bidder will be required to carry insurance in the amounts and kinds specified in the General Conditions. Such insurance must be with companies and in a form satisfactory to the OWNER, and certificates of such insurance must be attached to each copy of the executed Contract Documents. These certificates shall contain a provision that coverages afforded under the policies will not be cancelled or materially changed unless at least thirty (30) days prior written notice has been given to the OWNER and ENGINEER, as evidenced by return receipt or registered or certified mail.

**BONDS**

The successful Bidder will be required to furnish for each set of the executed Contract Documents and conformed copies thereof, an original conformed Performance Bond, and Labor and Material Bond on the forms attached hereto with a surety acceptable to the OWNER, as follows:

- 1) Performance Bond in the amount of One Hundred Percent (100%) of the Contract Price to insure the completion of the entire Project according to the Contract Documents.
- 2) Labor and Material Bond in the amount of One Hundred Percent (100%) of the Contract Price for the protection of the OWNER and to secure payments of all labor, materials and subcontractors according to the statute of the state at that time in effect.
- 3) Maintenance Bond in the amount of One Hundred Percent (100%) of the Contract Price to replace or repair any deficiencies in Labor or Material which shall occur on or before the first anniversary of final acceptance by OWNER.

**COMPLIANCE WITH PERMITS**

The successful Bidder shall comply with all required State and local construction permits and shall comply with all local building codes and inspection requirements.

**NONDISCRIMINATION**

Contracts for work under this Proposal will obligate the CONTRACTORS and Subcontractors not to discriminate in employment practices.

Bidders must, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the Award of Contract.

Successful Bidders must, if requested, submit a list of all subcontractors who will perform work on the Project and written signed statements from authorized agents of the labor pools with which they will or may deal for employees on the work, together with supporting information to the effect that said labor pools' practices and policies are in conformity with Executive Order No. 11246, as amended, and that said labor pools will affirmatively cooperate in, or offer no hindrance to, the recruitment, employment, and equal treatment of employees seeking employment and performing work under the Contract, or a



certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish same prior to the Award of Contract.

Successful Bidders must be prepared to comply in all respects with the Labor Standards Contract provisions regarding nondiscrimination.

**HEALTH AND SAFETY**

The successful Bidder shall comply with the Health and Safety Regulations, Chapter XVII of Title 29 CFR, Part 1926, as promulgated by the Department of Labor and/or applicable State and local safety and health regulations. All questions regarding compliance and enforcement, as well as requests for the regulations should be directed to the Department of Labor and/or local agencies.

**SOIL EROSION AND SEDIMENTATION**

The successful Bidder shall comply with the provisions of the "Soil Erosion and Sedimentation Control Act" of 1972 (Michigan P.A. 347, as amended), the "Inland Lakes and Streams Act" of 1972 (Michigan P.A. 346, as amended), and be in accordance with all applicable regulations, standards, and specifications as adopted by the local enforcing agencies.

**LANDSCAPE RESTORATION WORK**

To assure quality landscaping and lawn restoration work is completed on the project, the restoration contractor/subcontractor shall be named and approved at the time of contract award and have a minimum of 5 years of experience with the main business of providing landscaping services.

END OF SECTION



## BIDDER'S QUALIFICATION AND EXPERIENCE STATEMENT

The OWNER will require supporting evidence regarding Bidder's Qualifications and competency. The Bidder will be required to furnish all of the applicable information listed below and must be submitted with the sealed bid at the time of the Bid Opening. The Qualifications and Experience certificate must be type written and signed in ink.

### QUALIFICATIONS AND EXPERIENCE CERTIFICATE

The Undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading.

Submitted To: \_\_\_\_\_

Address: \_\_\_\_\_

Submitted By: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Principal Office: \_\_\_\_\_

Corporation: \_\_\_\_\_ Joint Venture: \_\_\_\_\_

Partnership: \_\_\_\_\_ Other: \_\_\_\_\_

Individual: \_\_\_\_\_

Name of Project: \_\_\_\_\_

Type of Work (File a separate form for each classification of work.)

General: \_\_\_\_\_ Plumbing: \_\_\_\_\_

HVAC: \_\_\_\_\_ Electrical: \_\_\_\_\_

Other: \_\_\_\_\_ (Please Specify)



## ORGANIZATION

How many years has your organization been in business as a CONTRACTOR?

How many years has your organization been in business under its present business name?

Under what other or former names has your organization operated?

If your organization is a corporation, answer the following:

Date of Incorporation: \_\_\_\_\_

State of Incorporation: \_\_\_\_\_

President's Name: \_\_\_\_\_

Vice President's Name: \_\_\_\_\_

Secretary's Name: \_\_\_\_\_

Treasurer's Name: \_\_\_\_\_

If your organization is a partnership, answer the following:

Date of Organization: \_\_\_\_\_

Type of Partnership: \_\_\_\_\_

Name(s) of General Partner(s): \_\_\_\_\_

If your organization is individually owned, answer the following:

Date of Organization: \_\_\_\_\_

Name of OWNER: \_\_\_\_\_

If the form of your organization is other than those listed above describe it and name the principals:



## LICENSING

List jurisdiction and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable:

List jurisdiction in which your organization's partnership or trade name is filed:

## EXPERIENCE

List the categories of work that your organization normally performs with its own forces:

On a separate sheet, list major construction projects your organization has in progress, giving the name of project, OWNER, architect/ENGINEER, Contract amount, percent complete, and scheduled completion date.

On a separate sheet, list the major construction projects your organization has completed in the past five (5) years, giving the name of the project, OWNER, architect/ENGINEER, Contract amount, date of completion and percentage of the cost of the work performed with your own forces.

On a separate sheet, list the construction experience and present commitments of the key individuals of your organization.

CLAIMS AND SUITS (if the answer to any of the questions below is yes, please attach details)

Has your organization ever failed to complete any work awarded to it? \_\_\_\_\_

Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or officers? \_\_\_\_\_



REFERENCES

Trade References: \_\_\_\_\_

Bank References: \_\_\_\_\_

Surety: \_\_\_\_\_

Name of Bonding Company: \_\_\_\_\_  
\_\_\_\_\_

Name and Address of Agent: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature: \_\_\_\_\_

Dated at: \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Name of Organization: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Mr/Mrs/Ms \_\_\_\_\_ being duly deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Notary Public: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

**IF THIS INFORMATION IS NOT SUBMITTED WITH THE SEALED BID AT THE TIME OF BID,  
THE BID WILL BE CONSIDERED INCOMPLETE.**



**PROPOSAL FOR  
MONTIBELLER PARK PHASE 2 IMPROVEMENTS AND  
MONTIBELLER PARK PHASE 3 RESTROOM BUILDING RENOVATION**

**TO THE PITTSFIELD CHARTER TOWNSHIP**

The undersigned as Bidder hereby declares that this Proposal is made in good faith without fraud or collusion with any person or persons bidding on the same Contract; that he/she has read and examined the Advertisement, Information for Bidders, Proposal, General Conditions, Agreement, Forms of Bonds, Specifications, and Plans, as prepared by the ENGINEERS, and understands all of the same; that he/she or his/her representative has made personal investigation at the site and has informed himself fully with regard to the conditions to be met in the execution of this Contract, and the undersigned proposes to furnish all labor, materials, tools, power, transportation, and construction equipment necessary for the construction of the Project and performing related work in full accordance with the aforesaid Contract Documents including any and all addenda officially issued, the receipt of which is hereby acknowledged:

Addendum No. /Dated	Date of Receipt	Signature
<hr/>	<hr/>	<hr/>
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**AWARD OF CONTRACT:** The Contract(s) will be awarded to the lowest responsive, responsible Bidder based on unit prices for all work as specified.

**PROPOSAL PRICE:** The Bidder agrees to complete the Project for the following unit prices:

**PHASE 2**

Item No.	Item Description	Qty	Unit	Unit Price	Total Price
1	Mobilization & General Conditions (5% max.)	1	LS	\$	\$
2	Soil Erosion Controls	1	LS	\$	\$
3	Audio Visual File	1	LS	\$	\$
4	Project Cleanup	1	LS	\$	\$
5	Tree Removal	15	EA	\$	\$
6	Gravel Drive Regrading/Removal (East Parking Lot)	5000	SYD	\$	\$
7	Existing HMA Removal	856	SYD	\$	\$
8	Integral Curb (West Parking Lot Sidewalk)	267	LF	\$	\$
9	6" Straight Curb (East Parking Lot Islands)	318	LF	\$	\$
10	6' Wide Limestone Path	2544	LF	\$	\$



11	6' Concrete Sidewalk	1267	LF	\$	\$
12	12' Wide Limestone Path	2779	LF	\$	\$
13	Gravel Resurfacing (East Parking Lot)	3739	SYD	\$	\$
14	ADA Parking Area (East Parking Lot)	1	LS	\$	\$
15	Wheel Stop (East Parking Lot)	54	EA	\$	\$
16	Bike Rack	1	LS	\$	\$
17	Decorative Fence	574	LF	\$	\$
18	Existing Tennis Court Resurfacing	1800	SYD	\$	\$
19	Pickleball Court	1	LS	\$	\$
20	ADA Bleachers	1	LS	\$	\$
21	12' Wide Sanitary Manhole Access	9	EA	\$	\$
22	ADA Bench Area	4	EA	\$	\$
23	Existing Detention Basin Enlargement and Storm Outlet Structure	1	LS	\$	\$
24	Proposed Detention Basin and Storm Outlet Structure	1	LS	\$	\$
25	15" Diameter Storm Sewer	130	LF	\$	\$
26	48" Diameter Storm Structure with 2' Diameter Beehive Cover	1	EA	\$	\$
27	48" Diameter Storm Structure with 2' Diameter Flat Top Cover	2	EA	\$	\$
28	Remove Bulkhead and Connect to New Storm Structure	1	EA	\$	\$
29	Turf Establishment & Landscaping	1	LS	\$	\$
30	LED Solar Bollards	17	EA	\$	\$
<b>PHASE 2 TOTAL BASE BID PRICE (ITEM NOS. 1 THROUGH 30):</b>					<b>\$</b>
<b>Phase 2 Alternate No. 1 (Add-on: West Parking Lot Re-surfacing)</b>					
Subtotal Alternate No. 1 (Add-on: West Parking Lot Re-surfacing)					\$
<b>Phase 2 Alternate No. 2 (Add-on: Arrival Point)</b>					
Subtotal Alternate No. 2 (Add-on: Arrival Point)					\$
<b>Phase 2 Alternate No. 3 (Add-on: Baseball Field Improvements)</b>					
Subtotal Alternate No. 3 (Add-on: Baseball Field Improvements)					\$



<b>Phase 2 Alternate No. 4 (Add-on: West Tennis Court Removal)</b>	
Subtotal Alternate No. 4 (Add-on: West Tennis Court Removal)	\$
<b>Phase 2 Alternate No. 5 (Add-on: Additional Site Work)</b>	
Subtotal Alternate No. 5 (Add-on: Additional Site Work)	\$

**TOTAL BASE BID PRICE – PHASE 2 IMPROVEMENTS (ITEM NOS. 1 THROUGH 30)**

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
 (Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern)

**TOTAL BASE BID PRICE – PHASE 3 RESTROOM BUILDING RENOVATION (LUMP SUM)**

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
 (Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern)

**PHASE 3 ALTERNATE NO. 1 (DESIGN-BUILD)**

**TOTAL BASE BID PRICE – PHASE 3 NEW RESTROOM BUILDING (LUMP SUM)**

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
 (Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern)

**TOTAL PROJECT: PHASE 2 BASE BID PLUS PHASE 3 BASE BID**

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
 (Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern)

The undersigned has read the “Method of Measurement and Basis of Payment” and acknowledges that Pages MP-1 to MP-8 are part of his/her proposal.

The undersigned agrees that if the foregoing Proposal shall be accepted by the OWNER, he/she will, within ten (10) days (Sundays and legal holidays excepted) after receiving notice of such acceptance, enter into the attached form of Agreement and will complete the Project, ready for use, at the price and within the time stated in this Proposal, and that he/she will furnish the OWNER satisfactory Contract Bonds and certificates of insurance coverage.

The undersigned further agrees that if the foregoing Proposal shall be accepted, he/she will commence work immediately after the Contract has been awarded, the Agreement executed, and he/she has received a Notice to Proceed.

The undersigned further agrees that if the foregoing Proposal is awarded, the total construction work shall be completed by October 27, 2023.

The undersigned attaches hereto his/her Bid Security, as required by the Advertisement and Information for Bidders, and the undersigned agrees that in case he/she shall fail to fulfill his/her obligations under the foregoing Proposal and/or shall fail to furnish bonds, as specified, the OWNER may, at its option determine that the undersigned has abandoned his/her rights and



interests in such Contract and that his/her Bid Security accompanying his/her Proposal has been forfeited to the said OWNER, but otherwise the Bid Security shall be returned to the undersigned upon the execution of the Contract and the acceptance of the bonds.

The undersigned also agrees that for each and every calendar day that he/she may be in default of substantial completion of the entire work, ready for use, within the time specified in this Proposal or within the time to which said time of completion may be extended for good cause shown, the OWNER will suffer a damage of Eight Hundred Dollars (\$800.00) per day, and said OWNER shall be compensated therefore at the rate as liquidated damages in accordance with Article 1-B, Liquidated Damages, of the Agreement.

The Bidder shall acknowledge that he/she is an equal opportunity employer and that they do not discriminate against other firms due to race, age, gender, or physical conditions.

In submitting this bid, it is understood that the right is reserved by the OWNER to accept any bid, to reject any or all bids, and to waive irregularities in bidding in the interest of the OWNER.

The Bidder has completed the accompanying "Legal Status" form.

Dated and Signed at \_\_\_\_\_  
this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

OFFICIAL ADDRESS

BIDDER'S NAME

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By

Telephone

Title



## ADA COMPLIANCE UNDERSTANDING

All ADA slope guidelines presented in the plans are maximums that are not to be exceeded. It is recommended that for construction, the CONTRACTOR(S) shall not set grades or forms that exceed: 7.5% running slope and 1.5% cross slope for curb ramps, 1.5% slope in all directions for landings, and 4.5% maximum running slope and 1.5% cross slope for pedestrian crosswalks and sidewalks.

The plans include ADA details, and the plan sheets include grades for the CONTRACTOR to use in setting forms for the ADA landings, ramps, and sidewalks. These grades shall be used as a guide to the CONTRACTOR, but due to field conditions, some grades may have to be modified when the CONTRACTOR sets his forms.

It shall be the responsibility of the CONTRACTOR to provide ADA accessible ramps, landings as well as sidewalks for this project. Should the post ADA survey indicate that the ADA requirements have not been met, then the OWNER or OWNER'S ENGINEER shall mark those areas that are out of ADA compliance. It is understood by the CONTRACTOR, as evidenced by the signature below, that the CONTRACTOR understands the ADA requirements and that if non-compliant ADA issues result, it will be the CONTRACTOR'S responsibility as part of the substantial completeness of the project to make the corrections required by the OWNER or the OWNER'S ENGINEER.

I the undersigned understand the ADA regulations and agree to deliver this project meeting all ADA requirements that are part of this project.

Dated and signed at

\_\_\_\_\_  
this, the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

OFFICIAL ADDRESS

BIDDER'S NAME

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By

\_\_\_\_\_  
Telephone

\_\_\_\_\_  
Title



## DESIGNATION OF MAJOR SUBCONTRACTORS AND SUPPLIERS

Each bidder shall set forth below: (a) the name and the location of the place of business of each subcontractor who will perform work or labor or render service to the CONTRACTOR in or about the construction of the work in an amount in excess of two percent (2%) of the CONTRACTOR's total base bid; and (b) the portion of the work which will be done by each such subcontractor.

If the CONTRACTOR fails to specify a subcontractor for any portion of the work as above stated, he agrees to perform that work himself.

The CONTRACTOR shall not, without written consent of the OWNER, make any substitution, alterations, or additions to the following list of subcontractors that is made a part of this Bid.

The qualifications of each subcontractor/supplier will be presented to the ENGINEER for review and approval after a CONTRACTOR is selected. However, specific information may be requested from the Bidder prior to a CONTRACTOR being selected in order to aid in the evaluation of a responsive responsible Bidder.

Section of Work	Portion of Work to be Done	Name of Subcontractor	Address of Shop, Mill or Office

Signed \_\_\_\_\_



CERTIFICATION REGARDING  
DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The prospective participant certifies, to the best of its knowledge and belief, that it and its principals:

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in transactions under federal nonprocurement programs by any federal department or agency;
- (2) Have not, within the three-year period preceding the proposal, had one or more public transactions (federal, state or local) terminated for cause or default; and
- (3) Are not presently indicated or otherwise criminally or civilly charged by a government entity (federal, state or local) and have not, within the three-year period preceding the proposal, been convicted of or had a civil judgment rendered against it:
  - (a) For the commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction (federal, state or local) or a procurement Contract under such a public transaction;
  - (b) For the violation of federal or state antitrust statutes, including those proscribing price fixing between competitors, the allocation of customers between competitors, or bid rigging; or
  - (c) For the commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

I understand that a false statement on this certification may be grounds for the rejection of this proposal or the termination of the award. In addition, under 18 U.S.C. § 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to five years, or both.

---

Name and Title of Authorized Representative

---

Name of Participant Agency or Firm

---

Signature of Authorized Representative

---

Date

☐ I am unable to certify to the above statement. Attached is my explanation.



## METHOD OF MEASUREMENT AND BASIS OF PAYMENT

### A. GENERAL

The method of measurement and the basis of payment for each item in the Proposal will be as specified in the schedule attached. The items are generally grouped by the section of the Specifications under which the particular unit of work is detailed. There will be no payment allowed for any unit of work not specifically mentioned in the Proposal as a bid item, and any such unit of work not mentioned in the Proposal, but necessary for the completion of the Project, will be considered as incidental to the construction of the Project.

### B. MEASUREMENT

Quantities of work completed under the Contract will be measured by the ENGINEER according to the United States standard measures. When tons are specified, the unit shall be the ton of 2000 pounds. When measurements are stated in miles, stations, acres, they will be horizontal measurements unless specified otherwise. Where measurements are specified to be "in place," they will be taken along the actual surface of the completed item to obtain lineal, area, or volume measurements.

### C. PAYMENT

In each and every instance in the schedule attached, where a Basis of Payment is specified, it shall be understood to be prefaced by the following statement, "The contract unit price bid in the Proposal will be payment in full for all labor, materials, and equipment necessary to do the following according to the Plans and Specifications." Payment shall be made on the basis of the actual quantity of the item completed and accepted at the unit price for such item named in the Proposal.



## MEASUREMENT AND PAYMENT SCHEDULE

### PHASE 2

<u>ITEM IN PROPOSAL</u>	<u>METHOD OF MEASUREMENT</u>	<u>BASIS OF PAYMENT</u>
Mobilization & General Conditions (5% max.)	By the unit lump sum (LS) for an amount no greater than 5% of the total Contract amount.	Shall include the cost of mobilization at the beginning of construction period to the job site including offices, stores, conveniences, and other temporary facilities (if required). It shall also include all work described by the plans and specifications for which no item of work is listed in the Proposal. It shall also include organizing the project, including coordination with OWNER, ENGINEER, third parties and sub-contractors, obtaining all permits, permit inspection, permit bond fees, testing, Shop Drawings, paperwork, insurance, and bonds, bringing equipment to the site as required and removing the equipment to the site as required, management of the job, Debarment/Suspension Certification, and the general conditions. Payment for this item shall not exceed 5% of the total work.
Soil Erosion Controls	By the unit lump sum (LS)	Shall include the cost associated with furnishing, placing, and removing all temporary soil erosion and sedimentation control (SESC) measures as shown on the plans or as specified in the Contract Documents. The CONTRACTOR shall not remove temporary SESC measures until permanent SESC measures are installed, turf has been established, and only upon receiving authorization for their removal in advance from the ENGINEER.
Audio Visual File	By the unit lump sum (LS)	Shall include the complete furnishing of all labor, material, and equipment for the recording of the project area, including the furnishing and delivery of three digital audio/visual files to the ENGINEER.
Project Cleanup	By the unit lump sum (LS)	Shall include the cost associated with furnishing of all labor materials and equipment required to restore all turf areas within the construction limits, and cleanup the site to its original conditions. Turf establishment and seeding of rain gardens, bioswales, and savanna areas will be paid separately as a part of their respective pay items. This pay item shall also include restoring the site, including work that is not called out by separate pay items, all as directed by the ENGINEER.



Tree Removal	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment necessary for the removal of the existing trees at the proposed construction area, as shown on the plans. It shall also include proper disposal offsite by the CONTRACTOR, of all removed materials.
Gravel Drive Regrading/Removal (East Parking Lot)	By the unit square yard (SYD)	Shall include the cost associated with furnishing of all labor materials and equipment necessary for removal of existing surface and grading to proposed base grades. This includes saw cutting, excavation, removing, hauling, and disposal of the material.
Existing HMA Removal	By the unit square yard (SYD)	Shall include the cost associated with furnishing of all labor materials and equipment necessary for removal of existing HMA surfaces as indicated on the plans. This includes saw cutting, excavation, removing, hauling, and disposal of the material.
Integral Curb (West Parking Lot Sidewalk)	By the unit linear feet (LF).	Shall include the cost associated with furnishing of all labor materials and equipment necessary for the installation of curb, integral to the proposed sidewalk, per 2020 MDOT Standard Specifications.
6" Straight Curb (East Parking Lot Islands)	By the unit linear feet (LF).	Shall include the cost associated with furnishing of all labor materials and equipment required for the installation of a 6-inch concrete straight curb. Concrete curb and gutter shall meet the requirements of the 2020 MDOT Standard Specifications for Construction.
6' Wide Limestone Path	By the unit linear feet (LF).	Shall include the cost associated with furnishing of all labor materials and equipment necessary for the installation of 6-ft wide aggregate path. Aggregate base course shall meet the requirements of 21AA in the 2020 MDOT Standard Specifications for Construction. Surface aggregate shall meet the requirements of the standard MDNR Crushed Natural Aggregate specification.
6' Concrete Sidewalk	By the unit linear feet (LF).	Shall include the cost associated with furnishing of all labor materials and equipment necessary for the installation of a 6-ft wide concrete sidewalk, including grading and Class II sand base per 2020 MDOT Standard Specifications for Construction.



12' Wide Limestone Path	By the unit linear feet (LF).	Shall include the cost associated with furnishing of all labor materials and equipment necessary for the installation of 12-ft wide aggregate path, including grading, geotextile, and aggregate base and surface courses. Aggregate base course shall meet the requirements of 21AA in the 2020 MDOT Standard Specifications for Construction. Geotextile shall meet the requirements of MDOT Geotextile, Separator. Surface aggregate shall meet the requirements of the standard MDNR Crushed Natural Aggregate specification.
Gravel Resurfacing (East Parking Lot)	By the unit square yard (SYD)	Shall include the cost associated with furnishing of all labor materials and equipment required for resurfacing per the gravel pavement cross section in the plans. Aggregate shall meet the requirements of 23A aggregate in the 2020 MDOT Standard Specifications for Construction.
ADA Parking Area (East Parking Lot)	By the unit lump sum (LS)	Shall include the cost associated with furnishing of all labor materials and equipment necessary for ADA parking spaces as shown in the plans. Concrete pavement shall meet the requirements of the 2020 MDOT Standard Specifications for Construction. Pavement markings and details shall be in conformance with details provided on the plans.
Wheel Stop (East Parking Lot)	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment required for installation of 8' wide concrete wheel stops at the location and of the type as shown in the plans or as directed by the ENGINEER.
Bike Rack	By the unit lump sum (LS).	Shall include the cost associated with furnishing of all labor materials and equipment required for installation of bike racks, including all appurtenances, hardware, supports and anchorage, including the concrete pad foundation.
Decorative Fence	By the unit linear feet (LF).	Shall include the cost associated with furnishing of all labor materials and equipment necessary for the installation of the decorative fencing, including all appurtenances, hardware, support posts and anchorage, including concrete foundations around posts. All fencing shall be installed as shown in the plans or as directed by the ENGINEER.



Existing Tennis Court Resurfacing	By the unit square yard (SYD)	Shall include the cost associated with furnishing of all labor materials and equipment required for resurfacing the tennis court with Nova Pro-Bounce or approved equal by the ENGINEER, restriping and net re-installation as shown in the plans. Protection of the existing fencing and or removal and re-installation of the existing fencing shall be included in this item.
Pickleball Court	By the unit lump sum (LS)	Shall include the cost associated with furnishing of all labor materials and equipment required for pickleball court renovations as specified on the plans. Pickleball Court surface shall be Nova ProBounce system or approved equal by the ENGINEER. Aggregate base shall be MDOT 21AA.
ADA Bleachers	By the unit lump sum (LS)	Shall include the cost associated with furnishing of all labor materials and equipment required for installation of ADA bleachers, including all appurtenances, hardware, supports and anchorage, including concrete pad foundation, per the plan details.
12' Wide Sanitary Manhole Access	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment required for constructing 12-ft wide access area around the sanitary manholes as indicated on the plans. Aggregate base course shall meet the requirements of the 2020 MDOT Standard Specifications for Construction. Surface aggregate shall meet the requirements of the standard MDNR Crushed Natural Aggregate specification.
ADA Bench Area	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment necessary for the installation of concrete pavement and footing, bench, and trash can as specified on the plans. Concrete installation shall meet 2020 MDOT Standard Specifications for Construction.
Existing Detention Basin and Storm Outlet Structure	By the unit lump sum (LS)	Shall include the cost associated with furnishing of all labor materials and equipment necessary for enlarging the existing detention basin, adjusting existing underdrains to proposed grades, removal of the existing storm outlet pipe and construction of the detention outlet structure and storm sewer pipe as indicated on the plans. This includes saw cutting, excavation, removing, hauling, and disposal of the material, as well as turf establishment within the basin area.



Proposed Detention Basin and Storm Outlet Structure	By the unit lump sum (LS)	Shall include the cost associated with furnishing of all labor materials and equipment necessary for grading the proposed north detention basin to proposed grades, construction of the detention outlet structure and storm sewer pipe as indicated on the plans. This includes excavation, removing, hauling, and disposal of the material, as well as all plantings and seeding within the north basin area as shown on the plans.
15" Diameter Storm Sewer	By the unit linear feet (LF).	Shall include the cost associated with furnishing of all labor materials and equipment required for installation of 15" diameter storm sewer pipe including excavation, excavation support, removing, hauling, and backfill of material at the location and elevation, and of the type as shown in the plans or as directed by the ENGINEER.
48" Diameter Storm Structure with 2' Diameter Beehive Cover	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment required for installation of catch basin including excavation, excavation support, removing, hauling, and backfill of material. Storm structures shall be 4-ft diameter precast concrete utilized with 2-ft wide beehive cover.
48" Diameter Storm Structure with 2' Diameter Flat Top Cover	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment required for installation of catch basin including excavation, excavation support, removing, hauling, and backfill of material. Storm structures shall be 4-ft diameter precast concrete utilized with 2-ft flat top cover.
Remove Bulkhead and Connect to New Storm Structure	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment required for locating the existing bulkhead, removing the bulkhead, and connecting to the new structure as shown on the plans.
Turf Establishment and Landscaping	By the unit lump sum (LS).	Shall include the cost associated with furnishing of all labor materials and equipment required for establishing turf in all disturbed areas for the base bid items, including tree and shrub planting adjacent to and within the East Parking Lot, adjacent to the West Parking Lot sidewalk connection, the enlarged south detention basin, and the existing restroom building, as shown on the Landscape Plan.



LED Solar Bollards	By the unit each (EA).	Shall include the cost associated with furnishing of all labor materials and equipment required for installing LED Solar Bollards. Bollards shall be Meteor SP-018-40K-BLK-WD-AKE-1S or approved equal.
Alternate No. 1 (Add-on: West Parking Lot Re-surfacing)	By the unit lump sum (LS)	Shall include the cost associated with resurfacing the west parking lot with a gravel top dress, including installation of curb for parking lot islands, wheel stops, concrete ADA spaces, and turf establishment and landscaping.
Alternate No. 2 (Add-on: Arrival Point)	By the unit lump sum (LS)	Shall include the cost associated with installation of an arrival point, including installation of a prefabricated pavilion structure, brick pavers and curb per the plans, benches, trash cans, bike racks, and associated turf establishment.
Alternate No. 3 (Add-on: Baseball Field Improvements)	By the unit lump sum (LS)	Shall include the cost associated with improving the existing baseball fields per the plans, including infield skin improvements, fencing and foul poles.
Alternate No. 4 (Add-on: West Tennis Court Removal)	By the unit lump sum (LS)	Shall include the cost associated with demolition of the existing West tennis court pavement and fencing, and establishing turf after removal of all materials from the site.
Alternate No. 5 (Add-on: East Parking Timber Steps)	By the unit lump sum (LS)	Shall include the cost associated with installation of timber steps and railing connecting the East parking lot to the existing pavilion, furnishing of all labor materials and equipment necessary for the installation of 6-ft wide aggregate path, as well as installation of brick pavers by the restroom building per the plans. Aggregate base course shall meet the requirements of 21AA in the 2020 MDOT Standard Specifications for Construction. Surface aggregate shall meet the requirements of the standard MDNR Crushed Natural Aggregate specification.



### PHASE 3

#### ITEM IN PROPOSAL

#### METHOD OF MEASUREMENT

#### BASIS OF PAYMENT

Restroom Building  
Renovation

By the unit lump sum (LS)

Shall include all costs associated with the reconfiguration of the existing restroom facility including entrances, including removing and replacing the wood ceiling, removing and replacing an interior CMU partition wall, new exterior CMU and brick wall, new concrete footings, new concrete slabs, and new hollow metal doors; removal and replacement of light fixtures; installation of recessed hand dryers; removal and replacement of plumbing fixtures; and removal replacement of restroom accessories, including toilet partitions, grab bars, baby changing stations, signage, lavatory mirrors.

Alternate No. 1 (Design-  
Build: New Restroom  
Building)

By the unit lump sum (LS)

Shall include all costs associated with providing design, permitting, approvals, and construction services for removing the existing restroom building, and providing a new restroom building that complies with ADA Standards for Accessible Design. See attached concept plan for new building.

END OF SECTION



PHASE 3 ALTERNATE NO. 1  
DESIGN-BUILD: NEW RESTROOM BUILDING  
CONCEPT PLAN

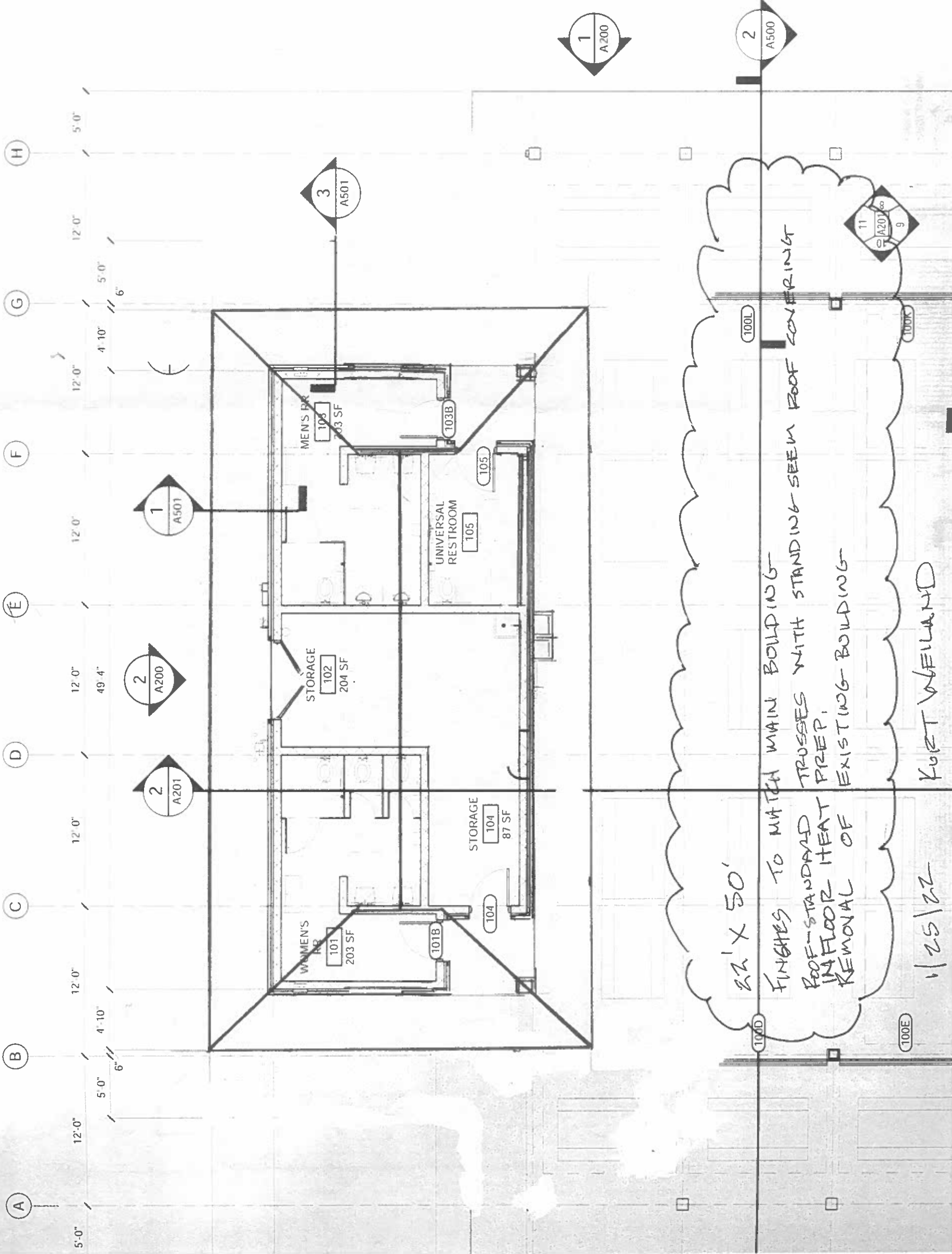
2  
A100

SLAB-ON-GRADE JOINT PLAN

SCALE: 1/8" = 1'-0"



NORTH



B. FINAL DESIGN PLAN

Issued

File Name: Pittsfield Township - Large Shelter.rvt Author: C. Becker.D  
Dwn

Permit/Seal



Client/Project Logo



Client/Project

PITTSFIELD CHARTER TOWNSHIP

MONTIBELLER PARK IMPROVEMENTS

Pittsfield Township, Michigan



NAME, ADDRESS, LEGAL STATUS,  
AND SIGNATURE OF BIDDER

This Proposal is submitted in the name of:

(Print) \_\_\_\_\_

The undersigned hereby designates below his/her business address to which all notices directions or other communications may be served or mailed:

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

The undersigned hereby declares that he has legal status checked below:

- ☐ INDIVIDUAL  
☐ INDIVIDUAL DOING BUSINESS UNDER AN ASSUMED NAME  
☐ CO-PARTNERSHIP

The Assumed Name of the Co-Partnership is registered in the County of \_\_\_\_\_, Michigan.

- ☐ CORPORATION INCORPORATED UNDER THE LAWS OF  
THE STATE OF \_\_\_\_\_. The Corporation is:  
☐ LICENSED TO DO BUSINESS IN MICHIGAN  
☐ NOT NOW LICENSED TO DO BUSINESS IN MICHIGAN

The name, titles and home addresses of all persons who are officers or Partners in the organization are as follows:

NAME AND TITLE

HOME ADDRESS

_____	_____
_____	_____
_____	_____

Signed and Sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

By \_\_\_\_\_ (Signature)

Printed Name of Signer

Title



### BID CERTIFICATION

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies, equipment, or service, that it meets or exceeds all the specifications contained herein, and is in all respects fair and without collusion or fraud. I understand collusive bidding is a violation of State and Federal law, and can result in fines, prison sentences, and civil damage awards. I agree to abide by all conditions of this bid and certify that I am authorized to sign for the bidder.

---

Bidder

---

Signature

---

Title

---

Date Certified



AGREEMENT

THIS AGREEMENT, made as of the \_\_\_\_\_ day of \_\_\_\_\_, 2023,  
by and between

PITTSFIELD CHARTER TOWNSHIP

hereinafter called the OWNER, and \_\_\_\_\_

\_\_\_\_\_

hereinafter called the CONTRACTOR.

WITNESSETH, that whereas the OWNER intends to construct

MONTIBELLER PARK PHASE 2 IMPROVEMENTS

MONTIBELLER PARK PHASE 3 RESTROOM BUILDING RENOVATION

hereinafter called the Project, in accordance with the Plans, Specifications and other Contract Documents prepared by STANTEC CONSULTING of Ann Arbor, Michigan, hereinafter called the ENGINEER.

NOW, THEREFORE, the OWNER and CONTRACTOR for the considerations hereinafter set forth, agree as follows:

I. THE CONTRACTOR AGREES to furnish all the necessary labor, materials, equipment, tools, and services necessary to perform and complete, in a workmanlike manner, all work required for the construction of the Project, in strict compliance with the Contract Documents herein mentioned, which are hereby made a part of the Contract, including the following Addenda:

ADDENDUM NO.

DATED

_____	_____
_____	_____
_____	_____

A. Contract Time: Work under this Agreement shall be commenced upon receipt of Notice to Proceed. The undersigned further agrees that if the foregoing Proposal is awarded, the total construction work shall be completed by **October 27, 2023**.

If the CONTRACTOR refuses or fails to prosecute the work, or any separate part thereof, with such diligence as will insure its completion, ready for use within the number of consecutive calendar days specified herein, or any extension thereof, or fails to complete said work within such time, the OWNER may, by written notice to the CONTRACTOR, terminate his right to proceed with the Project or such part of the Project as to which there has been delay. In such event the OWNER may take over the Project and prosecute the same to completion, by



Contract or otherwise, and the CONTRACTOR and his Sureties shall be liable to the OWNER for any excess cost occasioned the OWNER thereby. If the CONTRACTOR's right to proceed is so terminated, the OWNER may take possession of and utilize in completing the Project such materials, appliances, and plant as may be on the site of the Project and necessary; therefore.

B. Liquidated Damages: If the OWNER does not terminate the right of the CONTRACTOR to proceed, the CONTRACTOR shall continue the Project, in which event the actual damages for the delay will be impossible to determine and in lieu thereof, the CONTRACTOR shall pay the OWNER the sum of Eight Hundred Dollars (\$800.00) per day, as fixed, agreed and liquidated damages for each consecutive calendar day of delay until the Project is completed, accepted, and the CONTRACTOR and his Sureties shall be liable for the amount thereof: Provided, however, that the right of the CONTRACTOR to proceed shall not be terminated or the CONTRACTOR charged with liquidated damages because of any delays in the completion of the Project due to unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including, but not restricted to acts of God or of the public enemy, acts of the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, or delays of Subcontractors due to such causes, if the CONTRACTOR shall, within ten days from the beginning of any such delay (unless the OWNER shall grant a further period of time prior to the date of final settlement of the Contract) notify the OWNER in writing of the cause of delay who shall ascertain the facts and the extent of the delay and extend the time for completing the work, when in its judgment, the finds of fact justify such an extension and its findings of fact thereon shall be final and conclusive on the parties thereto.

C. Subcontractors: The CONTRACTOR agrees to bind every subcontractor by the terms of the Contract Documents. The Contract shall not be construed as creating any contractual relation between any Subcontractor and the OWNER.

II. THE OWNER AGREES to pay, and the CONTRACTOR agrees to accept, in full payment of the performance of this Contract, an amount to be determined by the actual constructed quantities and the Lump Sums set forth in the attached Proposal. This amount, excluding alternates, is:

**TOTAL BASE BID PRICE – PHASE 2 IMPROVEMENTS**

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)  
(Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern).

**TOTAL BASE BID PRICE – PHASE 3 RESTROOM BUILDING RENOVATION**

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)  
(Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern).

in accordance with the provisions of the Contract Documents. Progress Payments will be made in accordance with the General Conditions.

III. CONTRACT DOCUMENTS: The Contract comprises the Contract Documents listed in the General Conditions of the Contract. In the event that any provision of one Contract



Document conflicts with the provision of another Contract Document, the provision in that Contract Document first listed below shall govern, except as otherwise specifically stated:

- A. Agreement (this instrument)
- B. Modifications
- C. Addenda to Contract Documents
- D. Supplementary Conditions
- E. Instructions to Bidders
- F. General Conditions
- G. Specifications
- H. Drawings

IV.           AUTHORITY AND RESPONSIBILITY OF THE ENGINEER: All work shall be done under the observation of the ENGINEER. The ENGINEER shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, rate of progress of work, interpretation of Plans and Specifications and all questions as to the acceptable fulfillment of the Contract on the part of the CONTRACTOR.

V.           SUCCESSORS AND ASSIGNS: This Agreement and all of the covenants hereof shall inure to the benefit of and be binding upon the OWNER and the CONTRACTOR respectively and his partners, successors, assigns and legal representatives. Neither the OWNER nor the CONTRACTOR shall have the right to assign, transfer or sublet his/her interests or obligations hereunder without written consent of the other party.



IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed on the day and year first above written.

ATTEST

\_\_\_\_\_

*(fill in contractor's name)*

\_\_\_\_\_  
CONTRACTOR

\_\_\_\_\_  
By

\_\_\_\_\_  
Title

BUSINESS ADDRESS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Telephone

\_\_\_\_\_  
Fax

ATTEST

\_\_\_\_\_

\_\_\_\_\_  
OWNER

\_\_\_\_\_  
By

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date



ATTEST

---

OWNER

---

By

---

Title

---

Date



PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS THAT \_\_\_\_\_

\_\_\_\_\_  
as Principal, hereinafter called the CONTRACTOR, and \_\_\_\_\_  
as Surety, hereinafter called Surety, are held, and firmly bound unto

PITTSFIELD CHARTER TOWNSHIP

As obligee, hereinafter called the OWNER, in the amount of

\_\_\_\_\_ Dollars (\_\_\_\_\_)  
(Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern).

for the payment whereof the CONTRACTOR and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the CONTRACTOR has, by a written Agreement dated \_\_\_\_\_,  
entered into a Contract with the OWNER for the construction of

MONTIBELLER PARK PHASE 2 IMPROVEMENTS

MONTIBELLER PARK PHASE 3 RESTROOM BUILDING RENOVATION

in accordance with Plans and Specifications prepared by STANTEC CONSULTING, which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the CONTRACTOR shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject to, however, to the following conditions.

A. The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

B. Whenever the CONTRACTOR shall be, and declared by the OWNER to be, in default under the Contract, the OWNER having performed OWNER's obligations there under, the Surety may promptly remedy the default, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, or
2. Obtain a bid or bids for submission to the OWNER for completing the Contract in accordance with its terms and conditions, and upon determination by the OWNER and Surety of the lowest responsible Bidder, arrange for a Contract between such Bidder and



the OWNER, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by the OWNER to the CONTRACTOR under the Contract and any amendments thereto, less the amount properly paid by the OWNER to the CONTRACTOR.

C. Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

D. No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators, or successors of the OWNER.

Signed and Sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

In the Presence of:

WITNESS

*(fill in contractor's name)*

\_\_\_\_\_

Principal

\_\_\_\_\_

Title

WITNESS

\_\_\_\_\_

Surety

\_\_\_\_\_

Title

\_\_\_\_\_

Address of Surety

Bond No.

City

Zip Code



LABOR AND MATERIAL PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS that\_\_\_\_\_

as Principal, hereinafter called CONTRACTOR, and \_\_\_\_\_

as Surety, hereinafter called Surety, are held and firmly bound unto \_\_\_\_\_

PITTSFIELD CHARTER TOWNSHIP

as Obligee, hereinafter called the OWNER for the use and benefit of claimants herein below defined, in the amount of

\_\_\_\_\_ Dollars (\_\_\_\_\_)  
(Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern).

for the Payment whereof CONTRACTOR and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, CONTRACTOR has, by a written Agreement dated \_\_\_\_\_ entered into a Contract with the OWNER for

MONTIBELLER PARK PHASE 2 IMPROVEMENTS

MONTIBELLER PARK PHASE 3 RESTROOM BUILDING RENOVATION

in accordance with Plans and Specifications prepared by STANTEC CONSULTING, which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the CONTRACTOR shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject; however, to the following conditions:

A. A claimant is defined as one having a direct contract with the CONTRACTOR or with a subcontractor of the CONTRACTOR for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.

B. The above named CONTRACTOR and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been Paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.

C. No suit or action shall be commenced hereunder by any claimant:

1. Unless claimant, other than one having a direct contract with the CONTRACTOR, shall have given written notice to any two of the following: The Principal, the



OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the CONTRACTOR, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business or served in any manner in which legal process may be served in the state in which the aforesaid Project is located, save that such service need not be made by a public officer.

2. After the expiration of one (1) year following the date on which CONTRACTOR ceased work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof; such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law county or other political subdivision of the State in which the Project, or any part thereof, is situated; or in the United States District Court for the district in which the Project, or any part thereof, is situated; and not elsewhere.

D. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and Sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

In the Presence of:

WITNESS

*(fill in contractor's name)*

\_\_\_\_\_

Principal

\_\_\_\_\_

Title

WITNESS

\_\_\_\_\_

Surety

\_\_\_\_\_

Title

\_\_\_\_\_

Address of Surety

Bond No. \_\_\_\_\_

City \_\_\_\_\_

Zip Code \_\_\_\_\_



MAINTENANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS, that we \_\_\_\_\_

hereinafter called the "Principal," and \_\_\_\_\_  
hereinafter called the "Surety," are held and firmly bound unto

PITTSFIELD CHARTER TOWNSHIP

as Obligee, for the just and full sum of

\_\_\_\_\_ Dollars (\_\_\_\_\_)  
(Amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern).

to the payment whereof, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the above-named Principal was awarded a Contract by the OWNER

dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for the construction of

MONTIBELLER PARK PHASE 2 IMPROVEMENTS

MONTIBELLER PARK PHASE 3 RESTROOM BUILDING RENOVATION

AND WHEREAS, this Contract was awarded upon the express condition that the Principal would furnish a one (1) year Maintenance Bond to repair or replace any deficiencies in Labor or Material.

NOW, THEREFORE, the condition of this obligation is such that if the above Principal shall replace such defective material and shall repair all defects due to defective workmanship which shall occur on or before the first anniversary of final acceptance by OWNER, then this obligation shall be void, otherwise to be and remain in full force, effect and virtue.

Signed and Sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

In the Presence of:

WITNESS

*(fill in contractor's name)*

\_\_\_\_\_

Principal

\_\_\_\_\_

Title

\_\_\_\_\_

Surety

\_\_\_\_\_

Title

\_\_\_\_\_

Address of Surety

Bond No. \_\_\_\_\_

City \_\_\_\_\_ Zip Code \_\_\_\_\_



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**ARTICLE 1 - DEFINITIONS**

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Agreement: The written agreement between OWNER and CONTRACTOR covering the work to be performed; other Contract Documents are attached to the Agreement.

Application for Payment: The form furnished by ENGINEER which is to be used by CONTRACTOR in requesting progress payments and which is to include the schedule of values required by Paragraph 14.1 and an affidavit of CONTRACTOR that progress payments theretofore received on account of the work have been applied by CONTRACTOR to discharge in full all of CONTRACTOR's obligations reflected in prior Applications for Payment.

Bid: The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the work to be performed.



Bidder: Any person, firm, or corporation submitting a Bid for the work.

Bonds: Bid, performance and payment bonds, and other instruments of security, furnished by CONTRACTOR and his surety in accordance with the Contract Documents.

Change Order: A written order to CONTRACTOR signed by OWNER authorizing an addition, deletion, or revision in the work, or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

Contract Documents: The Agreement, Addenda (whether issued prior to the Opening of Bids or the execution of the Agreement), Instructions to Bidders, CONTRACTOR's bid, the bonds, the Notice of Award, these General Conditions, the Supplementary Conditions, the Specifications, Drawings, and Modifications.

Contract Price: The total monies payable to CONTRACTOR under the Contract Documents.

Contract Time: The number of days stated in the Agreement for the Completion of the Work, computed as provided in Paragraph 17.2.

CONTRACTOR: The person, firm, or corporation with whom OWNER has executed the Agreement.

Day: A calendar day of twenty-four (24) hours measured from midnight to the next midnight.

Drawings (Plans): The drawings, also commonly known or referred to as Plans, which show the character and Scope of Work to be performed and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents.

ENGINEER: The person, firm, or corporation named as such in the Agreement.

Field Order: A written order issued by ENGINEER which clarifies or interprets the Contract Documents in accordance with Paragraph 9.3 or orders minor changes in the work in accordance with Paragraph 10.2.

Modification: (a) A written amendment of the Contract Documents signed by both parties; (b) A Change Order; (c) A written clarification or interpretation issued by ENGINEER in accordance with Paragraph 9.3; or (d) A written order for a minor change or alteration in the work issued by ENGINEER pursuant to Paragraph 10.2. A Modification may only be issued after execution of the Agreement.

Notice of Award: The written notice by OWNER to the apparent successful Bidder stating that upon compliance with the conditions precedent to be fulfilled by him within the time specified, OWNER will execute and deliver the Agreement to him.

Notice to Proceed: A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform his obligations under the Contract Documents.

OWNER: A public body or authority, corporation, association, partnership, or individual for whom the work is to be performed.

OWNER'S REPRESENTATIVE: The authorized representative of OWNER who is assigned to the project site or any part thereof.

Project: The entire construction to be performed as provided in the Contract Documents.

Resident Project Representative: The authorized representative of ENGINEER who is assigned to the Project site or any part thereof.



Shop Drawings: All Drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by CONTRACTOR, subcontractor, manufacturer, supplier, or distributor and which illustrate the equipment, material, or some portion of the work.

Specifications: Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the work. The Specifications are customarily organized in 18 divisions in accordance with the Uniform System for Construction Specifications endorsed by the Construction Specifications Institute.

Subcontractor: An individual, firm, or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the work at the site.

Substantial Completion: The date as certified by ENGINEER when the construction of the Project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it was intended; or if there be no such certification, the date when final payment is due in accordance with Paragraph 14.13.

Work: Any and all obligations, duties, and responsibilities necessary to the successful completion of the Project assigned to or undertaken by CONTRACTOR under the Contract Documents, including all labor, materials, equipment, and other incidentals, and the furnishing thereof.

## **ARTICLE 2 - PRELIMINARY MATTERS**

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### **Execution of Agreement**

**2.1.** At least three counterparts of the Agreement and such other Contract Documents as practicable will be executed and delivered by CONTRACTOR to OWNER within ten days of the Notice of Award and the OWNER will execute and deliver one counterpart to CONTRACTOR within ten days of receipt of the executed Agreement from CONTRACTOR. ENGINEER will identify those portions of the Contract Documents not so signed and such identification will be binding on all parties. OWNER, CONTRACTOR, and ENGINEER shall each receive an executed counterpart of the Contract Documents and additional conformed copies as required.

### **Delivery of Bonds**

**2.2.** When he delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as he may be required to furnish in accordance with Paragraph 5.1.

### **Copies of Documents**

**2.3.** OWNER shall furnish to CONTRACTOR up to ten copies (unless otherwise provided in the Supplementary Conditions) of the Contract Documents as are reasonably necessary for the execution of the work. Additional copies will be furnished, upon request, at the cost of reproduction.

### **CONTRACTOR's Pre-Start Representations**

**2.4.** CONTRACTOR represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with the nature and extent of the Contract Documents, work, locality, and with all local conditions and Federal, State, and local laws, ordinances, rules, and regulations that may in any manner affect performance of the work, and represents that he has correlated his study and observations with the requirements of the Contract Documents. CONTRACTOR also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the General Requirements (Division 1) of the Specifications and made such additional surveys and investigations as he deems



necessary for the performance of the work at the Contract Price in accordance with the requirements of the Contract Documents and that he has correlated the results of all such data with the requirements of the Contract Documents.

**Commencement of Contract Time, Notice to Proceed**

**2.5.** The Contract Time will commence to run on the thirtieth day after the day on which the executed Agreement is delivered by OWNER to CONTRACTOR; or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the ninetieth day after the day of Bid Opening or the thirtieth day after the day on which OWNER delivers the executed Agreement to CONTRACTOR. A Notice to Proceed may be given at any time within thirty days after the day on which OWNER delivers the executed Agreement to CONTRACTOR.

**Starting the Project**

**2.6.** CONTRACTOR shall start to perform his obligations under the Contract Documents on the date when the Contract Time commences to run. No work shall be done at the site prior to the date on which the Contract Time commences to run.

**Before Starting Construction**

**2.7.** Before undertaking each part of the work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. He shall at once report in writing to ENGINEER any conflict, error, or discrepancy which he may discover; however, he shall not be liable to OWNER or ENGINEER for his failure to discover any conflict, error, or discrepancy in the Drawings or Specifications.

**2.8.** Within ten days after delivery of the executed Agreement by OWNER to CONTRACTOR, CONTRACTOR shall submit to ENGINEER for approval, an estimated progress schedule indicating the starting and completion dates of the various stages of the work, and a preliminary schedule of Shop Drawing submissions.

**2.9.** Before starting the work at the site, CONTRACTOR shall furnish OWNER and ENGINEER Certificates of Insurance as required by Article 5. Within twenty days after delivery of the executed Agreement by OWNER to CONTRACTOR, but before starting the work at the site, a conference will be held to review the above schedules, to establish procedures for handling Shop Drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the Project. Present at the conference will be OWNER or his representative, ENGINEER, Resident Project Representatives, CONTRACTOR, and his Superintendent.

**ARTICLE 3 - CORRELATION, INTERPRETATION, AND INTENT OF CONTRACT DOCUMENTS**

**3.1.** It is the intent of the Specifications and drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between OWNER and CONTRACTOR. They may be altered only by a Modification.

**3.2.** The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, he shall call it to ENGINEER's attention in writing at once and before proceeding with the work affected thereby; however, he shall not be liable to OWNER or ENGINEER for his failure to discover any conflict, error, or discrepancy in the Specifications or Drawings. In resolving such conflicts, errors, and discrepancies, the Documents shall be



given precedence in the following order: Agreement, Modifications, Addenda, Supplementary Conditions, Instructions to Bidders, General Conditions, Specifications, and Drawings. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings. Any work that may reasonably be inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials, or equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards.

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**ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS**

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**Availability of Lands**

**4.1.** OWNER shall furnish, as indicated in the Contract Documents, and not later than the date when needed by CONTRACTOR, the lands upon which the work is to be done, rights-of-way for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise specified in the Contract Documents. If CONTRACTOR believes that any delay in OWNER's furnishing these lands or easements entitles him to an extension of the Contract Time, he may make a claim therefor as provided in Article 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

**Physical Conditions - Surveys and Reports**

**4.2.** Reference is made to the General Requirements (Division 1) of the Specifications for identification of those surveys and investigation reports of subsurface and latent physical conditions at the Project site or otherwise affecting performance of the work which have been relied upon by ENGINEER in preparation of the Drawings and Specifications.

**Unforeseen Physical Conditions**

**4.3.** CONTRACTOR shall promptly notify OWNER and ENGINEER in writing of any subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents. ENGINEER will promptly investigate those conditions and advise OWNER in writing if further surveys or subsurface tests are necessary. Promptly thereafter, OWNER shall obtain the necessary additional surveys and tests and furnish copies to ENGINEER and CONTRACTOR. If ENGINEER finds that the results of such surveys or tests indicate that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents, and which could not reasonably have been anticipated by CONTRACTOR, a Change Order shall be issued incorporating the necessary revisions.

**Reference Points**

**4.4.** OWNER shall provide engineering surveys for construction to establish reference points which in his judgment are necessary to enable CONTRACTOR to proceed with the work. CONTRACTOR shall be responsible for surveying and laying out the work (unless otherwise provided in the Supplementary Conditions), and shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. He shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations. CONTRACTOR shall replace and accurately relocate all reference points so lost, destroyed or moved.

**4.5.** All elevations shown on the Plans or referred to herein are in feet above mean sea level datum as established by the United States Geological Survey, unless otherwise noted. The CONTRACTOR shall verify all the existing structure locations and elevations at points of connection or possible interference between his



work and the existing structures and shall report at once to the ENGINEER any interferences or discrepancies discovered.

**4.6.** The CONTRACTOR shall cause to be replaced by a Registered Land Surveyor all survey monuments and/or property irons damaged or destroyed by his operations or the operations of his Subcontractor.

## **ARTICLE 5 - BONDS AND INSURANCE**

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### **Performance, Payment and Other Bonds**

**5.1.** CONTRACTOR shall furnish performance and payment bonds as security for the faithful performance and payment of all his obligations under the Contract Documents. These bonds shall be in amounts at least equal to the Contract Price, and (except as otherwise provided in the Supplementary Conditions) in such form and with such sureties as are licensed to conduct business in the state where the Project is located and are named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department.

**5.2.** If the surety on any bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located, CONTRACTOR shall within five days thereafter substitute another bond and surety, both of which shall be acceptable to OWNER.

### **Insurance Required of the CONTRACTOR**

**5.3.** Prior to commencement of the work, the CONTRACTOR shall purchase and maintain during the term of the Project such insurance as will protect him, the OWNER(s), OWNER'S REPRESENTATIVE, TOWNSHIP ATTORNEY and the ENGINEER(s) from claims arising out of the work described in this Contract and performed by the CONTRACTOR, Subcontractor(s), or Sub-subcontractor(s) consisting of:

**5.3.1.** Worker's Compensation Insurance including Employer's Liability to cover employee injuries or disease compensable under the Worker's Compensation Statutes of the states in which work is conducted under this Contract; disability benefit laws, if any; or Federal Compensation Acts such as U.S. Longshoremen or Harbor Workers, Maritime Employment, or Railroad Compensation Act(s), if applicable. Self-insurance plans approved by the regulatory authorities in the state in which work on this Project is performed are acceptable.

**5.3.2.** A Comprehensive General Liability policy to cover bodily injury to persons other than employees and for damage to tangible property, including loss of use thereof, including the following exposures:

- (a) all premises and operations;
- (b) explosion, collapse, and underground damage;
- (c) CONTRACTOR's Protective Coverage for independent CONTRACTORS and subcontractors employed by him;
- (d) Contractual Liability for the obligation assumed in the indemnification or hold harmless agreement found in the General Conditions section of this Contract;
- (e) the usual Personal Injury Liability endorsement with no exclusions pertaining to employment;
- (f) products and completed operations coverage -- this coverage shall extend through the Contract Guarantee period.



**5.3.3.** A Comprehensive Automobile Liability policy to cover bodily injury and property damage arising out of the ownership, maintenance, or use of any motor vehicle, including owned, non-owned, and hired vehicles. In light of standard policy provisions concerning:

- (a) loading and unloading; and
- (b) definitions pertaining to motor vehicles licensed for road use vs. unlicensed or self-propelled construction equipment, it is strongly recommended that the Comprehensive General Liability and the Comprehensive Auto Liability be written by the same insurance carrier, though not necessarily in one policy.

**5.3.4.** The CONTRACTOR will purchase for the OWNER an OWNER's Protective Liability policy to protect the OWNER, the ENGINEER, their consultants, agents, employees, and such public corporations in whose jurisdiction the work is located for their contingent liability for work performed by the CONTRACTOR, the Subcontractor(s), and the Sub-subcontractor(s) under this Contract.

**5.3.5.** The CONTRACTOR shall purchase a Builder's Risk-Installation Floater in a form acceptable to the OWNER covering property of the Project for the full cost of replacement as of the time of any loss which shall include as named insureds:

- (a) the CONTRACTOR;
- (b) all Subcontractors;
- (c) all Sub-subcontractors;
- (d) the OWNER, the ENGINEER(s) or Architect(s);

as their respective interests may prove to be at the time of loss, covering insurable property which is the subject of this Contract, whether in place, stored at the job site, stored elsewhere, or in transit at the risk of the insured(s). Coverage shall be effected on an "All Risk" form including, but not limited to, the perils of fire, wind, vandalism, collapse, theft, and earthquake, with exclusions normal to the coverage. The CONTRACTOR may arrange for such deductibles as he deems to be within his ability of self-assume, but he will be held solely responsible for the amount of such deductible and for any non-insurance penalties. Any insured loss shall be adjusted with the OWNER and the CONTRACTOR and paid to the OWNER and CONTRACTOR as trustee for the other insureds.

**5.3.6.** Umbrella or Excess Liability: The OWNER or its representative may, for certain projects, require limits higher than those stated in Paragraph 5.4. which follows. The CONTRACTOR is granted the option of arranging coverage under a single policy for the full limit required or by a combination of underlying policies with the balance provided by an Excess or Umbrella Liability policy equal to the total limit(s) requested. Umbrella or Excess policy wording shall be at least as broad as the primary or underlying policy(ies) and shall apply both to the CONTRACTOR's general liability and to his automobile liability insurance.

**5.3.7.** Railroad Protective Liability: Where such an exposure exists, the CONTRACTOR will provide coverage in the name of each railroad company having jurisdiction over rights-of-way across which work under the Contract is to be performed. The form of policy and the limits of liability shall be determined by the railroad company(ies) involved. See Supplemental General Conditions for limits and coverage requested.

## **Limits of Liability**

**5.4.** The required limits of liability for insurance coverages requested in Paragraph 5.3 shall be NOT LESS than the following:



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### 5.4.1. Worker's Compensation:

Coverage A - Compensation	Statutory
Coverage B - Employer's Liability	\$500,000

### 5.4.2. Comprehensive General Liability:

Bodily Injury - Each Occurrence	\$1,000,000
Bodily Injury - Aggregate (Completed Operations)	\$1,000,000
Property Damage - Each Occurrence	\$500,000
Property Damage - Aggregate or Combined Single Limit	\$1,000,000 \$2,000,000

### 5.4.3. Comprehensive Automobile Liability:

Bodily Injury	\$500,000
Property Damage or Combined Single Limit	\$200,000 \$1,000,000

### 5.4.4. OWNER's Protective:

Bodily Injury - Each Occurrence	\$1,500,000
Property Damage - Each Occurrence	\$500,000
Property Damage - Aggregate or Combined Single Limit	\$1,000,000 \$2,000,000

### 5.4.5. Builder's Risk-Installation Floater: Replacement Cost at Time of Loss

### 5.4.6. Umbrella or Excess Liability: \$3,000,000

## Insurance - Other Requirements

### 5.5. The following conditions shall also be required in regard to insurance coverage.

**5.5.1. Notice of Cancellation or Intent Not to Renew:** Policies will be endorsed to provide that at least 30 days written notice of cancellation or of intent not to renew shall be given to the OWNER and to the ENGINEER.

**5.5.2. Evidence of Coverage:** Prior to commencement of the work, the CONTRACTOR shall furnish to the OWNER, Certificates of Insurance in force on the OWNER's form of certificate provided. Other forms of certificate are acceptable only if:

- (a) they include all of the items prescribed in the OWNER's form of certificate, including agreement to cancellation provisions outlined in Paragraph 5.5.1. above; and
- (b) they have written approval of the OWNER and the ENGINEER. The OWNER reserves the right to request complete copies of policies if deemed necessary to ascertain details of coverage not provided by the certificates. Such policy copies shall be "originally signed copies," and so designated.



**5.5.3. Evidence of Insurance Required for the CONTRACTOR:**

- (1) Worker's Compensation and Employer's Liability Comprehensive General Liability including:
  - (a) all premises and operations;
  - (b) explosion, collapse, and underground damage;
  - (c) CONTRACTOR's Protective;
  - (d) Contractual Liability for obligations assumed in the Indemnification-Hold Harmless Agreement of this Contract;
  - (e) Personal Injury Liability;
  - (f) products and completed operations;
- (2) Comprehensive Automobile Liability including owned, non-owned, and hired vehicles
- (3) Umbrella or Excess Liability

**5.5.4. Evidence of Insurance Required for the OWNER:**

- (a) OWNER's Protective Liability which names as insured(s) the OWNER, OWNER'S REPRESENTATIVE the ENGINEER(s), their consultants, agents, employees, and such public corporations in whose jurisdiction the work is located.

**5.5.5. Evidence of Insurance Required for the CONTRACTOR and the OWNER:**

- (a) Builder's Risk-Installation Floater which names as insured(s) the OWNER; OWNER'S REPRESENTATIVE; the ENGINEER(s); their consultants, agents, and employees; the CONTRACTOR and all Subcontractors.

**5.5.6. Qualification of Insurers:** In order to determine financial strength and reputation of insurance carriers, all companies providing the coverages required shall be licensed or approved by the Insurance Bureau of the State of Michigan and shall have a financial rating not lower than XI and a Policyholder's service rating no lower than B+ as listed in A.M. Best's Key Rating Guide, current edition. Companies with ratings lower than B+:XI will be acceptable only upon written consent of the OWNER.

**Additional Bonds and Insurance**

**5.6.** Prior to delivery of the executed Agreement by OWNER to CONTRACTOR, OWNER may require CONTRACTOR to furnish such other bonds and such additional insurance, in such form and with such sureties or insurers as OWNER may require. If such other bonds or such other insurance is specified by written instructions given prior to Opening of Bids, the premiums shall be paid by CONTRACTOR; if subsequent thereto, they shall be paid by OWNER (except as otherwise provided in Article 11).

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**ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES**

**Supervision and Superintendence**

**6.1.** CONTRACTOR shall supervise and direct the work efficiently and with his best skill and attention. He shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but he shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished work complies accurately with the Contract Documents.



**6.2.** CONTRACTOR shall keep on the work site at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

**Labor, Materials, and Equipment**

**6.3.** CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the work and perform construction as required by the Contract Documents. He shall at all times maintain good discipline and order at the site.

**6.4.** CONTRACTOR shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation, and completion of the work.

**6.5.** All materials and equipment shall be new, except as otherwise provided in the Contract Documents. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

**6.6.** All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processors, except as otherwise provided in the Contract Documents.

**Substitute Materials or Equipment**

**6.7.** Whenever a material, article, or piece of equipment is identified on the drawings or Specifications by reference to brand name or catalog number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality, and function may be considered.

The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand name or catalog number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to that specified, the ENGINEER may approve its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the Contract Price and the Contract Documents shall be appropriately modified by Change Order. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without a change in the Contract Price or Contract Time.

**Concerning Subcontractors**

**6.8.** CONTRACTOR shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection. A Subcontractor or other person or organization identified in writing to OWNER and ENGINEER prior to the Notice of Award will be deemed acceptable to OWNER and ENGINEER. Acceptance of any Subcontractor, other person, or organization by OWNER or ENGINEER shall not constitute a waiver of any right of OWNER or ENGINEER to reject defective work or work not in conformance with the Contract Documents. If OWNER or ENGINEER after due investigation has reasonable objection to any Subcontractor, other person or organization proposed by



CONTRACTOR after the Notice of Award, CONTRACTOR shall submit an acceptable substitute and the Contract Price shall be increased or decreased by the difference in cost occasioned by such substitution, and an appropriate Change Order shall be issued. CONTRACTOR shall not be required to employ any Subcontractor, other person or organization against whom he has reasonable objection. CONTRACTOR shall not without the consent of OWNER and ENGINEER make any substitution for any CONTRACTOR, other person, or organization who has been accepted by OWNER and ENGINEER unless ENGINEER determines that there is good cause for doing so.

Nothing contained in these Contract Documents shall create any contractual relationship between the OWNER or ENGINEER and any Subcontractor or Sub-Subcontractor.

**6.9.** CONTRACTOR shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any Subcontractor or other person or organization having a direct contract with CONTRACTOR, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any monies due any Subcontractor or other person or organization, except as may otherwise be required by law. OWNER or ENGINEER may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific work done in accordance with the Schedule of Values.

**6.10.** The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the work among Subcontractors or delineating the work to be performed by any specific trade.

**6.11.** CONTRACTOR agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER.

**6.12.** All work performed for CONTRACTOR by a Subcontractor shall be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which shall contain provisions that waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance provided in accordance with Article 5 of these General Conditions, except such rights as they may have to the proceeds of such insurance held by OWNER as trustee under Paragraph 5.3.5.

### **Patent Fees and Royalties**

**6.13.** CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. CONTRACTOR shall indemnify and hold harmless OWNER, TOWNSHIP ATTORNEY and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the work or resulting from the incorporation in the work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.



**Permits**

**6.14.** CONTRACTOR shall obtain and pay for all construction permits and licenses and shall pay all governmental charges and inspection fees necessary for the prosecution of the work, which are applicable at the time of his Bid. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall also pay all public utility charges.

**Laws and Regulations**

**6.15.** CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the work. If CONTRACTOR observes that the Specifications or Drawings are at variance therewith, he shall give ENGINEER prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Modification. If CONTRACTOR performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to ENGINEER, he shall bear all costs arising therefrom; however, it shall not be his primary responsibility to make certain that the Specifications and Drawings are in accordance with such laws, ordinances, rules and regulations.

**Taxes**

**6.16.** CONTRACTOR shall pay all sales, consumer use, and other Federal, State and Local taxes required to be paid by him in accordance with the law of the place where the work is to be performed.

**Use of Premises**

**6.17.** CONTRACTOR shall confine his equipment, the storage of materials and equipment, and the operations of his workmen to areas permitted by law, ordinances, permits, or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with materials or equipment. CONTRACTOR shall restore the areas to their original condition.

**6.18.** CONTRACTOR shall not load nor permit any part of any structure to be loaded with weights that will endanger the structure, nor shall he subject any part of the work to stresses or pressures that will endanger it.

**Record Drawings**

**6.19.** CONTRACTOR shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to ENGINEER and shall be delivered to him for OWNER upon completion of the Project. (Note: Further provisions in respect of such record Drawings may be included in the General Requirements (Division 1).)

**Safety and Protection**

**6.20.** CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

- (a) all employees on the work and other persons who may be affected thereby;
- (b) all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site;



- (c) other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. He shall notify OWNERS of adjacent utilities when prosecution of the work may affect them. All damage, injury or loss to any property referred to in Paragraph 6.20(b) or 6.20(c) caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR; except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR. CONTRACTOR's duties and responsibilities for the safety and protection of the work shall continue until such time as all the work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with Paragraph 14.13 that work is acceptable.

**6.21.** CONTRACTOR shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be CONTRACTOR's superintendent unless otherwise designated in writing by CONTRACTOR to OWNER.

**6.22.** Neither OWNER nor ENGINEER shall be responsible for safety on the job. It is the CONTRACTOR's sole responsibility to comply with the rules and regulations of the Occupational Safety and Health Act (OSHA).

### **Emergencies**

**6.23.** In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, CONTRACTOR without special instruction or authorization from ENGINEER or OWNER, is obligated to act, at his discretion, to prevent threatened damage, injury, or loss. He shall give ENGINEER prompt written notice of any significant changes in the work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved. If CONTRACTOR believes that additional work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Price or an extension of the Contract Time, he may make a claim therefor as provided in Articles 11 and 12.

### **Shop Drawings and Samples**

**6.24.** After checking and verifying all field measurements, CONTRACTOR shall submit to ENGINEER for approval, in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.8) five copies (or at ENGINEER's option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of CONTRACTOR and identified as ENGINEER may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction, and the like to enable ENGINEER to review the information as required.

**6.25.** CONTRACTOR shall also submit to ENGINEER for approval with such promptness as to cause no delay in work, all samples required by the Contract Documents. All samples will have been checked by and stamped with the approval of CONTRACTOR, identified clearly as to material, manufacturer, any pertinent catalog numbers, and the use for which intended.



**6.26.** At the time of each submission, CONTRACTOR shall in writing call ENGINEER's attention to any deviations that the Shop Drawing or sample may have from the requirements of the Contract Documents.

**6.27.** ENGINEER will review and approve with reasonable promptness Shop Drawings and samples, but his review and approval shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make any corrections required by ENGINEER and shall return the required number of correct copies of Shop Drawings and resubmit new samples, until approved. CONTRACTOR shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by ENGINEER on previous submissions. CONTRACTOR's stamp of approval on any Shop Drawing or sample shall constitute a representation to OWNER and ENGINEER that CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawing or sample with the requirements of the work and the Contract Documents.

**6.28.** Where a Shop Drawing or sample submission is required by the Specifications, no related work shall be commenced until the submission has been approved by ENGINEER. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by CONTRACTOR at the site and shall be available to ENGINEER.

**6.29.** ENGINEER's approval of Shop Drawings or samples shall not relieve CONTRACTOR from his responsibility for any deviations from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to such deviation at the time of submission and ENGINEER has given written approval to the specific deviation, nor shall any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings.

(Note: Further provisions in respect to Shop Drawings and samples may be included in the General Requirements (Division 1).)

### **Cleaning**

**6.30.** CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the work, and at the completion of the work he shall remove all waste materials, rubbish, and debris from and about the premises as well as all tools, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents. (Note: Further provisions in respect of cleaning may be included in the General Requirements (Division 1).)

### **Indemnification**

**6.31.** CONTRACTOR shall indemnify and hold harmless OWNER, TOWNSHIP ATTORNEY and ENGINEER and their agents, directors, officers, and employees from and against all claims, damages, losses and expenses including attorneys' fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense is:

- (a) attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom; and



- (b) caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

**6.32.** In any and all claims against OWNER, TOWNSHIP ATTORNEY, or ENGINEER or any of their agents or directors, officers, and employees by any employee of CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.31 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR, or any Subcontractor under Worker's Compensation Acts, disability benefit acts, or other employee benefit acts.

**6.33.** The obligations of CONTRACTOR under Paragraph 6.30 shall not extend to the liability of ENGINEER, his agents or directors, officers, and employees arising out of:

- (a) the preparation of approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
- (b) the giving of or the failure to give directions or instructions by ENGINEER, his agents or directors, officers and employees provided such giving or failure to give is the primary cause of injury or damage.

## **ARTICLE 7 - WORK BY OTHERS**

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**7.1.** OWNER may perform additional work related to the Project by himself, or he may let other direct contracts therefor which shall contain General Conditions similar to these. CONTRACTOR shall afford the other CONTRACTORS who are parties to such direct contracts (or OWNER, if he is performing the additional work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his work with theirs.

**7.2.** If any part of CONTRACTOR's work depends for proper execution or results upon the work of any such other CONTRACTOR (or OWNER), CONTRACTOR shall inspect and promptly report to ENGINEER in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results. His failure so to report shall constitute an acceptance of the other work as fit and proper for the relationship of his work except as to defects and deficiencies which may appear in the other work after the execution of his work.

**7.3.** CONTRACTOR shall do all cutting, fitting, and patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and of the other contractors whose work will be affected.

**7.4.** If the performance of additional work by other CONTRACTORS or OWNER is not noted in the Contract Documents prior to the execution of the contract, written notice thereof shall be given to CONTRACTOR prior to starting any such additional work. If CONTRACTOR believes that the performance of such additional work by OWNER or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim therefor as provided in Articles 11 and 12.



## **ARTICLE 8 - OWNER'S RESPONSIBILITIES**

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**8.1.** OWNER shall issue all communications to CONTRACTOR through ENGINEER.

**8.2.** In case of termination of the employment of ENGINEER, OWNER shall appoint an ENGINEER against whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER. Any dispute in connection with such appointment shall be subject to arbitration.

**8.3.** OWNER shall furnish the data required of him under the Contract Documents promptly and shall make payments to CONTRACTOR promptly after they are due as provided in Paragraphs 14.4 and 14.13.

**8.4.** OWNER's duties in respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER's identifying and making available to CONTRACTOR copies of surveys and investigation reports of subsurface and latent physical conditions at the site or otherwise affecting performance of the work which have been relied upon by ENGINEER in preparing the Drawings and Specifications.

**8.5.** OWNER's responsibilities in respect of liability and property insurance are set forth in Article 5.

**8.6.** In addition to his rights to request changes in the work in accordance with Article 10, OWNER (especially in certain instances as provided in Paragraph 10.4) shall be obligated to execute Change Orders.

**8.7.** OWNER's responsibility in respect of certain inspections, tests, and approvals is set forth in Paragraph 13.2.

**8.8.** In connection with OWNER's right to stop work or suspend work, see Paragraphs 13.8 and 15.1. Paragraph 15.2 deals with OWNER's right to terminate services of CONTRACTOR under certain circumstances.

## **ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION**

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### **OWNER's Representative**

**9.1.** ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in Articles 1 through 17 of these General Conditions and shall not be extended without written consent of OWNER and ENGINEER.

### **Visits to Site**

**9.2.** ENGINEER will make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the work is proceeding in accordance with the Contract Documents. He will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work. His efforts will be directed toward providing assurance for OWNER that the completed Project will conform to the requirements of the Contract Documents. On the basis of his on-site observations as an experienced and qualified design professional, he will keep OWNER informed of the progress of the work and will endeavor to guard OWNER against defects and deficiencies in the work of CONTRACTORS.



**Clarifications and Interpretations**

**9.3.** ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If CONTRACTOR believes that a written clarification and interpretation entitles him to an increase in the Contract Price, he may make a claim therefor as provided in Article 11.

**Rejecting Defective Work**

**9.4.** ENGINEER will have authority to disapprove or reject work which is "defective" (which term is hereinafter used to describe work that is unsatisfactory, faulty, or defective, or does not conform to the requirements of the Contract Documents or does not meet the requirements of the inspection, test, or approval referred to in Paragraph 13.2 or has been damaged prior to approval of final payment). He will also have authority to require special inspection or testing of the work as provided in Paragraph 13.7, whether or not the work is fabricated, installed, or completed.

**Shop Drawings, Change Orders, and Payments**

**9.5.** In connection with ENGINEER's responsibility for Shop Drawings and samples, see Paragraphs 6.23 through 6.28 inclusive.

**9.6.** In connection with ENGINEER's responsibility for Change Orders, see Articles 10, 11, and 12.

**9.7.** In connection with ENGINEER's responsibilities in respect of Applications for Payment, etc., see Article 14.

**Resident Project Representatives**

**9.8.** If the OWNER authorizes the ENGINEER, the ENGINEER shall provide one or more full-time resident project representatives to assist the ENGINEER in carrying out his responsibilities at the site. The duties, responsibilities, and limitation of authority of any such resident project representative shall be to endeavor to further protect the OWNER against defects and deficiencies in the work. But the furnishing of such resident project representatives shall not make the ENGINEER responsible for construction means, methods, techniques, sequences, or procedures or for any safety precautions or programs in connection with the work.

**Decisions on Disagreements**

**9.9.** ENGINEER will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder. In his capacity as interpreter and judge he will exercise his best efforts to insure faithful performance by both OWNER and CONTRACTOR. He will not show partiality to either and will not be liable for the result of any interpretation or decision rendered in good faith. Claims, disputes, and other matters relating to the execution and progress of the work or the interpretation of or performance under the Contract Documents shall be referred to ENGINEER for decision, which he will render in writing within a reasonable time.



### **Limitations on ENGINEER's Responsibilities**

**9.10.** Neither ENGINEER's authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by him in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ENGINEER to CONTRACTOR, any Subcontractor, any materialman, fabricator, supplier, or any of their agents or employees or any other person performing any of the work.

**9.11.** ENGINEER will not be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, and he will not be responsible for CONTRACTOR's failure to perform the work in accordance with the Contract Documents.

**9.12.** ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or any Subcontractors, or any of his or their agents or employees, or any other persons at the site or otherwise performing any of the work.

### **ARTICLE 10 - CHANGES IN THE WORK**

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**10.1.** Without invalidating the Agreement, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the work; these will be authorized by Change Orders. Upon receipt of a Change Order, CONTRACTOR shall proceed with the work involved. All such work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 11 or Article 12 on the basis of a claim made by either party.

**10.2.** ENGINEER may authorize minor changes or alterations in the work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If CONTRACTOR believes that any minor change or alteration authorized by ENGINEER entitles him to an increase in the Contract Price, he may make a claim therefor as provided in Article 11.

**10.3.** Additional work performed by CONTRACTOR without authorization of a Change Order will not entitle him to an increase in the Contract Price or an extension of the Contract Time, except in the case of an emergency and as provided in Paragraphs 10.2 and 13.7.

**10.4.** OWNER shall execute appropriate Change Orders prepared by ENGINEER covering changes in the work to be performed as provided in Paragraph 4.3, and work performed in an emergency as provided in Paragraph 6.23 and any other claim of CONTRACTOR for a change in the Contract Time or the Contract Price which is approved by ENGINEER.

**10.5.** It is CONTRACTOR's responsibility to notify his Surety of any changes affecting the general Scope of Work or change in the Contract Price and the amount of the applicable bonds shall be adjusted accordingly. CONTRACTOR shall furnish proof of such adjustment to OWNER.

### **ARTICLE 11 - CHANGE OF CONTRACT PRICE**

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**11.1.** The Contract Price constitutes the total compensation payable to CONTRACTOR for performing the work. All duties, responsibilities, and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

**11.2.** The Contract Price may only be changed by a Change Order. Any claim for an increase in the Contract Price shall be based on written notice delivered to OWNER and ENGINEER within fifteen days of the occurrence of the event giving rise to the claim. Notice of the amount of the claim with supporting data shall be delivered within forty-five days of such occurrence unless ENGINEER allows an additional period of



time to ascertain accurate cost data. Any claims, not delivered to OWNER or ENGINEER within forty-five days or within any additional period allowed by ENGINEER in writing, shall be forfeited by the CONTRACTOR and shall not be honored by the OWNER. All claims for adjustments in the Contract Price shall be determined by ENGINEER if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. Any change in the Contract Price resulting from any such claim shall be incorporated in a Change Order.

**11.3.** The value of any work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

- (a) where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved;
- (b) by mutual acceptance of a lump sum;
- (c) on the basis of the Cost of the Work (determined as provided in Paragraph 11.4.).

### **Cost of the Work**

**11.4.** The term Cost of the Work means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the work. Except as may be otherwise agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in Paragraph 11.5.

**11.4.1.** Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the work under schedules of job classifications agreed upon by OWNER and CONTRACTOR: Payroll costs for employees not employed full time on the work shall be apportioned on the basis of their time spent on the work. Payroll costs shall include, but not be limited to salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, worker's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing work after regular working hours, on Sunday or legal holidays shall be included in the above to the extent authorized by the OWNER.

**11.4.2.** Cost of all materials and equipment furnished and incorporated in the work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith: All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

**11.4.3.** Payments made by CONTRACTOR to the Subcontractors for work performed by Subcontractors: If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to him and shall deliver such bids to OWNER who will then determine with the advice of ENGINEER, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Cost of the Work shall be determined in accordance with Paragraphs 11.4 and 11.5. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

**11.4.4.** Costs of special consultants (including, but not limited to, ENGINEERS, architects, testing laboratories, surveyors, lawyers, and accountants) employed for services specifically related to the work.



**11.4.5.**Supplemental costs including the following:

- (a) The proportion of necessary transportation, traveling and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the work;
- (b) Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workmen, which are consumed in the performance of the work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR;
- (c) Sales, use or similar taxes related to the work, and for which CONTRACTOR is liable, imposed by any governmental authority;
- (d) Deposits lost for causes other than CONTRACTOR's negligence, royalty payments and fees for permits and licenses;
- (e) Losses, damages and expenses, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the execution of and to the work, provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's Fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, he shall be paid for his services a fee proportionate to that stated in Paragraph 11.6.2;
- (f) The cost of utilities, fuel and sanitary facilities at the site;
- (g) Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the work;
- (h) Cost of premiums for bonds and insurance which OWNER is required to pay.

**11.5.** The term Cost of the Work shall not include any of the following:

**11.5.1.**Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, ENGINEERS, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in his principal or a branch office for general administration of the work and not specifically included in the schedule referred to in Subparagraph 11.4.1. -- all of which are to be considered administrative costs covered by the CONTRACTOR's Fee.

**11.5.2.**Expenses of CONTRACTOR's principal and branch offices other than his office at the site.

**11.5.3.**Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the work and charges against CONTRACTOR for delinquent payments.

**11.5.4.**Cost of premiums for all bonds and for all insurance policies whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except as otherwise provided in Subparagraph 11.4.5(h)).

**11.5.5.**Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

**11.5.6.**Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 11.4.

**11.5.7.**Temporary shut down of work due to unknown existing condition. CONTRACTOR shall not charge OWNER for equipment of labor for idled operations due to unforeseen condition at the work site.



**CONTRACTOR's Fee**

**11.6.** The CONTRACTOR's Fee which shall be allowed to CONTRACTOR for his overhead and profit shall be determined as follows:

**11.6.1.**A fixed mutually acceptable. If no mutually acceptable fixed fee can be agreed upon, then,

**11.6.2.**A fee based on the following percentages of the various portions of the Cost of the Work:

- (a) for costs incurred under Paragraphs 11.4.1. and 11.4.2.; the CONTRACTOR's Fee shall be ten (10) percent;
- (b) for costs incurred under Paragraph 11.4.3., the CONTRACTOR's Fee shall be five (5) percent; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to the Subcontractor as a fee for overhead and profit shall be ten (10) percent; and
- (c) no fee shall be payable on the basis of costs itemized under Paragraphs 11.4.4., 11.4.5., and 11.5.

**11.7.** The amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost, will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the combined overhead and profit shall be figured on the basis of the net increase, if any.

**11.8.** Whenever the cost of any work is to be determined pursuant to Paragraphs 11.4 and 11.5, CONTRACTOR will submit in form prescribed by ENGINEER an itemized cost breakdown together with supporting data.

**Cash Allowances**

**11.9.** It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the work so covered to be done by such materialmen, suppliers, or Subcontractors and for such sums within the limit of the allowances as ENGINEER may approve. Upon final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. CONTRACTOR agrees that the original Contract Price includes such sums as he deems proper for costs and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be allowed.

**ARTICLE 12 - CHANGE OF THE CONTRACT TIME**

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**12.1.** The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to OWNER and ENGINEER within fifteen days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by ENGINEER if OWNER and CONTRACTOR cannot otherwise agree. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

**12.2.** The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if he makes a claim therefor as provided in Paragraph 12.1. Such delays shall include, but not be restricted to, acts or neglect by any separate CONTRACTOR employed by OWNER, fires, floods, labor disputes, epidemics, abnormal weather conditions, or Acts of God.



**12.3.** All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 12 shall not exclude recovery for damages (including compensation for additional professional services) for delay by either party.

**ARTICLE 13 - WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

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**Warranty and Guarantee**

**13.1.** CONTRACTOR warrants and guarantees to OWNER and ENGINEER that all materials and equipment will be new unless otherwise specified and that all work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents and of any inspections, tests, or approvals referred to in Paragraph 13.2. All unsatisfactory work, all faulty or defective work, and all work not conforming to the requirements of the Contract Documents at the time of acceptance thereof or of such inspections, tests, or approvals, shall be considered defective. Prompt notice of all defects shall be given to CONTRACTOR. All defective work, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 13.

**Tests and Inspections**

**13.2.** If the Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction require any work to specifically be inspected, tested, or approved by some public body, CONTRACTOR shall assume full responsibility therefor, pay all costs in connection therewith and furnish ENGINEER the required certificates of inspection, testing, or approval. All other inspections, tests and approvals required by the Contract Documents shall be performed by organizations acceptable to OWNER and CONTRACTOR and the costs thereof shall be borne by CONTRACTOR unless otherwise specified.

**13.3.** CONTRACTOR shall give ENGINEER timely notice of readiness of the work for all inspections, tests, or approvals. If any such work required so to be inspected, tested, or approved is covered without written approval of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation, and such uncovering shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of his intention to cover such work and ENGINEER has not acted with reasonable promptness in response to such notice.

**13.4.** Neither observations by ENGINEER, nor inspections, tests, or approvals by persons other than CONTRACTOR shall relieve CONTRACTOR from his obligations to perform the work in accordance with the requirements of the Contract Documents.

**Access to Work**

**13.5** ENGINEER and his representatives and other representatives of OWNER will at reasonable times have access to the work. CONTRACTOR shall provide proper and safe facilities for such access and observation of the work and also for any inspection or testing thereof by others.

**Uncovering Work**

**13.6.** If any work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for his observation and replaced at CONTRACTOR's expense.

**13.7.** If any work has been covered which ENGINEER has not specifically requested to observe prior to its being covered, or if ENGINEER considered it necessary or advisable that covered work be inspected or



tested by others, CONTRACTOR at ENGINEER's request shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the work in question, furnishing all necessary labor, material, and equipment. If it is found that such work is defective, CONTRACTOR shall bear all the expenses of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction if he makes a claim therefor as provided in Articles 11 and 12.

**OWNER May Stop the Work**

**13.8.** If the work is defective, or CONTRACTOR fails to supply sufficient skilled workmen or suitable materials or equipment, or if CONTRACTOR fails to make prompt payments to Subcontractors or for labor, materials, or equipment, OWNER may order CONTRACTOR to stop the work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

**Correction or Removal of Defective Work**

**13.9.** If required by ENGINEER prior to approval of final payment, CONTRACTOR shall promptly, without cost to OWNER and as specified by ENGINEER, either correct any defective work, whether or not fabricated, installed or completed, or, if the work has been rejected by ENGINEER, remove it from the site and replace it with non-defective work. If CONTRACTOR does not correct such defective work or remove and replace such rejected work within a reasonable time, all as specified in a written notice from ENGINEER, OWNER may have the deficiency corrected or the rejected work removed and replaced. All direct and indirect costs of such correction or removal and replacement, including compensation for additional professional services, shall be paid by CONTRACTOR, and an appropriate deductive Change Order shall be issued. CONTRACTOR shall also bear the expenses of making good all work of others destroyed or damaged by his correction, removal or replacement of his defective work.

**One-Year Correction Period**

**13.10.** If, after the approval of final payment and prior to the expiration of one year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions, either correct such defective work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective work. If CONTRACTOR does not promptly comply with the terms of such instructions, OWNER may have the defective work corrected or the rejected work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by CONTRACTOR.

**Acceptance of Defective Work**

**13.11.** If, instead of requiring correction or removal and replacement of defective work, OWNER (and, prior to approval and final payment, also ENGINEER) prefers to accept it, he may do so. In such case, if acceptance occurs prior to approval of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price; or, if the



acceptance occurs after approval of final payment, an appropriate amount shall be paid by CONTRACTOR to OWNER.

**Neglected Work by CONTRACTOR**

**13.12.** If CONTRACTOR should fail to prosecute the work in accordance with the Contract Documents, including any requirements of the progress schedule, OWNER, after seven (7) days written notice to CONTRACTOR may, without prejudice to any other remedy he may have, make good such deficiencies and the cost thereof (including compensation for additional professional services) shall be charged against CONTRACTOR if ENGINEER approves such action, in which case a Change Order shall be issued incorporating the necessary revisions in the Contract Documents including an appropriate reduction in the Contract Price. If the payments then or thereafter due CONTRACTOR are not sufficient to cover such amount, CONTRACTOR shall pay the difference to OWNER.

**ARTICLE 14 - PAYMENTS AND COMPLETION**

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**Schedules**

**14.1.** At least ten days prior to submitting the first application for a progress payment, CONTRACTOR shall submit a progress schedule, a final schedule of Shop Drawing submissions and a schedule of values of the work. These schedules shall be satisfactory in form and substance to ENGINEER. The schedule of values shall include quantities and unit prices aggregating the Contract Price, and shall subdivide the work into component parts in sufficient detail to serve as the basis for progress payments during construction. Upon approval of the schedules of values by ENGINEER, it shall be incorporated into the form of Application for Payment furnished by ENGINEER.

**Application for Progress Payment**

**14.2.** At least ten days before each progress payment falls due (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the work completed as of the date of the application and accompanied by such data and schedules as ENGINEER may reasonably require. If payment is requested on the basis of material and equipment not incorporated in the work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by such data, satisfactory to OWNER, as will establish OWNER's title to the material and equipment and protect his interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the work have been applied to discharge in full all of CONTRACTOR's obligations reflected in prior Applications for Payment. Except where greater retention is necessary pursuant to definite circumstances specifically provided for in the construction contract, the following schedule of retained amounts from progress payments shall be followed:

- (a) Not more than 10% of the dollar value of all work in place until work is 50% in place.
- (b) After the work is 50% in place, additional retainage shall not be withheld unless the OWNER determines that the CONTRACTOR is not making satisfactory progress, or for other specific cause relating to the CONTRACTOR's performance under the Contract. If the OWNER so determines, the OWNER may retain not more than 10% of the dollar value of work more than 50% in place.
- (c) The retained funds shall not exceed the pro rata share of the OWNER's matching requirement under the construction contract and shall not be co-mingled with other funds of the OWNER and shall be deposited in an interest bearing account in a regulated financial institution in this state wherein all such retained funds are kept by the OWNER which shall account for both retainage and interest on each construction contract separately. An OWNER is not required to deposit retained



funds in an interest bearing account if the retained funds are to be provided under a state or federal grant and the retained funds have not been paid to the OWNER.

- (d) Except as provided in 14.2.6 and 14.2.7, retainage and interest earned on retainage shall be released to the CONTRACTOR together with the final progress payment.
- (e) At any time after 94% of work under the Contract is in place and at the request of the original CONTRACTOR, the OWNER shall release the retainage plus interest to the original CONTRACTOR only if the original CONTRACTOR provides to the OWNER an irrevocable letter of credit in the amount of the retainage plus interest, issued by a bank authorized to do business in this state, containing terms mutually acceptable to the CONTRACTOR and the OWNER.

**14.2.1.** If a dispute regarding a matter described in 14.2.2. arises, the CONTRACTOR and the OWNER shall designate an agent who has background, training, and experience in the construction of facilities similar to that which is the subject of the Contract, as follows:

- (a) in an agreement reached within 10 days after a dispute arises;
- (b) if an agreement cannot be reached within 10 days after a dispute arises, the OWNER shall designate an agent who has background, training, and experience in the construction of facilities similar to that which is the subject of the Contract and who is not an employee of the OWNER.

**14.2.2.** The OWNER may request dispute resolution by the agent regarding the following:

- (a) at any time during the term of the Contract, to determine whether there has been a delay for reasons that were within the control of the CONTRACTOR, and the period of time that delay has been caused, continued, or aggravated by actions of the CONTRACTOR.
- (b) at any time after 94% of work under the Contract is in place, whether there has been an unacceptable delay by the CONTRACTOR in performance of the remaining 6% of work under the Contract. The agent shall consider the terms of the Contract and the procedures normally followed in the industry and shall determine whether the delay was for failure to follow reasonable and prudent practices in the industry for completion of the project.

**14.2.3.** This dispute resolution process shall be used only for the purpose of determining the rights of the parties to retained funds and interest earned on retained funds and is not intended to alter, abrogate, or limit any rights with respect to remedies that are available to enforce or compel performance of the terms of the Contract by either party.

**14.2.4.** The agent may request and shall receive all pertinent information from the parties and shall provide an opportunity for an informal meeting to receive comments, documents, and other relevant information in order to resolve the dispute. The agent shall determine the time, place, and procedure for the informal meeting. A written decision and reasons for the decision shall be given to the parties within 14 days after the meeting.

**14.2.5.** The decision of the agent shall be final and binding upon all parties. Upon application of either party, the decision of the agent may be vacated by order of the circuit court only upon a finding by the court that the decision was procured by fraud, duress, or other illegal means.

**14.2.6.** If the dispute resolution results in a decision:

- (a) that there has been a delay as described in 14.2.2.(a), all interest earned on retained funds during the period of delay shall become the property of the OWNER;
- (b) that there has been unacceptable delay as described in 14.2.2.(b), the OWNER may contract with a subsequent contractor to complete the remaining 6% of the work under the Contract, and interest earned on retained funds shall become the property of the OWNER. A subsequent contractor under this subdivision shall be paid by the OWNER from the following sources until each source is depleted, in the order listed below:



- (1) the dollar value of the original Contract, less the dollar value of funds already paid to the original CONTRACTOR and the dollar value of work in place for which the original CONTRACTOR has not received payment;
- (2) Retainage from the original CONTRACTOR, or funds made available under a letter of credit provided under 14.1.(e);
- (3) interest earned on retainage from the original CONTRACTOR, of funds made available under a letter of credit provided under 14.1.(e).

**14.2.7.** If the OWNER contracts with a subsequent CONTRACTOR as provided in 14.2.6.(b), the final progress payment shall be payable to the original CONTRACTOR within the time period specified in 14.4.1. The amount of the final progress payment to the original CONTRACTOR shall not include interest earned on retained funds. The OWNER may deduct from the final progress payment all expenses of contracting with the subsequent CONTRACTOR. This act shall not impair the right of the OWNER to bring an action or to otherwise enforce a performance bond to complete work under a construction Contract.

### **CONTRACTOR's Warranty of Title**

**14.3.** CONTRACTOR warrants and guarantees that title to all work, material and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens").

### **Approval of Payments**

**14.4.** ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing his approval of payment and present the application to OWNER, or return the application to CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the application. OWNER shall, after presentation to him of an approved Application for Payment, pay CONTRACTOR the amount approved by ENGINEER as provided under 14.4.1.

**14.4.1.** Each progress payment requested, including reasonable interest if requested under 14.4.2. shall be paid within thirty (30) days after receipt by the OWNER of the Application for Payment.

**14.4.2.** Upon failure of the OWNER to make a timely progress payment pursuant to this section, the person designated to submit requests for progress payments may include reasonable interest on amounts past due in the next request for payment.

**14.5.** ENGINEER's approval of any payment requested in an Application for Payment will constitute a representation by him to OWNER, based on ENGINEER's on-site observations of the work in progress as an experienced and qualified design professional and on his review of the Application for Payment and the accompanying data and schedules that the work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the work is in accordance with the Contract Documents (subject to an evaluation of the work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in his approval); and that CONTRACTOR is entitled to payment of the amount approved. However, by approving any such payment ENGINEER will not thereby be deemed to have represented that he made exhaustive or continuous on-site inspections to check the quality or the quantity of the work, or that he has reviewed the means, methods, techniques, sequences, and procedures of construction, or that he has made any examination to ascertain how or for what purpose CONTRACTOR has used the monies paid or to be paid to him on account of the Contract Price, or that title to any work, materials, or equipment has passed to OWNER free and clear of any liens.



**14.6.** ENGINEER's approval of final payment will constitute an additional representation by him to OWNER that the conditions precedent to CONTRACTOR's being entitled to final payment as set forth in Paragraph 14.13 have been fulfilled.

**14.7.** ENGINEER may refuse to approve the whole or any part of any payment if, in his opinion, it would be incorrect to make such representations to OWNER. He may also refuse to approve any such payment, or, because of subsequently discovered evidence of the results of subsequent inspections or tests, nullify any such payment previously approved, to such extent as may be necessary in his opinion to protect OWNER from loss because:

- (a) The work is defective, or completed work has been damaged requiring correction or replacement;
- (b) Claims or liens have been filed or there is reasonable cause to believe such may be filed;
- (c) The Contract Price has been reduced because of Modifications;
- (d) OWNER has been required to correct defective work or complete the work in accordance with Paragraph 13.11; or
- (e) Of unsatisfactory prosecution of the work, including failure to furnish acceptable submittals or to clean up.

### **Substantial Completion**

**14.8.** Prior to final payment, CONTRACTOR may, in writing to OWNER and ENGINEER, certify that the entire Project is substantially complete and request that ENGINEER issue a Certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of the Project to determine the status of completion. If ENGINEER does not consider the Project substantially complete, he will notify CONTRACTOR in writing giving his reasons therefor. If ENGINEER considers the Project substantially complete, he will prepare and deliver to OWNER a tentative Certificate of Substantial Completion which shall fix the date of Substantial Completion and the responsibilities between OWNER and CONTRACTOR for maintenance, heat, and utilities. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment, and the certificate shall fix the time within which such items shall be completed or corrected, said time to be within the Contract Time. OWNER shall have seven days after receipt of the tentative certificate during which he may make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Project is not substantially complete, he will within fourteen days after submission of the tentative certificate to OWNER notify CONTRACTOR consideration of OWNER's objections, ENGINEER considers the Project substantially complete, he will within said fourteen days execute and deliver to OWNER and CONTRACTOR a definitive Certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as he believes justified after consideration of any objections from OWNER.

**14.9.** OWNER shall have the right to exclude CONTRACTOR from the Project after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

### **Partial Utilization**

**14.10.** Prior to final payment, OWNER may request CONTRACTOR in writing to permit him to use a specified part of the Project which he believes he may use without significant interference with construction of the other parts of the Project. If CONTRACTOR agrees, he will certify to OWNER and ENGINEER that said part of the Project is substantially complete and request ENGINEER to issue a Certificate of Substantial Completion for that part of the Project which is substantially complete. Within a reasonable time thereafter OWNER, CONTRACTOR and ENGINEER shall make an inspection of that Part of the Project to determine its status of



completion. If ENGINEER does not consider that it is substantially complete, he will notify OWNER and CONTRACTOR in writing giving his reasons therefor. If ENGINEER considers that part of the Project to be substantially complete, he will execute and deliver to OWNER and CONTRACTOR a certificate to that effect, fixing the date of Substantial Completion as to that part of the Project, attaching thereto a tentative list of items to be completed or corrected before final payment and fixing the responsibility between OWNER and CONTRACTOR for maintenance, heat and utilities as to that part of the Project. OWNER shall have the right to exclude CONTRACTOR from any part of the Project which ENGINEER has so certified to be substantially complete, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

**Final Inspection**

**14.11.** Upon written notice from CONTRACTOR that the Project is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

**Final Application for Payment**

**14.12.** After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, and other documents -- all as required by the Contract Documents -- he may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by such data and schedules as ENGINEER may reasonably require, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all liens arising out of the Contract Documents and the labor and services performed and the materials and equipment furnished thereunder. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material, and equipment for which a lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the work for which OWNER or his property might in anyway be responsible, have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment. If any Subcontractor, materialman, fabricator, or supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a bond or other collateral satisfactory to OWNER to indemnify him against any lien.

**Approval of Final Payment**

**14.13.** If, on the basis of his observation and review of the work during construction, his final inspection and his review of the final Application for Payment -- all as required by the Contract Documents -- ENGINEER is satisfied that the work has been completed and CONTRACTOR has fulfilled all of his obligations under the Contract Documents, he will, within ten days after receipt of the final Application for Payment, indicate in writing his approval of payment and present the application to OWNER for payment. Thereupon ENGINEER will give written notice to OWNER and CONTRACTOR that the work is acceptable subject to the provisions of Paragraph 14.16. Otherwise, he will return the application to CONTRACTOR, indicating in writing his reasons for refusing to approve final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the application. OWNER shall within ten days of presentation to him of an approved final Application for Payment, pay CONTRACTOR the amount approved by ENGINEER.



**14.14.** If after Substantial Completion of the work, final completion thereof is materially delayed through no fault of CONTRACTOR, and ENGINEER so confirms, OWNER shall upon certification by ENGINEER and without terminating the Agreement make payment of the balance due for that portion of the work fully completed and accepted. If the remaining balance for work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the work fully completed and accepted shall be submitted by the CONTRACTOR to the ENGINEER prior to certification of such payment. Such payment shall be made under the terms and conditions governing final payment except that it shall not constitute a waiver of claims.

### **CONTRACTOR's Continuing Obligation**

**14.15.** CONTRACTOR's obligation to perform the work and complete the Project in accordance with the Contract Documents shall be absolute. Neither approval of any progress or final payment by ENGINEER, nor the issuance of a Certificate of Substantial Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Project or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any correction of defective work by OWNER shall constitute an acceptance of work not in accordance with the Contract Documents.

### **Waiver of Claims**

**14.16.** The making and acceptance of final payment shall constitute:

- (a) A waiver of all claims by OWNER against CONTRACTOR other than those arising from unsettled liens, from defective work appearing after final inspection pursuant to Paragraph 14.11, or from failure to comply with the requirements of the Contract Documents or the terms of any special guarantees specified therein; and
- (b) A waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

## **ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION**

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### **OWNER May Suspend Work**

**15.1.** OWNER may, at any time and without cause, suspend the work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER which shall fix the date on which work shall be resumed. CONTRACTOR shall resume the work on the date so fixed. CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefor as provided in Articles 11 and 12.

### **OWNER May Terminate**

**15.2.** If CONTRACTOR is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable material or equipment, or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction, or if he disregards the authority of ENGINEER, or if he otherwise violates any provision of the Contract Documents, then OWNER may, without prejudice to any other right or remedy and after giving CONTRACTOR and his



Surety seven days' written notice, terminate the services of CONTRACTOR and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by CONTRACTOR, and finish the work by whatever method he may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER shall be determined by ENGINEER and incorporated in a Change Order.

**15.3.** Where CONTRACTOR's services have been so terminated by OWNER, said terminations shall not affect any rights of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by OWNER due CONTRACTOR will not release CONTRACTOR from liability.

**15.4.** Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may without cause and without prejudice to any other right or remedy elect to abandon the Project and terminate the Agreement. In such case, CONTRACTOR shall be paid for all work executed and any expense sustained plus a reasonable profit.

#### **CONTRACTOR May Stop Work or Terminate**

**15.5.** If, through no act or fault of CONTRACTOR, the work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted, or OWNER fails to pay CONTRACTOR any sum approved by ENGINEER within thirty days of its approval and presentation, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, terminate the Agreement and recover from OWNER payment for all work executed and any expense sustained plus a reasonable profit. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' notice to OWNER and ENGINEER stop the work until he has been paid all amounts then due.

#### **ARTICLE 16 - OFFICE SPACE**

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**16.1.** The CONTRACTOR shall establish and maintain, at his own expense, office headquarters at the site of the Project. Telephone and fax service shall be provided. At the office headquarters shall be kept a complete set of the Contract Documents and shop drawings.

**16.2.** The CONTRACTOR shall arrange office space for the ENGINEER in a separate building or in a room completely partitioned off from the CONTRACTOR's office, if in the same building. The CONTRACTOR shall provide adequate heating and lighting telephone and fax service within the ENGINEER's office.

#### **ARTICLE 17 - MISCELLANEOUS**

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##### **Giving Notice**

**17.1.** Whenever any provision of the Contract Documents requires the giving of written notice it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to him who gives the notice.



**Computation of Time**

**17.2.** When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

**General**

**17.3.** All monies not paid when due hereunder shall bear interest at the maximum rate allowed by law at the place of the Project.

**17.4.** All Specifications, Drawings and copies thereof furnished by ENGINEER shall remain his property. They shall not be used on another Project, and, with the exception of those sets which have been signed in connection with the execution of the Agreement, shall be returned to him on request upon completion of the Project.

**17.5.** The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by Paragraphs 6.30, 13.1, 13.10, and 14.3 and the rights and remedies available to OWNER and ENGINEER thereunder, shall be in addition to and shall not be construed in any way as a limitation of any rights and remedies available to them which are otherwise imposed or available by law, by special guarantee, or by other Provisions of the Contract Documents.

**17.6.** Should OWNER or CONTRACTOR suffer injury or damage to his person or property because of any error, omission, or act of the other or of any of his employees or agents or others for whose acts he is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage.

**17.7.** The Contract Documents shall be governed by the law of the place of the Project.

END OF SECTION





## Pittsfield Charter Township

6201 West Michigan Avenue, Ann Arbor, MI 48108  
Phone: (734) 822-3101 • Fax: (734) 944-8024  
Website: [www.pittsfield-mi.gov](http://www.pittsfield-mi.gov)

Mandy Grewal, Supervisor

**Mandy Grewal**

*Township Supervisor*  
[supervisor@pittsfield-mi.gov](mailto:supervisor@pittsfield-mi.gov)

**Michelle L. Anzaldi**

*Township Clerk*  
[clerk@pittsfield-mi.gov](mailto:clerk@pittsfield-mi.gov)

**Patricia Tupacz Scribner**

*Township Treasurer*  
[treasurer@pittsfield-mi.gov](mailto:treasurer@pittsfield-mi.gov)

### PITTSFIELD CHARTER TOWNSHIP CONTRACT ADDENDUM

THIS ADDENDUM is dated \_\_\_\_\_ 2023, by Pittsfield Charter Township, located at 6201 W. Michigan Avenue, Ann Arbor, MI 48108-9721 (“the Township”), and \_\_\_\_\_ (“Contractor”) and is an addendum to a contract between the parties dated \_\_\_\_\_ for (list the services to be provided) \_\_\_\_\_ (“the Contract”).

The expressed terms of the Contract notwithstanding, the Township and Contractor agree to the following amendments, which supersede any conflicting terms of the Contract and shall become part of the agreement between the parties.

1. **INSURANCE:** Contractor shall maintain Commercial General Liability insurance with coverage of at least \$1,000,000.00 per occurrence, Automobile Liability insurance with a combined single limit of \$1,000,000.00 per accident, Worker’s Compensation coverage of \$500,000.00 per employee and, if applicable, Professional Liability insurance of \$1,000,000.00 per claim (\$2,000,000.00 aggregate per year) during the term of this Addendum. Contractor will furnish evidence of insurance coverage in the form of a customary insurance certificate upon request by the Township.

The Contractor shall add the Township to its existing policies as an additional insured party. Prior to the effective date of the Contract, a certificate issued by the insurance company shall be delivered to the Clerk stating that the Township is an insured party under the policy and provide that the policy shall not be terminated nor the Township removed as an insured party without thirty (30) day written notice being mailed to the Township. In the event such coverage is not provided or lapses during the term of the Contract and this Addendum, then the Township may, at its option, terminate the Contract and this Addendum. A breach of this provision shall be a material breach of the Contract.

2. **TERMINATION:** The Township may terminate the Contract on 30 days prior written notice to Contractor.

3. **LOSS PAYMENT:** Contractor shall pay for any and all liabilities, claims, actions, causes of action, demands, obligations, liens, and any and all other claims or damages of any kind whatsoever, including legal fees and related costs (collectively, “claim” or “claims”) which may result from injury or death to any persons, including Contractor’s own employees, and for loss or damage to any property, including property owned or in the care, custody or control of Pittsfield Charter Township in connection with or in any way incident to or arising out of the occupancy, use, service, operations, performance or nonperformance of work in connection with the Contract resulting in whole or in part from negligent acts or omissions of the Contractor, any subcontractor, or any employee, agent or representative of the Contractor or any subcontractor. Contractor shall pay for any such claims, whether made against Contractor, the Township or the Township’s officers, employees, agents, attorneys, subcontractors, insurer, volunteers or assign, if the claim arises from the contract or actions described in this paragraph.

4. **COMPLIANCE WITH LAWS AND REGULATIONS:** Contractor shall comply with all federal, state and local regulations, including but not limited to all applicable OSHA/MIOSHA requirements and the Americans with Disabilities Act.



5. **IRAN ECONOMIC SANCTIONS ACT:** Contractor certifies that it is not an Iran linked business as defined by the Michigan Iran Economic Sanctions Act (Michigan Compiled Laws §129.311-16).

6. **INTEREST OF CONTRACTOR AND TOWNSHIP:** Contractor promises that it has no interest which would conflict with the performance of services required by this contract. Contractor also promises that, in the performance of this contract, no officer, agent, employee of the Township, or member of its governing bodies, may participate in any decision relating to this contract which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested or has any personal or pecuniary interest. This paragraph does not apply if all parties are in compliance with the provisions of Michigan Compiled Laws §15.323.

7. **EQUAL EMPLOYMENT OPPORTUNITY:** Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, sex, height, weight, or marital status (except as it relates to a bona fide occupational qualification reasonably necessary to the normal operation of the business). A breach of this provision shall be a material breach of the Contract.

8. **LIVING WAGE:** The Township has a Living Wage Ordinance requiring covered vendors who execute a service or professional contract with the Township to pay their employees working under that contract, a minimum wage. Contractor agrees to comply with applicable provisions of the Living Wage Ordinance.

9. **CHOICE OF LAW AND FORUM:** This Contract is to be interpreted by the laws of the State of Michigan. The parties agree that the proper forum for litigation arising out of this contract is in Washtenaw County, Michigan.

10. **EXECUTION AND DELIVERY:** Both the Contract and this Addendum may be executed and delivered to the other party by electronic means and in discrete subparts, the combined subparts constituting a complete agreement.

ATTESTED TO:

\_\_\_\_\_  
(Contractor Name)

Pittsfield Charter Township

By \_\_\_\_\_  
(DATE)

By: \_\_\_\_\_  
Mandy Grewal (DATE)  
Supervisor

Its:

By: \_\_\_\_\_  
Michelle L. Anzaldi (DATE)  
Clerk



## NON-IRAN LINKED BUSINESS CERTIFICATION

This Proposal is submitted in the name of:

(Print Company Name)

The undersigned hereby certifies in accordance with Public Act 517 of the Public Acts of 2012 that it is not an Iran-linked business.

Signed and Sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

By

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name of Signature)

\_\_\_\_\_  
(Title)



## **IRAN ECONOMIC SANCTIONS ACT**

### **Act 517 of 2012**

AN ACT to prohibit persons who have certain economic relationships with Iran from submitting bids on requests for proposals with this state, political subdivisions of this state, and other public entities; to require bidders for certain public contracts to submit certification of eligibility with the bid; to require reports; and to provide for sanctions for false certification.

**History:** 2012, Act 517, Eff. Apr. 1, 2013.

*The People of the State of Michigan enact:*

#### **129.311 Short title.**

Sec. 1. This act shall be known and may be cited as the "Iran economic sanctions act".

**History:** 2012, Act 517, Eff. Apr. 1, 2013.

#### **129.312 Definitions.**

Sec. 2. As used in this act:

(a) "Energy sector of Iran" means activities to develop petroleum or natural gas resources or nuclear power in Iran.

(b) "Investment" means 1 or more of the following:

(i) A commitment or contribution of funds or property.

(ii) A loan or other extension of credit.

(iii) The entry into or renewal of a contract for goods or services.

(c) "Investment activity" means 1 or more of the following:

(i) A person who has an investment of \$20,000,000.00 or more in the energy sector of Iran.

(ii) A financial institution that extends \$20,000,000.00 or more in credit to another person, for 45 days or more, if that person will use the credit for investment in the energy sector of Iran.

(d) "Iran" means any agency or instrumentality of Iran.

(e) "Iran linked business" means either of the following:

(i) A person engaging in investment activities in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers or products used to construct or maintain pipelines used to transport oil or liquefied natural gas for the energy sector of Iran.

(ii) A financial institution that extends credit to another person, if that person will use the credit to engage in investment activities in the energy sector of Iran.

(f) "Person" means any of the following:

(i) An individual, corporation, company, limited liability company, business association, partnership, society, trust, or any other nongovernmental entity, organization, or group.

(ii) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in section 1701(c)(3) of the international financial institutional act, 22 USC 262r(c)(3).

(iii) Any successor, subunit, parent company, or subsidiary of, or company under common ownership or control with, any entity described in subparagraph (i) or (ii).

(g) "Public entity" means this state or an agency or authority of this state, school district, community college district, intermediate school district, city, village, township, county, public authority, or public airport authority.

**History:** 2012, Act 517, Eff. Apr. 1, 2013.

#### **129.313 Ineligibility of Iran linked business to submit request for proposal bid; certification.**

Sec. 3. (1) Beginning April 1, 2013, an Iran linked business is not eligible to submit a bid on a request for proposal with a public entity.

(2) Beginning April 1, 2013, a public entity shall require a person that submits a bid on a request for proposal with the public entity to certify that it is not an Iran linked business.

**History:** 2012, Act 517, Eff. Apr. 1, 2013.

#### **129.314 Effect of false certification.**

Sec. 4. If a public entity determines, using credible information available to the public, that a person has submitted a false certification under section 3(2), the public entity shall provide the person with written notice of its determination and of the intent not to enter into or renew a contract with the person. The notice shall include information on how to contest the determination and specify that the person may become eligible for a



future contract with the public entity if the person ceases the activities that cause it to be an Iran linked business. The person shall have 90 days following receipt of the notice to respond in writing and to demonstrate that the determination of false certification was made in error. If a person does not make that demonstration within 90 days after receipt of the notice, the public entity may terminate any existing contract and shall report the name of the person to the attorney general together with information supporting the determination.

**History:** 2012, Act 517, Eff. Apr. 1, 2013.

#### **129.315 Civil action; penalty.**

Sec. 5. The attorney general may bring a civil action against any person reported under section 4. If a civil action results in a finding that the person submitted a false certification, the person is responsible for a civil penalty of not more than \$250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the public entity's investigation, and reasonable attorney fees, in addition to the fine. A person who submitted a false certification shall be ineligible to bid on a request for proposal for 3 years from the date the public entity determines that the person has submitted the false certification.

**History:** 2012, Act 517, Eff. Apr. 1, 2013.

#### **129.316 Conditional effect.**

Sec. 6. The provisions of this act are effective only if Iran is a state sponsor of terror as defined under section 2 of the divestment from terror act, 2008 PA 234, MCL 129.292.

**History:** 2012, Act 517, Eff. Apr. 1, 2013.





## **PITTSFIELD CHARTER TOWNSHIP LIVING WAGE ORDINANCE**

Effective: December 30, 2011 (Ord. No. 295)

**\$14.82 per hour**

If the employer provides  
health care benefits

**\$16.52 per hour**

If the employer does **NOT**  
provide health care benefits

**Effective May 1, 2022 to April 30, 2023**

Employers who hold professional service or service contracts with Pittsfield Charter Township for a value of more than \$10,000 in a twelve-month period of time **must pay those employees performing work on a Pittsfield Charter Township contract the above living wage.**

### ***ENFORCEMENT***

Pittsfield Charter Township may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the ordinance. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by Pittsfield Charter Township.

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, Pittsfield Charter Township has the right to modify, terminate, cancel, or suspend a contract if the Ordinance is violated.

For Additional Information or to File a Complaint

Contact:

**Pittsfield Charter Township Human Resources Department**

**(734) 822-3137**

*\*Health Care Benefits includes those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hour for the average work week.*

The ordinance requires employers to display this poster where employees can readily see it.



# Preliminary Project Schedule

**Pittsfield Charter Township**

**File No. 2075140801**

**Project: Montibeller Park**

**Phase 2 Improvements and Phase 3 Restroom Building Renovation**

- |     |  |                                       |
|-----|--|---------------------------------------|
| 1.  | Advertisement  | Friday, February 17, 2023             |
|     | 3 Days   |                                       |
| 2.  | Plans Available  | Tuesday, February 21, 2023            |
|     | 14 Days  |                                       |
| 3.  | Questions Due  | Monday, March 6, 2023                 |
|     | 3 Days   |                                       |
| 4.  | Addendum (If Required)   | Thursday, March 9, 2023               |
|     | 7 Days   |                                       |
| 5.  | Bid Opening  | Thursday, March 16, 2023 @ 10:00 a.m. |
|     | 8 Days   |                                       |
| 6.  | Bid Tabulation & Stantec Recommendation to Park Commissioners                    | Friday, March 24, 2023                |
|     | 11 Days  |                                       |
| 7.  | Park Commission Meeting  | Tuesday, April 4, 2023                |
|     | 3 Days   |                                       |
| 8.  | Bid Tabulation & Stantec/Parks Recommendation for Contract Award, Packets to BOT |                                       |
|     | 12 Days  | Friday, April 7, 2023                 |
| 9.  | Contract Award (BOT)   | Wednesday, April 19, 2023             |
|     | 9 Days   |                                       |
| 10. | Contracts for Execution Available  | Friday, April 28, 2023                |
|     | 6 Days   |                                       |
| 11. | Pre-Construction Meeting   | Thursday, May 4, 2023 @ 11:00 a.m.    |
|     | 4 Days   |                                       |
| 12. | Receipt of Signed Contract (Notice to Proceed)                                   | Monday, May 8, 2023                   |
| 13. | Construction Start   | Monday, May 8, 2023                   |
|     | 25 Weeks   |                                       |
| 14. | Construction Completion  | Friday, October 27, 2023              |



**PART II**  
**SPECIFICATIONS**



**PART II**  
**PHASE 2 – SPECIFICATIONS**



**1.00 GENERAL****1.01 DESCRIPTION OF WORK**

- A. Work under this Contract consists of site work at Montibeller Park in Pittsfield Township. It will include gravel resurfacing and drainage improvements to the East parking lot, resurfacing of the East tennis court, construction of aggregate path throughout the park, construction of sidewalk connecting tennis court and baseball fields, pickleball court, and culvert installations.
- B. Alternate site work items include the gravel resurfacing of the West parking lot, the construction of an arrival point plaza in the west parking lot, baseball field renovations, construction of timber step and aggregate path connection to the East parking lot, brick pavers by the restroom building, and the removal of the West tennis court.
- C. All steel and iron materials and products for permanent incorporation into the work must be produced only in the United States Build America, Buy America Requirements. See Section 1.17 of the General Requirements for additional requirements.
- D. Contract Drawings are included which give specific locations for all work under this Contract.

**1.02 EXISTING FACILITIES ACCESS**

- A. Access to existing facilities shall not be temporarily disrupted without coordination with and prior approval of the OWNER.

**1.03 CONSTRUCTION WATER**

- A. Water for construction is NOT available on site. The CONTRACTOR shall furnish all water and equipment required for delivery and distribution of water for construction of the proposed facilities. The CONTRACTOR shall be responsible for providing water from off-site approved sources and will be solely responsible for the protection, cost, and clean-up of the water source supply. All cost associated with furnishing, delivery and use of water will be included in the cost of the proposed construction item requiring the use thereof and is incidental to the construction of the proposed installation item.

**1.04 CONSTRUCTION POWER**

- A. Power for construction is NOT available on-site. The CONTRACTOR shall furnish all power, equipment and appurtenances required for delivery and distribution of power for construction of the proposed facilities. The CONTRACTOR shall be responsible for providing power from approved sources and will be solely responsible for the protection, cost, and clean-up of the power source supply. All cost associated with furnishing, delivery and use of power will be included in the cost of the proposed construction item requiring the use thereof and is incidental to the construction of the proposed installation item.

**1.05 CONSTRUCTION STAGING AREA**

- A. If the CONTRACTOR requires a construction staging area for the storage of equipment and materials during the project, he will need to secure such space on his own and at his sole costs. No construction staging or storage area will be provided on this project by the OWNER.

**1.06 NOTIFICATION OF UTILITIES**

- A. The CONTRACTOR shall notify all utilities prior to any excavation. Information regarding size and location is available from the utility.



- B. MISS DIG - DTE Energy, Consumers Energy Co., Comcast, Frontier, Pittsfield Township, and AT&T are members of a utility communication system called "MISS DIG" that provides service to participating utilities. The CONTRACTOR shall contact "MISS DIG" not less than 72 hours before starting construction for assistance in locating utilities or for any work to be done on utilities. The phone number is 811.

**1.07 MAINTENANCE OF EXISTING SEWER FLOW**

- A. The CONTRACTOR shall be responsible for providing and maintaining all temporary pumping necessary to maintain existing stormwater runoff and drainage on the site.
- B. All existing utilities, including drainage through existing sewers and drains shall be maintained at all times during construction. Where existing sewers are encountered in the line of the work which interfere with the construction, the flow in the sewers, including both dry weather flow and storm flow, shall be maintained.

**1.08 WORK SCHEDULE**

- A. The CONTRACTOR shall provide a work schedule. The schedule shall be complete and shall show in detail the manner in which he/she proposes to complete the work under this contract and approximately monthly billing of the Contract. The purpose of the schedule is to assist the OWNER in notifying the public of inconveniences and to anticipate cash-flow on the job, and to determine if the CONTRACTOR is reasonably proceeding with the work to assure completion within the specified time.

**1.09 CONSTRUCTION SEQUENCE**

- A. Prior to commencing the work, the CONTRACTOR shall provide the ENGINEER a detailed schedule of the proposed work. The schedule shall include a list of tasks required to complete the work; their relevancy to each other; expected duration; and completion dates.
- B. The CONTRACTOR shall allow for one parking lot to be open to the public at all times. This must be considered when planning the construction schedule in regards to East and West parking lot improvements. All other proposed improvements may be constructed concurrently in accordance with an approved schedule.

**1.10 TRAFFIC MAINTENANCE**

- A. Because the availability of roads and streets is critical for the traveling public, the CONTRACTOR shall not close the road to traffic at any time. If shoulder closures are required, through and local traffic shall always be maintained by the use of 2-lane construction techniques and by the use of temporary roadways and flaggers.
- B. The CONTRACTOR shall provide all required Type II and Type III barricades, flashers, flashing arrows, flaggers, and all signing required to properly and safely maintain traffic flow through the construction area in accordance with the Michigan Manual of Uniform Traffic Control Devices. The CONTRACTOR shall provide as many signs and barricades as required by the ENGINEER to protect and maintain traffic through this area at all times. The CONTRACTOR shall add any additional devices required by the ENGINEER to provide a smooth flow of traffic. Traffic control beyond the temporary access driveways shown in the Contract Drawings must be approved by the Washtenaw County Road Commission.



- C. The construction influence zone shall be properly signed in accordance with the recommendations outlined in the latest edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).
- D. The CONTRACTOR shall provide all dust control and other means to reduce dust during construction. The CONTRACTOR shall grade and maintain the area of the road being used as traveling surface for the through, as well as the local traffic. Grading of the road and application of dust control measures shall be made on a weekly basis at minimum, or as often as required by the ENGINEER.
- E. In the event of the CONTRACTOR'S failure to comply with these provisions, the OWNER may with or without notice, cause the same to be done; and will deduct the cost of such work from any money due or to become due the CONTRACTOR under this Contract, but the performance of such work by the OWNER or at his insistence, shall serve in no way to release the CONTRACTOR from his general or particular liability for the safety of the Public or the work.
- F. Access to fire hydrants and water valves shall always be maintained. The CONTRACTOR's truck and equipment operations on public streets shall be governed by County regulations, and all local traffic ordinances, and regulations of the Fire and Police Departments.
- G. Where streets or pathways are partially obstructed, the CONTRACTOR shall place and maintain temporary driveways, ramps, bridges, and crossings which in the opinion of the OWNER are necessary to accommodate the public at no extra cost to the OWNER. In the event of the CONTRACTOR'S failure to comply with the foregoing provisions, the OWNER may, with or without notice, cause the same to be done and deduct the cost of such work from any monies due or to become due the CONTRACTOR under this Contract, but the performance of such work by the OWNER, or at his insistence, shall serve in no way to release the CONTRACTOR from his liability for the safety of the traveling public.
- H. The CONTRACTOR shall inform the local fire department in advance of his program of street obstruction and detours, so that the fire department can set up plans for servicing the area in case of an emergency. He shall also notify the governing police department and the OWNER at least one week prior to obstructing any street according to the specifications set forth herein and/or as may be required elsewhere on the drawings or specifications.
- I. Access to the fire station must be maintained at all times.
- J. Access to one park parking lot for public access must be maintained at all times. The park will remain open during construction.
- K. Payment for traffic maintenance, the furnishing of flaggers, barricades, flashers, and maintenance of these shall be included in the Traffic Maintenance and Control pay item.

**1.11 CONSTRUCTION PERMITS**

- A. The CONTRACTOR will be required to follow the requirements established by all permits necessary for the construction of this project. The following permits must be obtained by the CONTRACTOR prior to the beginning of construction. In addition, if other permits are necessary, they are the CONTRACTORS responsibility.
  - 1. The Soil Erosion Sedimentation Control Permit, as part of Public Act 451 (1994), Part 91 (Pittsfield Twp.) will be obtained by the CONTRACTOR. All costs associated with the permit, including inspection fees will be the responsibility of the OWNER. The CONTRACTOR will be required to adhere to all requirements of the Permit.



2. The permit to construct, operate, use, and/or maintain within the Washtenaw County Road Commission (WCRC) road right-of-way will be obtained by the CONTRACTOR. All costs associated with the permit, including inspection fees and bonds will be the responsibility of the OWNER. The CONTRACTOR will be required to adhere to all requirements of the Permit.
3. The permit to construct, operate, use, an/or maintain within the Washtenaw County Drain Easement will be obtained by the CONTRACTOR. All costs associated with the permit, including inspection fees and bonds will be the responsibility of the OWNER. The CONTRACTOR will be required to adhere to all requirements of the Permit.
4. The Building Permit to rehabilitate existing buildings within Pittsfield Charter Township will be obtained by the CONTRACTOR. All costs associated with the permit, including inspection fees and bonds will be the responsibility of the OWNER. The CONTRACTOR will be required to adhere to all requirements of the Permit.

**1.12 SOIL AND CONCRETE TESTING**

- A. The CONTRACTOR shall be responsible for providing a testing firm (acceptable to the ENGINEER) to perform soil compaction tests and concrete quality control including concrete compression tests, at CONTRACTOR cost.
- B. The CONTRACTOR shall provide and pay for the service of an independent materials testing laboratory to provide material and compaction testing. The type and minimum frequency of testing shall be as follows:
  1. Utility Trenches
    - Sieve analysis per source
    - Proctor per source
    - Compaction testing at 50' intervals per lift, as required
  2. Aggregate Base
    - Sieve analysis per source
    - Proctor per source
    - Compaction test at each location. Where length exceeds 100', one test per 50'
  3. Asphalt Pavement
    - Extraction per day
    - Thickness and density at each location. When length exceeds 100', one test per 50'
  4. Concrete Pavement, Sidewalks and Curb & Gutter
    - Slump, minimum 50 CYD or load
    - Air entrainment, minimum 50 CYD or load
    - Comprehensive strength, minimum 50 CYD or load
- C. The ENGINEER shall determine the exact location of all tests. The CONTRACTOR shall notify the ENGINEER of all other test results at least 48 hours in advance of all new materials to be used. Any area failing tests shall be corrected and retested at the CONTRACTOR's expense.
- D. Copies of test reports shall be furnished to the OWNER and distributed to parties designated by the OWNER, including the CONTRACTOR and the ENGINEER.



- E. The costs associated with providing soil and concrete testing shall be considered in the Contract pay item General Conditions and Mobilization and will not be paid for separately.

**1.13 DUST CONTROL**

- A. All haul roads, detour roads, and other public and private roads, driveways and parking lots used by the CONTRACTOR must be maintained in a dust free condition during the life of this Contract. The control of the dust shall be accomplished by the application of dust control materials and methods of application as approved and as directed by the ENGINEER. Such dust control materials shall be applied as often as is necessary to control the dust.
- B. Cost of providing dust control shall be included as part of soil and erosion control.
- C. Should the CONTRACTOR be negligent of his duties in providing dust control, the OWNER may, with or without notice, cause the same to be done and deduct the cost of such work from any monies due or to become due the CONTRACTOR under this Contract, but the performance of such work by the OWNER, or at his insistence, shall service in no way to release the CONTRACTOR from his liability for dust control.
- D. Dust Palliative may be any of the following:
  - 1. Road oil of 30% asphalt base applied at the rate of 0.5 gallons per square yard.
  - 2. Type 1-calcium chloride applied at the rate of six pounds per ton of aggregate.
  - 3. Water, as required.
  - 4. Other methods as approved by the ENGINEER.

**1.14 CONSTRUCTION STAKING**

- A. The CONTRACTOR will provide construction staking Any and all stakes that are destroyed or tampered with after staking are to be replaced at the CONTRACTORS expense.

**1.15 AUDIO/VIDEO FILE COVERAGE**

- A. The CONTRACTOR shall furnish to the OWNER, a color audio-video file for all areas proposed for improvement.
- B. The audio/video taping shall be of such quality to accurately describe the existing conditions. The file shall be produced one week prior to the placement of materials or equipment in the construction area. The file shall be of commercial quality and of size commonly used.
- C. Both sides of the entire area must be recorded with the rate of speed less than 48-ft. per minute. Camera functions such as panning rate, zoom-in/zoom-out shall be controlled to provide optimum object clarity.
- D. The file must be recorded while the visibility is clear and at no time will it be allowed during periods of ground cover.
- E. The file shall be continuous running and shall include date, time, and location at appropriate intervals. The location shall be easily referenced to the Contract Drawings.

**1.16 PROJECT PROGRESS MEETING**



- A. It shall be the responsibility of the CONTRACTOR to have a representative present at each meeting. The meetings shall be held at least once a month as directed by the ENGINEER.

**1.17 BUILD AMERICA, BUY AMERICA REQUIREMENTS**

- A. All iron and steel used in the project must be produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- B. All manufactured products used in the project must be produced in the United States —this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.
- C. All construction materials must be manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.
- D. Build America, Buy America requirements do not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project.

**1.18 METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

**A. General**

- 1. The method of measurement and the basis of payment for each item in the Proposal will be as specified in the schedule attached. The items are generally grouped by the section of the Specifications under which the particular unit of work is detailed. There will be no payment allowed for any unit of work not specifically mentioned in the Proposal as a bid item, and any such unit of work not mentioned in the Proposal, but necessary for the completion of the Project, will be considered as incidental to the construction of the Project.

**2. MEASUREMENT**

Quantities of work completed under the Contract will be measured by the ENGINEER according to the United States standard measures. When tons are specified, the unit shall be the ton of 2,000 pounds. When measurements are stated in miles, stations, acres, they will be horizontal measurements unless specified otherwise. Where measurements are specified to be "in place", they will be taken along the actual surface of the completed item to obtain lineal, area, or volume measurements.

**3. PAYMENT**

In each and every instance in the schedule attached, where a Basis of Payment is specified, it shall be understood to be prefaced by the following statement, "The Contract unit price bid in the Proposal will be payment in full for all labor, materials, and equipment necessary to do the following according to the Plans and Specifications". Payment shall be made on the basis of the actual quantity of the item completed and accepted at the unit price for such item named in the Proposal.

**END OF SECTION**



**1.00 GENERAL****1.01 SECTION INCLUDES**

- A. Submittal Procedures
- B. Certifications
- C. Shop Drawings
- D. Product Data
- E. Samples
- F. Manufacturers' Instructions
- G. Manufacturers' Field Reports
- H. Construction Schedule
- I. Submittal Schedule

**1.02 SUBMITTAL PROCEDURES**

- A. Package each submittal appropriately for shipping and handling. This shall include an index either on the transmittal or within the submittal itself. Transmit each submittal from CONTRACTOR to ENGINEER using a transmittal form. Submittals received from sources other than CONTRACTOR will be returned without action. Use separate transmittals for items from different specification sections. Number each submittal consecutively. Resubmittals should have the same number as the original, plus a letter and number designation for each resubmittal (i.e., 7-R1, 7-R2, etc.).
- B. Indicate on the transmittal relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include CONTRACTOR's certification that information complies with Contract Document requirements. On resubmittal, all changes shall be clearly identified for ease of review. Resubmittals shall be reviewed for the clearly identified changes only. Any changes not clearly identified will not be reviewed and original submittal shall govern.
- C. Include the following information on the label for processing and recording action taken.
  - 1. Project name.
  - 2. Date.
  - 3. Name and address of ENGINEER.
  - 4. Name and address of CONTRACTOR.
  - 5. Name and address of subcontractor.
  - 6. Name and address of supplier.
  - 7. Name of manufacturer.
  - 8. Number and title of appropriate specification sections.
  - 9. Drawing number and detail references, as appropriate.
- D. Schedule submittals to expedite the Project and deliver to ENGINEER at business address. Coordinate submission of related items. Coordinate related activities that require sequential activity.



- E. Review and approve Shop Drawings, product data, samples, and O&M Manuals before submitting them.
- F. Verify field measurements, field construction criteria, catalog numbers, and similar data. Indicate on the submission exactly what was verified.
- G. Any markings done by CONTRACTOR shall be done in a color other than red. Red is reserved for ENGINEER's marking.
- H. The number of copies to be submitted will be determined at the pre-construction conference. Reproducible may be submitted and will be marked and returned to CONTRACTOR. Blue or black line prints shall be submitted in sufficient quantity for distribution to ENGINEER and OWNER recipients.
- I. Coordinate each submittal with the requirements of the Contract Documents.
- J. Provide space for CONTRACTOR and ENGINEER review stamps.
- K. Apply CONTRACTOR's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- L. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- M. No claim will be allowed for damages or extension of time because of delays in the work resulting from rejection of material or from revision and resubmittal of Shop Drawings, product data, or samples.
- N. No extension of contract time will be authorized because of failure to transmit submittals to ENGINEER sufficiently in advance of the work to permit processing.
- O. ENGINEER reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are received.
- P. Do not install materials or equipment which requires submittals until the submittals are returned with ENGINEER's/OWNER's stamp and initials or signature indicating approval. The OWNER shall have final approval authority.
- Q. CONTRACTOR's responsibility of errors, omissions, and deviations from requirements of Contract Documents in submittals is not relieved by the ENGINEER's review.
- R. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with requirements.
- S. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.
- T. Submittals not requested in conformance with this Specification will not be recognized or processed.
- U. Revise and resubmit as required, identify all changes made since the previous submittal.



- V. In the event that more than two resubmittals of any submittal are necessary to achieve conformance to the contract requirements, CONTRACTOR shall be charged for excess engineering. The OWNER shall deduct these charges from the CONTRACTOR's final payment. Charges will be \$115.00/hr. minimum four hours, for each additional submittal of an item. A tabulated record of such charges will be provided for the CONTRACTOR's review prior to the processing of the final payment.
- W. Submit new product data and samples when the initial submittal is returned disapproved.

**1.03 CERTIFICATIONS**

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the CONTRACTOR to ENGINEER, in quantities specified for Product Data.
- B. Indicate that the material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certifications may be recent or previous test results of the material or product but must be acceptable to ENGINEER.

**1.04 SHOP DRAWINGS**

- A. Shop Drawings: Submit to ENGINEER for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the project is not considered Shop Drawings.
- C. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates, and similar Drawings. Include the following information:
  - 1. Dimension.
  - 2. Identification of products and materials included.
  - 3. Compliance with specified standards.
  - 4. Notation of coordination requirements.
  - 5. Notation of dimensions established by field measurements.
- D. Shop Drawings shall indicate shop painting requirements to include type of paint and manufacturer.
- E. Standard manufactured items in the form of catalog work sheets showing illustrated cuts of the items to be furnished, scale details, sizes, dimensions, quantity, and all other pertinent information should be submitted and approved in a similar manner.
- F. Measurements given on Shop Drawings or standard catalog sheets, as established from Contract Drawings, and as approved by ENGINEER, shall be followed. When it is necessary to verify field measurements, they shall be checked and established by CONTRACTOR. The field measurements so established shall be followed by CONTRACTOR and by all affected trades.



- G. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

**1.05 PRODUCT DATA**

- A. Product Data: Submit to ENGINEER for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Contract.
- C. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

**1.06 SAMPLES**

- A. Submit full-size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers or materials, color range sets, and swatches showing color, texture, and pattern.
- B. Mount, display, or package samples in the manner specified to facilitate review of qualities indicated. Prepare samples to match ENGINEER's sample. Include the following:
  - 1. Generic description of the sample.
  - 2. Sample source.
  - 3. Product name or name of manufacturer.
  - 4. Compliance with recognized standards.
  - 5. Availability and delivery time.
- C. Submit samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
- D. Refer to other specification sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
- E. Preliminary Submittals: Where samples are for selection of color, pattern, texture, or similar characteristics from a range of standard choices, submit a full set of choices for the material or product. Preliminary Submittals will be reviewed and returned with ENGINEER's mark indicating selection and other action.
- F. Except for samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit three sets; one will be returned marked with the action taken.
- G. Maintain sets of samples, as returned, at the site, for quality comparisons throughout the course of construction.
- H. Unless noncompliance with Contract Document provisions is observed the submittal may serve as the final submittal.



- I. Sample sets may be used to obtain final acceptance of the construction associated with each set.

**1.07 MANUFACTURER'S INSTRUCTIONS**

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to ENGINEER for delivery to OWNER in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

**1.08 MANUFACTURER'S FIELD REPORTS**

- A. Submit report in duplicate, within thirty days of observation, to ENGINEER and OWNER for information.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

**1.09 CONSTRUCTION SCHEDULE**

- A. Bar Chart Schedule:
  - 1. Prepare a fully developed, horizontal bar chart type construction schedule. Submit within thirty days of the date established for commencement of the work.
  - 2. Provide a separate item bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the work as indicated on the schedule of values.
  - 3. Prepare schedule of sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for entire construction period.
  - 4. Secure time commitments for performing critical elements of the work from parties involved. Coordinate each element on schedule with other construction activities; include minor elements involved in the sequence of the work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the work.
  - 5. Coordinate construction schedule with schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other schedules.
  - 6. Indicate completion in advance of the date established for substantial completion. Indicate substantial completion of schedule to allow time for ENGINEER's procedures necessary for certification of substantial completion.
- B. Schedule Updating: Revise schedule after each meeting or activity, where revisions have been recognized or made within two weeks following the meeting or activity.
- C. All schedules shall have the date of issue plainly noted.



**2.00 PRODUCTS**

NOT USED

**3.00 EXECUTION**

**3.01 ENGINEER'S ACTION**

- A. Except for submittals for record, information, or similar purposes, where action and return is required or requested, ENGINEER will review each submittal, mark to indicate action taken, and return promptly. Compliance with specified characteristics is CONTRACTOR's responsibility.
- B. Action Stamp: ENGINEER will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
  - 1. Final Unrestricted Release: Where submittals are marked "No Exceptions Taken" that part of the work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents; final acceptance will depend upon the compliance.
  - 2. Final-But-Restricted Release: When submittals are marked "Make Corrections Noted" that part of the work covered by the submittal may proceed, provided it complies with notation or correction on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
  - 3. Returned for Resubmittal: When submittal is marked "Rejected" or "Revise and Resubmit" do not proceed with the part of the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary, to obtain a different action mark.
    - a. Do not permit submittals marked "Rejected" or "Revise and Resubmit" to be used at site, or elsewhere where work is in progress.
  - 4. Additional Information Needed: When submittal is marked "Submit Specified Item" CONTRACTOR shall submit requested information.
  - 5. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Acknowledge Receipt".
  - 6. The approval of ENGINEER shall not relieve CONTRACTOR of responsibility for errors on Drawings or submittals as ENGINEER's checking is intended to cover compliance with Drawings and specifications and not enter into every detail of the shop work.

END OF SECTION



**1.00 GENERAL****1.01 DESCRIPTION**

- A. The CONTRACTOR shall provide all labor, materials, tools, and equipment necessary for the preparation and completion of the site of the project.

**1.02 CLEARING AND GRUBBING**

- A. The CONTRACTOR shall clear the work area of all wild brush and debris which may be present and interfering with construction and shall remove and dispose of the same.
- B. Trees and shrubs are not to be removed unless required by the Plans and/or with the express permission of the ENGINEER. Where trees are to be removed or are permitted to be removed by the ENGINEER, the CONTRACTOR shall remove such trees and stumps to a depth of at least one foot below the proposed finish grade. All stumps, roots, logs, branches, brush and debris shall be removed from the site and disposed of by the CONTRACTOR.
- C. Grubbing shall consist of removing from the ground and disposing of all stumps and roots more than three inches in diameter to a depth of one foot.

**1.03 PROTECTION OF TREES**

- A. All trees which are to be preserved and which, in the opinion of the ENGINEER, might be subject to damage by the CONTRACTOR's operations, shall be adequately protected against damage to the bark by 2-inch-thick vertical planking securely wired or tied completely around the tree trunk. Such protection shall not be removed until authorized by the ENGINEER.
- B. Machine excavation shall not be made within a circular area of any tree, the diameter of the area in feet being equal to the diameter of the tree in inches. If hand excavation within this area cuts across a large root of a tree, the cutting of which, in the opinion of the ENGINEER, would be injurious to the tree, the CONTRACTOR shall tunnel under such root and protect it from injury throughout the work.
- C. Trees which interfere with the work, and the removal of which is permitted, shall be removed by the CONTRACTOR at his expense and in a safe manner. No trees are to be removed without the expressed approval of the governmental body having jurisdiction thereof, and of the ENGINEER.

**1.04 WORK AREA AND STORAGE OF MATERIALS**

- A. The working area shall be organized in an orderly manner with storage and tool sheds, offices and sanitary facilities, parking areas for employees, and all other necessary facilities developed and maintained by the CONTRACTOR. The CONTRACTOR shall keep the site and all haul roads reasonably clean and dust free.
- B. All materials, supplies and equipment, whether furnished by the CONTRACTOR or by the OWNER, shall be delivered, stored, and handled as to prevent the inclusion of foreign materials and/or damage by water, freezing, breakage or other causes. The ENGINEER may require the CONTRACTOR to provide an enclosed storage shed for the storage of the above-mentioned materials, supplies and equipment. Packaged materials shall be delivered in the original unopened containers and shall be stored until ready for use. All materials which have been stored shall meet the requirements of the Specifications at the time they are used in the project.



- C. Where the CONTRACTOR is required to do work within the rights-of-way under the jurisdiction of governmental bodies, he shall meet the requirements of said governmental bodies for the work and storage within their jurisdiction. Such requirements must be met as a minimum requirement, and if the specifications given herein impose further limitations on the work, they shall also be met as the required work standard. The CONTRACTOR may not store items within the road right-of-way.

**1.05 EXISTING PUBLIC UTILITIES**

- A. Existing public utilities and underground structures, such as pipelines, electric conduits, sewers, and water lines are shown on the Contract Drawings. The information shown is believed to be reasonably correct and complete; however, neither the correctness nor the completeness of such information is guaranteed.
- B. The CONTRACTOR shall conduct his operations so as not to damage any existing utility whether shown in the Contract Drawings or not. The CONTRACTOR shall correct, at his own expense, damaged caused during the operations of his subcontractors or suppliers.
- C. If the CONTRACTOR desires, or is required by the utility companies, to relocate or protect any power or telephone poles to facilitate his work, any expense encountered from such relocation shall be borne by the CONTRACTOR.

**1.06 NOTIFICATION TO UTILITIES**

- A. Prior to the start of any operations in the vicinity of any utilities, the CONTRACTOR shall notify the utility companies and request that they stake out the locations of the utilities in question.

**1.07 SANITARY REQUIREMENTS**

- A. The CONTRACTOR shall provide adequate sanitary facilities for all persons employed on the project. The sanitary facilities shall conform in every way to the requirements of the "General Safety Rules and Regulations for the Construction Industry".

**1.08 UTILITIES**

- A. The CONTRACTOR shall make all necessary arrangements for the provisions of all utility services, temporary or permanent, required under this Contract. The CONTRACTOR shall pay all costs for such connections and services.
- B. All utility services shall be inspected by and shall meet the requirements of the applicable codes and governmental bodies.

**1.09 PUMPING AND DRAINAGE**

- A. Adequate pumping and drainage facilities shall be provided and water, from whatever source, entering the work during any stage of construction shall be removed promptly and disposed of in a manner satisfactory to the ENGINEER. All pumping and drainage shall be done with no damage to property or structures and without interference with the right of the public, owners of private property, pedestrians, vehicular traffic, or the work of other CONTRACTORS. Dewatering shall be done in such a manner that the soil under or adjacent to existing structures shall not be disturbed, removed, or displaced.
- B. The overloading or obstructing of existing drainage facilities shall not be permitted, and the CONTRACTOR shall be solely responsible for any damages caused to such existing drainage facilities during his operations.



**1.10 WINTER CONSTRUCTION**

- A. The ENGINEER shall have permissive authority over the work which is proposed to be done during the winter months. The CONTRACTOR shall provide adequate weather protection, temporary heating and take any other measures which are necessary to ensure that the work performed during the winter months is properly installed and protected against damage from freezing.

**1.11 COORDINATION WITH OTHER CONTRACTORS**

- A. When two or more CONTRACTOR's are working on the site, each shall cooperate with the others in planning for CONTRACTOR's plant and storage areas, and plans shall be subject to approval and/or arbitration by the ENGINEER.
- B. It is anticipated that restroom renovation work will be taking place at the same time as the site plan work. Work must be coordinated with the restroom building CONTRACTOR.

**2.00 PRODUCTS**

Not Applicable

**3.00 EXECUTION**

**3.01 CONTROL OF WATER POLLUTION AND SILTATION**

- A. General Requirements
  - 1. The CONTRACTOR shall conduct his work in a manner to comply with the Soil Erosion and Sedimentation Control Act of 1972, (MICH P.A. 347) that will not cause damaging siltation or pollution of the water in streams, rivers, lakes, and reservoirs. The ENGINEER shall advise the Department of Environment, Great Lakes & Energy of the proposed work. All work of water pollution and siltation control is subject to inspection by the Department of Environment, Great Lakes & Energy.
  - 2. All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the Contract.
  - 3. Construction operations shall be conducted in such manner as to reduce erosion to the practicable minimum and prevent damaging siltation to streams or lakes. The area of erodible land exposed to the elements by grading operations, including gravel pits, waste or disposal areas and haul roads, at any one time shall be subject to approval of the ENGINEER and the duration of such exposure prior to final trimming and finishing of the areas shall be as short as practical. The ENGINEER shall have full authority to order the suspension of grading and other operations pending adequate and proper performance of trimming, finishing and maintenance work or to restrict the area of erodible land exposed to the elements.
  - 4. Gravel or stone, consisting of durable particles of rock and containing only negligible quantities of fines, shall be used for construction pads, haul roads and temporary roads in or across streams.



5. The disturbance of lands and waters that are outside the limits of construction as staked is prohibited, except as found necessary and approved by the ENGINEER.
6. The CONTRACTOR shall conduct his work in such manner as to prevent the entry of fuels, oils, bituminous materials, chemicals, sewage or other harmful materials into streams, rivers, lakes, or reservoirs.
7. Water from aggregate washing or other operations containing sediment shall be treated by filtration, by use of a settling basin or other means to reduce the sediment content to a level acceptable to the Department of Environment, Great Lakes & Energy.
8. All waterways shall be cleared as soon as practical of falsework, piling, debris, or other obstructions placed during construction operations not a part of the finished work. Care shall be taken during construction and removal of such barriers to minimize the muddying of a stream.

**B. Temporary Control Requirements**

1. The CONTRACTOR shall provide temporary soil erosion and sedimental controls according to current local soil conservation district soil erosion and sedimentation control standards and specifications or revisions thereof.
2. The CONTRACTOR shall not pump water directly from the excavation into the river but shall construct and maintain stilling basins to receive the pumpage with an overflow from the basins to the river. The basins shall be of sufficient size to allow proper settling of sediment before the water flows into the river. The CONTRACTOR shall remove and/or restore the basin area to original condition after backfilling is complete. Water from well points may be discharged directly into the river providing such operation does not result in erosion of riverbanks.
3. Permanent soil erosion control measures for all slopes, channels, ditches or any disturbed land area shall be completed within 15 calendar days after final grading or the final earth change has been completed or where significant earth change activity ceases, temporary soil erosion control measures shall be implemented within 30 calendar days. All temporary soil erosion control measures shall be maintained until permanent soil erosion control measures are implemented.

**3.02 FINISH GRADING, TOPSOIL**

- A. After all backfilling and rough grading has been completed and thoroughly compacted, the entire disturbed area at the site shall be graded to smooth, even surfaces as shown by the proposed new contours shown on the Contract Drawings. The portion of the disturbed area where no new contours are shown shall be graded to smooth, even surfaces approximating the original surfaces.
- B. All debris and larger stones and sticks and the like shall be removed and disposed of and the entire disturbed area made ready for the addition of topsoil and seeding.
- C. After all construction has been completed, the CONTRACTOR shall spread 4-inches of approved topsoil over all graded areas. The stockpiled material may be used for this purpose. If there is not sufficient topsoil on the site, the CONTRACTOR shall secure and deliver to the site whatever amount is required at his own expense.



**3.03 MEASUREMENT AND PAYMENT**

- A. All work associated with site clearing and grubbing, and tree protection shall be considered included in the contract pay items and they will not be paid for separately. Tree Removals will be paid separately per each.
- B. All work associated with furnishing, placing and, upon the establishment of permanent SESC measures, the removal of temporary SESC measures, shall be included in the contract pay item SESC Measures, they will not be paid for separately.

END OF SECTION



**1.00 GENERAL****1.01 DESCRIPTION**

- A. Furnish all labor, materials, tools, and equipment necessary to properly dismantle and/or remove the items shown on the Drawings or specified herein. This work shall include, but not be limited to, the removal of such items as full depth pavements, HMA surface, fencing, sidewalks, shed, pavilion, or any other materials that are removed as part of the work. All removal work shall be performed in accordance with the Michigan Department of Transportation 2020 Standard Specifications for Construction unless otherwise noted.

**2.00 PRODUCTS****2.01 CONCRETE FILL**

- A. Concrete for fill or plugging will not be required.

**3.00 EXECUTION****3.01 GENERAL**

- A. The CONTRACTOR shall exercise special precautions during construction, not to damage any remaining pavement, or sidewalk, and no construction equipment with tractor lugs or other defacing or damaging components will be permitted on these surfaces. Where it is necessary for such equipment to travel over paved areas, the CONTRACTOR shall provide suitable planks and blocking to prevent damaging paved surfaces.
- B. All items that are specified for removal, including but not limited to pavement, HMA surface, sidewalk, curb ramps, and benches shall be removed from the site and legally disposed of by the CONTRACTOR at a site provided by the CONTRACTOR.

**3.02 SUPERSTRUCTURES**

- A. Buildings designated to be demolished shall have all pumps, piping, valves, motors, electrical gear, control panels and boxes, electrical panels, hoists, and trolleys, etc., or other materials which are considered as "operating equipment," carefully removed from their locations and transported to a storage point designated by the OWNER. Such materials shall remain the property of the OWNER.
- B. All superstructures, including miscellaneous metallic items attached to the structure, minor "non-operating equipment," and other construction items considered as "building appurtenances," etc., shall be razed to the ground and removed from the site.
- C. All structural floor slabs, platforms, structural supports, etc., or other materials determined to be non-salvageable or non-removable from the site by either OWNER or CONTRACTOR, shall be razed in place and compacted mechanically into the lowest levels of the substructures. The upper portion of the foundation's walls, from tops of walls down to a depth of 4-ft. below adjacent finished grade, shall be broken down and compacted onto the demolition of the slabs.
- D. The demolition and compaction of the structural system shall be such as to create a tightly compacted mass, without such voids that would create future settlement. Additional "fine"



materials, such as gravel, broken stone, sand, etc., shall be added during the compaction process where it proves to be extremely difficult to break concrete masses into smaller sections. Cutting torches or other means shall be used where necessary to cut reinforcing steel.

**3.03 PAVEMENTS**

- A. Cut and remove all pavement, sidewalk and sidewalk ramps that would be damaged by the work and where indicated in the Plans. Cutting of concrete pavement, where permitted, shall be done with a concrete saw, in a manner meeting the approval of the ENGINEER. Asphalt pavements shall be cut with a saw meeting the approval of the ENGINEER. Pulverized pavements may be used to supplement existing base where additional aggregate is required, otherwise removed pavements shall be removed from the site.
- B. All strips of the existing pavement which are less than 2-ft. wide and which are between the cut pavement and the concrete gutter shall be removed and replaced.
- C. Where pavements will be relocated and not replaced, remove the HMA pavement and fill ditches and obliterate the pathway, using grading operations. Provide suitable drainage and blend the area with the surrounding ground contours. If required, scarify the obliterated roadway to mix aggregate surfacing materials with earth, and leave in a smooth condition. Topsoil, seed, fertilize, and mulch obliterated areas in accordance with Section 2.15, Landscaping.

**3.04 SIDEWALKS, CURB AND GUTTER, AND CURB RAMPS**

- A. In cutting through sidewalks, and curb ramps the CONTRACTOR shall remove full slabs of sidewalk or sidewalk ramp to the nearest regular joint or as directed by the ENGINEER. The CONTRACTOR shall perform full-depth saw-cutting at all removal limits unless otherwise authorized by the ENGINEER.

**3.05 CATCH BASINS AND MANHOLES**

- A. Miscellaneous items designated for removal, including portions of manholes to facilitate underdrain taps shall be removed by the CONTRACTOR and properly disposed of off-site. The cost associated with this work shall be considered included in the unit price for the Contract pay item "Underdrain," and it will not be paid for separately.

**3.06 METHOD OF MEASUREMENT AND PAYMENT**

- A. Work covered in this Section is to be paid at the unit price(s), and units of measure that have been established in the bid form for the corresponding demolition and removal pay items.

END OF SECTION



**1.00 GENERAL****1.01 DESCRIPTION**

- A. The CONTRACTOR shall perform all excavation and backfilling necessary to complete the work. This shall include the excavation of earth and rock, the removal and disposal of unsuitable material, dewatering, placement of suitable fill and backfill material, pipe boring and jacking, and the restoration and final grading for all earth surfaces.

**1.02 WORK WITHIN RIGHTS-OF-WAY**

- A. Where the governmental bodies having jurisdiction of the streets or rights-of-way have specific specifications relating to the requirements for work within their jurisdiction, such requirements must be met as a minimum requirement, and if these Specifications impose further limitation on the work, they shall also be met as the required work standard.
- B. During all operations of the CONTRACTOR in the streets and roadways, the CONTRACTOR shall maintain barricades, lights, and warning signs as required by the agency having jurisdiction.

**1.03 WORK WITHIN EASEMENTS**

- A. During construction within any easements, the CONTRACTOR shall confine himself to the limits shown on the Plans. He shall notify property owners in advance of moving equipment on easements and use of the access routes which will be designated by the OWNER. The OWNER will cooperate in working out the details of access. The topsoil over the trench shall be removed and carefully replaced upon completion of the work. The backfill of the trench in the easement may be left slightly high to provide for any slight residual settlement. Any trees, shrubs, or bushes removed shall be replaced to the satisfaction of the property OWNER.

**2.00 PRODUCTS****2.01 BACKFILL MATERIAL**

- A. For areas not requiring "granular backfill" material, backfill shall be of the excavated material, with the exception that materials such as soft clay, topsoil, muck, cinders, vegetable matter, refuse, boulders, and other objectionable and non-packing earth shall be excluded from the backfill and removed from the site. Stone larger than 3-inches in any dimension shall be excluded from the backfill and removed from the site by the CONTRACTOR.
- B. Where "granular material" backfill is required as specified herein, backfill material shall be defined as a material meeting granular material Class II as defined in 2020 MDOT 902.07.

**3.00 EXECUTION****3.01 GENERAL EXCAVATION**

- A. Excavation shall be performed by any practicable method consistent with the integrity and protection of the work and neighboring structures, workmen, and the public. Topsoil shall be separately removed and stockpiled for reuse.



- B. All excavation, except where necessary to tunnel, bore or jack under roads, railroads, tree roots and other obstructions within the limits indicated on the Plans, may be open cut from the surface. Tunneling or boring under trees shall be considered as incidental to construction and will not be considered as cause for request for additional payment.
- C. Foreign material or unsuitable foundation material encountered such as wood, boulders, etc., which obstruct the excavation, shall be removed. Such materials found at the bottom of the excavation shall be removed and the foundation restored with approved materials.
- D. If excess excavation is made or the material becomes disturbed so as to require removal beyond the prescribed limits, the resulting space shall be filled with selected material solidly tamped into place, in not more than 6-inch layers to the satisfaction of the ENGINEER, before the construction work proceeds.
- E. The excavation shall be kept dry during the work. Where water is encountered in the excavation, it shall be removed by pumping or well points. All necessary precautions shall be taken to prevent damage to existing wells and to completed or partially completed structures. The CONTRACTOR shall be responsible for all damages caused by him due to inadequate or improper protection.

### 3.02 EXCAVATION FOR SEWERS AND WATER MAINS

- A. Trenches shall be excavated to the depth required with allowance for bedding the pipe. The trench shall be cut wider and deeper at each pipe joint location to provide for properly completing the pipe joint and to relieve the joint of all loadings.
- B. The width of the trench at the top of a rigid pipe shall be sufficient to allow the pipe to be laid and jointed properly and shall provide for a minimum net clearance of 6-inches and a maximum net clearance of 12-inches on each side of the barrel of the pipe and to allow the backfill to be placed and properly compacted.
- C. The width of trench at the top of a flexible pipe backfill when using concrete bedding shall be sufficient to allow the pipe to be laid and jointed properly with the minimum net clearance of 12-inches and a maximum net clearance of 18-inches on each side of the barrel of the pipe.
- D. Where the conditions of the ground require, or where the work is in close proximity of existing structures, the sides of excavation shall be securely held by bracing and/or sheeting which may be removed in units when the level of the backfill has reached a point where it is safe to pull the sheeting without disturbing the protected feature. No sheeting, bracing, or other timber shall be left in the excavation upon the completion of the main or other structures, except with the specific review and direction of the ENGINEER.
- E. Other underground mains, sewers or structures encountered in the excavation shall be adequately supported during the CONTRACTOR's operations, and before backfilling, shall be given permanent support as directed by the ENGINEER to meet the standards or requirements of the owning utility or agency.
- F. Water, sewer, gas and other utility services disturbed by the CONTRACTOR in his operations shall be repaired or replaced in a manner equal to the original condition by the CONTRACTOR at his own expense. Where these services are encountered and are undamaged, they shall be supported and/or protected by the CONTRACTOR at his expense against later settlement and/or damage after backfill. The CONTRACTOR shall consult the agency or the utility firm having jurisdiction over any duct line, gas main, etc., which may cross the excavation to determine method of supporting such duct or pipe.



- G. All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing sidewalks and driveways. Hydrants under pressure, valve manhole covers, valve boxes, curb stop boxes, fire and police call boxes, or other utility controls shall be left unobstructed and accessible until the work is completed. Gutters shall be kept clean, or other satisfactory provisions made for street drainage, and natural water courses shall not be obstructed except as otherwise provided for herein on a temporary basis.

### **3.03 EXCAVATION FOR STRUCTURES**

- A. Excavation for structures shall be extended sufficiently beyond the limits of the structure to provide ample room for form construction and for practicable construction methods to be followed.
- B. Requirements for excavation of sewers and water mains shall also apply to this Section.

### **3.04 EXCAVATION FOR PAVED SURFACES**

- A. In excavating around manholes and catch basins or inlets, care shall be exercised to avoid removing the casings and pushing dirt into the structures. Dirt pushed into manholes, catch basins or inlets by the CONTRACTOR's operations shall be immediately removed so that the dirt will not be carried into the sewer by the flow of sewage or storm water.
- B. The CONTRACTOR shall take ample precautions to protect all trees and ornamental shrubbery not within the limits of the construction area, or within the construction areas shown on the Plans to be retained from injury by workmen, equipment, or any other agencies connected with the work, including subcontractors. Such protection shall be provided during the progress of the excavation, grading, or other phases of the work as necessary. Such trees or shrubbery shall be surrounded by protective posts and fencing before construction begins, when in the judgment of the ENGINEER, such precautionary measures are necessary. If, as a result of any phase of the work, trees are damaged or it is necessary to remove limbs in the way of construction, the repair of the damage and such limb removal shall be done by the CONTRACTOR as directed by the ENGINEER. All costs for the protective work shall be borne by the CONTRACTOR as incidental to the Contract work.

### **3.05 SHORING, SHEETING AND BRACING**

- A. Where sheet piling, shoring, sheeting, bracing, or other supports are necessary, they shall be furnished, placed, maintained, and except as shown or specified otherwise, removed by the CONTRACTOR.
- B. All sheet piling, shoring, sheeting, and bracing shall be designed by a Professional ENGINEER engaged by the CONTRACTOR with demonstrated competence and experience in such work. The sheeting system shall be designed to prevent bottom failure and hydrostatic uplift within the excavation. Provision shall also be made in the design for lateral pressures due to side slope and construction equipment or other surcharge loads, as applicable.
- C. The CONTRACTOR shall provide to the ENGINEER for his review, design calculation and arrangement drawings of the sheeting system prior to ordering any materials for bracing, sheeting, etc., and prior to the commencement of the excavation.
- D. All materials, except as otherwise specified, used for sheeting and sheet piling, lagging, braces, shores, and stringers, or waling strips shall be of approved quality and dimensions throughout.



- E. Materials for sheeting systems shall be furnished and driven or set-in place by the CONTRACTOR, where necessary or wherever ordered by the ENGINEER, whether the same is or is not considered necessary by the CONTRACTOR. If, in the opinion of the ENGINEER, the materials furnished by the CONTRACTOR are not of proper quality or sufficient size or not properly placed to ensure the safety of the work or of adjacent structures and property, the CONTRACTOR shall, upon notice from the ENGINEER to that effect, forthwith procure, furnish and set in place or drive other and satisfactory materials, or place the material in a satisfactory manner; and if he shall fail or neglect to do so, the ENGINEER may order all or any part of the work to be stopped until such materials so used are furnished and placed; and the CONTRACTOR shall not be entitled to claim, demand, or receive any compensation for larger size or better quality or different disposal of materials ordered by the ENGINEER, nor any compensation for allowance of any kind whatsoever for or on account of any damage or delay resulting from such stoppage of work.
- F. Steel sheet piling may be either new or used. It shall be of adequate strength, straight and properly braced. Steel sheet piling shall be of the interlocking type. Friction in the interlocks shall not be assumed to contribute to the strength of the sheet piling.
- G. The design, planning, installation, and removal, if required, of all sheet piling, shoring, sheeting, and bracing shall be accomplished in such a manner as to maintain the required excavation or trench section and to maintain the undisturbed state of the soils below and adjacent to the excavation.
- H. Steel sheet piling for the excavation shall be driven straight and in-line. The piling shall be supported aboveground, before driving, by a guide frame at least 20-ft. high which will keep the piling accurately in the required position and vertical. Each piece of piling shall be driven only a few feet at a time and driving shall proceed continuously around the perimeter so that the piles shall reach their full penetration together.
- I. Walers and bracing shall be supplied and installed as required to complete the sheeting system. Walers and braces shall be of adequate strength for the load imposed. Splices in walers shall develop the full strength of the member in bending, shear, and axial compression.
- J. If bracing members are to be removed during construction, the timing and procedure for removal shall not induce excessive stresses in the permanent structures or in steel sheet piling and bracing members.
- K. If the construction sequence of structures requires the transfer of bracing to the completed portions of any structure, the CONTRACTOR shall secure written acceptance of the ENGINEER prior to the installation of such bracing.
- L. In trenching operations, the use of horizontal strutting below the barrel of pipe or the use of the pipe as support for trench racing will not be permitted. The use of a traveling shield for sewer construction shall require that the device be approved for use by a Professional ENGINEER. Sheet piling and timbers in trench excavations shall be withdrawn in a manner so as to prevent subsequent settlement of the pipe or additional backfill loadings which might overload the pipe.
- M. The neglect, failure, or refusal of the ENGINEER to order the use of sheeting, or sheet piling or steel, or to order the same to be left in place, or the giving or failure to give of any order or directions as to the manner or methods of driving or placing sheeting, sheet piling, bracing, shores, etc., shall not in any way relieve the CONTRACTOR of any or all obligations under this Contract. Sheeting left in place shall be cut off 1-ft. below existing grade.
- N. The rules of the OSHA and the State Department of Labor with respect to excavation and construction shall at all times be strictly observed.



**3.06 BEDDING FOR SEWERS, WATER MAINS AND CONDUITS**

- A. The sewer, water main or conduit shall be laid on a compacted granular cushion, minimum 4-inches thick. Granular backfill material shall be placed around and above the main to a height of not less than 12-inches above the crown of the pipe.
- B. Granular material shall be placed in not more than 12-inch layers and compacted to obtain 95% of the maximum unit density as determined at the optimum moisture content.

**3.07 BACKFILLING FOR SEWERS**

- A. Backfilling shall consist of placement of the prescribed materials from a level 12 inches above the crown of the pipe. Placement shall be as follows:
  - 1. Under gravel driveways, gravel roads and shoulders, the backfill shall be granular material which shall be solidly compacted by mechanical tamps in layers of not more than 12-inches loose thickness with backfilling carried up to within 12-inches of finished grade. Compaction of backfill shall be such as to obtain 98% of the maximum unit density as determined at the optimum moisture content.
  - 2. Under pavements, curb, paved driveways, and sidewalks, the backfill shall be granular material compacted in layers not to exceed 12-inches loose thickness with backfilling carried up to subgrade. Compaction of backfill shall be such as to obtain 95% of the maximum unit density as determined at the optimum moisture content. After a period of about 60 days or less, if the backfill compaction is satisfactory to the ENGINEER, to provide for any slight settlement, the CONTRACTOR shall retrim neatly any broken edges of pavement and replace the top surface of the backfill within the pavement area with pavement surface equal to that surface which was removed. The pavement shall be replaced in accordance with the standard specifications of the agency having jurisdiction.
  - 3. Backfill around lift stations or buried underground structures shall be granular material compacted in 12-inch lifts. Compaction of backfill shall be such as to obtain 95% of the maximum unit density as determined at the optimum moisture content.
  - 4. For all other areas, backfilling shall consist of placing excavated material as defined in Paragraph 2.01.A. of this Section, in 12-inch lifts to finish grade. Compaction of backfill shall be such as to obtain 90% of the maximum unit density as determined at the optimum moisture content.

**3.08 FILLING AND BACKFILLING FOR STRUCTURES**

- A. Embankments underlying structural footings, streets and drives, sidewalks and around structures shall be granular material meeting the requirements of the Michigan Department of Transportation for granular material compacted to 95% density.
- B. In all other areas, material required for embankments and backfilling shall be soil or soil-rock mixture free of organic and other deleterious matter and shall contain no more than 15% rocks or lumps larger than 2½-inches in the greatest dimension, compacted to 90% density.
- C. Under all interior and exterior floor slabs, an 8-inch-thick granular cushion shall be placed. This material shall be clean mineral aggregate meeting the following gradation requirements:

Passing the No. 4 Sieve 100%  
Passing the No. 200 Sieve 0-3%



- D. Where embankment material is placed to achieve a new surface elevation, the top 4-inches shall be approved topsoil either salvaged from the site or hauled in by the CONTRACTOR.

### 3.09 FILLING AND BACKFILLING FOR PAVED SURFACES

- A. Embankments, including sand cushions and granular fills, shall be placed in successive layers not more than 6-inches in depth the full width of the cross section, each layer to be thoroughly compacted by means of vibratory compactors or by an approved pneumatic-tired roller or combination thereof, as required by the ENGINEER. Each layer shall be compacted to not less than 98% of the maximum unit density as determined at the optimum moisture content. All parts of the embankment shall be uniformly compacted, and the CONTRACTOR shall so direct all earthmoving equipment used in the work so that the same shall be attained. Embankment or fill outside the limits of the subgrade where sand or gravel is not required shall be made with suitable material, which is free from perishable organic matter, rubbish, stones, broken concrete, roots, or other foreign materials, at no additional compensation. Before any embankments are begin, the base shall be made firm and cleared of topsoil, sod or other perishable material. The sides of the embankment shall be neatly and evenly dressed to the slope shown on the Plans, or such other slope as the ENGINEER may direct.
- B. Upon completion of the placing of the curbs, and after the concrete has cured sufficiently, forms shall be removed and the excavated space behind the curb shall be backfilled with a good quality of surface soil, free of rubbish, stone, broken concrete, roots, or other foreign material. Where adequate acceptable material for backfill behind the curb is not available, granular fill conforming to 2020 MDOT 902, Class II, shall be used. Where the area behind the curb is in cut, it shall be trimmed from the top of the curb on the slope shown on the Plans. If the area is in embankment or fill, an earth berm shall be placed immediately adjacent to the top of the curb and then the embankment of fill shall be finished to the slope shown on the Plans. All trimming and finishing shall be done in a neat, workmanlike manner. All excess concrete and debris shall be removed from the excavation behind the curb line before backfilling begins.
- C. In construction of non-rigid pavements, backfilling back of curb and gutter shall be completed before placement and compaction of the base course of the roadway.

### 3.10 PREPARATION OF SUBGRADE FOR PAVED SURFACES

- A. The bottom of the excavation for the pavement or top of the fill shall be known as the pavement subgrade and shall be smoothed, trimmed, and compacted to the required line, grade, and cross section to receive the road metal. It shall be thoroughly compacted by rolling with a roller of approved type weighing not less than 8-tons. The subgrade shall be compacted to at least 98% of the maximum density as designated by the test method AASHTO T-180. Inaccessible areas, where rolling is not practical, shall be thoroughly compacted by mechanical tampers capable of striking a blow equivalent to at least 250-foot-pounds per square foot. The subgrade thus formed shall be maintained in a smooth and compacted condition until the pavement has been placed. No base course, surfacing, curb, or curb and gutter shall be placed until the subgrade has been reviewed by the ENGINEER. The subgrade shall be finished in an acceptable condition at least one day in advance of the pavement construction at all times. Six inches of compacted depth of granular material shall be used where uncompactable soil is encountered. The granular fill shall conform to the 2020 MDOT 902, Class II, compacted to 98% of its density.
- B. Immediately prior to placing the pavement, the subgrade shall be tested for conformity with the cross section shown on the Plans by means of an approved template riding on the curb and gutter sections or on side forms. If necessary, materials shall be removed or added, as required, to bring all portions of the subgrade to the correct elevation. Corrected portions shall then be



thoroughly compacted and again tested with the template. Pavement material shall not be placed at any portion of the subgrade which has not been tested for correct elevation.

- C. The finished subgrade shall be maintained in a smooth and compacted condition until the pavement is placed. No storage piles of fine or coarse aggregate shall be placed directly upon the finished subgrade. Should the subgrade become rutted or disturbed in any manner, it shall be reshaped and recompactd.

### **3.11 GRADING**

- A. The CONTRACTOR shall grade the site to achieve the elevations as shown on the Plans. All disturbed areas beyond the grading limits shall be restored to prior condition.
- B. Surplus excavated material not needed for embankment shall be disposed of by the CONTRACTOR. Headwalls, culverts, drains, sewers, and appurtenances filled or damaged by the CONTRACTOR during the course of his operations shall be cleaned, repaired, or replaced at his expense.
- C. All temporary earth changes shall be in conformance with the Soil and Erosion Control Act.

### **3.12 RESTORATION**

- A. Headwalls, culverts, and drainage systems filled or damaged by the CONTRACTOR during the course of his operations shall be cleaned, re-laid or rebuilt with new materials to a condition equal to the original state, and of thickness equal to the original structure and to the original line and grade at the CONTRACTOR's expense.
- B. Where the excavation is located beside a ditch and/or where an existing ditch is filled or disturbed in the CONTRACTOR's operations, the CONTRACTOR shall clean, repair, or replace the ditch with properly pitched bottom and side slopes and of section and capacity not less than the original section.
- C. Where excavation has been through lawn areas, the CONTRACTOR shall restore the disturbed area by placing topsoil and seeding or sodding over the final backfill material. Turf establishment shall be done per Section 2.15, Landscaping. In landscape areas, seed mixes specified within the plans and Section 2.15, Landscaping must be followed.
- D. The CONTRACTOR shall remove excess dirt and other construction material from the site of the work and leave the site in a condition equal to its original state.
- E. The final condition of the streets and roadways shall be subject to the approval of the governmental body having jurisdiction thereof, as well as review by the ENGINEER.

END OF SECTION



**1.00 GENERAL****1.01 DESCRIPTION**

- A. Furnish all labor, tools, equipment, and materials to construct all storm sewers, and drainage structures as herein specified. No sewers shall be accepted until the sewer system has passed the system acceptance tests.

**1.02 TESTING****A. General**

- 1. The CONTRACTOR shall furnish all equipment and personnel to conduct system acceptance tests as specified herein on all completed sewers. All tests shall be conducted under the supervision of the ENGINEER. No acceptance tests shall be conducted until the entire sewer system is constructed or just prior to placing the line in service providing the sewer pipe has been installed for not less than 30 days.

**B. Test for Alignment**

- 1. All sewers shall be laid accurately to the line and grade established by the ENGINEER. The sewers will be tested for alignment by shining a light through the pipe at a manhole and viewing the light from an adjacent manhole. Any section of sewer in which a light cannot be seen from one manhole to the next shall be corrected to the satisfaction of the ENGINEER to pass this test.

**C. Material Tests**

- 1. The CONTRACTOR shall have tests of pipe and strength made by an independent testing laboratory. Tests of up to four lengths of sewer pipe per hundred lengths may be required to show compliance with the Specifications. All pipe delivered to the job site shall be accompanied with a manufacturer's certificate of compliance to the Specifications.

**D. Submittals**

- 1. The CONTRACTOR shall submit Shop Drawings or data sheets for all castings, steps, and pipe materials.

**2.00 PRODUCTS****2.01 PIPE**

- A. Reinforced concrete pipe and manhole tees shall be no less than the latest revision of ASTM C76, with the class designation as shown on the Plans or in the Proposal.
- B. Concrete pipe shall have tongue and groove joints and shall be made with an approved mastic.
- C. Corrugated steel pipe shall meet the requirements of AASHTO M-190 for coated pipe latest revision. Minimum gage thickness shall be as shown on the Plans or in the Proposal.
- D. High density polyethylene pipe and fittings shall meet the requirements in the AASHTO M326-08 specification.



**2.02 PRECAST CONCRETE**

- A. Reinforced concrete structures and grade rings shall conform to the current ASTM Specifications for Precast Reinforced Concrete Manhole Sections, Serial Designation C478. Manhole section joints shall be made with mortar. Dome sections shall be straight side type.

**2.03 HEADWALLS**

- A. Headwalls shall be constructed of concrete in accordance with MDOT Specifications.

**2.04 BRICK AND BLOCK**

- A. Clay brick to be used in the construction of manholes, catch basins, and similar structures shall conform to the current ASTM C32, Grade MS. Concrete brick shall conform to the requirements for concrete building brick and structural masonry of current ASTM C55, Grade S-II. Concrete block for manholes, catch basins, and inlets shall conform to the current ASTM C139. Mortar for plastering drainage structures shall be made of one-part Portland cement and two parts fine aggregate.
- B. The concrete block masonry used to construct manhole and catch basin walls shall be solid curved blocks with the inside and outside surfaces curved to the required radii. The blocks shall have tongue and groove or other approved type of joint at the ends so that the units interlock to form a strong, rigid structure. Curved blocks shall have the inside and outside surfaces parallel.
- C. The block shall not exceed 18 inches in length or 8 inches in depth (height). No block shall be less than 6 inches in width (thickness). All blocks in one structure shall be of the same height dimension. The blocks shall be designed for length so that only full-length or half-length blocks are required to lay the circular wall of any one course.
- D. Blocks intended for use in the cones or tops of manholes and catch basins shall have such shape as may be required to form the structure as shown on the Plans with inside and outside joint not to exceed 1/4-inch in thickness.

**2.05 CASTINGS**

- A. Castings shall conform to the latest revision of the ASTM Specification A48, Gray Iron Castings, and be coated by the manufacturer with coal tar pitch, varnish, or other asphaltum coating reviewed by the ENGINEER.
- B. Frames and lids shall be as follows:
  - 1. For use on manholes: Neenah R-1642 with type C solid cover, or East Jordan Type A solid cover, or equal.
  - 2. For use on drainage structures designated to receive "Type B" cover: Neenah R-2560-E4 Beehive cover or East Jordan Beehive grate or equal.
  - 3. For use on drainage structures in curbed areas: Neenah R-3031-B, or East Jordan 7045 with Type M1 grate, or equal.
  - 4. For use on drainage structures in curbed areas with a curb cut: Neenah R-3034B, or East Jordan 7065 with Type M1 grate, or equal.



5. For use on drainage structures in non-curbed areas: East Jordan 5080 with Type M1 grate, or equal.

**2.06 STEPS**

- A. Manhole steps shall be cast iron or plastic-coated steel. They shall be Neenah R-1981-J, East Jordan 8512, M.A. Industries PSI-PF, or equal.

**3.00 EXECUTION**

**3.01 EXCAVATION AND BACKFILL**

- A. All excavation and backfill above the pipe shall conform to Section 2.04, Earthwork.
- B. Concrete pipe shall be laid on a compacted aggregate material placed on the bottom of the trench to a depth of not less than 3-inches for 24-inch and smaller pipe and not less than 4-inches for pipe larger than 24-inch. Where indicated on the Plans or required by the ENGINEER, concrete encasement or cradle shall be used.
- C. Compacted aggregate material shall be placed at the sides of the pipe and cover not less than 12-inches over the pipe.
- D. "Aggregate Material" shall be pea gravel, or crushed stone conforming to ASTM C33 Size No. 67 placed in not more than 6-inch layers and compacted to not less than 90% standard density.

**3.02 PIPE PLACEMENT**

- A. Pipe shall be laid true to the required lines and grades. All trenches when pipe laying is in progress, shall be kept dry; and all pipes and fittings shall be uniformly supported on a properly trimmed bedding with holes at each joint to receive bells. All pipe shall be laid with bells uphill.
- B. The grade as shown on the profiles is that of the pipe invert and that to which the work must conform. The grade shall be kept by batter boards, levels, laser, or other tools which shall be furnished by the CONTRACTOR at his expense. Each pipe shall be laid accurately to the line and grade in such manner as to form a close concentric joint with the adjoining pipe and prevent sudden offsets of the invert. The interior of sewers shall, as the work progresses, be cleaned of all dirt, cement, debris, and other superfluous materials of every description. Bulkheads shall be used to keep foreign materials out of the open end of the sewer when work is not in progress.
- C. The CONTRACTOR shall be responsible for providing and maintaining all temporary pumping necessary to maintain existing storm water run-off and drainage at the site, including both dry weather flow and storm flow. At the end of each workday, the CONTRACTOR shall reconnect storm sewer system to allow the existing flow to be maintained through storm sewer without the need for bypass pumping.
- D. The locations of the piping as shown on the Plans has been determined to avoid, insofar as possible, interference with trees or structures or fixtures above ground and other underground mains, services, utilities, or structures. Any change in location or alignment of piping, which may be found more feasible or practicable as the work progresses, shall be made by the CONTRACTOR, as the ENGINEER may direct.



- E. Whenever it is necessary to deflect pipe from a straight line either in the horizontal or vertical plane to avoid obstructions, or where long radius curves are permitted, the amount of deflection allowed shall not exceed that required for satisfactory jointing and shall be reviewed by the ENGINEER.

**3.03 PIPE CONNECTIONS**

- A. When a sewer is connected to an existing manhole, a hole adequate to receive the new pipe shall be cut into the manhole.
- B. If the existing manhole is of brick construction, a single rowlock of brick shall be turned over the new pipe and the existing manhole brick work shall be cleaned, pointed, and given a 2-inch mortar coat on the outside surface.
- C. For connections to existing precast reinforced concrete manholes, a hole shall be cut into the concrete manhole wall to receive the pipe. Reinforcing steel shall not be cut but shall be bent and replaced in the area that is to be patched. A form shall be constructed over the area of pipe penetration. The formed area shall then be filled with concrete.

**3.04 DRAINAGE STRUCTURES**

- A. Manhole and catch basin bottoms shall be concrete and top of slab shall have a troweled finish.
- B. The manhole and catch basin walls may be constructed of concrete block masonry or concrete manhole pipe conforming to the requirements of the Specifications previously listed. Construction shall be in accordance with the details for "Storm Catch Basin" and "Storm Manhole" shown on the Plans or the Michigan Department of Transportation Standard Drawings.
- C. A plaster coat of mortar 2-inch in thickness shall be applied to the outer surface of all manholes and catch basins constructed with concrete block masonry.
- D. Final adjustment of the top of manholes and catch basins, so that the manhole or catch basin cover is at finished elevation as shown on the Plans or meets the finished surface, may be accomplished with sewer brick conforming to the previously listed Specifications. The total height of brick for this purpose shall not exceed 12-inches. The inside and outside surfaces of all manholes and catch basins constructed with sewer brick will receive a plaster coat of mortar 2-inch in thickness. The inside coat of mortar shall be applied in a smooth, neat workmanlike manner.
- E. All block, and brick masonry units shall be laid in a full bed of mortar. The inside joints of the block masonry construction shall be tooled in a neat and workmanlike manner.
- F. If precast manhole pipe is used for manholes and catch basins, the bottom barrel section shall be placed in a full bed of mortar and each succeeding joint shall also be filled with mortar. The pipe shall be set in a true vertical position.

**3.05 DETENTION BASIN**

- A. Enlarge the existing detention basin as indicated on the plans.
- B. Detention outlet structure shall be constructed as indicated on the plans.



**3.06 BULKHEADS**

- A. Remove the existing bulkhead and connect the existing storm sewer to the proposed storm structure as indicated on the plans.

END OF SECTION



**1.00 GENERAL****1.01 DESCRIPTION**

- A. The CONTRACTOR shall furnish all labor, materials, tools, and equipment necessary to construct the various pavements and walks as described herein and/or shown on the Plans.
- B. This work may include, but not necessarily be limited to the following:
  - 1. Aggregate Paving (Parking Lot)
  - 2. Concrete Paving (Parking Lot)
  - 3. Concrete Curb and Gutter
  - 4. Concrete Wheel Stop
  - 5. Concrete Sidewalks
  - 6. Curb Ramps
  - 7. Brick Walks
  - 8. Aggregate Path
  - 9. Sport Court Surfaces
- C. Where MDOT occurs in statements in this Section, it shall mean Michigan Department of Transportation, 2020 Edition.
- D. Where HMA occurs in statements in this Section, it shall mean Hot Mix Asphalt.

**1.02 RELATED WORK**

- A. Removal of the items listed in Subsection 1.01.B, if existing, is described in Section 2.03, Demolition.
- B. Preparation of a stabilized subgrade is described in Section 2.04, Earthwork.
- C. Detailed information on site improvements is described in Section 2.14, Site Improvements.

**2.00 PRODUCTS****2.01 AGGREGATE SURFACE COURSE (PARKING LOT)**

- A. Aggregate shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 902.05, 23A limestone aggregate.

**2.02 CONCRETE PAVEMENT (PARKING LOT)**

- A. Concrete shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 602, Grade 3500 unless otherwise indicated on the plans.

Aggregate base course shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 902.05, 21AA limestone aggregate.



**2.03 CONCRETE CURB AND GUTTER**

- A. Concrete curb and gutter shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 802.02. Concrete shall be Grade 3500 unless otherwise indicated on the plans.

**2.04 CONCRETE WHEEL STOP**

- A. Concrete wheel stops shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 802.02. wheel stops shall be precast reinforced concrete.

**2.05 CONCRETE SIDEWALKS**

- A. Concrete sidewalk shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 803.02. Concrete shall be Grade 3000.

**2.06 CURB RAMPS**

- A. Curb ramps shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 803.02. Concrete shall be Grade 3000.
- B. Detectable warnings shall be prefabricated inlaid type and on the MDOT Qualified Products List.

**2.07 BRICK WALKS**

- A. Brick pavers must conform to ASTM C 902, for Class PX, Type I or Type II, Application PX and the dimensions shown on the plans. Supply pavers that are uniform in dimension, color, and texture. Provide manufacturer's product data and installation instructions for pavers.
  - 1. Provide only sound pavers free of defects that could interfere with proper installation or reduce the service life of the finished work. Minor cracks and minor chipping incidental to methods of manufacture or handling are subject to visual inspection and the ENGINEER's approval. Ensure there is no efflorescence evident upon visual inspection of the pavers at the project site.
  - 2. Provide manufacturer's test data certification, according to the Materials Quality Assurance Procedures Manual, documenting that the pavers meet these specifications when tested as specified in ASTM C 902. Conduct freeze-thaw tests not more than 12 months prior to delivery. If sampling and testing is required, sampling frequency and sample size will be as stated for concrete brick in Section G of the Materials Quality Assurance Procedures Manual.
  - 3. Submit a minimum of five full size samples for each paver color. Include the full range of style, size, exposed finish, color, and texture proposed for the work.
  - 4. Protect pavers from damage, chipping, and soiling during delivery and storage. Store off the ground on pallets or wood platforms. Do not use paving units with chips, cracks, voids, discoloration, or other visible defects.
  - 5. The pavers listed here are acceptable for this project. An alternate source of pavers may be submitted to the ENGINEER for approval provided they meet all requirements of this special provision. Do not change source of pavers during the course of the work. Subject to



compliance with requirements, products that may be incorporated into the work include, but are not limited to, the following:

- a. Products. Subject to compliance with requirements, provide from one of the following: 1) Watsonville Brick Company, 2) Pine Hall Brick Co., 3) Belden Brick City Line Pavers.
- b. Thickness. 2¼-inches for pedestrian paving.
- c. Face Size: four by eight nominal sizes.
- d. Color: As selected by ENGINEER from manufacturer's full range of browns, reds, and tans. Color choices must be submitted to the ENGINEER in advance of ordering product.

B. The sand setting bed and sand joints shall conform to ASTM C33.

C. The non-woven geotextile fabric shall conform to ASTM D4751.

D. The aggregate base shall be MDOT 21AA limestone aggregate.

## 2.08 AGGREGATE PATHWAY

A. Aggregate base course shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 902.05, 21AA limestone aggregate.

B. Surface aggregate shall meet the requirements of the standard MDNR Crushed Natural Aggregate specification.

- a. Provide aggregate with a maximum loss of 50 percent Los Angeles Abrasion (MTM 102).
- b. Provide 100 percent "high calcium" carbonate derived from natural limestone. Provide certification ensuring the material is composed of calcium carbonate and not magnesium carbonate.
- c. Provide 100 percent crushed aggregate in accordance with Table 1:

Table 1: Grading Requirements for Crushed Natural Aggregate

Crushed Calcium Carbonate Aggregate	Sieve Analysis – Total Percent Passing							Loss by Washing
	3/8 inch	#4	#8	#16	#30	#50	#100	#200
Aggregate Surface Course	95-100	65-99	40-75	30-55	25-45	20-40	15-35	6-26

## 2.09 TENNIS & PICKLEBALL COURT SURFACE

A. Tennis and Pickleball Court surface shall be Nova ProBounce system or approved equal. Materials shall be submitted with the manufacturer's shop drawing per Section 1.33 of this Specification.

B. Color to be approved by Owner.



**3.00 EXECUTION**

**3.01 SUBBASE**

- A. Existing subbase shall be compacted to 95% Marshall Density as indicated in the plans.

**3.02 AGGREGATE PAVEMENT**

- A. Aggregate surface courses shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 306. Measurement and Payment shall be provided per this Specification, Section 4.00, superseding the MDOT Specification.

**3.03 CONCRETE PAVEMENT**

- A. Concrete pavement shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 602.

**3.04 CONCRETE CURB AND GUTTER**

- A. Concrete curb and gutter shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 802, and be sized equal to that removed or as shown on the plans. Curb shall be integral with the concrete sidewalk where indicated on the plans.

**3.05 CONCRETE WHEEL STOP**

- A. Concrete wheel stops shall be installed per manufacturer's recommendations. Wheel stops shall be 8-ft long precast concrete blocks reinforced with two no.3 steel reinforcing bars, or approved equal. Shop drawings shall be submitted per Section 1.33 of this Specification.

**3.06 CONCRETE SIDEWALKS**

- A. Concrete sidewalks shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 803. Curb shall be integral with the concrete sidewalk where indicated on the plans.

**3.07 CURB RAMPS**

- A. Ramps and detectable warnings shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Section 803.

**3.08 BRICK WALKS**

- A. Review installation procedures and coordinate this work with other contractors or subcontractors working in the area. Furnish and install temporary barricades and warning lights, as required, for public safety and protection of work. Protect adjacent work from damage, soiling, or staining during paving operations.
- B. Before starting this work, construct a 20 square foot (approximately) sample panel using bedding depth, materials, pattern, and joints shown on the plans. Construct the sample panel using the range of clay paver color, texture, and workmanship, proposed for the work. Correct and rebuild



sample panel until it is acceptable to the ENGINEER. Retain the sample panel during construction as a standard for completed paving work.

- C. Restrict pedestrian and vehicular traffic in the area during installation of pavers. Protect partially completed paving against weather damage when work is not in progress. Remove and replace completed work damaged by frost or freezing. Place pavers according to the pattern shown on the plans and the following.
- D. Compact the subgrade to 95% maximum density prior to placing aggregate base. Place 21AA limestone aggregate base to plan thickness. Aggregate base and subbase shall meet the requirements of 2020 MDOT Standard Specifications Sections 302 and 301, respectively.
- E. Install sand setting bed to the thickness shown on the plans. Thickness indicated shall be after compaction to 98% maximum density.
- F. Place pavers on the setting bed with hand tight joints. Maintain uniform 1/16-inch to 1/8-inch joints between pavers. Maintain good alignment and match the pattern shown on the plans. Use string lines to ensure that pavers are set true to grade and alignment. Abut all edges of pavers tightly to adjacent concrete curbs and adjoining work as shown on the plans. Set pavers flush to adjacent sidewalk and driveways. Make all joint width or elevation corrections by removing the paver(s); filling, compacting, and leveling the sand setting bed; and reinstalling the paver(s).
- G. Begin paver installation from a corner, straight edge or base line as shown on the plans. Place pavers perpendicular and parallel to the surrounding work. Use full pavers whenever possible. Where cutting is required, use the largest size paver possible. Make all cuts required for color transitions or where pavers do not fit at joints or paving with masonry saw to leave a clean edge and clean joint. Ragged cuts will not be accepted. Cut through the full thickness of the pavers. Do not cut more than 1-inch of the 4-inch dimension of a soldier course.
- H. Make a minimum of three passes of a plate vibrator (minimum 5,000 pounds compaction force) to set pavers in sand setting bed prior to filling joints. Protect pavers from damage from plate vibrator as required. Sweep dry joint filler material into joints until they are completely filled. Lightly fog the joints with water.
- I. Protect newly laid pavers at all times with plywood sheets on which paving crews stand. Advance plywood as work progresses. Plywood protection must remain in areas subject to continued movement of equipment and materials.
- J. Remove and properly dispose of all unused materials, cutting remnants and other debris upon completion of the installation.

### **3.08 AGGREGATE PATHWAY**

- A. Aggregate courses shall meet the requirements of the 2020 MDOT Standard Specifications for Construction, Sections 302 and 306. Measurement and Payment shall be provided per this Specification, Section 4.00, superseding the MDOT Specification.

### **3.09 TENNIS & PICKLEBALL COURT SURFACES**

- A. Nova ProBounce or equivalent surfaces shall be installed per manufacturer's recommendations. Construction procedures shall be submitted with the manufacturer's shop drawing per Section 1.33 of this Specification.



**4.0 MEASUREMENT AND PAYMENT**

- A. Work covered in this section is to be paid at the unit price(s), and units of measure that have been established in the bid form for the corresponding pay items.

END OF SECTION



**1.00 GENERAL****1.01 DESCRIPTION**

- A. The CONTRACTOR shall furnish all labor, materials, tools, and equipment necessary to construct the various site improvements as described herein and/or shown on the Plans.
- B. This work shall include, but not necessarily be limited to, the following:
  - 1. Decorative Railing
  - 2. Bench
  - 3. Arrival Point Pavilion
  - 4. Trash Can
  - 5. Bike Rack
  - 6. Tennis Court Improvements
  - 7. Pickleball Court
  - 8. Timber Steps
  - 9. Baseball Field Improvements
  - 10. ADA Bleachers
  - 11. LED Solar Bollards
- C. All work in this section must conform to Build America, Buy America requirements as described in Section 1.00 General Requirements.

**1.02 RELATED WORK**

- A. Concrete work, aggregate surfaces, brick pavers, and court surfaces are described in Section 2.13, Pavements, Curbs, Walks, & Paths.

**1.03 SUBMITTALS**

- A. The CONTRACTOR shall submit manufacturer's drawings and data for each item listed below to the ENGINEER for review. Submittals shall follow the guidance in Section 1.33 of these Specifications.

**1.04 GUARANTEES**

- A. Furnish a minimum 1-year guarantee of all material and workmanship.

**2.00 PRODUCTS****2.01 DECORATIVE RAILING**

- A. All wood shall be rough-sawn, and pressure treated. Posts and rails shall be sized per the plans.
- B. All fasteners must be galvanized.
- C. Concrete for footing shall be MDOT Grade 3500.

**2.02 BENCH**

- A. Benches shall be Playworld Systems, Model #1410, 6-ft. Bench, in-ground mounting, hunter green Eco-Armour PE coated steel top, powder-coated black frame, or approved equal.
- B. Concrete for footing and bench pad shall be MDOT Grade 3500.



**2.03 ARRIVAL POINT PAVILION**

- A. Arrival Point pavilion shall be 16x16 four post pavilion, Polygon CAR-16 or approved equal. Color shall be selected by OWNER.

**2.04 TRASH CAN**

- A. Trash can shall be Playworld Systems, Model #1566 steel trash can and 32-gallon plastic container with lid, in ground mounting, metal cover with cable attachment, hunter green Eco-Armor PE coated, or approved equal.

**2.05 BIKE RACK**

- A. Bike racks shall be Madrax Division, UX' Bike Rack, Product UX238-IGSF, black polyester powder-coated, 2-3/8-inch O.D. steel tube, surface flange mount, or approved equal.

**2.06 TENNIS COURT RE-SURFACING**

- A. Tennis court shall be re-surfaced with Nova Pro-Bounce, or approved equal per Specification Section 2.13.
- B. Cracks shall be filled with acrylic crack filler as recommended per court surface manufacturer.

**2.07 PICKLEBALL COURT**

- A. Pickleball court shall be Nova Pro-Bounce, or approved equal per Specification Section 2.13.
- B. Aggregate base shall be MDOT 21AA.
- C. Pickleball equipment shall be Jaypro Sports, or approved equal.
- D. Fencing shall be 10' high chain link meeting the specifications indicated in the Plans. Fence post footings shall be MDOT Grade 3500 concrete.

**2.08 TIMBER STEPS**

- A. Timber steps shall consist of pressure treated 8x8 risers per MDOT 2020 Specification Section 912 on compacted MDOT 21AA aggregate. Limestone screens within steps shall use the MDNR surface aggregate mix for pathways per Section 2.13 of this Specification.
- B. Timber railing posts shall be 8ft long 6x6 pressure treated timber per MDOT 2020 Specification Section 912 embedded in MDOT Grade 3500 concrete footings.
- C. Handrail shall be 1-1/2" schedule 20 pipe, powder coated black.

**2.09 BASEBALL FIELD IMPROVEMENTS**

- A. Infield improvements shall use a mix consisting of at least sand, clay and silt. The mix shall be at least 60% sand and intended for baseball field infields, such as Turface Diamond Select, or approved equivalent. Infield mix to be submitted for approval per Section 1.33 of the specifications.
- B. Baseball fencing shall follow the details and specifications on the Plans.



**2.09 ADA BLEACHERS**

- A. ADA Bleachers shall be 15' long, with 5 risers and spots for two wheelchairs at the base of the bleachers.

**2.10 LED SOLAR BOLLARDS**

- A. LED Solar Bollards shall be Meteor SP-018-40K-BLK-WD-AKE-1S or approved equal.
- B. Bollards must be LED, solar powered, with motion sensor and with no wires required for installation.
- C. Bollards should be installed on a 12" diameter, 2-ft deep 3500psi concrete foundation. Bollard anchors shall be embedded in the concrete foundation.

**3.00 EXECUTION**

**3.01 DECORATIVE RAILING**

- A. Install railing as shown on the plans or as approved by the ENGINEER. Ensure the work is in accordance with Section 808 of the MDOT 2020 Standard Specifications for Construction and manufacturers recommendations. Embed posts in a concrete footing or directly into undisturbed ground as shown on the Drawings.

Place concrete as described in Section 2.13, Pavements and Sidewalks or as directed by the ENGINEER.

**3.02 BENCH**

- A. Place benches as shown on plans or as approved by the ENGINEER. Install benches on surface indicated in plan detail per manufacturers recommendations. Hardware should be stainless-steel or per manufacturers recommendations.

**3.03 ARRIVAL POINT PAVILION**

- A. Place pavilion at the location shown on the plans or as approved by the ENGINEER.

**3.04 TRASH CAN**

- A. Place trash can as shown on plans or as approved by the ENGINEER. Install trash cans per plan detail and manufacturers recommendations. Hardware should be stainless-steel or per manufacturers recommendations.

**3.05 BIKE RACK**

- A. Place bike racks as shown on plans or as approved by the ENGINEER. Install bike racks per plan detail and manufacturers recommendations. Hardware should be stainless-steel or per manufacturers recommendations.

**3.06 TENNIS COURT**

- A. Fill all cracks with acrylic crack filler and screed patch to obtain level surface. Install mylar to patched cracks. Install Nova Pro-Bounce turf, with sand. Spray latex binder to turf in two applications. Apply four coat acrylic tennis surface consisting of: two application of filled Acrylic



Surfacer Material and two applications of filled Acrylic Color Materials. Mask and Paint Line courts with Latex line Paint according to USTA specifications.

**3.07 PICKLEBALL COURT**

- A. Place 21AA aggregate base for pickleball court and obtain level surface. Install Nova Pro-Bounce turf, with sand. Spray latex binder to turf in two applications. Apply four coat acrylic pickleball surface consisting of: two application of filled Acrylic Surfacer Material and two applications of filled Acrylic Color Materials. Mask and Paint Line courts with Latex line Paint according to USAPA specifications.
- B. Install pickleball net at each court. Use Grade 3500 concrete to set posts.
- C. Install fence and gate posts in Grade 3500 concrete footings following specifications on the Plans.

**3.08 TIMBER STEPS**

- A. Compact aggregate and surface course per MDOT 2020 specifications 302 and 306.
- B. Timber construction shall be per MDOT 2020 specification Section 709.

**3.09 BASEBALL FIELD IMPROVEMENTS**

- A. Install fence and infield skin as shown on the Plans.

**3.10 ADA BLEACHERS**

- A. Install ADA bleachers on Grade 3500 concrete pad as shown on the plans. Secure to pad as recommended by bleacher manufacturer. Submit anchor plan with bleacher shop drawing.

**3.11 LED SOLAR BOLLARDS**

- A. Install LED Solar Bollards according to manufacturer's instructions.
- B. Concrete construction shall be per MDOT 2020 specification.

**3.12 CLEAN-UP**

- A. Clean-up all debris and unused materials and remove from site.

**4.0 MEASUREMENT AND PAYMENT**

- A. Work covered in this section is to be paid at the unit price(s), and units of measure that have been established in the bid form for the corresponding pay items.

END OF SECTION



**1.00 GENERAL****1.01 DESCRIPTION**

- A. Under this Section the CONTRACTOR shall furnish all labor, materials, and equipment necessary to establish temporary vegetative ground cover and permanent seeding, sodding, and planting. Temporary measures shall be utilized to stabilize erosive or sediment-producing areas during the construction period.
- B. The lawn operations shall not be started until all CONTRACTOR's on the site have fully completed their work. Any lawn areas damaged by other trades performing work at the site under separate Contracts shall be fully repaired or replaced at the expense of the CONTRACTOR.
- C. To assure quality landscaping and lawn restoration work is completed on the project, the restoration CONTRACTOR/subcontractor shall be named and approved at the time of Contract award and have a minimum of 5-years of experience with the main business of providing landscaping services.
- D. Related work that is not a part of this Section and is specified elsewhere includes:

Site General Provisions	Section 2.01
Earthwork	Section 2.04

**1.02 TEMPORARY REQUIREMENTS**

- A. All areas subjected to erosion for up to 12 months, and all areas where temporary seeding will be required to produce sufficient growth to retard erosion prior to the establishment of finished grade or permanent vegetation shall be implemented in the manner prescribed in this Section. Temporary seeding and mulching shall not be paid separately but considered incidental to the work.

**1.03 PERMANENT REQUIREMENTS**

- A. The CONTRACTOR shall permanently prepare, fertilize, and seed or sod or riprap the areas designated on the Plans or disturbed by the CONTRACTOR. Sod shall be placed on areas having a slope of 3:1 (three horizontal and one vertical) or steeper. Grass seed shall be placed on areas having a slope flatter than 3:1. Sod may be placed in other areas at the CONTRACTOR's own option and expense. Riprap shall be placed where shown on the Plans or required by the ENGINEER.
- B. Seeding and sodding shall be accomplished within the following schedule:

Dates to sod	May 1 - Oct 30
Dates to seed	Apr 20 - Jun 1 Aug 10 - Oct 1
- C. The CONTRACTOR is responsible for planting of correct grades and alignment, and all plants shall be set so that when settled they will bear the same relationship to finish grade as they did before being transplanted. No filling will be permitted around trunks or stems. Roots of bare-rooted plants shall not be allowed to mat together but shall be spread and arranged in their natural position and have planting mixture worked in among them. All broken or frayed roots shall be cut off.



**1.04 MAINTENANCE AND GUARANTEE**

- A. The CONTRACTOR shall assume responsibility for maintaining his work to the end of the guarantee period. During this period, the CONTRACTOR shall make a minimum of one maintenance trip every four weeks during the growing season and as many more as necessary to keep the plantings in a thriving condition.
- B. Lawn maintenance shall begin immediately after the grass seed or sod is in and continue until provisional acceptance with the following requirements:
  - 1. Lawns shall be protected and maintained by watering, mowing, and reseeding as necessary for at least 30 days and as much longer as necessary to establish a uniform, weed free stand of the specified grasses and until specific lawn acceptance has been made. Maintenance includes deposition of additional topsoil and resodding as may be required to correct all settlement and erosion up to the date of final acceptance.
  - 2. At the time of the first cutting, mower blades shall be set at 2-1/2 inches high. All lawns shall receive at least three mowings before acceptance.
- C. Maintenance of trees shall consist of pruning, cultivating, weeding, watering, keeping guying taut, and trees erect, raising tree balls which settle below grade, and to furnish and apply such sprays as are necessary to keep the planting free of insects and diseases.
- D. The CONTRACTOR agrees to guarantee all plants for one year from time of planting. This guarantee includes furnishing new plants as well as labor and material for installation of replacements. All replacement plants shall be guaranteed and maintained for an additional period of one year. Any tree over four inches in caliper shall be guaranteed for two years.
- E. The CONTRACTOR shall not assume responsibility for damages or loss of plants or trees caused by fire, flood, lightning storms, freezing rains, winds over 60 miles per hour or vandalism.
- F. Inspection of the plantings will be made jointly by the CONTRACTOR and ENGINEER at the completion of planting. All plants not in a healthy, growing condition shall be removed and replaced with plants of like kind, size and quality as originally specified before the close of the next planting season.
- G. At the end of the guarantee period, the CONTRACTOR shall remove all guying, staking, wrapping, and saucers from the site.

**2.00 PRODUCTS****2.01 TOPSOIL**

- A. Topsoil shall be loam without admixture of sticks and other extraneous material. A certified analysis of the topsoil from each source shall be submitted to the ENGINEER for approval before delivery to the site. If deficiencies in the topsoil are found as a result of this analysis, they shall be corrected at no expense to the OWNER. Topsoil must contain five to eight percent organic material.

**2.02 FERTILIZER**

- A. Commercial fertilizer shall be 20-10-10. It shall be delivered to the site in original unopened containers which shall bear the manufacturer's guaranteed statement of analysis. Fertilizer shall



be stored in weatherproof locations in such a manner that it will be kept dry and its effectiveness not impaired.

**2.03 SEED**

A. Temporary seeds and their spreading rates shall be as follows:

1. April 1 to August 15:  
Spring oats or barley, at 2-lbs./1,000 sq. ft., or 3-bu./acre.  
Domestic rye grass, at .5-lb./1,000 sq. ft., or 20-25 bu./acre.
2. June - July:  
Sudangrass, at 1 lb./1,000 sq. ft., or 30-40 lbs./acre.
3. August 1 to October 15:  
Rye, at 1-lbs./1,000 sq. ft., or 2-3 bu./acre; Perennial Ryegrass, at .5-lb./1,000, or 20-25 lbs./acre.
4. September 20 to October 15:  
Wheat, at 3-lbs./1,000 sq. ft., or 2-3 bu./acre

B. Permanent seed shall be a mixture proportioned for spreading, as follows:

1. 65% Kentucky Bluegrass, 95% pure with an 80% germination factor.
2. 25% Pennlawn Fescue, 97% pure with an 80% germination factor.
3. 10% Domestic Ryegrass, 97% pure with a 90% germination factor.

C. Weed seed content shall not exceed 0.30 of 1% of the permanent grass mixture.

E. Grass seed shall be fresh, clean, new-crop seed. The CONTRACTOR shall furnish to the ENGINEER the dealer's guaranteed statement of the composition of the mixture and the percentages of purity and germination of each variety.

F. Seed mixes in the landscaping plans for rain gardens and detention basins shall supersede mixes specified in this section.

**2.04 SOD**

A. Sod shall be 100% Kentucky Bluegrass, strongly rooted with no bent grass, temporary grasses, or pernicious weeds. It shall be mowed to a height not to exceed 3-inches before lifting and shall be of uniform thickness with not over 1½-inches nor less than 1-inch of soil.

**2.05 MULCH**

A. Threshed straw, oats, wheat, barley, or rye, not chopped in short lengths, shall be spread as a mulch over all seeded areas at the rate of two tons (dry weight) per acre.

**2.06 PLANTS**

A. Plant materials shall conform to the sizes given in the Plant List and shall be sound, healthy, vigorous, and free from plant diseases and insect pests or their eggs and shall have normal healthy root systems. All measurements, such as spread, ball size, number of canes, quality designations, etc., shall be in accordance with the latest edition of "American Standards for



Nursery Stock". Trees shall be calipered 6-inches above the ground. Trees planted in rows shall be uniform in size and shape.

- B. All trees selected for this project must be approved at the source of supply prior to digging or shipping. This approval must be given in writing to the CONTRACTOR by the ENGINEER.
- C. Plant substitutions will be permitted only upon submission of proof that specified plants are not obtainable and with the authorization of the ENGINEER to provide for the use of the nearest equivalent, size, and variety of plants. All requests for price adjustments due to substitutions will be submitted in writing to the ENGINEER or OWNER for review along with a request for use of the substitutions.

## **2.07 PLANT SETTING MIXTURE**

- A. The material which is used for tamping around the balls and roots in the process of planting shall be prepared on the site by mixing four parts topsoil to one part peat, adding five pounds of superphosphate to each cubic yard of the mixture. Peat shall be granulated raw peat or baled peat, containing not more than 9% mineral on a dry basis. Superphosphate shall contain 20% of phosphoric acid.

## **2.08 GUYS, STAKES AND WRAPS**

- A. Stakes for guying shall be wood 2-inch x 4-inch x 30-inch-long minimum size.
- B. Stakes for staking shall be sound, cedar posts, 3-inch in diameter, 9-ft. long, with bark skinned off.
- C. Guying cable shall be three No. 12 gauge galvanized wires, twisted.
- D. Turnbuckles shall be galvanized or dip-painted, with a 3-inch minimum lengthwise opening, fitted with screw eyes. Three turnbuckles per tree.
- E. Staking wire shall be 12-gauge galvanized steel.
- F. Hose for covering wire shall be new or used, black or red, two-ply fiber reinforced garden hose, not less than 1/2-inch inside diameter. Seconds rejected by factory are acceptable.
- G. Tree wrap shall be treated wrapping, Kraft wrap or approved equal.

## **3.00 EXECUTION**

### **3.01 TEMPORARY SEEDING AND MULCHING**

- A. The seedbed immediately before seeding shall be firm but not so compact as to prohibit covering seed, securing adequate germination, or root penetration. Tillage implements shall be used as necessary to provide at least a 3-inch depth of firm but friable soil, free of large clods and stones.
- B. Seed may be broadcast by hand, by cyclone-type mechanical seeders or applied with a drill, cultipacker-seeder, or other suitable equipment. Seed should be covered approximately 1/2-inch deep either during seeding operation or by following broadcast application with cultipacker or similar tool.
- C. Mulching shall be used with all seedings on disturbed soil areas and for temporary use without seeding during months unfavorable to seeding.



- D. Immediately after seeding, mulch all critical areas (slopes steeper than 4:1, unstable soils, or heavy clay soil) with unweathered small grain straw (preferably wheat) or hay spread uniformly at the rate of 1½ ton per acre or 100 lbs (2-3 bales) per 1000 square feet.
- E. For acceptable anchoring and application techniques, see Subsection 3.04 of this Specification.

### 3.02 PERMANENT SEEDING

- A. Seeding and mulching required for temporary soil erosion control shall be removed prior to preparation of permanent seeding and mulching.
- B. Topsoil, 4-inches in depth, shall be worked to a smooth uniform surface and compacted firmly. Any lumps or depressions which occur shall be regraded and re-rolled until a satisfactory grade is obtained.
- C. Provided that all machinery and operations are approved, and provided that a smooth finely pulverized seedbed is produced, areas may be machine-finished except for a 3-foot strip adjacent to walks, roads, parking areas or structures. This 3-foot strip shall be hand-raked and seeded. All areas to be seeded shall be thoroughly loosened and graded to true lines free from all unsightly variations, lumps, ridges, and depressions. All sticks and stones, roots, and other objectionable material over 1-inch in any dimension which might interfere with the formation of a finely pulverized seedbed shall be removed from the soil. The prepared area shall be thoroughly rolled with an approved lawn roller and all low spots leveled up.
- D. Immediately before seeding, the topsoil surface shall be reworked until the seedbed is a fine pulverized, smooth seedbed, varying not more than ½-inch in 10-ft.
- E. Seed as specified shall be evenly sown at the rate of 5-lbs. per thousand square feet, and lightly worked into the surface, using a mechanical seeder. The CONTRACTOR may increase the quantity of seed at his option at no increase in cost to the OWNER.

### 3.03 FERTILIZING

- A. Commercial fertilizer shall be spread over all areas to be seeded or sodded at a rate of 20-lbs. per 1,000 sq. ft. and incorporated by discing, rototilling or other acceptable mechanical means to a depth of 3-inches to 4-inches. In areas inaccessible to power equipment, it shall be incorporated with the soil by hand tools.

### 3.04 MULCHING

- A. Mulch shall be spread evenly with extreme care so as to leave the seeded surface with a minimum amount of damage.
- B. Mulch shall be anchored by Mulch netting: Lightweight fibrous materials which, when properly placed over the mulch and stapled to the ground, will check erosion, and reduce displacement of the mulch.
- C. Machines which cut mulch into short pieces will not be permitted. The mulch shall be loose enough to allow sunlight to penetrate and air to slowly circulate, but thick enough to shade the ground, reduce rate of water evaporation and prevent or reduce water or wind erosion. All mulch shall be placed on seeded areas within 48 hrs after seeding or planting. The CONTRACTOR shall protect as necessary all traffic, vehicles, structures, etc., from being marked or disfigured by adhesive materials.



**3.05 SODDING**

- A. For sodding areas, the cut sod shall be laid on prepared soil, tightly together and with staggered joints. All cracks shall be filled with screened soil. Wood stakes (1-inch x 1-inch) shall be driven through the sod in place. The stakes shall be pulled after the sod has rooted firmly to the embankment. The areas shall be soaked thoroughly. As soon as sod is dry enough to walk on, it shall be rolled or tamped to a smooth surface to eliminate small bumps and given good contact with soil beneath. The areas shall be watered every two or three days as necessary for two weeks.

**3.06 PLANT STAKING**

- A. The CONTRACTOR shall field stake all trees for the ENGINEER's review prior to planting. The CONTRACTOR shall schedule his work and arrange to stake enough planting work for two weeks and arrange for a periodic site meeting with the ENGINEER for the purpose of reviewing the work that has taken place in the prior two weeks and review of the staking for the next two weeks.
- B. It shall be understood and agreed that where minor changes and deviations from the Plans or staking may be required by the ENGINEER, such revisions shall be done by the CONTRACTOR at no additional cost, providing such instructions are given to the CONTRACTOR before such affected work other than staking is started.

**3.07 ROOT PROTECTION**

- A. Plants designated "BB" in the Plant List shall be "balled and burlapped". They shall be dug with firm, natural balls of earth of sufficient diameter root systems necessary for full recovery of the plant. Balls shall be securely wrapped with burlap and bound with cord. No balled and burlapped plant shall be planted if the ball is cracked or broken. Bare root plants shall be handled in such a manner that the roots are protected at all times.
- B. All plant material shall be delivered in either closed or open vehicles with the entire load properly covered in transit for protection from drying winds. They shall be planted immediately upon delivery. No plant shall be bound with rope or wire in a manner that will damage the bark or break the branches.

**3.08 PLANTING**

- A. Prior to planting, tree pits shall be excavated as shown on the Plans. Subsoil dug from pits, trenches and beds shall be disposed of by the CONTRACTOR.
- B. When the plants have been properly set, the pit shall be backfilled with planting mixture, gradually filling, tamping, and settling with water. No soil in a frozen or muddy condition shall be used for backfilling. A ring of soil shall be formed around the edge of each plant to hold water.
- C. The CONTRACTOR shall make adjustments in the locations of plants where necessary as directed by the ENGINEER.

**3.09 PLANT MULCHING AND WATERING**

- A. All planting shall be mulched with a cover of peat. Plant pits shall be completely covered with a 2-inch layer of mulch.
- B. All plants shall be thoroughly soaked after planting. After each watering, all beds shall be raked and left in a complete and finished manner.



**3.10 ROOT PROTECTION**

- A. Upon completion of planting, all trees and shrubs shall have been pruned and injuries repaired. Remove dead or injured twigs and branches as necessary to compensate for the loss of roots from transplanting. Pruning shall be done in such a manner as not to change the natural habit or shape of the plant. All cuts shall be made flush, leaving no stubs. Paint all cuts over 3/4-inch in diameter with tree paint.

**3.11 GUYING, STAKING AND WRAPPING**

- A. Guying and staking shall be completed immediately after planting. Guy trees over five inches in caliper, and stake trees under five inches in caliper. Maintain guys and stakes until the end of the guarantee period. The trunks of all deciduous trees larger than 6-8 feet above grade shall be wrapped with standard tree wrap from the first branch down to the ground and secured at every second wrap.

**4.00 MEASUREMENT AND PAYMENT**

- A. All work associated with planting trees and shrubs and furnishing and placing 4-inches of approved topsoil, seed, fertilizer, and continuous watering as necessary to establish or re-establish turf areas and plantings as shown on the plans or as directed by the ENGINEER shall be considered included in the Contract pay item Turf Establishment and Landscaping.

END OF SECTION



**PART II**  
**PHASE 3 – SPECIFICATIONS**



**1.00 GENERAL****1.01 DESCRIPTION OF WORK**

- A. Work under this Contract consists of the renovation of the existing restroom building at Montibeller Park in Pittsfield Township. The renovation is to bring the restroom up the ADA Compliance. The work includes the reconfiguration of the restroom entrances, including removing and replacing the wood ceiling, removing and replacing an interior CMU partition wall, new exterior CMU and brick wall, new concrete footings, new concrete slabs, and new hollow metal doors; removal and replacement of light fixtures; installation of recessed hand dryers; removal and replacement of plumbing fixtures; and removal replacement of restroom accessories, including toilet partitions, grab bars, baby changing stations, signage, lavatory mirrors.
- B. Contract Drawings are included which give specific locations for all work under this Contract.
- C. Site work at Montibeller Park, including soil erosion and control, will be let under a separate Contract. The CONTRACTOR must coordinate all work with the site work contractor.

**1.02 EXISTING FACILITIES ACCESS**

- A. Access to existing facilities shall not be temporarily disrupted without coordination with and prior approval of the OWNER.

**1.03 CONSTRUCTION WATER**

- A. Water for construction is NOT available on site. The CONTRACTOR shall furnish all water and equipment required for delivery and distribution of water for construction of the proposed facilities. The CONTRACTOR shall be responsible for providing water from off-site approved sources and will be solely responsible for the protection, cost, and clean-up of the water source supply. All cost associated with furnishing, delivery and use of water will be included in the cost of the proposed construction item requiring the use thereof and is incidental to the construction of the proposed installation item.

**1.04 CONSTRUCTION POWER**

- A. Power for construction is NOT available on-site. The CONTRACTOR shall furnish all power, equipment and appurtenances required for delivery and distribution of power for construction of the proposed facilities. The CONTRACTOR shall be responsible for providing power from approved sources and will be solely responsible for the protection, cost, and clean-up of the power source supply. All cost associated with furnishing, delivery and use of power will be included in the cost of the proposed construction item requiring the use thereof and is incidental to the construction of the proposed installation item.

**1.05 CONSTRUCTION STAGING AREA**

- A. If the CONTRACTOR requires a construction staging area for the storage of equipment and materials during the project, he will need to secure such space on his own and at his sole costs. No construction staging or storage area will be provided on this project by the OWNER.

**1.06 NOTIFICATION OF UTILITIES**

- A. The CONTRACTOR shall notify all utilities prior to any excavation. Information regarding size and location is available from the utility.



- B. MISS DIG - DTE Energy, Comcast, Frontier, Pittsfield Township, and AT&T are members of a utility communication system called "MISS DIG" that provides service to participating utilities. The CONTRACTOR shall contact "MISS DIG" not less than 72 hours before starting construction for assistance in locating utilities or for any work to be done on utilities. The phone number is 811.

**1.07 MAINTENANCE OF EXISTING SEWER FLOW**

- A. The CONTRACTOR shall be responsible for providing and maintaining all temporary pumping necessary to maintain existing stormwater runoff and drainage on the site.
- B. All existing utilities, including drainage through existing sewers and drains shall be maintained at all times during construction. Where existing sewers are encountered in the line of the work which interfere with the construction, the flow in the sewers, including both dry weather flow and storm flow, shall be maintained.

**1.08 WORK SCHEDULE**

- A. The CONTRACTOR shall provide a work schedule. The schedule shall be complete and shall show in detail the manner in which he/she proposes to complete the work under this contract and approximately monthly billing of the Contract. The purpose of the schedule is to assist the OWNER in notifying the public of inconveniences and to anticipate cash-flow on the job, and to determine if the CONTRACTOR is reasonably proceeding with the work to assure completion within the specified time.

**1.09 CONSTRUCTION SEQUENCE**

- A. Prior to commencing the work, the CONTRACTOR shall provide the ENGINEER a detailed schedule of the proposed work. The schedule shall include a list of tasks required to complete the work; their relevancy to each other; expected duration; and completion dates.
- B. As a guide in preparing a construction sequence for the most significant portions of the project, the CONTRACTOR shall follow the construction sequence detailed in the Contract Drawings. All other proposed improvements may be constructed concurrently in accordance with an approved schedule.

**1.10 TRAFFIC MAINTENANCE**

- A. Because the availability of roads and streets is critical for the traveling public, the CONTRACTOR shall not close the road to traffic at any time. If shoulder closures are required, through and local traffic shall always be maintained by the use of 2-lane construction techniques and by the use of temporary roadways and flaggers.
- B. The CONTRACTOR shall provide all required Type II and Type III barricades, flashers, flashing arrows, flaggers, and all signing required to properly and safely maintain traffic flow through the construction area in accordance with the Michigan Manual of Uniform Traffic Control Devices. The CONTRACTOR shall provide as many signs and barricades as required by the ENGINEER to protect and maintain traffic through this area at all times. The CONTRACTOR shall add any additional devices required by the ENGINEER to provide a smooth flow of traffic. Traffic control beyond the temporary access driveways shown in the Contract Drawings must be approved by the Washtenaw County Road Commission.
- C. The construction influence zone shall be properly signed in accordance with the recommendations outlined in the latest edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).



- D. The CONTRACTOR shall provide all dust control and other means to reduce dust during construction. The CONTRACTOR shall grade and maintain the area of the road being used as traveling surface for the through, as well as the local traffic. Grading of the road and application of dust control measures shall be made on a weekly basis at minimum, or as often as required by the ENGINEER.
- E. In the event of the CONTRACTOR'S failure to comply with these provisions, the OWNER may with or without notice, cause the same to be done; and will deduct the cost of such work from any money due or to become due the CONTRACTOR under this Contract, but the performance of such work by the OWNER or at his insistence, shall serve in no way to release the CONTRACTOR from his general or particular liability for the safety of the Public or the work.
- F. Access to fire hydrants and water valves shall always be maintained. The CONTRACTOR's truck and equipment operations on public streets shall be governed by County regulations, and all local traffic ordinances, and regulations of the Fire and Police Departments.
- G. Where streets or pathways are partially obstructed, the CONTRACTOR shall place and maintain temporary driveways, ramps, bridges, and crossings which in the opinion of the OWNER are necessary to accommodate the public at no extra cost to the OWNER. In the event of the CONTRACTOR'S failure to comply with the foregoing provisions, the OWNER may, with or without notice, cause the same to be done and deduct the cost of such work from any monies due or to become due the CONTRACTOR under this Contract, but the performance of such work by the OWNER, or at his insistence, shall serve in no way to release the CONTRACTOR from his liability for the safety of the traveling public.
- H. The CONTRACTOR shall inform the local fire department in advance of his program of street obstruction and detours, so that the fire department can set up plans for servicing the area in case of an emergency. He shall also notify the governing police department and the OWNER at least one week prior to obstructing any street according to the specifications set forth herein and/or as may be required elsewhere on the drawings or specifications.
- I. Payment for traffic maintenance, the furnishing of flaggers, barricades, flashers, and maintenance of these shall be considered included in the Contract, and will not be paid separately.

**1.11 CONSTRUCTION PERMITS**

- A. The CONTRACTOR will be required to follow the requirements established by all permits necessary for the construction of this project. The following permits must be obtained by the CONTRACTOR prior to the beginning of construction. In addition, if other permits are necessary, they are the CONTRACTORS responsibility.
  - 1. The Building Permit to rehabilitate existing buildings within Pittsfield Charter Township will be obtained by the CONTRACTOR. All costs associated with the permit, including inspection fees and bonds will be the responsibility of the OWNER. The CONTRACTOR will be required to adhere to all requirements of the Permit.



**1.12 SOIL AND CONCRETE TESTING**

- A. The CONTRACTOR shall be responsible for providing a testing firm (acceptable to the ENGINEER) to perform soil compaction tests and concrete quality control including concrete compression tests, at CONTRACTOR cost.
- B. The CONTRACTOR shall provide and pay for the service of an independent materials testing laboratory to provide material and compaction testing. The type and minimum frequency of testing shall be as follows:
  - 1. Aggregate Base
    - Sieve analysis per source
    - Proctor per source
    - Compaction test at each location. Where length exceeds 100', one test per 50'
  - 2. Concrete Slabs and Foundations
    - Slump, minimum 50 CYD or load
    - Air entrainment, minimum 50 CYD or load
    - Comprehensive strength, minimum 50 CYD or load
- C. The ENGINEER shall determine the exact location of all tests. The CONTRACTOR shall notify the ENGINEER of all other test results at least 48 hours in advance of all new materials to be used. Any area failing tests shall be corrected and retested at the CONTRACTOR's expense.
- D. Copies of test reports shall be furnished to the OWNER and distributed to parties designated by the OWNER, including the CONTRACTOR and the ENGINEER.
- E. The costs associated with providing soil and concrete testing shall be considered in the Contract and will not be paid for separately.

**1.13 DUST CONTROL**

- A. All haul roads, detour roads, and other public and private roads, driveways and parking lots used by the CONTRACTOR must be maintained in a dust free condition during the life of this Contract. The control of the dust shall be accomplished by the application of dust control materials and methods of application as approved and as directed by the ENGINEER. Such dust control materials shall be applied as often as is necessary to control the dust.
- B. Cost of providing dust control shall be included as part of the Contract.
- C. Should the CONTRACTOR be negligent of his duties in providing dust control, the OWNER may, with or without notice, cause the same to be done and deduct the cost of such work from any monies due or to become due the CONTRACTOR under this Contract, but the performance of such work by the OWNER, or at his insistence, shall service in no way to release the CONTRACTOR from his liability for dust control.
- D. Dust Palliative may be any of the following:
  - 1. Road oil of 30% asphalt base applied at the rate of 0.5 gallons per square yard.
  - 2. Type 1-calcium chloride applied at the rate of six pounds per ton of aggregate.
  - 3. Water, as required.



4. Other methods as approved by the ENGINEER.

**1.14 CONTRACTOR STAKING**

- A. Contractor staking is considered to be a part of the Contract and will not be paid for separately or provided by the OWNER.

**1.15 AUDIO/VIDEO FILE COVERAGE**

- A. The CONTRACTOR shall furnish to the OWNER, a color audio-video file for all areas proposed for improvement.
- B. The audio/video taping shall be of such quality to accurately describe the existing conditions. The file shall be produced one week prior to the placement of materials or equipment in the construction area. The file shall be of commercial quality and of size commonly used.
- C. Both sides of the entire area must be recorded with the rate of speed less than 48-ft. per minute. Camera functions such as panning rate, zoom-in/zoom-out shall be controlled to provide optimum object clarity.
- D. The file must be recorded while the visibility is clear and at no time will it be allowed during periods of ground cover.
- E. The file shall be continuous running and shall include date, time, and location at appropriate intervals. The location shall be easily referenced to the Contract Drawings.

**1.16 PROJECT PROGRESS MEETING**

- A. It shall be the responsibility of the CONTRACTOR to have a representative present at each meeting. The meetings shall be held at least once a month as directed by the ENGINEER.

END OF SECTION



**1.00 GENERAL****1.01 SECTION INCLUDES**

- A. Submittal Procedures
- B. Certifications
- C. Shop Drawings
- D. Product Data
- E. Samples
- F. Manufacturers' Instructions
- G. Manufacturers' Field Reports
- H. Construction Schedule
- I. Submittal Schedule

**1.02 SUBMITTAL PROCEDURES**

- A. Package each submittal appropriately for shipping and handling. This shall include an index either on the transmittal or within the submittal itself. Transmit each submittal from CONTRACTOR to ENGINEER using a transmittal form. Submittals received from sources other than CONTRACTOR will be returned without action. Use separate transmittals for items from different specification sections. Number each submittal consecutively. Resubmittals should have the same number as the original, plus a letter and number designation for each resubmittal (i.e., 7-R1, 7-R2, etc.).
- B. Indicate on the transmittal relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include CONTRACTOR's certification that information complies with Contract Document requirements. On resubmittal, all changes shall be clearly identified for ease of review. Resubmittals shall be reviewed for the clearly identified changes only. Any changes not clearly identified will not be reviewed and original submittal shall govern.
- C. Include the following information on the label for processing and recording action taken.
  - 1. Project name.
  - 2. Date.
  - 3. Name and address of ENGINEER.
  - 4. Name and address of CONTRACTOR.
  - 5. Name and address of subcontractor.
  - 6. Name and address of supplier.
  - 7. Name of manufacturer.
  - 8. Number and title of appropriate specification sections.
  - 9. Drawing number and detail references, as appropriate.
- D. Schedule submittals to expedite the Project and deliver to ENGINEER at business address. Coordinate submission of related items. Coordinate related activities that require sequential activity.



- E. Review and approve Shop Drawings, product data, samples, and O&M Manuals before submitting them.
- F. Verify field measurements, field construction criteria, catalog numbers, and similar data. Indicate on the submission exactly what was verified.
- G. Any markings done by CONTRACTOR shall be done in a color other than red. Red is reserved for ENGINEER's marking.
- H. The number of copies to be submitted will be determined at the pre-construction conference. Reproducible may be submitted and will be marked and returned to CONTRACTOR. Blue or black line prints shall be submitted in sufficient quantity for distribution to ENGINEER and OWNER recipients.
- I. Coordinate each submittal with the requirements of the Contract Documents.
- J. Provide space for CONTRACTOR and ENGINEER review stamps.
- K. Apply CONTRACTOR's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- L. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- M. No claim will be allowed for damages or extension of time because of delays in the work resulting from rejection of material or from revision and resubmittal of Shop Drawings, product data, or samples.
- N. No extension of contract time will be authorized because of failure to transmit submittals to ENGINEER sufficiently in advance of the work to permit processing.
- O. ENGINEER reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are received.
- P. Do not install materials or equipment which requires submittals until the submittals are returned with ENGINEER's/OWNER's stamp and initials or signature indicating approval. The OWNER shall have final approval authority.
- Q. CONTRACTOR's responsibility of errors, omissions, and deviations from requirements of Contract Documents in submittals is not relieved by the ENGINEER's review.
- R. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with requirements.
- S. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.
- T. Submittals not requested in conformance with this Specification will not be recognized or processed.
- U. Revise and resubmit as required, identify all changes made since the previous submittal.



- V. In the event that more than two resubmittals of any submittal are necessary to achieve conformance to the contract requirements, CONTRACTOR shall be charged for excess engineering. The OWNER shall deduct these charges from the CONTRACTOR's final payment. Charges will be \$115.00/hr. minimum four hours, for each additional submittal of an item. A tabulated record of such charges will be provided for the CONTRACTOR's review prior to the processing of the final payment.
- W. Submit new product data and samples when the initial submittal is returned disapproved.

**1.03 CERTIFICATIONS**

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the CONTRACTOR to ENGINEER, in quantities specified for Product Data.
- B. Indicate that the material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certifications may be recent or previous test results of the material or product but must be acceptable to ENGINEER.

**1.04 SHOP DRAWINGS**

- A. Shop Drawings: Submit to ENGINEER for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the project is not considered Shop Drawings.
- C. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates, and similar Drawings. Include the following information:
  - 1. Dimension.
  - 2. Identification of products and materials included.
  - 3. Compliance with specified standards.
  - 4. Notation of coordination requirements.
  - 5. Notation of dimensions established by field measurements.
- D. Shop Drawings shall indicate shop painting requirements to include type of paint and manufacturer.
- E. Standard manufactured items in the form of catalog work sheets showing illustrated cuts of the items to be furnished, scale details, sizes, dimensions, quantity, and all other pertinent information should be submitted and approved in a similar manner.
- F. Measurements given on Shop Drawings or standard catalog sheets, as established from Contract Drawings, and as approved by ENGINEER, shall be followed. When it is necessary to verify field measurements, they shall be checked and established by CONTRACTOR. The field measurements so established shall be followed by CONTRACTOR and by all affected trades.



- G. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

**1.05 PRODUCT DATA**

- A. Product Data: Submit to ENGINEER for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Contract.
- C. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

**1.06 SAMPLES**

- A. Submit full-size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers or materials, color range sets, and swatches showing color, texture, and pattern.
- B. Mount, display, or package samples in the manner specified to facilitate review of qualities indicated. Prepare samples to match ENGINEER's sample. Include the following:
  - 1. Generic description of the sample.
  - 2. Sample source.
  - 3. Product name or name of manufacturer.
  - 4. Compliance with recognized standards.
  - 5. Availability and delivery time.
- C. Submit samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
- D. Refer to other specification sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.
- E. Preliminary Submittals: Where samples are for selection of color, pattern, texture, or similar characteristics from a range of standard choices, submit a full set of choices for the material or product. Preliminary Submittals will be reviewed and returned with ENGINEER's mark indicating selection and other action.
- F. Except for samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit three sets; one will be returned marked with the action taken.
- G. Maintain sets of samples, as returned, at the site, for quality comparisons throughout the course of construction.
- H. Unless noncompliance with Contract Document provisions is observed the submittal may serve as the final submittal.



- I. Sample sets may be used to obtain final acceptance of the construction associated with each set.

**1.07 MANUFACTURER'S INSTRUCTIONS**

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to ENGINEER for delivery to OWNER in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

**1.08 MANUFACTURER'S FIELD REPORTS**

- A. Submit report in duplicate, within thirty days of observation, to ENGINEER and OWNER for information.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

**1.09 CONSTRUCTION SCHEDULE**

- A. Bar Chart Schedule:
  - 1. Prepare a fully developed, horizontal bar chart type construction schedule. Submit within thirty days of the date established for commencement of the work.
  - 2. Provide a separate item bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the work as indicated on the schedule of values.
  - 3. Prepare schedule of sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for entire construction period.
  - 4. Secure time commitments for performing critical elements of the work from parties involved. Coordinate each element on schedule with other construction activities; include minor elements involved in the sequence of the work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the work.
  - 5. Coordinate construction schedule with schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other schedules.
  - 6. Indicate completion in advance of the date established for substantial completion. Indicate substantial completion of schedule to allow time for ENGINEER's procedures necessary for certification of substantial completion.
- B. Schedule Updating: Revise schedule after each meeting or activity, where revisions have been recognized or made within two weeks following the meeting or activity.
- C. All schedules shall have the date of issue plainly noted.



**2.00 PRODUCTS**

NOT USED

**3.00 EXECUTION**

**3.01 ENGINEER'S ACTION**

- A. Except for submittals for record, information, or similar purposes, where action and return is required or requested, ENGINEER will review each submittal, mark to indicate action taken, and return promptly. Compliance with specified characteristics is CONTRACTOR's responsibility.
- B. Action Stamp: ENGINEER will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:
  - 1. Final Unrestricted Release: Where submittals are marked "No Exceptions Taken" that part of the work covered by the submittal may proceed provided it complies with the requirements of the Contract Documents; final acceptance will depend upon the compliance.
  - 2. Final-But-Restricted Release: When submittals are marked "Make Corrections Noted" that part of the work covered by the submittal may proceed, provided it complies with notation or correction on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
  - 3. Returned for Resubmittal: When submittal is marked "Rejected" or "Revise and Resubmit" do not proceed with the part of the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary, to obtain a different action mark.
    - a. Do not permit submittals marked "Rejected" or "Revise and Resubmit" to be used at site, or elsewhere where work is in progress.
  - 4. Additional Information Needed: When submittal is marked "Submit Specified Item" CONTRACTOR shall submit requested information.
  - 5. Other Action: Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked "Acknowledge Receipt".
  - 6. The approval of ENGINEER shall not relieve CONTRACTOR of responsibility for errors on Drawings or submittals as ENGINEER's checking is intended to cover compliance with Drawings and specifications and not enter into every detail of the shop work.

END OF SECTION



## SECTION 062023

### INTERIOR FINISH CARPENTRY

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:

- 1. Interior trim.
  - 2. Interior board paneling.

- B. Related Requirements:

- 1. Section 074646 "Fiber Cement Siding" for fiber cement trim and fiber cement lap siding applied over interior surfaces.
  - 2. Section 099300 "Staining and Transparent Finishing" for staining and finishing interior finish carpentry.

##### 1.3 ACTION SUBMITTALS

- A. Samples for Verification:

- 1. For each species and cut of lumber and panel products with nonfactory-applied finish, with half of exposed surface finished; 50 sq. in. for lumber and 8 by 10 inches for panels.

##### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation.

- 1. Protect materials from weather by covering with waterproof sheeting, securely anchored.
  - 2. Provide for air circulation around stacks and under coverings.

- B. Deliver interior finish carpentry materials only when environmental conditions comply with requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions comply with requirements specified for installation areas.



## 1.5 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet-work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
  - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with applicable rules of any rules-writing agency certified by the American Lumber Standard Committee's (ALSC) Board of Review. Grade lumber by an agency certified by the ALSC's Board of Review to inspect and grade lumber under the rules indicated.

### 2.2 INTERIOR TRIM

- A. Softwood Lumber Trim for Transparent Finish (Stain or Clear Finish):
  - 1. Species and Grade:
    - a. Eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine; NeLMA, NLGA, or WWPA C Select (Choice).
  - 2. Maximum Moisture Content: 19 percent.
  - 3. Finger Jointing: Not allowed.
  - 4. Face Surface: Surfaced (smooth).
- B. Lumber Trim for Opaque Finish (Painted Finish):
  - 1. Species and Grade:
    - a. Eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine; NeLMA, NLGA, or WWPA D Select (Quality).
  - 2. Maximum Moisture Content for Softwoods: 19 percent.
  - 3. Finger Jointing: Not allowed.
  - 4. Face Surface: Surfaced (smooth).



## 2.3 PANELING

### A. Board Paneling:

1. Species and Grade:
  - a. Eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine; NeLMA, NLGA, or WWPA C Select (Choice).
2. Maximum Moisture Content: 19 percent.
3. Pattern:
  - a. V-joint, tongue and groove, WWPA WP 4.
4. Net Coverage Width: Not less than 5-1/16 inches.

## 2.4 MISCELLANEOUS MATERIALS

- A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.
- B. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer for general carpentry use.
- C. Multipurpose Construction Adhesive: Formulation, complying with ASTM D3498, that is recommended for indicated use by adhesive manufacturer.

## 2.5 FABRICATION

- A. Ease edges of lumber less than 1 inch in nominal thickness to 1/16-inch radius and edges of lumber 1 inch or more in nominal thickness to 1/8-inch radius.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.



### 3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.

### 3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound; warped; improperly treated or finished; inadequately seasoned; too small to fabricate with proper jointing arrangements; or with defective surfaces, sizes, or patterns.
- B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials.
  - 1. Use concealed shims where necessary for alignment.
  - 2. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
  - 3. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
  - 4. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
  - 5. Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

### 3.4 INSTALLATION OF STANDING AND RUNNING TRIM

- A. Install trim with minimum number of joints as is practical, using full-length pieces from maximum lengths of lumber available.
  - 1. Do not use pieces less than 24 inches long, except where necessary.
  - 2. Stagger joints in adjacent and related standing and running trim.
  - 3. Miter at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint.
  - 4. Use scarf joints for end-to-end joints.
  - 5. Plane backs of casings to provide uniform thickness across joints where necessary for alignment.
  - 6. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
  - 7. Install trim after gypsum-board joint finishing operations are completed.
  - 8. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting.
  - 9. Fasten to prevent movement or warping.
  - 10. Countersink fastener heads on exposed carpentry work and fill holes.



### 3.5 INSTALLATION OF PANELING

- A. Board Paneling: Install according to manufacturer's written instructions.
  - 1. Arrange in random-width pattern suggested by manufacturer unless boards or planks are of uniform width.
  - 2. Install in full lengths without end joints.
  - 3. Stagger end joints in random pattern to uniformly distribute joints on each wall.
  - 4. Install with uniform end joints with only end-matched (tongue-and-groove) joints within each field of paneling.
  - 5. Install with uniform end joints. Locate end joints only over furring or blocking.
  - 6. Select and arrange boards on each wall to minimize noticeable variations in grain character and color between adjacent boards.
  - 7. Install with uniform tight joints between boards.
  - 8. Fasten paneling by blind nailing through tongues.

### 3.6 ADJUSTING

- A. Replace interior finish carpentry that is damaged or does not comply with requirements.
  - 1. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.
- B. Adjust joinery for uniform appearance.

### 3.7 CLEANING

- A. Clean interior finish carpentry on exposed and semiexposed surfaces.
- B. Restore damaged or soiled areas and touch up factory-applied finishes if any.

### 3.8 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
  - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
  - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 062023



## SECTION 072100

### THERMAL INSULATION

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Extruded polystyrene foam-plastic board.
  - 2. Polyisocyanurate foam-plastic board.
  - 3. Glass-fiber blanket.

##### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

##### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.
- B. Protect foam-plastic board insulation as follows:
  - 1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
  - 2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site until just before installation time.
  - 3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.



## PART 2 - PRODUCTS

### 2.1 EXTRUDED POLYSTYRENE FOAM-PLASTIC BOARD

- A. Extruded Polystyrene Board, Type X: ASTM C578, Type X, 15-psi minimum compressive strength; unfaced; maximum flame-spread and smoke-developed indexes of 25 and 450, respectively, per ASTM E84.
  - 1. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

### 2.2 POLYISOCYANURATE FOAM-PLASTIC BOARD

- A. Polyisocyanurate Board: Foil Faced: ASTM C1289, foil faced, Type I, Class 1 or 2.
  - 1. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

### 2.3 GLASS-FIBER BLANKET

- A. Glass-Fiber Blanket Insulation, Kraft Faced: ASTM C665, Type II (nonreflective faced), Class C (faced surface not rated for flame propagation); Category 1 (membrane is a vapor barrier).

### 2.4 ACCESSORIES

- A. Insulation for Miscellaneous Voids:
  - 1. Spray Polyurethane Foam Insulation: ASTM C1029, Type II, closed cell, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, per ASTM E84.
- B. Adhesive for Bonding Insulation: Product compatible with insulation and air and water barrier materials, and with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates.
  - 1. Adhesives shall have a VOC content of 70 g/L or less.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.



### 3.2 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.
- B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- C. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- D. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

### 3.3 INSTALLATION OF SLAB INSULATION

- A. On vertical slab edge and foundation surfaces, set insulation units using manufacturer's recommended adhesive according to manufacturer's written instructions.
  - 1. Extend insulation below exterior grade line to top of footings.
- B. On horizontal surfaces, loosely lay insulation units according to manufacturer's written instructions. Stagger end joints and tightly abut insulation units.

### 3.4 INSTALLATION OF FOUNDATION WALL INSULATION

- A. Butt panels together for tight fit.
- B. Adhesive Installation: Install with adhesive or press into tacky waterproofing or dampproofing according to manufacturer's written instructions.

### 3.5 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

- A. Blanket Insulation: Install in cavities formed by framing members according to the following requirements:
  - 1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
  - 2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
- B. Miscellaneous Voids: Install insulation in miscellaneous voids and cavity spaces where required to prevent gaps in insulation using the following materials:
  - 1. Spray Polyurethane Insulation: Apply according to manufacturer's written instructions.



### 3.6 PROTECTION

- A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100



SECTION 074646

**FIBER-CEMENT SIDING**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes fiber-cement siding, soffit and trim.

1.3 COORDINATION

- A. Coordinate siding installation with flashings and other adjoining construction to ensure proper sequencing.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Samples for Initial Selection: For fiber-cement siding with factory-applied finish.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with labels intact until time of use.
- B. Store materials on elevated platforms, under cover, and in a dry location.

1.6 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace products that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including cracking and deforming.
    - b. Deterioration of materials beyond normal weathering.



2. Warranty Period: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Source Limitations: Obtain products, including related accessories, from single source from single manufacturer.

### 2.2 FIBER-CEMENT SIDING

- A. General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.
  1. Basis-of-Design Product: Subject to compliance with requirements, provide James Hardie Building Products, Inc.; Hardieplank Select Cedarmill Lap Siding or comparable product by one of the following:
    - a. GAF.
    - b. Nichiha Architectural Panels.
- B. Nominal Thickness: Not less than 5/16 inch.
- C. Horizontal Pattern: Boards 7-1/4 inches wide.
  1. Texture: Wood grain.

Factory priming is generally offered as an optional feature by manufacturers listed.

- D. Factory Finish: Manufacturer's standard factory-applied paint finish.

### 2.3 FIBER-CEMENT SOFFIT

- A. General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.
  1. Basis-of-Design Product: Subject to compliance with requirements, provide James Hardie Building Products, Inc.; Hardiepanel Select Cedarmill Panels. or comparable product by one of the following:
    - a. Nichiha Architectural Panels.
- B. Nominal Thickness: Not less than 5/16 inch.
- C. Pattern: 48-inch-wide sheets with wood-grain texture.



- D. Ventilation: Provide continuous soffit.
- E. Factory Priming: Manufacturer's standard acrylic primer.

## 2.4 ACCESSORIES

- A. Siding Accessories, General: Provide starter strips, edge trim, outside and inside corner caps, and other items as recommended by siding manufacturer for building configuration.
  - 1. Provide accessories matching color and texture of adjacent siding unless otherwise indicated.
- B. Decorative Accessories: Provide the following fiber-cement decorative accessories as indicated:
  - 1. Door and window casings.
  - 2. Fasciae.
  - 3. Moldings and trim.
- C. Flashing: Provide flashing complying with Section 076200 "Sheet Metal Flashing and Trim" at window and door heads and where indicated.
- D. Fasteners:
  - 1. For fastening fiber cement, use stainless-steel fasteners.
- E. Insect Screening for Soffit Vents: Aluminum, 18-by-16 mesh.
- F. Continuous Soffit Vents: Aluminum, hat-channel shape, with perforations; 2 inches wide and not less than 96 inches long.
  - 1. Net-Free Area: 4 sq. in./linear ft.
  - 2. Finish: White paint.
- G. Building Wrap: ASTM E1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E84; UV stabilized; and acceptable to authorities having jurisdiction.
  - 1. Basis-of-Design Product: DuPont Tyvek CommercialWrap.
- H. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of fiber-cement siding and soffit and related accessories.



- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.

### 3.3 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.
  - 1. Do not install damaged components.
  - 2. Install fasteners no more than 24 inches o.c.
- B. Install joint sealants as specified in Section 079200 "Joint Sealants" and to produce a weathertight installation.

### 3.4 ADJUSTING AND CLEANING

- A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.
- B. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 074646



## SECTION 079200

### JOINT SEALANTS

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Urethane joint sealants.
  - 2. Mildew-resistant joint sealants.
  - 3. Latex joint sealants.

##### 1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

##### 1.4 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
  - 2. When joint substrates are wet.
  - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

##### 1.5 WARRANTY

- A. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Five years from date of Substantial Completion.



## PART 2 - PRODUCTS

### 2.1 JOINT SEALANTS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

### 2.2 URETHANE JOINT SEALANTS

- B. Urethane, M, NS, 50, NT: Multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Use NT.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Tremco Incorporated; Dymeric 240FC. or comparable product by one of the following:
    - a. Pecora Corporation.
    - b. Polymeric Systems, Inc.

### 2.3 MILDEW-RESISTANT JOINT SEALANTS

- B. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.
- C. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
  - 1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Pecora Corporation; Pecora 860.
    - b. The Dow Chemical Company; DOW CORNING® 786 SILICONE SEALANT -.
    - c. Tremco Incorporated; Tremsil 200.

### 2.4 LATEX JOINT SEALANTS

- B. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
  - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Pecora Corporation.
    - b. Sherwin-Williams Company (The).
    - c. Tremco Incorporated.



## 2.5 JOINT-SEALANT BACKING

- B. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- C. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

## 2.6 MISCELLANEOUS MATERIALS

- B. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- C. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- D. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.2 EXAMINATION

- B. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.3 PREPARATION

- B. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning



operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

- a. Concrete.
  - b. Masonry.
3. Remove laitance and form-release agents from concrete.
4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
- a. Metal.
  - b. Glass.
  - c. Porcelain enamel.
- C. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- D. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.4 INSTALLATION OF JOINT SEALANTS

- B. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- C. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- D. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
- 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.
- E. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- F. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
- 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.



3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- G. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  3. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.

### 3.5 CLEANING

- B. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.6 PROTECTION

- B. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

### 3.7 JOINT-SEALANT SCHEDULE

- B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
    - a. Control and expansion joints in unit masonry.
    - b. Joints between sheet metal flashings and trims.
    - c. Perimeter joints between materials listed above and frames of doors windows and louvers.
    - d. Other joints as indicated on Drawings.
  2. Joint Sealant: Urethane, M, NS, 50, NT.
  3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- C. Joint-Sealant Application: Interior joints in vertical surfaces.
1. Joint Locations:
    - a. Vertical joints on exposed surfaces of unit masonry.
    - b. Joints between door frames and masonry partitions.



- c. Other joints as indicated on Drawings.
- 2. Joint Sealant: Acrylic latex or siliconized acrylic latex, OP, NF.
- 3. Joint-Sealant Color: White to receive paint finish matching adjacent painted surfaces.
- D. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
  - 1. Joint Locations:
    - a. Joints between plumbing fixtures and adjoining walls and floors.
    - b. Other joints as indicated on Drawings.
  - 2. Joint Sealant: Silicone, mildew resistant, acid curing, S, NS, 25, NT.
  - 3. Joint-Sealant Color: White at porcelain plumbing fixtures; All other locations, as selected by Architect from manufacturer's full range of colors.

END OF SECTION 079200



## SECTION 081113

### HOLLOW METAL DOORS AND FRAMES

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Standard hollow metal doors and frames.

##### 1.3 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings.
- B. Standard Hollow Metal Work: Hollow metal work fabricated according to ANSI/SDI A250.8.

##### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, fire-resistance rating, and finishes.
- B. Shop Drawings: Include the following:
  - 1. Elevations of each door design.
  - 2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
  - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
  - 4. Locations of reinforcement and preparations for hardware.
  - 5. Details of each different wall opening condition.
  - 6. Details of anchorages, joints, field splices, and connections.
  - 7. Details of accessories.
  - 8. Details of moldings, removable stops, and glazing.
- C. Other Action Submittals:
  - 1. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule.

##### 1.5 QUALITY ASSURANCE



- A. Source Limitations: Obtain hollow metal work from single source from single manufacturer.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.
  - 1. Provide additional protection to prevent damage to finish of factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch-high wood blocking. Do not store in a manner that traps excess humidity.
  - 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

#### 1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

#### 1.8 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Amweld Building Products, LLC.
  - 2. Curries Company; an Assa Abloy Group company.
  - 3. Steelcraft; an Ingersoll-Rand company.

#### 2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.



- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum A40 metallic coating.
- D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z coating designation; mill phosphatized.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.
- G. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.
- H. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- I. Glazing: Comply with requirements in Division 08 Section "Glazing."
- J. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

## 2.3 STANDARD HOLLOW METAL DOORS

- A. General: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8.
  - 1. Design: As indicated on Drawings.
  - 2. Core Construction: Manufacturer's standard kraft-paper honeycomb, polystyrene, polyurethane, polyisocyanurate, mineral-board, or vertical steel-stiffener core.
    - a. Thermal-Rated (Insulated) Doors: Where indicated, provide doors fabricated with thermal-resistance value (R-value) of not less than 4.0 deg F x h x sq. ft./Btu when tested according to ASTM C 1363.
      - 1) Locations:
        - a) All exterior doors.
        - b) Interior doors where indicated.
  - 3. Vertical Edges for Single-Acting Doors: Manufacturer's standard.
    - a. Beveled Edge: 1/8 inch in 2 inches.
  - 4. Top and Bottom Edges: Closed with flush or inverted 0.042-inch-thick, end closures or channels of same material as face sheets.
  - 5. Tolerances: Comply with SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."



- B. Exterior Doors: Face sheets fabricated from metallic-coated steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
  - 1. Level 3 and Physical Performance Level A (Extra Heavy Duty), Model 1 (Full Flush).
- C. Interior Doors: Face sheets fabricated from cold-rolled steel sheet unless metallic-coated sheet is indicated. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:
  - 1. Level 2 and Physical Performance Level B (Heavy Duty), Model 1 (Full Flush).
- D. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.
- E. Fabricate concealed stiffeners and hardware reinforcement from either cold- or hot-rolled steel sheet.

## 2.4 STANDARD HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
- B. Interior Frames: Fabricated from cold-rolled steel sheet unless metallic-coated sheet is indicated.
  - 1. Fabricate frames with mitered or coped corners.
  - 2. Fabricate frames as face welded unless otherwise indicated.
  - 3. Frames for Steel Doors: 0.053-inch-thick steel sheet.
- C. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

## 2.5 FRAME ANCHORS

- A. Jamb Anchors:
  - 1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
- B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch thick, and as follows:
  - 1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

## 2.6 STOPS AND MOLDINGS

- A. Moldings for Glazed Lites in Doors: Minimum 0.032-inch-thick, fabricated from same material as door face sheet in which they are installed.



- B. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch high unless otherwise indicated.
- C. Loose Stops for Glazed Lites in Frames: Minimum 0.032-inch-thick, fabricated from same material as frames in which they are installed.

## 2.7 ACCESSORIES

- A. Grout Guards: Formed from same material as frames, not less than 0.016 inch thick.

## 2.8 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.
- C. Hollow Metal Doors:
  - 1. Glazed Lites: Factory cut openings in doors.
  - 2. Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.
- D. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
  - 1. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
  - 2. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
  - 3. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
  - 4. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
  - 5. Jamb Anchors: Provide number and spacing of anchors as follows:
    - a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
      - 1) Two anchors per jamb up to 60 inches high.
      - 2) Three anchors per jamb from 60 to 90 inches high.
      - 3) Four anchors per jamb from 90 to 120 inches high.
      - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
  - 6. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction.



- a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
  - b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.
- E. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.
- F. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."
  - 1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
  - 2. Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.
  - 3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
  - 4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.
- G. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints.
  - 1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow metal work.
  - 2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
  - 3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
  - 4. Provide loose stops and moldings on inside of hollow metal work.
  - 5. Coordinate rabbet width between fixed and removable stops with type of glazing and type of installation indicated.

## 2.9 STEEL FINISHES

- A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.
  - 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.



- C. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness to the following tolerances:
  - 1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  - 2. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
  - 3. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  - 4. Plumbness: Plus or minus 1/16 inch, measured at jambs on a perpendicular line from head to floor.
- C. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

### 3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11.
  - 1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
    - a. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
    - b. Install frames with removable glazing stops located on secure side of opening.
    - c. Install door silencers in frames before grouting.
    - d. Remove temporary braces necessary for installation only after frames have been properly set and secured.
    - e. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
    - f. Field apply bituminous coating to backs of frames that are filled with grout containing antifreezing agents.
  - 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.



- a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
- 3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
- 4. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
  - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
  - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
  - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
  - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.
- C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
  - 1. Non-Fire-Rated Standard Steel Doors:
    - a. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
    - b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
    - c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
    - d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
- D. Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions.
  - 1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches o.c. and not more than 2 inches o.c. from each corner.

### 3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION 081113



## SECTION 088000

### GLAZING

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:
  - 1. Exterior hollow metal doors.

##### 1.3 DEFINITIONS

- A. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

##### 1.4 PERFORMANCE REQUIREMENTS

- A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:
  - 1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
    - a. Design Wind Loads: Determine design wind loads applicable to Project from basic wind speed indicated in miles per hour at 33 feet above grade, according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 6.5, "Method 2-Analytical Procedure," based on mean roof height above grade.
    - b. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch, whichever is less.
    - c. Minimum Glass Thickness for Exterior Lites: Not less than 6.0 mm.



- C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

## 1.5 SUBMITTALS

- A. Product Data: For each glass product and glazing material indicated.

## 1.6 QUALITY ASSURANCE

- A. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.
- B. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
1. GANA Publications: GANA's "Laminated Glazing Reference Manual" and GANA's "Glazing Manual."
  2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR-A7, "Sloped Glazing Guidelines."
  3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Guidelines for Sloped Glazing."
  4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."
- C. Safety Glazing Labeling: Where safety glazing labeling is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction or the manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.
- B. Comply with insulating-glass manufacturer's written recommendations for venting and sealing units to avoid hermetic seal ruptures due to altitude change.

## 1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or below 40 deg F.



## PART 2 - PRODUCTS

### 2.1 GLASS PRODUCTS, GENERAL

- A. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.
  - 1. Minimum Glass Thickness for Exterior Lites: Not less than 6.0 mm.
  - 2. Thickness of Tinted Glass: Provide same thickness for each tint color indicated throughout Project.
- B. Strength: Where float glass is indicated, provide annealed float glass, Kind HS heat-treated float glass, or Kind FT heat-treated float glass. Where heat-strengthened glass is indicated, provide Kind HS heat-treated float glass or Kind FT heat-treated float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.
- C. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
  - 1. For monolithic-glass lites, properties are based on units with lites 6.0 mm thick.

### 2.2 GLASS PRODUCTS

- A. Float Glass: ASTM C 1036, Type I, Quality-Q3, Class I (clear) unless otherwise indicated.
- B. Heat-Treated Float Glass: ASTM C 1048; Type I; Quality-Q3; Class I (clear) unless otherwise indicated; of kind and condition indicated.
  - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
  - 2. For uncoated glass, comply with requirements for Condition A.

### 2.3 GLAZING GASKETS

- A. Dense Compression Gaskets: Molded or extruded gaskets of profile and hardness required to maintain watertight seal, made from one of the following:
  - 1. Neoprene complying with ASTM C 864.
  - 2. EPDM complying with ASTM C 864.
  - 3. Silicone complying with ASTM C 1115.
  - 4. Thermoplastic polyolefin rubber complying with ASTM C 1115.
- B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned neoprene, EPDM, silicone or thermoplastic polyolefin rubber gaskets complying with ASTM C 509, Type II, black; of profile and hardness required to maintain watertight seal.
  - 1. Application: Use where soft compression gaskets will be compressed by inserting dense compression gaskets on opposite side of glazing or pressure applied by means of pressure-glazing stops on opposite side of glazing.



- C. Lock-Strip Gaskets: Neoprene extrusions in size and shape indicated, fabricated into frames with molded corner units and zipper lock-strips, complying with ASTM C 542, black.

## 2.4 GLAZING SEALANTS

### A. General:

1. Compatibility: Provide glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. VOC Content: For sealants used inside of the weatherproofing system, not more than 250 g/L when calculated according to 40 CFR 59, Subpart D.
4. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

### B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
  - a. Dow Corning Corporation; 790.
  - b. GE Advanced Materials - Silicones; SilPruf LM SCS2700.
  - c. May National Associates, Inc.; Bondaflex Sil 290.
  - d. Pecora Corporation; 890.
  - e. Sika Corporation, Construction Products Division; SikaSil-C990.
  - f. Tremco Incorporated; Spectrem 1.

## 2.5 GLAZING TAPES

### A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:

1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.

### B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:

1. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.



## 2.6 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

## 2.7 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
- B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.

## 2.8 MONOLITHIC-GLASS TYPES

- A. Glass Type GL-1: Clear fully tempered float glass.
  - 1. Thickness: 6.0 mm.
  - 2. Provide safety glazing labeling.
  - 3. Application: Vision lites in hollow metal doors.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:
  - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
  - 2. Presence and functioning of weep systems.
  - 3. Minimum required face and edge clearances.



4. Effective sealing between joints of glass-framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that will leave visible marks in the completed work.

### 3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Adjust glazing channel dimensions as required by Project conditions during installation to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches.

1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.

2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.



- J. Set glass lites with proper orientation so that coatings face exterior or interior as specified.
- K. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
- L. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

### 3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until right before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

### 3.5 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to



produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

- E. Install gaskets so they protrude past face of glazing stops.

### 3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

### 3.7 LOCK-STRIP GASKET GLAZING

- A. Comply with ASTM C 716 and gasket manufacturer's written instructions. Provide supplementary wet seal and weep system unless otherwise indicated.

### 3.8 CLEANING AND PROTECTION

- A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.
- C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.
- D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

END OF SECTION 088000



## SECTION 092216

### NON-STRUCTURAL METAL FRAMING

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Non-load-bearing steel framing systems supporting exterior sheathing.

##### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

#### PART 2 - PRODUCTS

##### 2.1 FRAMING SYSTEMS

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
  - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
  - 2. Protective Coating: ASTM A 653/A 653M, G60, hot-dip galvanized unless otherwise indicated.
- B. Z-Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches, wall attachment flange of 3/4 inch, minimum uncoated-metal thickness of 0.0296 inch (20 gage), and depth required to fit insulation thickness indicated.

##### 2.2 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards.
  - 1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

#### PART 3 - EXECUTION



### 3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

### 3.3 INSTALLING FRAMED ASSEMBLIES

- A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
- B. Z-Furring Members:
  - 1. Erect insulation, specified in Division 07 Section "Thermal Insulation," vertically and hold in place with Z-furring members spaced 24 inches o.c.
  - 2. Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.
  - 3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw-attach short flange of furring channel to web of attached channel. At interior corners, space second member no more than 12 inches from corner and cut insulation to fit.
- C. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION 092216



SECTION 099113

**EXTERIOR PAINTING**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Primers.
- 2. Finish coatings.
- 3. Floor sealers and paints.

B. Related Requirements:

- 1. Division 05 Sections for shop priming of metal substrates with primers specified in this Section.
- 2. Division 09 Section "Interior Painting" for surface preparation and the application of paint systems on interior substrates.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

- 1. Include preparation requirements and application instructions.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

- 1. Maintain containers in clean condition, free of foreign materials and residue.
- 2. Remove rags and waste from storage areas daily.

1.5 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.

- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.



## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis of Design: Subject to compliance with requirements provide products by the Sherwin Williams Company or comparable products by the following:
  - 1. Benjamin Moore & Co.
  - 2. Pratt and Lambert.
  - 3. PPG Pittsburgh Paints Company

### 2.2 PAINT, GENERAL

- A. Material Compatibility:
  - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Colors: As indicated on Drawings.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
  - 1. Fiber-Cement Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
  - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.



- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
  - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D. Concrete Pavement Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

### 3.4 FIELD QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when paints are being applied:
  - 1. Owner will engage the services of a qualified testing agency to sample paint materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
  - 2. Testing agency will perform tests for compliance of paint materials with product requirements.



3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying-paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.6 EXTERIOR PAINTING SCHEDULE

- A. Galvanized and Galvannealed Metal Substrates:
  1. Urethane Modified Alkyd Resin Over Primer System:
    - a. Prime Coat: One (1) coat All Surface Enamel Latex Primer series, 4 mils WFT/1.5 mils DFT.
    - b. Topcoats: Two (2) coats Emerald Urethane Trim Enamel series, semi-gloss, 4 mils WFT/1.4 mils DFT per coat.
- B. Cementitious Composition Board Substrates: Siding, Trim and/or Panels.
  1. Latex System:
    - a. Prime Coat: Matching topcoat.
    - b. Intermediate Coat: Matching topcoat.
    - c. Topcoat: Duration exterior latex paint, semigloss.

END OF SECTION 099113



## SECTION 099123

### INTERIOR PAINTING

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:
  - 1. Concrete masonry units (CMU).
  - 2. Steel.
  - 3. Galvanized metal.
  - 4. Gypsum board.
- B. Related Requirements:
  - 1. Division 05 Sections for shop priming of metal substrates with primers specified in this Section.
  - 2. Section 099113 "Exterior Painting" for surface preparation and the application of paint systems on exterior substrates.

##### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

##### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

##### 1.5 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.



- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide the named products by The Sherwin-Williams Company or comparable products by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. Pratt & Lambert.
  - 3. PPG Pittsburgh Paints Company

### 2.2 PAINT, GENERAL

- A. Material Compatibility:
  - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Colors: As indicated on Drawings.
- C. Low-Emitting Materials: Paints and Coatings shall have a VOC content equal to or less than the following when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - a. Flat Paints and Coatings: VOC not more than 50 g/L.
  - b. Nonflat Paints and Coatings: VOC not more than 150 g/L.
  - c. Anti-corrosive and anti-rust paints: 250 g/L

### 2.3 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
  - 1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
  - 2. Testing agency will perform tests for compliance with product requirements.
  - 3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.



## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
  - 1. CMU Masonry: 12 percent.
  - 2. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
  - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
  - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D. Concrete Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.



- G. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.

### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Mechanical and Electrical Work: Paint items exposed in occupied spaces including, but not limited to, the following:
  - 1. Mechanical Work:
    - a. Uninsulated metal piping.
    - b. Uninsulated plastic piping.
    - c. Pipe hangers and supports.
    - d. Tanks that do not have factory-applied final finishes.
    - e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
    - f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
    - g. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
  - 2. Electrical Work:
    - a. Electrical equipment that is indicated to have a factory-primed finish for field painting.
    - b. Electrical conduit that is surface mounted on painted walls.
    - c. Electrical panel covers located in corridors.

### 3.4 FIELD QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when paints are being applied:



1. Owner will engage the services of a qualified testing agency to sample paint materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying-paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.
- E. At completion of construction remove all unused paint and supplies.

### 3.6 INTERIOR PAINTING SCHEDULE

- A. CMU Substrates:
  1. Latex System.
    - a. Prime Coat: One coat PrepRite Block Filler, 4 mils WFT/1.6 mils DFT.
    - b. Topcoats: Two coats ProMar 200 Zero VOC Interior Waterbased Acrylic-latex semi-gloss, 4 mils WFT/1.6 mils DFT per coat.
- B. Steel Substrates:
  1. Latex Over Alkyd Primer System:
    - a. Prime Coat: One coat Kem Bond High Solids B50 Series 3 mils WFT/2 mils DFT.
    - b. Topcoat: Two coats Metallatex B42 semi-gloss, 4 mils WFT/1.5 mils DFT per coat.
- C. Galvanized and Galvannealed-Metal Substrates:
  1. Latex Over Waterborne Primer System (Metal doors and frames and other):
    - a. Prime Coat: One coat DTM Wash Primer B72Y1 3.4 mils WFT/0.7 mils DFT.



- b. Topcoat: Two coats Metalatex B42 semi-gloss, 4.0 mils WFT/1.5 mils DFT per coat.

D. Gypsum Board Substrates:

1. Latex System:

- a. Prime Coat: One coat ProMar 200 Zero VOC Latex Primer, 4 mils WFT/1.1 mils DFT.
- b. Topcoats: Two coats ProMar 200 Zero VOC Interior Waterbased Acrylic-Latex eggshell. 4 mils WFT/1.8 mils DFT per coat.

END OF SECTION 099123



## SECTION 099300

### STAINING AND TRANSPARENT FINISHING

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. This Section includes surface preparation and the application of wood finishes on the following substrates:
  - 1. Interior Substrates:
    - a. Exposed wood board products.
- B. Related Sections include the following:
  - 1. Division 09 Section "Exterior Painting" for surface preparation and application of standard paint systems on exterior substrates and on interior fiber cement products.
  - 2. Division 09 Section "Interior Painting" for surface preparation and application of standard paint systems on interior substrates.

##### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each type of finish system and in each color and gloss of finish indicated.
  - 1. Submit Samples on representative samples of actual wood substrates, 8 inches square.
  - 2. Label each Sample for location and application area.

##### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

##### 1.5 PROJECT CONDITIONS



- A. Apply finishes only when temperature of surfaces to be finished and ambient air temperatures are between 50 and 95 deg F.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide named products by The Sherwin-Williams Company or comparable products by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. Pratt & Lambert.
  - 3. PPG Pittsburgh Paints Company

### 2.2 MATERIALS, GENERAL

- A. Material Compatibility:
  - 1. Provide materials for use within each finish system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  - 2. For each coat in a finish system, provide products recommended in writing by manufacturers of topcoat for use in finish system and on substrate indicated.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
  - 1. Maximum Moisture Content of Wood Substrates: 15 percent when measured with an electronic moisture meter.
  - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes.
  - 3. Begin finish application only after unsatisfactory conditions have been corrected and surfaces are dry.
  - 4. Beginning application of finish system constitutes Contractor's acceptance of substrate and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.



- B. Remove plates, machined surfaces, and similar items already in place that are not to be finished. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and finishing.
  - 1. After completing finishing operations, reinstall items that were removed; use workers skilled in the trades involved. Remove surface-applied protection if any.
- C. Clean and prepare surfaces to be finished according to manufacturer's written instructions for each particular substrate condition and as specified.
  - 1. Remove surface dirt, oil, or grease by washing with a detergent solution; rinse thoroughly with clean water and allow to dry. Remove grade stamps and pencil marks by sanding lightly. Remove loose wood fibers by brushing.
  - 2. Remove mildew by scrubbing with a commercial wash formulated for mildew removal and as recommended by stain manufacturer.
  - 3. Countersink steel nails, if used, and fill with putty tinted to final color to eliminate rust leach stains.

### 3.3 APPLICATION

- A. Apply finishes according to manufacturer's written instructions.
  - 1. Use applicators and techniques suited for finish and substrate indicated.
  - 2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces.
- B. Apply finishes to produce surface films without cloudiness, holidays, lap marks, brush marks, runs, ropiness, or other surface imperfections.

### 3.4 FIELD QUALITY CONTROL

- A. Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when finishes are being applied:
  - 1. Owner will engage the services of a qualified testing agency to sample finish materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
  - 2. Testing agency will perform tests for compliance with product requirements.
  - 3. Owner may direct Contractor to stop applying finishes if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying materials from Project site, pay for testing, and refinish surfaces finished with rejected materials. Contractor will be required to remove rejected materials from previously finished surfaces if, on refinishing with complying materials, the two finishes are incompatible.

### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.



- B. After completing finish application, clean spattered surfaces. Remove spattered materials by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from finish application. Correct damage by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced finished wood surfaces.

### 3.6 INTERIOR WOOD-FINISH-SYSTEM SCHEDULE

#### A. Wood Board Substrates:

- 1. Woodscapes Exterior Polyurethane Semi-Transparent Wood Stain.
  - a. Apply two coats.
  - b. Color: As indicated on Drawings.

END OF SECTION 099300



SECTION 102113.19

**PLASIC TOILET COMPARTMENTS**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Solid-plastic toilet compartments configured as toilet enclosures and urinal screens.

- B. Related Requirements:

- 1. Section 102800 "Toilet, Bath, and Laundry Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories mounted on toilet compartments.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

- B. Shop Drawings: For toilet compartments.

- 1. Include plans, elevations, sections, details, and attachment details.
  - 2. Show locations of cutouts for compartment-mounted toilet accessories.
  - 3. Show locations of centerlines of toilet fixtures.

- C. Samples for Initial Selection: For each type of toilet compartment material indicated.

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.



## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Flame-Spread Index: 25 200 or less.
  - 2. Smoke-Developed Index: 450 or less.
- B. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.

### 2.2 SOLID-PLASTIC TOILET COMPARTMENTS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Accurate Partitions Corp.; ASI Group.
  - 2. Bradley Corporation.
  - 3. General Partitions Mfg. Corp.
  - 4. Hadrian Manufacturing Inc.
- B. Toilet-Enclosure Style: Overhead braced.
- C. Urinal-Screen Style: Wall hung.
- D. Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch thick, seamless, with eased edges, and with homogenous color and pattern throughout thickness of material.
  - 1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
  - 2. Heat-Sink Strip: Manufacturer's standard continuous, extruded-aluminum or stainless-steel strip fastened to exposed bottom edges of solid-plastic components to hinder malicious combustion.
  - 3. Color and Pattern: One color and pattern in each room as selected by Architect from manufacturer's full range.
- E. Pilaster Shoes: Manufacturer's standard design; stainless steel.
- F. Brackets (Fittings):
  - 1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

### 2.3 HARDWARE AND ACCESSORIES

- A. Hardware and Accessories: Manufacturer's heavy-duty operating hardware and accessories.



1. Hinges: Manufacturer's minimum 0.062-inch- thick stainless-steel paired, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees, allowing emergency access by lifting door.
  2. Latch and Keeper: Manufacturer's heavy-duty surface-mounted cast-stainless-steel latch unit designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
  3. Coat Hook: Manufacturer's heavy-duty combination cast-stainless-steel hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
  4. Door Bumper: Manufacturer's heavy-duty rubber-tipped cast-stainless-steel bumper at out-swinging doors.
  5. Door Pull: Manufacturer's heavy-duty cast-stainless-steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.
- B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.
- C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless-steel, hot-dip galvanized-steel, or other rust-resistant, protective-coated steel compatible with related materials.

## 2.4 FABRICATION

- A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.
- B. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- wide, in-swinging doors for standard toilet compartments and 36-inch- wide, out-swinging doors with a minimum 32-inch-wide, clear opening for compartments designated as accessible.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
1. Confirm location and adequacy of blocking and supports required for installation.



- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
  - 1. Maximum Clearances:
    - a. Pilasters and Panels: 1/2 inch.
    - b. Panels and Walls: 1 inch.
  - 2. Full-Height (Continuous) Brackets: Secure panels to walls and to pilasters with full-height brackets.
    - a. Locate bracket fasteners so holes for wall anchors occur in tile joints.
    - b. Align brackets at pilasters with brackets at walls.
- B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.
- C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

### 3.3 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113.19



## SECTION 102800

### TOILET, BATH, AND LAUNDRY ACCESSORIES

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

##### 1.2 SUMMARY

- A. Section Includes:
  - 1. Public and private-use washroom accessories.
  - 2. Custodial accessories.
- B. Related Sections:
  - 1. Division 10 Section "Toilet Compartments" for toilet compartments requiring cut-outs for toilet accessories.

##### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include the following:
  - 1. Construction details and dimensions.
  - 2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
  - 3. Material and finish descriptions.
  - 4. Features that will be included for Project.
  - 5. Manufacturer's warranty.

##### 1.4 QUALITY ASSURANCE

- A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.

##### 1.5 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.



## 1.6 WARRANTY

- A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

- 1. Warranty Period: 15 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch minimum nominal thickness unless otherwise indicated.
- B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.
- C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch minimum nominal thickness.
- D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating.
- E. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.
- G. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).
- H. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.
- I. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.

### 2.2 PUBLIC AND PRIVATE-USE WASHROOM ACCESSORIES

- A. Basis-of-Design Product: The design for accessories is based on named manufacturer's products. Subject to compliance with requirements, provide the named product or comparable product by one of the following:
  - 1. American Specialties, Inc.
  - 2. Bobrick Washroom Equipment, Inc.
  - 3. Bradley Corporation.
- B. Grab Bar TA-1:
  - 1. Basis-of-Design Product: Bobrick #B-6806.99 x 36.
  - 2. Mounting: Flanges with concealed fasteners.
  - 3. Material: Stainless steel, 0.05 inch thick.
    - a. Finish: Smooth, No. 4, satin finish on ends and slip-resistant texture in grip area.



4. Outside Diameter: 1-1/2 inches.
  5. Configuration and Length: Horizontal, 36-inch long.
- C. Grab Bar TA-2:
1. Basis-of-Design Product: Bobrick #B-6806.99 x 42.
  2. Mounting: Flanges with concealed fasteners.
  3. Material: Stainless steel, 0.05 inch thick.
    - a. Finish: Smooth, No. 4, satin finish on ends and slip-resistant texture in grip area.
  4. Outside Diameter: 1-1/2 inches.
  5. Configuration and Length: Horizontal, 42-inch long.
- D. Grab Bar TA-3:
1. Basis-of-Design Product: Bobrick #B-6806.99 x 18.
  2. Mounting: Flanges with concealed fasteners.
  3. Material: Stainless steel, 0.05 inch thick.
    - a. Finish: Smooth, No. 4, satin finish on ends and slip-resistant texture in grip area.
  4. Outside Diameter: 1-1/2 inches.
  5. Configuration and Length: Vertical, 18-inch long.
- E. Toilet Tissue (Roll) Dispenser TA-4:
1. Basis-of-Design Product: Bobrick #B-6867.
  2. Description: Double-roll dispenser.
  3. Mounting: Surface mounted.
  4. Material and Finish: Stainless steel, No. 4 finish (satin).
- F. Surface-Mounted Sanitary-Napkin Disposal Unit TA-5:
1. Basis-of-Design Product: Bobrick #B-270.
  2. Mounting: Surface mounted.
  3. Material and Finish: Stainless steel, No. 4 finish (satin).
- G. Soap Dispenser TA-6:
1. Basis-of-Design Product: Bobrick #B-2111
  2. Surface-mounted soap dispenser.
- H. Warm-Air Dryer TA-7:
1. Product: Excel Dryer Corporation; Exlerator, XL-W-1.1N.
  2. Mounting: Surface mounted.
  3. Operation: Electronic-sensor activated with timed power cut-off switch.
  4. Cover Material and Finish: White.
  5. Electrical Requirements: 110 V, 60 Hz A, 1400 W.
  6. Options: ADA-Compliant Recess Kit; Part #40502
- I. Diaper-Changing Station TA-8:
1. Basis-of-Design Product: Koala Kare KB200.



2. Description: Horizontal unit that opens by folding down from stored position and with child-protection strap.
  - a. Engineered to support a minimum of 200-lb static load when opened.
3. Mounting: Surface mounted, with unit projecting not more than 4 inches (100 mm) from wall when closed.
4. Operation: By pneumatic shock-absorbing mechanism.
5. Material and Finish: HDPE in manufacturer's standard color.
6. Liner Dispenser: Built in.

J. Mop and Broom Holder TA-9:

1. Basis-of-Design Product: Bobrick #B-223 x 24.
2. Description: Unit with holders.
3. Length: 24 inches.
4. Hooks: Three.
5. Mop/Broom Holders: Three spring-loaded, rubber hat, cam type.
6. Material and Finish: Stainless steel, No. 4 finish (satin).

K. Mirror Unit TA-10:

1. Basis-of-Design Product: Bobrick #B-165.
2. Frame: Stainless-steel channel.
  - a. Corners: Manufacturer's standard.
3. Hangers: Produce rigid, tamper- and theft-resistant installation, as indicated below.
  - a. Manufacturer's standard concealed wall hanger for mirror size indicated.
4. Size: 18-inch by 36-inch.

## 2.3 FABRICATION

- A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.
- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.



### 3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Remove temporary labels and protective coatings.
- C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 102800



**PART III**  
**DRAWINGS**