



# City of Flint

## Department of Purchases & Supplies

---

Sheldon A. Neeley

TO: All Proposers  
FROM: Lauren Rowley, Purchasing Manager  
DATE: **April 13, 2026**  
SUBJECT: **Addendum #01 – P26000532: CONSTRUCTION PROJECTS AT ST. JOHN'S PARK**

***Please see the attached Pre-bid Attendance sign in sheet, additional drawings, and clarifications document provided by Rowe Engineering in regards to this RFP.***

***Thank you,***

All other bidding terms, requirements, and conditions continue as indicated in the remaining original bid documents.

The Purchasing Manager, Lauren Rowley, is an officer for the City of Flint with respect to this RFP.

**In the submission of their proposal, Proposer must acknowledge receipt of this addendum. Proposer shall acknowledge this addendum by signing and returning one copy of this notice with their submission.**

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

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

City / State / Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Print Name: \_\_\_\_\_ Title: \_\_\_\_\_

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

Thank you,

**Lauren Rowley, Purchasing Manager**



# BID OPENING SIGN IN SHEET

CITY OF FLINT DIVISION OF PURCHASES & SUPPLIES

BID/PROPOSAL # 720-582

BID/PROPOSAL TITLE St John Park construction Improvements

PLEASE PRINT CLEARLY\*\*\*

NAME	COMPANY	PHONE #	EMAIL ADDRESS
L. Rowley	COF		
D. Dengler	COF		
Chris Jerlecki	union properties	810-689-8570	chrisjerlecki@unionproperties-mi.com
charlie Yorks	DCC Construction	810-272-0628	charlieY@DccConstruction.com
Roland Abi Younes	Sorenson Gross	470.360.8711	rabiyounes@sgcompany.com
Josh Perrin	Gross Con	989.494.9035	jperrin@grosscon.org
Bill Boss	EASTERN ASPHALT	810-620-6983	BillBoss1968@GMAIL.COM
Aaron Adkins	L.A. Construction	810-659-7565	AAdkins76@gmail.com
Ray Mc Lemore	A-MAC Construction	248 772 8422	RmCLEMORE@A-MAC.COM
Brett Jory	RBF Construction	810-516-4405	Bradley.K.Herd@gmail.com
Brandon Dietrich	Garpel Group	989-797-4749	B.Dietrich@GarpelGroup.com
Alexis Staebel	Garpel Group	989-797-4749	alexis@garpelgroup.com
Donna Allen	DR AC Enterprises Maintenance & Contracting	810 423 8468	DRALLEN@TEACH@Yahoo.com
Dakota Carie	Brenca Contractors Inc	810-728-2683	dcarie@brenca.net

BID OPENING/DUE DATE: Monday, April 20, 2020 @ 2:00 AM/PM



ADDENDUM #1  
St. John Street Neighborhood Memorial Park/Flint River Trail  
IBT 26000532  
City of Flint, MI  
April 13, 2026

The following clarifications and additions are to be incorporated into the construction plans, bidding and contract documents:

1. Refer to attached specifications and details for the interpretive and memorial signage, or equal, to be provided and installed per 01 25 00 Materials and Equipment, plans and as directed by the engineer.
2. Refer to the attached site plan and details providing updated grading, layout and storm sewer related to the parking lot, sidewalk, pavilion and playground locations. (ROWE sheets 1-4)
3. Replace pavilion detail sheets (1-5) with updated sealed pavilion details (sheet 1-16)
4. Refer to draft soil boring logs, a full report will be provided shortly as a separate addendum.
5. Refer to the additional Section 33 44 00 – Storm Sewers and Section 31 23 02 – Excavating and Backfilling for Utility Construction, attached.
6. Refer to the revised Section 01 71 23.15 Construction Staking
7. Refer to the revised Section 01 41 26 Permit Requirements
8. Refer to the revised Section 01 25 00 Materials and Equipment with a revised count and model for picnic tables
9. References to Meadow and Forest Edge Perennials on landscape plans and sheet L-700 are deleted, areas will be grass.
10. The playground and pavilion pay items should include the delivery and installation only. The equipment has been purchased by the city previously and is located at 2712 N Saginaw Street, Flint, MI 48505. Contractor will need to provide equipment to load and unload items.
11. Provide an Add Alternate 1 lump sum bid item to provide and install (2 each) permanent Park Entry Signs, locations to be field verified (see attached details)
12. Refer to the attached IBT with the updated bid form
13. Refer to separate attendance from the pre-bid meeting.

**Each bidder must acknowledge receipt of this addendum of the Bid.**

\*\*\*END OF ADDENDUM\*\*\*

Prepared by:  
ROWE Professional Services Company  
540 S. Saginaw Street  
Suite 200  
Flint, MI 48502  
(810) 341-7500



Sheldon Neeley  
Mayor

## REQUEST FOR PROPOSALS

PROPOSAL NO. 26000532

Publish Date: 03/19/26

Revised: 04/13/26

The City of Flint, Finance Department of Purchases & Supplies, is soliciting sealed bids for providing:

### ***CONSTRUCTION OF IMPROVEMENTS AT ST JOHNS PARK***

PRINCIPAL ITEMS OF WORK INCLUDE BUT ARE NOT LIMITED TO CONCRETE SIDEWALK, HMA PARKING LOT AND TRAIL RECONSTRUCTION, PAVILION, PLAYGROUND AND SURFACING, FENCING, LANDSCAPING AND SIGNAGE AS INCLUDED IN THE ATTACHED CONSTRUCTION PLANS AND SPECIFICATIONS.

Per the attached additional requirements.

If your firm is interested in providing the services requested, please submit:

Submit to City:

- 1 original, printed, signed, original proposals and signed addenda
- 2 additional copies unbound
- 1 electronic copy

Please follow the following bid timeline.

### **Pre-Bid Conference**

The City of Flint will host a mandatory pre-bid conference on **April 7, 2026, 2:00pm at Flint City Offices, McKenzie Room, 2<sup>nd</sup> floor, 1101 S. Saginaw St., Flint, MI 48502**. Failure to attend this pre-conference may result in disqualification of your bid.

### **Questions**

All written questions shall be directed Lauren Rowley, Purchasing Manager by **April 10, 2026, by 10am EST** to [lrowley@cityofflint.com](mailto:lrowley@cityofflint.com).

### **Bid Submission Requirements**

1. The mail in **HARD COPY** with the original signature (signed documents) must be received by **April 20<sup>th</sup>, 2026, 2:00pm City of Flint, Finance Department - Division of Purchases and Supplies, 1101 S. Saginaw St., Room 203, Flint, MI, 48502**. Bids must be in a sealed envelope clearly identifying the proposal name and proposal number.
2. **Electronic Copies** are being accepted on the BidNet Direct platform. Please submit them by **April 20<sup>th</sup>, 2026, 2:00pm**,
  - An electronic bid submission user guide can be found here: <https://faq.bidnetdirect.com/electronic-bid-submission>.
  - Bidnet Direct's Vendor Support team is available M-F from 8 a.m. – 8 p.m. ET. You can contact them at (800) 835-4603 or [support@bidnet.com](mailto:support@bidnet.com).
  - Emailed copies may be submitted to [PurchasingBids@cityofflint.com](mailto:PurchasingBids@cityofflint.com) in the event of technical error.

Please note that in the subject line of the email, type in the proposal name and number. This must be submitted by the due date and time.

3. Faxed bids are not accepted.
4. Both mail in proposal and electronic submittal must be received by the due date and time.

### **Bid Opening**

#### **Bid Opening**

#### **INSERT GOOGLE MEET INFORMATION HERE**

Any additional proposal documents, requirements, addendums, specifications, and plans/drawings (if utilized) are available on the Purchasing page of the City of Flint's web site at <https://www.cityofflint.com/purchasing/>.

Effective immediately upon release of these Bidding Documents, and until notice of contract award, all official communications from proposers regarding the requirements of this Bid shall be directed to:

Lauren Rowley  
810-766-7266 ext. 2904  
[lrowley@cityofflint.com](mailto:lrowley@cityofflint.com)

The City, or designee, shall distribute all official changes, modifications, responses to questions or notices relating to the requirements of this Bid. Addendum to this Bid may be developed and shared with all Vendors. Any other information of any kind from any other source shall not be considered official, and proposers relying on other information do so at their own risk.

**NOTICE TO VENDOR** Offers, subject to the conditions made a part hereof, will be received at this office, **1101 S. Saginaw St., Flint, MI 48502 for the following:**

---

City of Flint has partnered with BidNet as part of the [MITN Purchasing Group](#) (branded page link) to post bid opportunities to this site. As a vendor, you can register with the [MITN Purchasing Group](#) and be sure that you see all available bids and opportunities. By selecting automatic bid notification, your company will receive emails once the City of Flint has a bid opportunity that matches your company's business. In addition, the site handles bid opportunities, RFPs, and RFQs for other member governmental agencies throughout Michigan. The City of Flint looks forward to providing you with more bid information and simplifying the entire bid, proposal, and quote processes for everyone involved. We appreciate your cooperation and welcome your participation. If you need help registering, please call the MITN Purchasing Group support department toll free 1-800-835-4603 option #2.

Link to City of Flint open solicitations:  
[MITN Purchasing Group](#) (branded page link)

---

### **INSTRUCTIONS TO VENDORS**

- 1) **PRE-BID INFORMATION AND QUESTIONS:** Each bid that is timely received will be evaluated on its merit and completeness of all requested information. In preparing bids, Bidders are advised to rely only upon the contents of this Request for Proposals (RFP) and accompanying documents and any written clarifications or addenda issued by the City of Flint. If a Bidder finds a discrepancy, error or omission in the RFP package, or requires any written addendum thereto, the Bidder is requested to notify the Purchasing contact noted on the cover of this RFP, so that written clarification may be sent to all prospective Bidders. **THE CITY OF FLINT IS NOT RESPONSIBLE FOR ANY ORAL INSTRUCTIONS.** All questions must be submitted in writing to the

Finance Department of Purchases and Supplies before any pre-bid deadline (if specified) or at least one (1) week prior to the proposal opening date indicated on the front of this document.

- 2) **RFP MODIFICATIONS:** The City of Flint has the right to correct, modify or cancel the RFP, in whole or in part, or to reject any Bid, in whole or in part, within the discretion of the City of Flint, or their designee. If any such changes are made, all known recipients of the RFP will be sent a copy of such changes. If any changes are made to this RFP document by any party other than the City of Flint, the original document in the City of Flint's files takes precedence.
- 3) **PROPOSAL SUBMISSION:**
  - a) The Bidder must include the following items, or the proposal may be deemed non-responsive:
    - i) All forms contained in this RFP, fully completed.
  - b) Bids must be submitted to the Finance Department of Purchases and Supplies, City of Flint, 1101 S. Saginaw Street, Room 203, Flint, Michigan 48502 by the date and time indicated as the deadline. The Purchasing Department time stamp will determine the official receipt time. It is each Bidder's responsibility to insure that their proposal is time stamped by the Purchasing Department by the deadline. This responsibility rests entirely with the Bidder, regardless of delays resulting from postal handling or for any other reasons. Proposals will be accepted at any time during the normal course of business only, said hours being 8:00 a.m. to 5:00 p.m. local time, Monday through Friday, legal holidays as exception.
  - c) Bids must be enclosed in a sealed, non-transparent envelope, box or package, and clearly marked on the outside with the following: RFP Title, RFP Number, Deadline and Bidder's name.
  - d) Submission of a bid establishes a conclusive presumption that the Bidder is thoroughly familiar with the Request for Proposals (RFP), and that the Contractor understands and agrees to abide by each and all of the stipulations and requirements contained therein.
  - e) All prices and notations must be typed or printed in ink. No erasures are permitted. Mistakes may be crossed out and corrections must be initialed in ink by the person(s) signing the bid.
  - f) Proposals sent by email, facsimile, or other electronic means will not be considered unless specifically authorized in this RFP.
  - g) All costs incurred in the preparation and presentation of the bid are the Bidder's sole responsibility; no pre-bid costs will be reimbursed to any Bidder. All documentation submitted with the proposal will become the property of the City of Flint.
  - h) Proposals must be held firm for a minimum of 120 days.
- 4) **EXCEPTIONS:** Bidder shall clearly identify any proposed deviations from the Terms or Scope in the Request for Proposals. Each exception must be clearly defined and referenced to the proper paragraph in this RFP. The exception shall include, at a minimum, the proposed substitute language and opinion as to why the suggested substitution will provide equivalent or better service and performance. If no exceptions are noted in the bid, the City of Flint will assume complete conformance with this specification and the successful Bidder will be required to perform accordingly. Bids not meeting all requirements may be rejected.
- 5) **DUPLICATE BIDS:** No more than one (1) bid from any Bidder including its subsidiaries, affiliated companies and franchises will be considered by the City of Flint. In the event multiple proposals are submitted in violation of this provision, the City will have the right to determine which bid will be considered or, at its sole option, reject all such multiple proposals.

- 6) **WITHDRAWAL:** Bids may only be withdrawn by written notice prior to the date and time set for the opening of bids. No bid may be withdrawn after the deadline for submission.
- 7) **REJECTION/GOOD STANDING:** The City of Flint reserves the right to reject any or all bids, or to accept or reject any bid in part, and to waive any minor informality or irregularity in bids received if it is determined by the City of Flint, or their designee, that the best interest of the City will be served by doing so. No bid will be considered from any person, firm or corporation in arrears or in default to the City on any contract, debt, taxes or other obligation, or if the Bidder is debarred by the City of Flint from consideration for a contract award pursuant to Section 18-21.5 (d) of Article IV of the "Purchasing Ordinance of the City of Flint".
- 8) **PROCUREMENT POLICY:** Procurement for the City of Flint will be handled in a manner providing fair opportunity to all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City. The City of Flint and their officials have the vested authority to execute a contract, subject to City Council and Mayoral approval where required.
- 9) **BID SIGNATURES:** Bids must be signed by an authorized official of the Bidder. Each signature represents binding commitment upon the Bidder to provide the goods and/or services offered to the City of Flint if the Bidder is determined to be the lowest Responsive and Responsible Bidder.
- 10) **CONTRACT AWARD/SPLIT AWARDS:** The City of Flint reserves the right to award by item and/or group of items. The Bidder to whom the award is made will be notified at the earliest possible date. Tentative acceptance of the bid, intent to recommend award of a contract and actual award of the contract will be provided by written notice sent to the Bidder at the address designated in the bid if a separate Agreement is required to be executed. After a final award of the Agreement by the City of Flint, the Contractor/Vendor must execute and perform said Agreement. All proposals must be firm for at least 120 days from the due date of the proposal. If, for any reason, a contract is not executed with the selected Bidder within 14 days after notice of recommendation for award, then the City may recommend the next lowest responsive and responsible Bidder.
- 11) **NO RFP RESPONSE:** Bidders who receive this RFP but who do not submit a bid should return this RFP package stating "No Bid" and are encouraged to list the reason(s) for not responding. Failure to return this form may result in removal of the Bidder's name from all future lists.
- 12) **FREEDOM OF INFORMATION ACT (FOIA) REQUIREMENTS:** Bids are subject to public disclosure after the deadline for submission in accordance with state law.
- 13) **ARBITRATION:** Contractor/Vendor agrees to submit to arbitration all claims, counterclaims, disputes and other matters in question arising out of or relating to this agreement or the breach thereof. The Contractor's/Vendor's agreement to arbitrate shall be specifically enforceable under the prevailing law of any court having jurisdiction to hear such matters. Contractor's/Vendor's obligation to submit to arbitration shall be subject to the following provisions:
  - a) Notice of demand for arbitration must be submitted to the City in writing within a reasonable time after the claim, dispute or other matter in question has arisen. A reasonable time is hereby determined to be fourteen (14) days from the date the party demanding the arbitration knows or should have known the facts giving rise to their claim, dispute or question. In no event may the demand for arbitration be made after the time when institution of legal or equitable proceedings based on such claim dispute or other matters in question would be barred by the applicable statute of limitation.

- b) Within fourteen (14) days from the date that demand for arbitration is received by the City, each party shall submit to the other the name of one person to serve as an arbitrator. The two arbitrators together shall then select a third person, the three together shall then serve as a panel in all proceedings. Any decision concurred in by a majority of the three shall be a final binding decision.
  - c) The final decision rendered by said arbitrators shall be binding and conclusive and shall be subject to specific enforcement by a court of competent jurisdiction.
  - d) The costs of the arbitration shall be split and borne equally between the parties and such costs are not subject to shifting by the arbitrator.
  - e) This provision shall survive the expiration or termination of this Agreement in perpetuity.
- 14) **BID HOLD:** The City of Flint may hold bids for a period of one hundred twenty (120) days from opening, for the purpose of reviewing the results and investigating the qualifications of bidders prior to making an award.
- 15) **NONCOMPLIANCE:** Failure to deliver in accordance with specifications will be cause for the City of Flint and they may cancel the contract or any part thereof and purchase on the open market, charging any additional cost to the Contractor/Vendor.
- 16) **DISCLAIMER OF CONTRACTUAL RELATIONSHIP:** Nothing contained in these documents shall create any contractual relationship between the City and any Subcontractor or Sub-subcontractor.
- 17) **ERRORS AND OMISSIONS:** Bidder is not permitted to take advantage of any obvious errors or omissions in specifications.
- 18) **INTERPRETATION:** In the event that any provision contained herein shall be determined by a court of competent jurisdiction or an appropriate administrative tribunal to be contrary to the provision of law or to be unenforceable for any reason, then, to the extent necessary and possible to render the remainder of this Agreement enforceable, such provision may be modified or severed by such court or administrative tribunal having jurisdiction over this Agreement and the interpretation thereof, or the parties hereto, so as to, as nearly as possible, carry out the intention of the parties hereto, considering the purpose of the entire Agreement in relation to such provision.
- 19) **LAWS AND ORDINANCES:** The Bidder shall obey and abide by all of the laws, rules and regulations of the Federal Government, State of Michigan, Genesee County and the City of Flint, applicable to the performance of this Agreement, including, but not limited to, labor laws, and laws regulating or applying to public improvement, local government, and its operational requirements.
- 20) **LOCAL PREFERENCE:** Contractors/bidders located within the corporate city limits of Flint, Michigan may be given a seven percent (7%) competitive price advantage. Additionally, if the lowest responsible bidder is not located within the limits of the City of Flint, but is located within the County of Genesee, and said bidder does not exceed the bid of the lowest non-local bidder by more than three and one-half percent (3-1/2%), then said lowest Genesee County bidder may be determined to be the lowest responsible bidder, and make the award to such Genesee County bidder accordingly, subject to the approval of the City Council. If the lowest non-local bidder does not exceed that of any Proposers/bidders by (7%) inside the City of Flint or (3-1/2%) inside the County of Genesee, then the Purchasing Director shall be allowed to request that the lowest local vendor match the price offered by the lowest non-local vendor.

- 21) **MATERIAL WORKMANSHIP AND STANDARDS OF PERFORMANCE:** The Bidder agrees to exercise independent judgment and to complete performance under this Agreement in accordance with sound professional practices. In entering into this Agreement, the City is relying upon the professional reputation, experience, certification and ability of the Bidder by her/him/themselves or by others employed by her/him/them and working under their direction and control. The continued effectiveness of this Agreement during its term or any renewal term shall be contingent, in part, upon the Bidder maintaining her/his/their operating qualifications in accordance with the requirements of federal, state and local laws. All materials furnished must be new, of latest model and standard first grade quality, or best workmanship and design, unless otherwise expressly specified. Bidder, if required, must furnish satisfactory evidence of quality materials; offers of experimental or unproven equipment may be disregarded.
- 22) **MODIFICATIONS/CHANGES:** Any modification to this agreement must be in writing and signed by the authorized employee, officer, board or council representative authorized to make such modifications pursuant to the State law and local ordinances.
- 23) **NON-COLLUSION:** The Bidder acknowledges that by signing this document that she/he/they is/are duly authorized to make said offer on behalf of the company she/he/they represent(s) and that said bid is genuine and not sham or collusive and not made in the interests or on behalf of any person not therein named, and that she/he/they and said bidder have not directly induced or solicited any other person(s) or corporation to refrain from responding to this solicitation and that she/he/they and said bidder have not in any manner sought by collusion to secure to themselves and said bidder any advantage over any other bidder.
- 24) **NON-DISCRIMINATION:** Pursuant to the requirements of 1976 P.A. 453 (Michigan Civil Rights Act) and 1976 P.A. 220 (Michigan Handicapped Rights Act), the local unit and its agent agree not to discriminate against any 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 or because of a handicap that is unrelated to the person's ability to perform the duties of nondiscrimination provision identical to this provision and binding upon any and all contractors and subcontractors. A breach of this covenant shall be regarded as a material breach of this contract.
- 25) **SUBCONTRACTING:** No subcontract work shall be started prior to the written approval of the subcontractor by the City. The City reserves the right to accept or reject any subcontractor.
- 26) **UNION COMPLIANCE:** Bidder agrees to comply with all regulations and requirements of any national or local union(s) that may have jurisdiction over any of the materials, facilities, services or personnel to be furnished by the City.
- 27) **WAIVER:** Failure of the City to insist upon strict compliance with any of the terms, covenants or conditions of this Agreement shall not be deemed a waiver of that term, covenant or condition or of any other term, covenant or condition. Any waiver or relinquishment of any right or power hereunder at any one or more times shall not be deemed a waiver or relinquishment of that right or power at any other time.
- 28) **CITY INCOME TAX WITHHOLDING:** Contractor and any subcontractor engaged in this contract shall withhold from each payment to his employees the City income tax on all of their compensation subject to tax, after giving effect to exemptions, as follows:
- a) Residents of the City:  
At a rate equal to 1% of all compensation paid to the employee who is a resident of the City of Flint.
  - b) Non-residents:

At a rate equal to 1/2% of the compensation paid to the employee for work done or services performed in the City of Flint.

These taxes shall be held in trust and paid over to the City of Flint in accordance with City ordinances and State law. Any failure to do so shall constitute a substantial and material breach of this contract.

- 29) **CONTRACT DOCUMENTS:** The invitation for proposal, instructions to proposal, proposal, affidavit, addenda (if any), statement of Bidder's qualifications (when required), general conditions, special conditions, performance bond, labor and material payment bond, insurance certificates, technical specifications, and drawings, together with this agreement, form the contract, and they are as fully a part of the contract as if attached hereto or repeated herein.
- 30) **DISCLAIMER OF CONTRACTUAL RELATIONSHIP WITH SUBCONTRACTORS:** Nothing contained in the Contract Documents shall create any contractual relationship between the City and any Subcontractor or Sub-subcontractor.
- 31) **EFFECTIVE DATE:** Any agreement between the City and the Bidder shall be effective upon the date that it is executed by all parties hereto.
- 32) **FORCE MAJEURE:** Neither party shall be responsible for damages or delays caused by Force Majeure nor other events beyond the control of the other party and which could not reasonably have anticipated the control of the other party and which could not reasonably have been anticipated or prevented. For purposes of this Agreement, Force Majeure includes, but is not limited to, adverse weather conditions, floods, epidemics, war, riot, strikes, lockouts, and other industrial disturbances; unknown site conditions, accidents, sabotage, fire, and acts of God. Should Force Majeure occur, the parties shall mutually agree on the terms and conditions upon which the services may continue.
- 33) **INDEMNIFICATION:** To the fullest extent permitted by law, Bidder agrees to defend, pay on behalf of, indemnify, and hold harmless the City of Flint, its elected and appointed officials, employees and volunteers and others working on behalf of the City of Flint against any and all claims, demands, suits, or losses, including all costs connected therewith, and for any damages which may be asserted, claimed, or recovered against or from the City of Flint, its elected and appointed officials, employees, volunteers or others working on behalf of the City of Flint, by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof, which may arise as a result of Bidder's acts, omissions, faults, and negligence or that of any of his employees, agents, and representatives in connection with the performance of this contract. Should the Bidder fail to indemnify the City in the above-mentioned circumstances, the City may exercise its option to deduct the cost that it incurs from the contract price forthwith. These provisions shall survive the termination or expiration of any agreement entered into as a result of this request.
- 34) **INDEPENDENT CONTRACTOR:** No provision of this contract shall be construed as creating an employer-employee relationship. It is hereby expressly understood and agreed that Bidder is an "independent contractor" as that phrase has been defined and interpreted by the courts of the State of Michigan and, as such, Bidder is not entitled to any benefits not otherwise specified herein.
- 35) **NO THIRD-PARTY BENEFICIARY:** No contractor, subcontractor, mechanic, material man, laborer, vendor, or other person dealing with the principal Contractor shall be, nor shall any of them be deemed to be, third-party beneficiaries of this contract, but each such person shall be deemed to have agreed (a) that they shall look to the principal Contractor as their sole source of recovery if not paid, and (b) except as otherwise agreed to by the principal Contractor and any such person in writing, they may not enter any

claim or bring any such action against the City under any circumstances. Except as provided by law, or as otherwise agreed to in writing between the City and such person, each such person shall be deemed to have waived in writing all rights to seek redress from the City under any circumstances whatsoever.

- 36) **NON-ASSIGNABILITY:** Contractor shall not assign or transfer any interest in this contract without the prior written consent of the City provided, however, that claims for money due or to become due to Contractor from the City under this contract may be assigned to a bank, trust company, or other financial institution without such approval. Notice of any such assignment or transfer shall be furnished promptly to the City.
- 37) **NON-DISCLOSURE/CONFIDENTIALITY:** Contractor agrees that the documents identified herein as the contract documents are confidential information intended for the sole use of the City and that Contractor will not disclose any such information, or in any other way make such documents public, without the express written approval of the City or the order of the court of appropriate jurisdiction or as required by the laws of the State of Michigan.
- 38) **RECORDS PROPERTY OF CITY:** All documents, information, reports and the like prepared or generated by Contractor as a result of this contract shall become the sole property of the City of Flint.
- 39) **SEVERABILITY:** In the event that any provision contained herein shall be determined by a court or administrative tribunal to be contrary to a provision of state or federal law or to be unenforceable for any reason, then, to the extent necessary and possible to render the remainder of this Agreement enforceable, such provision may be modified or severed by such court or administrative tribunal so as to, as nearly as possible, carry out the intention of the parties hereto, considering the purpose of the entire Agreement in relation to such provision. The invalidation of one or more terms of this contract shall not affect the validity of the remaining terms.
- 40) **TERMINATION:** This contract may be terminated by either party hereto by submitting a notice of termination to the other party. Such notice shall be in writing and shall be effective 30 days from the date it is submitted unless otherwise agreed to by the parties hereto. Contractor, upon receiving such notice and prorated payment upon termination of this contract shall give to the City all pertinent records, data, and information created up to the date of termination to which the City, under the terms of this contract, is entitled.
- 41) **TIME PERFORMANCE:** Contractor's services shall commence immediately upon receipt of the notice to proceed and shall be carried out forthwith and without reasonable delay.
- 42) **EVALUATION OF PROPOSAL:** In the City's evaluation of proposals, at minimum: cost, serviceability, financial stability, and all requirements set forth in this document shall be considered as selection and award criteria unless otherwise specified.
- 43) **PREVAILING WAGE:** All work for this project, including that of any subcontractor or sub-subcontractor, must meet Davis-Bacon Act requirements and full prevailing wage. Information on Davis-Bacon reporting and requirements, including payroll reporting, can be found at: <https://www.dol.gov/whd/govcontracts/dbra.htm>. City of Flint may preferentially award construction contracts to successful bidder, to the extent provided by law, that pay their subcontractors and construction mechanics not less than prevailing wage rates and fringe benefits.
- 44) **INSURANCE & BONDS:** The bidder whose proposal is accepted will be required to furnish bonds and evidence of insurance within five days from date of Notice of Award. In case of failure or refusal on the part of the bidder to furnish bonds, if required, within the set period, the amount of deposit may be

forfeited to the city and the contract may be awarded to the next lowest responsible bidder. Upon the notification of award and approval of the bond, the deposit will be returned to the proposer. The deposit of persons other than the one to whom and award is made will be returned to the person or persons making the proposal immediately after the contract and bonds have been executed.

45) **PROPOSAL SUBMISSION:** Proposals and all information requested of the vendor shall be entered in the appropriate spaces. Failure to do so may disqualify the vendor's offer. An authorized officer or employee of the bidder shall submit the proposal.

46) **PRICES:** Prices proposed shall be for new products in current production unless otherwise specified. Where refurbished or discontinued items are offered they must be clearly identified as such. Prices proposed shall be exclusive of any rebates due the City. Any rebates the City may be entitled to should be shown as a separate line item and include expiration date.

Corrections and/or modifications received after the bid closing time specified will not be accepted. Unit prices prevail.

All prices will be bid F.O.B. DESTINATION, INCLUDE ALL DELIVERY AND ANY ADDITIONAL CHARGES, and remain in effect as specified in the quotation.

47) **AWARD:** Unless otherwise stated in the proposal documents, the City cannot guarantee exclusivity of the contract for the proposed products or services.

Award of the proposal shall be based upon a combination of factors, including but not limited to, adherence to proposal requirements, references and any other factors that may be in the City's best interest.

The City reserves the right to reject any and all bids, and to waive any defect or irregularity in bids.

The City reserves the right to accept and separate items in the bid;

and to accept the proposal that in the opinion of the City is to the best advantage and interest of the public we serve. The City also has the right to re-solicit bids if it is deemed to be in the best interest of the City.

The City reserves the right to reject low bids which have major deviations from our specification; to accept a higher quotation which has only minor deviations. By signing the bid, the vendor agrees to accept a split award unless the awarded vendor clearly indicates that it takes exception. The bid will be awarded to that responsible, responsive bidder whose proposal conforms to this solicitation, and will be most advantageous to the City, with regard not only to price, but also to availability of product, location and quality of product considered.

The City reserves the right to award all line items, to make no award or to award on an individual line item basis, whichever is deemed to be in the best interest of the City.

Time of delivery may be a consideration in the award.

48) **ETHICS IN PURCHASING:** Bidders and proposers are required to comply with Flint City Ordinance 3865 in its entirety. It is incumbent upon and the responsibility of the bidder to become familiar with and comply with the Purchasing ordinances as outlined in 3865 covering chapter 18 of the Flint City Ordinances. Bidder/Proposer acknowledges in accordance with Flint City Ordinance Section 18-21.19 Ethics in Purchasing, any and all communication about the bid selection process should be directed to those City employees delegated with the authority with respect to all purchases of goods and services.

Bidder/Proposer acknowledges and agrees that while a procurement is pending, bidders and proposers shall not communicate about the solicitation with any City employee, agent, or elected official, other than the

purchasing director or other City personnel identify in the solicitation. This means that bidder and proposer are prohibited from communicating orally or by written communications, including but not limited to voicemail messages, social media, email, in person, among any other form of communication while the award is pending, to the aforementioned, with the exception to those employees designated by the City. If you are unclear about the process, it is your duty and obligation to contact the designated employee(s) for clarification.

Violations of the ethics provision of the ordinance, without regard to if the violation rises to the level of a criminal violation, may subject the bidder or proposer to debarment.

- 49) **BID PROTESTS:** If Bidder/Proposal believe that they are aggrieved in connection with the solicitation or award of the purchase order or contract, they may protest the action to the City as outlined in Flint City Charter Section 18-21.15.
- 50) **FUNDING:** This project is being funded in part with proceeds from a Michigan Department of Natural Resources SPARK Grant Program and is therefore required to follow all related federal, state, and local orders, policies, executive directives, public acts, and ordinances as deemed necessary. The Contractor must comply with all applicable and related requirements including but not limited to, the 1976 PA 453 (Elliot-Larsen Civil Rights Act); the 1976 PA 220 (persons with Disabilities Civil Rights Act), as amended; and in accordance with: Governor's Executive Directive 2019-09 and the Playground Safety Act, P.A. 16 of 1997 and Davis Bacon Wage Rates.

**THE FOLLOWING PAGES MUST BE COMPLETED AND INCLUDED WITH SUBMITTAL IN THE FOLLOWING ORDER.**

**Purchasing Checklist:**

- Exhibit A – Complete Proposal Submittal with detailed Summary of Pricing
- Exhibit A.1 – Bid Bond
- Exhibit B – Qualifications and Licenses Requirements
- Exhibit C – Disclosure of Supplier Responsibility Statement
- Exhibit D – List of References
- Exhibit E – Non-Bidder’s Response
- Exhibit F – City of Flint Affidavit

❖ **EXHIBIT A – SUBMITTAL WITH DETAILED SUMMARY OF PRICING**

**BID FORM FOR CONSTRUCTION CONTRACT**

St. John’s Park Improvements, City of Flint

26000532

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

**ARTICLE 1—OWNER AND BIDDER**

1.01 This Bid is submitted to:

City of Flint  
1101 S. Saginaw St.,  
Flint, MI, 48502

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2—ATTACHMENTS TO THIS BID**

2.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security; and
- B. Contractor’s license number as evidence of Bidder’s State Contractor’s License or a covenant by Bidder to obtain said license within the time for acceptance of Bids.

**ARTICLE 3—BASIS OF BID**

3.01 Lump Sum Bids

A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s):

- 1. Lump Sum Price (Base Bid and Alternates)

Parking Lot and Storm Sewer	LSUM	\$ _____
Play Equipment Delivery and Installation (including Fencing, Landscape, Safety Surfacing – Engineered Wood Fiber)	LSUM	\$ _____
Picnic Area/Pavilion Footings	LSUM	\$ _____
Picnic Area/Pavilion Delivery and Installation	LSUM	\$ _____
Trail – 8’ Wide (Remove and Replace)	LSUM	\$ _____
Trail – 6’-8’ Wide (Concrete)	LSUM	\$ _____
Park Memorial Signage	LSUM	\$ _____

All associated costs will be included within the pay items listed above.

**BASE BID TOTAL**

**LSUM: \$ \_\_\_\_\_**

**Alternate A**

Remove and replace HMA Trail - \_\_\_\_\_ Wide

**Unit**

100'/Station

**Cost**

\$ \_\_\_\_\_

**Alternate B**

Type IV subgrade undercut, wrapped with non-woven geotextile

**Unit**

CYD

**Cost**

\$ \_\_\_\_\_

**Alternate C**

Park Entry Signage

**Unit**

2 EA

**Cost**

\$ \_\_\_\_\_

Alternates are for the purpose of adding or reducing scope to match the project funding available.

- 1) Failure to use this bid form shall result in bid disqualification.
- 2) Failure to bid on all items shall result in an "incomplete bid" determination.
- 3) List value-added considerations on a separate sheet of paper.
- 4) All bid pricing to include shipping and freight charges.

**ARTICLE 4—TIME of COMPLETION**

- 4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 5—Bidder’s ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA**

5.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

**ARTICLE 6—BIDDER’S Representations AND CERTIFICATIONS**

6.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following :
  - 1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.

2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, if any, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on a) the cost, progress, and performance of the Work; b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

## 6.02 *Bidder's Certifications*

### A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 6.02.A:
  - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process
  - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
  - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
  - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

**THIS PAGE MUST BE COMPLETED AND INCLUDED WITH THE BID**

The undersigned hereby certifies, on behalf of the respondent named in this Certification (the "Respondent"), that the information provided in this offer submitted to the City of Flint, Department of Purchase and Supplies is accurate and complete, and that I am duly authorized to submit same. I hereby certify that the Respondent has reviewed all documents and requirements included in this offer and accept its terms and conditions.

Terms: \_\_\_\_\_

Fed. ID #: \_\_\_\_\_

Company (Respondent): \_\_\_\_\_

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

City, State & Zip Code: \_\_\_\_\_

Phone / Fax Number: \_\_\_\_\_ FAX: \_\_\_\_\_

Email: \_\_\_\_\_

Print Name and Title: \_\_\_\_\_  
(Authorized Representative)

Signed: \_\_\_\_\_  
(Authorized Representative)

## ❖ EXHIBIT A.1 – SUPPLEMENTAL DOCUMENTS

- C-430 Bid Bond
- C-510 Notice of Award
- C-520 Agreement
- C-550 Notice to Proceed
- C-610 Performance Bond
- C-612 Warranty Bond
- C-615 Payment Bond
- C-620 Application for Payment
- C-625 Certificate of Substantial Completion
- C-700 Standard General Conditions
- C-800 Supplementary Conditions
- C-940 Work Change Directive
- C-941 Change Order
- C-942 Field Order

## **EXHIBIT B - QUALIFICATIONS AND LICENSES REQUIREMENTS**

**Please give a synopsis of your qualifications and experience with this service:**

**Please list Licenses:**

**How long have you been in business?**

**Have you done business with the City of Flint?**

**If yes, please state the project name.**

**EXHIBIT C – DISCLOSURE OF SUPPLIER RESPONSIBILITY STATEMENT**

- 1. List any convictions of any person, subsidiary, or affiliate of the company, arising out of obtaining, or attempting to obtain a public or private contract, or subcontract, or in the performance of such contract or subcontract.

---

- 2. List any convictions of any person, subsidiary, or affiliate of this company for offenses such as embezzlement, theft, fraudulent schemes, etc. or any other offense indicating a lack of business integrity or business honesty which affect the responsibility of the contractor.

---

- 3. List any convictions or civil judgments under state or federal antitrust statutes.

---

- 4. List any violations of contract provisions such as knowingly (without good cause) to perform, or unsatisfactory performance, in accordance with the specifications of a contract.

---

- 5. List any prior suspensions or debarments by any government agency.

---

- 6. List any contracts not completed on time.

---

- 7. List any documented violations of federal or state labor laws, regulations or standards, or occupational safety and health rules.

---

---

**❖ EXHIBIT D – LIST OF REFERENCES: (3) SIMILAR SCOPE OF WORK FROM  
THE LAST 5 YEARS**

Providing the following contact information enables the City of Flint to contact those accounts as references.

**Reference #1:**

Company/Municipality: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Type of Project: \_\_\_\_\_

Project Timeline (Dates): \_\_\_\_\_ Budget: \_\_\_\_\_

**Reference #2:**

Company/Municipality: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Type of Project: \_\_\_\_\_

Project Timeline (Dates): \_\_\_\_\_ Budget: \_\_\_\_\_

**❖ EXHIBIT D – LIST OF REFERENCES: (3) SIMILAR SCOPE OF WORK FROM  
THE LAST 5 YEARS (CONTINUES)**

**Reference #3:**

Company/Municipality: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Type of Project: \_\_\_\_\_

\_\_\_\_\_

Project Timeline (Dates): \_\_\_\_\_ Budget: \_\_\_\_\_

❖ **EXHIBIT E – NON-BIDDER’S RESPONSE**

**VENDOR’S NAME:** \_\_\_\_\_

**NON-BIDDER’S RESPONSE**

For the purpose of facilitating your firm’s response to our invitation to bid, the City of Flint is interested in ascertaining reasons for prospective bidder’s failure to respond to “Invitations to Bid”. If your firm is not responding to this bid, please indicate the reason(s) by checking any appropriate item(s) below and return this form to the above address.

We are **not** responding to this “Invitation to Bid” for the following reason(s):

\_\_\_\_\_ Items or materials requested not manufactured by us or not available to our company.

\_\_\_\_\_ Our items and/or materials do not meet specifications.

\_\_\_\_\_ Specifications not clearly understood or applicable (too vague, too rigid, etc.).

\_\_\_\_\_ Quantities too Small.

\_\_\_\_\_ Insufficient time allowed for preparation of bid.

\_\_\_\_\_ Incorrect address used. Our correct mailing address is:

\_\_\_\_\_

\_\_\_\_\_ Our branch / division handles this type of bid. We have forwarded this bid on to them but for the future the correct name and mailing address is: \_\_\_\_\_

\_\_\_\_\_ **OTHER:** \_\_\_\_\_

\_\_\_\_\_

**Thank you for your participation in this bid.**

❖ EXHIBIT F – CITY OF FLINT AFFADAVIT

AFFIDAVIT FOR INDIVIDUAL

STATE OF \_\_\_\_\_

S.S.

COUNTY OF \_\_\_\_\_

\_\_\_\_\_ being duly sworn,  
deposes and says that they are the person making the above bid; and that said bid is genuine and not sham or collusive, and is not made in the interest of or on behalf of any person not therein named, and that they have not directly or indirectly induced or solicited any bidder to put in a sham bid; that they have not directly or indirectly induced or solicited any other person or corporation to refrain from bidding, and that they have not in any manner sought by collusion to secure themselves any advantage over other bidders.

Subscribed and sworn to before me at \_\_\_\_\_, in said County and State,

this \_\_\_\_\_ day of \_\_\_\_\_, A.D. 20\_\_\_\_\_,

\_\_\_\_\_

\*Notary Public, \_\_\_\_\_ County, \_\_\_\_\_

My Commission expires \_\_\_\_\_, 20\_\_\_\_\_

❖ EXHIBIT F – CITY OF FLINT AFFADAVIT

FOR CORPORATION

STATE OF \_\_\_\_\_

S.S.

COUNTY OF \_\_\_\_\_

\_\_\_\_\_ being duly sworn, deposes and says that she/he/they  
is \_\_\_\_\_ of \_\_\_\_\_

(Official Title)

(Name of Corporation)

a corporation duly organized and doing business under the laws of the State of \_\_\_\_\_  
the corporation making the within and foregoing bid; that they executed said bid in behalf of said corporation by  
authority of its Board of Directors; that said bid is genuine and not sham or collusive and is not made in the  
interests of or on behalf of any person not herein named, and that they have not and said bidder has not directly  
or indirectly induced or solicited any other person or corporation to refrain from bidding; that they have not and  
said bidder has not in any manner sought by collusion to secure to themselves or to said corporation an advantage  
over other bidders.

Subscribed and sworn to before me at \_\_\_\_\_, in said County and State,

this \_\_\_\_\_ day of \_\_\_\_\_, A.D. 20\_\_\_\_\_,

\_\_\_\_\_

\*Notary Public, \_\_\_\_\_ County, \_\_\_\_\_

My Commission expires \_\_\_\_\_, 20\_\_\_\_\_

## ❖ EXHIBIT G – TECHNICAL SPECIFICATIONS

01 25 00	Materials and Equipment
01 32 14	Schedule Requirements
01 33 00	Submittal Procedures
01 41 26	Permit Requirements
01 45 16.01	Concrete Testing
01 45 16.02	Density and Aggregate Testing
01 50 00	Construction Facilities and Temporary Controls
01 57 26	Dust Control
01 71 13	Mobilization
01 71 23.15	Construction Staking
01 74 50	Cleanup and Restoration
02 41 13.13	Pavement Removal
03 30 53	Concrete
11 68 13	Playground Equipment
31 23 01	Excavating, Filling, and Grading
31 23 02	Excavating and Backfilling for Utility Construction
31 25 00	Soil Erosion and Sedimentation Control
31 37 00	Riprap
32 11 16	Granular Subbase
32 11 23	Aggregate Base
32 12 16	HMA Paving
32 13 00	Concrete Curb and Gutter, Sidewalk, and Miscellaneous Pavement
32 17 23	Pavement Markings
32 31 13	PVC Coated Chain Link Fences and Gates
32 31 29	Split Rail Fence
32 92 00	Turf Establishment
32 93 00	Landscaping
33 44 00	Storm Sewer
33 46 16	Underdrains

## ❖ EXHIBIT H – CONSTRUCTION PLANS

See attached separate construction plans including:

- St. John Memorial Trail
- Icon Shelter Systems, Inc. Pavilion
- St. John Neighborhood Playground
- ROWE civil site sheets
- Park Entry Signage
- Park Memorial Signage

SECTION 01 25 00  
MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 Work Included

Unless specifically indicated otherwise on the plans or in the contract documents, all materials and equipment shall be new and undamaged.

A. Materials and Equipment

1. Materials and equipment incorporated into the work shall conform to applicable specifications and standards. Materials and equipment shall comply with size, make, type, and quality specified or as specifically approved by the Engineer. Items shall be installed per manufacturer recommendation, details or as directed by the engineer.
2. Manufactured and fabricated products shall be designed, fabricated, and assembled in accordance with the best engineering and shop practices. Like parts of duplicate units are to be manufactured to standard sizes and gauges to be interchangeable. Two or more items of the same kind shall be identical and manufactured by the same manufacturer. Products shall be suitable for the service conditions. Equipment capacities, sizes, and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing. Materials or equipment shall not be used for any purpose other than that for which it is designed or specified.

1.02 Substitutions

- A. Where specific materials and equipment items are identified in the specifications by manufacturer's name or model number, bids shall be based on the products of one of the manufacturers so named or added thereto by addendum during the bidding period.
- B. During the bidding period, all requests for substitutions will be given full consideration by the Engineer; and if approved, an addendum will be issued to incorporate the approved material or equipment into the contract documents.
- C. Requests for substitutions must be received by the Engineer in ample time, not later than ten days before the bid due date, so that any necessary addendum will be received by all prospective bidders before submission of the bids.
- D. After award of the contract, requests for substitutions will be considered only for one of the following reasons:
  1. Increased value to the Owner
  2. Decreased cost to the Owner
  3. Specified items not procurable
- E. Requests for substitutions after award of the contract shall be accompanied by manufacturer's data or other detailed descriptions of the proposed material or equipment.
- F. A request for a substitution constitutes a representation that the Contractor has investigated

and determined the proposed product is equal to or superior in all respects to that specified.

- G. The Contractor shall coordinate the installation of an accepted substitution into the project to provide a complete and operable system. Modifications or re-work of other parts of the project resulting because of substitutes will be at the Contractor’s expense.
- H. The Engineer shall be the judge of the acceptability of the proposed substitutions.

1.03 Manufacturer's Instructions

- A. When contract documents require that installation of work shall comply with the manufacturer's printed instructions, the Contractor shall obtain and distribute copies of such instructions to the parties involved in the installation, including two sets to the Engineer. The instructions shall be provided in advance of installation. The Contractor shall notify the Engineer in the event job conditions or the requirements of the plans or specifications conflict with the manufacturer's instructions.
- B. The Contractor shall handle, install, connect, clean, condition, and adjust products in accordance with such instructions and in conformity with the specified requirements.
- C. The Contractor shall perform work in accordance with manufacturer's instructions. No preparatory step or installation procedures shall be omitted unless specifically modified or exempted by contract documents.

PART 2 - PRODUCTS

Product	Quantity	Unit
<b>Bollard</b> – As manufactured by Victor Stanley (800) 365-2573 <a href="http://www.victorstanley.com">www.victorstanley.com</a> . Model #L-89, Matte Black Metal Finish, 4’ High Bollard, or approved equal.	<b>4</b>	<b>EA</b>
<b>Standard Bench</b> – As manufactured by Victor Stanley (800) 365-2573 <a href="http://www.victorstanley.com">www.victorstanley.com</a> . Model #FB-324, Matte Black Metal Finish; IPE Wood Finish, or approved equal. Epoxy anchor bolt in place	<b>11</b>	<b>EA</b>
<b>Commemorative Bench</b> – As manufactured by Victor Stanley (800) 365-2573 <a href="http://www.victorstanley.com">www.victorstanley.com</a> . Model #FB-324, Matte Black Metal Finish; IPE Wood Finish or approved equal; Accommodate Metal Plaque by Others. Epoxy anchor bolt in place	<b>7</b>	<b>EA</b>
<b>Trash Receptacles</b> – As manufactured by Victor Stanley (800) 365-2573 <a href="http://www.victorstanley.com">www.victorstanley.com</a> . Model #EB-36SD, Matte Black Metal Finish, or approved equal. Epoxy anchor bolt in place.	<b>5</b>	<b>EA</b>
<b>Bike Racks</b> – As manufactured by Victor Stanley (800) 365-2573 <a href="http://www.victorstanley.com">www.victorstanley.com</a> . Model #BRWA-101, Matte Black Metal Finish, or approved equal.	<b>4</b>	<b>EA</b>
<b>Park Memorial Signage</b> – Manufactured by Flutter and WOW Museum Projects (734) 224-3727; Heritage Trail Signage or approved equal.	<b>16</b>	<b>EA</b>
<b>Park Entry Signage</b> – Manufactured Signs by Crannie, <a href="mailto:nick@signsbycrannie.com">nick@signsbycrannie.com</a> ; park entrance signage or approved equal.	<b>2</b>	<b>EA</b>
<b>ADA Signage</b> – MDOT approved signage; install per MDOT guidelines.	<b>5</b>	<b>EA</b>

<b>Product</b>	<b>Quantity</b>	<b>Unit</b>
<b>Pavilion</b> – 50'x70' Pavilion by Icon Shelter Systems Inc. (616) 396-0919 or approved equal; with steel roof panels, structural steel plates, wide flange sections and connection bolts with a 4/12 pitch roof.	<b>1</b>	<b>EA</b>
<b>Stop/Yield Sign</b> – MDOT approved signage; install per MDOT guidelines.	<b>4</b>	<b>EA</b>
<b>Picnic Tables</b> – As manufactured by Victor Stanley (800) 365-2573 <a href="http://www.victorstanley.com">www.victorstanley.com</a> . Model #ST-5, barrier free, Matte Black Metal Finish with Recycled Plastic Heirloom Grain Wood Slats, tubular steel, freestanding and surface mounted, or approved equal. Epoxy anchor bolt in place to concrete slab with Barco SKU:PT-97, 2 each or as approved by engineer.	<b>18</b>	<b>EA</b>

**PART 3 - EXECUTION**

**3.01 Transportation and Handling**

- A. The Contractor shall arrange deliveries of products in accordance with construction schedules and coordinate them to avoid conflict with work and conditions at the site.
  - 1. Products shall be delivered in undamaged condition, in the manufacturer's original containers or packaging with identifying labels intact and legible.
  - 2. Immediately upon delivery, the Contractor shall inspect shipments to assure compliance with requirements of contract documents and approved submittals and that products are properly protected and undamaged.
- B. The Contractor shall provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.

**3.02 Storage and Protection**

- A. Products shall be stored in accordance with the manufacturer's instructions, with seals and labels intact and legible.
  - 1. Products subject to damage by the elements shall be stored in weather tight enclosures.
  - 2. Temperature and humidity shall be maintained within the ranges required by manufacturer's instructions.
- B. The Contractor shall arrange storage in a manner to provide easy access for inspection and make periodic inspections to assure that products are maintained under specified conditions and free from damage or deterioration.
- C. For products specified by naming one or more products or manufacturers and "or equal", the Contractor must submit a request for substitutions for any product or manufacturer not specifically named.

\*\*\*END OF SECTION\*\*\*

SECTION 01 41 26  
PERMIT REQUIREMENTS

**PART 1 - GENERAL**

**1.01 Work Included**

The Contractor shall complete work in accordance with all applicable regulations, laws, and ordinances. Work shall be completed in accordance with permits issued by regulatory agencies.

The Contractor shall obtain permits, including the paying of fees, posting bonds, and providing insurance coverage, to secure permits which have not been obtained by the Owner.

Where permits have been obtained by the Owner, the Contractor shall conduct work and operations consistent with the requirements of the permits.

Where changed conditions or other issues arise such that the conditions of a permit which has been issued cannot be met, the Contractor shall promptly notify the Owner and the permitting agency. The Contractor shall provide such additional information as may be necessary to secure a modification to the original permit to allow the planned work to continue.

**1.02 Permits Obtained by the Owner**

The Owner has obtained the following permits to allow for constructing the proposed project. Copies of these permits are included in the project manual.

<b>Permit Agency</b>	<b>Permit No.</b>	<b>Permitted Activity</b>	<b>Copy of Permit</b>
Michigan Department of Environment, Great Lakes, and Energy (EGLE)	WRP045049v.1	Replacement of an existing path, reconfiguration of the existing parking lot, and installation of new playground equipment.	Yes

**PART 2 - PRODUCTS**

Not Applicable

**PART 3 - EXECUTION**

**3.01 Permits to be Obtained by Contractor**

**A. Permit Applications Completed by the Owner**

The Owner has submitted information and reviewed the proposed work with the following agencies. Final permits have not yet been issued. The Contractor is required to obtain the permits for the proposed project including the paying of fees, posting bonds, and providing insurance coverage to secure permits.

<b>Permit Agency</b>	<b>Permit Type</b>	<b>Requirements</b>
Genesee County Drain Commission	Soil Erosion and Sedimentation Control	ROWE has submitted a preliminary application. The contractor will complete the application, submit, and execute.

**B. Other Permits to be Obtained by the Contractor**

The Contractor is responsible to obtain all permits necessary to complete the proposed work, which have not been obtained by the Owner.

<b>Permit Agency</b>	<b>Permit Type</b>	<b>Requirements</b>
City of Flint	ROW Permit	Complete application, submit to the City of Flint.
City of Flint	Building Permit	Complete application, submit to the City of Flint.

\*\*\*END OF SECTION\*\*\*

SECTION 01 71 23.15  
CONSTRUCTION STAKING

PART 1 - GENERAL

1.01 Work Included

This section describes the responsibilities of the Contractor regarding construction staking and describes what staking, if any, will be provided to the Contractor by the Owner or Engineer.

1.02 Notifications

The Contractor shall notify the Owner or Engineer to arrange for staking and shall provide as much notice as possible. A minimum of three working days' notice shall be provided.

The Contractor shall inform the Owner or Engineer of any preferred offset dimensions for stakes or other desires. In the absence of direction from the Contractor, the Owner or Engineer will locate offset stakes based on their best judgment.

If it appears there is an error or contradiction between plan grades, construction stakes, and/or actual conditions, the Contractor shall notify the Owner or Engineer immediately.

1.03 Construction Staking Provided by the Owner or Engineer

The following construction staking will be provided for the project by the Engineer at no cost to the Contractor.

<b>Proposed Construction</b>	<b>Staking Provided</b>	<b>Frequency</b>
Proposed Buildings or Structures/Playground	1. Edge of playground layout (not individual components). 2. Pavilion footings 3. Rough grading	One time only
Parking Lot w/Curb & Gutter	1. Rough Grading 2. Curb Staking/Drainage	One time only
Sidewalk, Trails, and/or ADA ramps	1. Alignment for 2.5-mile trail (edge of trail) 2. Sidewalk final grades	One time only

PART 2 - PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 Layout by the Contractor

The Contractor is responsible to provide such layout and control work as may be required for

construction of the proposed improvements, in addition to that provided by the Engineer or Owner.

The Contractor shall provide workers competent in the layout and control work necessary. The Contractor shall provide the equipment and materials necessary for establishing the necessary control and layout.

Openings through proposed curb for driveways and sidewalks will not be staked by the Engineer. The Contractor shall locate and establish the grades for the openings.

### 3.02 Plan Grades and Alignments

Final casting elevations for drainage structures and manholes shall be established by the Engineer after grading is completed.

Trail grading will be field verified. Rough grading for playground layout, parking lot, and pavilion footings will be conducted by Engineer.

\*\*\*END OF SECTION\*\*\*

SECTION 31 23 02  
EXCAVATING AND BACKFILLING FOR UTILITY CONSTRUCTION

PART 1 - GENERAL

1.01 Work Included

This work includes preparation, excavating, bedding, and backfilling for the construction of utilities, pipelines, manholes, and other related appurtenances.

1.02 References

Where materials or methods of construction are listed as being in conformance with a standard specification, it shall refer to the latest edition of the standard specification or any interim revision.

- A. ASTM C618 – Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- B. ASTM A139 – Standard Specification for Electric-Fusion (Arc)-Welded Steel Pipe (NPS 4 and Over)
- C. Michigan Department of Transportation 2020 Standard Specifications for Construction

1.03 Related Work

- A. Section 01 41 26 – Permit Requirements
- B. Section 01 45 16.02 – Density and Aggregate Testing
- C. Section 01 57 26 – Dust Control
- D. Section 02 41 13.13 – Pavement Removal
- E. Section 31 25 00 – Soil Erosion and Sedimentation Control
- F. Section 33 44 00 – Storm Sewers

1.04 Submittals

- A. Casing pipe for tunneling operations
- B. Drilling fluid
- C. Flowable fill
- D. Horizontal and vertical record locations of pipeline installed by means of directional drilling
- E. Design calculations for temporary sheeting, shoring, timbering, and bracing for trenches

1.05 Safety

The Contractor is responsible for conducting operations in a safe and orderly manner and in conformance with MIOSHA P.A. 154.

## 1.06 Permit

Unless otherwise provided, the Contractor is responsible to obtain and comply with permits required under Parts 31 and 91 of Michigan PA 451 of 1994 (Natural Resources and Environmental Protection Act) and any local ordinances.

## 1.07 Notifications

The Contractor shall contact MISS DIG (800-482-7171 or 811) for the location of underground utilities at least three working days in advance of beginning any excavation. The Contractor shall contact utility agencies, which are not part of the MISS DIG system, to arrange for the location of their utilities in advance of beginning excavation.

## PART 2 - PRODUCTS

### 2.01 Trench Backfill

Backfill material, unless specified otherwise, shall be soil or soil-rock mixture which is free from organic matter and other deleterious substance. It shall contain no rocks or lumps over 6 inches in greatest dimension, and not more than 15 percent of the rocks or lumps shall be larger than 2<sup>1</sup>/<sub>2</sub> inches in greatest dimension. Backfill placed within 12 inches of the proposed pipeline or structures shall be free of any rocks or lumps.

### 2.02 Sand for Bedding or Backfill

Sand shall meet the requirements of Granular Material Class II, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction.

### 2.03 Aggregate for Pipe Bedding

Aggregate shall meet the requirements of Series 6AA aggregate, as specified in the Michigan Department of Transportation 2020 Standard Specifications for Construction.

### 2.04 Steel Casing (for Tunneling)

Casing pipe shall be steel pipe and meet the requirements of ASTM designation A-139-00 Grade B material. Casing pipe strength shall meet the requirements of the authoritative agency and have a minimum yield strength of 35,000 psi.

Casing shall be round, with the difference between any 2 outside diameters not greater than 1 percent or 1/4-inch, whichever is less. The ends of the pipe shall be square, with beveled ends. The pipe shall be straight, with no deviation greater than 1/8-inch in 10 feet.

Casing pipe shall be free of visible cracks, holes, foreign inclusions, blisters, or other deleterious faults. Casing pipe shall be constructed without longitudinal seams. Casing pipe shall have smooth interior and exterior walls.

## 2.05 Drilling Fluid (for Tunneling)

Drilling fluid shall be composed of bentonite clay, potable water, and appropriate additives. Water shall be from a clean source with a pH of 8.5 to 10 and/or as per the mixing requirements of the manufacturer. Water of a lower pH or with excessive calcium shall be treated with the appropriate amount of sodium carbonate, or equal. The water and additives shall be mixed thoroughly and be absent of any clumps or clods. No hazardous additives may be used. Drilling fluids shall be maintained at a viscosity sufficient to suspend cuttings and maintain the integrity of bore wall.

## 2.06 Flowable Fill

Flowable fill shall be a mixture of Portland cement, fly ash, sand, and water in the following proportions.

<b>Flowable Fill Mixture Ratios</b>		
<b>Material</b>	<b>Type</b>	<b>Quantity</b>
Portland Cement	Type I or IA	50 lb/cyd
Fly Ash	ASTM C618, Class C or F	500 lb/cyd
Sand	MDOT 2NS	2,850 lb/cyd
Water		Approx. 376 lb/cyd (sufficient to produce desired flowability)

Flowable fill shall be produced and delivered at a minimum temperature of 50 degrees Fahrenheit. Mixtures shall be transported to the point of placement in a revolving drum mixer or agitator.

## PART 3 - EXECUTION

### 3.01 Existing Utilities

The location of existing piping and underground utilities, such as gas mains, water mains, electric duct lines, telephone conduits, etc., as shown on the contract drawings, have been determined from the best available information by actual surveys, or furnished and taken from the records of the utility companies and drawings of the existing facilities. However, the Owner does not assume responsibility for the possibility that during construction, utilities other than those shown may be encountered, or that actual location of those shown may be different from the locations designated on the contract drawings.

The location of the proposed pipes and structures shown on the drawings has been selected to limit interference with, or the crossing of, existing utilities. However, where the actual conditions result in interference with the proposed construction, the Owner may make appropriate adjustments to the alignment of the proposed work.

The Contractor shall furnish all labor and tools to either verify and substantiate the record drawing location, or definitely establish the position of the facilities. The actual location of all utilities shall be determined by the Contractor in advance of excavation and pipelaying work to allow sufficient time and space to make adjustments to the alignment of the proposed pipeline or related structures.

### 3.02 Dust Control

Dust caused by the Contractor's operations during performance of the work, or resulting from the condition in which the Contractor leaves the site, shall be controlled by the Contractor. The Contractor shall use all means necessary to control dust on and near the work zone and all off-site borrow areas.

All surfaces shall be thoroughly moistened, as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of other work on the site.

### 3.03 Trench Excavation

The Contractor shall excavate open trenches of sufficient width and depth to provide ample room for the proper construction of the proposed pipeline and its appurtenances as shown on the contract drawings, and for removing any material that the Engineer may deem unsuitable for foundation.

The trench width shall be in accordance with the details provided in the plans. The trench depth shall be undercut below the proposed grade of the pipeline or structure to allow sufficient space for the required bedding.

The excavation of the trench shall not advance ahead of the completed manhole and pipe work.

Trench excavation includes clearing the site of the work, loosening, loading, removing, transporting, and disposing of all materials necessary to be removed for the construction of the proposed work. Excavation shall be completed to the lines, grades, and locations necessary to complete the work shown on the contract drawings. If encountered within the limits of the excavation, the removal of quicksand; hardpan; boulders; clay; rubbish; unforeseen obstacles; abandoned conduits, pipes, tile, and telephone ducts; tree roots and stumps; masonry structures; railroad tracks; pavements; and sidewalks are included in the work of excavation and will not be paid for separately.

The Contractor shall coordinate with the owners or users of any poles, pipes, tracks, or conduits, or other systems that might be affected by the construction of the project, to maintain and protect such facilities during construction. Any costs for protecting, maintaining, or restoring these systems will be the Contractor's responsibility, and not paid for separately.

Excavated material shall not be placed outside the limits of the public right-of-way or the limits of easements for the utility. Excavated material shall not be placed on adjacent lawn areas, unless there is no other suitable place to put it. Excavated material shall be placed on pavements or sidewalks, only if approved by the Owner.

Sidewalks and pavements shall not be blocked or obstructed by excavated material, except on the authorization of the Engineer. Adequate provisions shall be made for the safe temporary passage of pedestrians and vehicles. Adequate bridging and planked crossings shall be provided and maintained across all open trenches for pedestrians and vehicles.

The Contractor shall provide all temporary sheeting, shoring, timbering, and bracing required to maintain the excavation in a condition to furnish safe working conditions and to permit the safe and efficient installation of all items of contract work. Shoring and supports shall be designed by a licensed Engineer. The Contractor shall shore up, or otherwise protect all fences, shrubs, buildings, walls, walks, curbs, or other property adjacent to any excavation which might be disturbed during the progress of the work.

Sheeting and bracing shall be removed as the work progresses, in such a manner as to prevent the caving in of the excavations, or any damage to the project. All voids resulting from the removal of sheeting and bracing shall be carefully filled with fine sand and rammed to eliminate voids and prevent future settlement.

The contract price in this contract shall include the cost of all temporary supports and braces that may be necessary to secure a safe prosecution of the work until the permanent structure is complete.

Whenever the excavation is carried beyond the lines and grades shown on the contract drawings or given by the Owner, the Contractor shall, at their own expense, refill all such excavated space with aggregate material or flowable fill in such a manner as may be directed.

Excavated material shall be deposited so as to interfere as little as possible with the excavation of the whole work. Unsuitable and surplus excavated material, not incorporated in the improvement, shall be disposed of by the Contractor at their own expense, unless otherwise designated.

If private land is used by the Contractor as a spoil site, the Contractor shall obtain written permission from the owner or agent of the land agreeing to its use for this purpose and provide the project Owner with a certified copy of such agreement.

Excavated material that is suitable for backfill and is planned to be used for backfill, shall be neatly piled adjacent to the excavation so as to prevent cave-ins of the excavation and damage to adjacent trees, shrubs, fences, and other property.

The excavated area shall be kept free of water at all times. The Contractor shall furnish and maintain any wells, pumps, or other measures needed to provide a dry, stable trench for pipelaying. Sheeting and shoring shall be provided, if necessary, for the protection of the workers.

Backfilling shall follow immediately behind trench excavation and pipelaying operations. In no case shall more than 100 feet of trench excavation be open at any one time. Any excavation left open and unattended shall be protected with lighted barricades and a "snow fence" constructed around the perimeter of the excavation.

Excavation and trenching shall be in accordance with the details in the construction plans.

In areas where the proposed construction may interfere with existing utilities, additional excavation may be required to determine the exact location of said existing utilities. This work will be included in the other pay items and no additional compensation will be due to the Contractor for this work.

### 3.04 Bedding

Pipe bedding shall be as shown on the drawings.

The pipe bedding shall be shaped to match the bottom  $\frac{1}{4}$  of the pipe's shape. The bedding shall be excavated to accommodate the pipe bells. The completed bedding shall provide uniform support of the entire length of pipe.

### 3.05 Dewatering

The excavation shall be maintained free of water (including groundwater, surface water, storm runoff, or sanitary wastewater) during the performance of the work.

The Contractor shall provide such dewatering as may be necessary to keep the excavation free of water, including ditching, pumping, wells, well pointing, or bailing. All water removed by the Contractor's dewatering operations shall be discharged without damage to adjacent properties.

Necessary precautions shall be taken to protect all construction against flooding.

The Contractor shall supply water to home owners if wells go dry due to construction. Any damage to neighboring wells caused by dewatering efforts shall be repaired by the Contractor at the Contractor's expense.

### 3.06 Structure Excavation

Excavation for manholes or special structures shall be made to the depth and dimensions necessary for the proper installations of all structures shown on the contract drawings. Care shall be taken that the foundation area of the structure is not excavated below grade, except when rock is encountered. Where masonry is built directly against the sides or bottom of the excavations, the final trimming shall be done just before the masonry is placed.

### 3.07 Rock Excavation

Excavation includes the removal of rock.

### 3.08 Foundations, Strengthening

Whenever the ground is sufficiently firm and unyielding, the masonry shall be laid directly on the sand or crushed aggregate bedding of the excavation and pipes or conduits shall be laid as specified.

When so designated on the contract drawings, or directed by the Engineer, excavated areas shall be strengthened for foundation purposes by furnishing and placing crushed rock or gravel refill, flowable fill, concrete cradle or encasement, timber cradles, timber piling, or a combination of these materials.

After the excavation is opened and to grade, it will be examined by the Engineer who will determine whether or not it is a satisfactory foundation for masonry or pipes, or if it is necessary

to stabilize the base. Where directed by the Engineer, a soil load test shall be made to determine the safe bearing capacity of the ground.

### 3.09 Tunneling

Tunneling includes either 1) boring and jacking, or 2) directional boring.

Where shown on the plans or otherwise directed, pipelines shall be installed by tunneling. Where a particular method of tunneling is shown on the drawings or indicated on the proposal, the installation shall be completed using the method specified. Where the installation of pipelines by a tunneling method is not specifically required, the Contractor may use tunneling as an alternative to open cut excavation, when approved by the Engineer. Where installation is by tunneling, but tunneling was not specifically required on the plans, the price paid for the installation will not exceed the price which would have been due if the pipe had been installed using open cut methods.

#### A. Horizontal Boring and Jacking

The methods and materials used for utility installation by horizontal boring and jacking shall meet the requirements of the agency having jurisdiction of the road(s) or railroad(s) being crossed.

The casing pipe shall be of a diameter large enough to provide at least 3 inches of clearance between the outside of the proposed carrier pipe (including joints) and the inside of the casing pipe. Casing pipe shall have a wall thickness not less than indicated in the following table.

<b>Required Casing Thickness</b>	
<b>Nominal Casing Pipe Size (inches)</b>	<b>Minimum Casing Wall Thickness (inches)</b>
4 to 24	0.375
30	0.406
36	0.469
42 to 60	0.500

Unless otherwise directed, the casing pipe shall be installed to provide at least 6 feet of cover between the pavement surface and the top of the casing pipe. At least 3 feet of cover shall be provided under the bottom of ditches, streams, and drains.

Access pits for boring shall be sheeted and braced, as necessary, to protect the structure of the road or railroad being crossed. Excavations shall be protected with snow fencing and barricades to maintain the safety of pedestrians and vehicles. The access pits shall be of sufficient size to allow space for working. Access pits shall be constructed in accordance with safety regulations.

The bottom of the access pit used for pushing the casing shall be cut to the required grade, at a slope suitable for establishing the desired grade and alignment of the casing pipe. If necessary, the bottom of the pit shall be strengthened to provide the support necessary to maintain the casing and excavation at the desired grade and alignment.

Groundwater shall be maintained to a level at least 2 feet below the bottom of the casing pipe at all times. The Contractor shall take such measures, as necessary, to control groundwater to the required level before beginning excavation.

The auger used for excavation shall not precede the leading edge of the casing pipe.

In the event that movement of the ground surface above the casing installation is detected, either heaving upward or settling downward, all excavation and pushing of the casing shall stop. The Contractor shall inform the Engineer and the permitting agency of the movement, and make such adjustments as directed.

In the event the casing cannot be pushed further because of soil conditions or obstructions, any deviations in the work methods proposed by the Contractor shall be subject to the approval of the Engineer and permitting agency.

In the event the installation of the casing cannot be installed, the section of casing which was completed shall be abandoned, as directed by the Engineer and the permitting agency.

## B. Horizontal Directional Drilling

### 1. Equipment

Directional drilling equipment shall include a directional drilling rig of sufficient capacity to perform the bore and pullback of the pipe, a drilling fluid mixing and delivery system of sufficient capacity to successfully complete the crossing, a guidance system to accurately guide boring operations, and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials, and spare parts on hand to maintain the system in good working order.

The directional drilling machine shall consist of a hydraulically powered system to rotate, push, and pull hollow drill pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing, and rotating pressure required to complete the crossing. The hydraulic power system shall be self-contained, with sufficient pressure and volume to power drilling operations. The hydraulic system shall be free of leaks. The rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations.

The drill head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and drilling fluid jets.

Mud motors, if required, shall be of adequate power to turn the required drilling tools.

Drill pipe shall be constructed of high quality seamless tubing with threaded box and pins. Tool joints shall be hardened.

### 2. Guidance System

The guidance system shall be of a proven type and shall be set up and operated by

personnel trained and experienced with the system. The operator shall be aware of any local magnetic anomalies and make appropriate adjustments in the operation of the guidance system, if magnetic.

### 3. Drilling Fluid

A self-contained, closed, drilling fluid mixing system shall be of sufficient size to mix and deliver drilling fluid composed of bentonite clay, potable water, and appropriate additives. The mixing system shall be able to molecularly shear individual bentonite particles from the dry powder to avoid clumping and ensure thorough mixing. The drilling fluid reservoir tank shall be sized for adequate storage of the mud. The mixing system shall continually agitate the drilling fluid during drilling operations.

Drilling fluid shall be composed of clean water and an appropriate additive. Water shall be from a clean source with a pH of 8.5 to 10 and/or as per the mixing requirements of the manufacturer. Water of a lower pH or with excessive calcium shall be treated with the appropriate amount of sodium carbonate, or equal. The water and additives shall be mixed thoroughly and be absent of any clumps or clods. No hazardous additives may be used. Drilling fluids shall be maintained at a viscosity sufficient to suspend cuttings and maintain the integrity of bore wall.

The mud pumping system shall have a minimum capacity to supply mud, in accordance with the drilling equipment pull-back rating, at a constant required pressure. The delivery system shall have filters in-line to prevent solids from being pumped into the drill pipe. Connections between the pump and drill pipe shall be substantially leak free. Used drilling fluid and drilling fluid spilled during drilling operations shall be contained and properly disposed of. A berm shall be maintained around drill rigs, the drilling fluid mixing system, and entry and exit pits to prevent spills into the adjacent environment. Pumps and/or vacuum trucks shall be available to convey excess drilling fluid from containment areas to suitable storage areas.

Pipe rollers shall be provided in sufficient quantity and size to fully support the weight of the pipe during pull-back.

### 4. Operations

The Engineer shall be notified two working days before beginning work. The directional bore shall not begin until the Engineer is present at the job site and has observed the setup and precautions provided by the Contractor.

The Contractor's personnel shall be fully trained in their respective duties relative to directional boring and safety.

Prior to any alterations to the work site, the Contractor shall photograph or videotape the work area, including the planned entrance and exit points. One copy shall be provided to the Engineer.

The area from which the directional boring is to be executed shall be graded or filled to provide a firm, level-working area. No alterations, other than necessary for the drilling

operations, shall be made to the area. Alterations and work activities shall be confined to the designated work areas.

The entire drill path shall be accurately surveyed with stakes placed in the approximate entrance and exit locations. If the Contractor is using a magnetic guidance system, the drill path shall be surveyed to determine if there are local magnetic variations or anomalies.

A pilot hole shall be drilled in the bore path, with no deviations greater than 5 percent of depth over a length of 100 feet. In the event that the pilot deviates from the proposed bore path by more than 5 percent of depth over a length of 100 feet, the Contractor shall notify the Engineer; the Engineer may require that the Contractor pull-back and re-drill.

In the event of a drilling fluid fracture, inadvertent returns, or returns loss occurs during pilot hole drilling operations, the Contractor shall cease drilling, wait at least 30 minutes, inject a quantity of drilling fluid with a viscosity of at least 120 seconds as measured by a Marsh funnel and then wait another 30 minutes. If mud fracture or returns loss continues, the Contractor shall cease operations and notify the Engineer. The Contractor shall be responsible for drilling fluid cleanup and surface damage repairs as a result of drilling fluid fracture, inadvertent returns, or returns loss occurs during pilot hole drilling operations.

Upon successful completion of a pilot hole, the Contractor shall ream the bore hole to a minimum of 25 percent greater than the outside diameter of the pipe, using suitable tools. The Contractor shall not ream the hole in excess of the amount for which the equipment is designed at a single time. Separate reaming operations shall be performed, as necessary, to achieve the desired opening diameter.

After successfully reaming the bore hole to the required diameter, the Contractor shall pull the pipe through the bore hole. The leading edge of the pipe shall be provided with a head to guide the pipe through the bore hole and prevent the entry of drilling fluids and soil from entering the pipe. The head shall be provided with a swivel. Once pull-back operations have commenced, they shall proceed without interruption until all pipe is completely pulled into the bore hole. The Contractor shall not allow force or pressure in excess of the safe pipe pull pressure to be exerted at any time during the pulling phase.

In the event the pipe becomes stuck, the Contractor shall cease pulling operations to allow any potential hydraulic locking to equalize, and then resume pulling. In the pipe remains stuck, the Contractor shall notify the Engineer.

#### 5. Restoration

Following drilling operations, the Contractor shall remove equipment and materials, and restore the project area to its original condition.

#### 6. Records

The Contractor shall maintain a guidance system log showing the installation depth and alignment of each section of pipe installed by directional boring. A copy of the log(s) shall be provided to the Engineer.

### 3.10 Backfill

Unless otherwise directed, all trenches and excavation shall be backfilled as the pipe is laid. No pipes shall be backfilled until the sewer elevations, gradient, alignment, and the pipe joints have been observed by the Engineer.

The trench shall be backfilled to the proposed final elevations with suitable materials. Unless other compaction methods are demonstrated and approved by the Engineer, backfill shall be placed in 8-inch lifts and compacted to the required density as stated in Section 01 45 16.02 – Density and Aggregate Testing.

In areas which are not to be restored with a pavement or aggregate surface, the backfill shall be graded to a height slightly above the adjacent surface. When final restoration of the area is completed by the Contractor, the backfill surface shall be excavated (or filled if settlement has occurred), trimmed, or graded, as necessary, to provide for the required depth of topsoil and its transition to adjacent, undisturbed areas.

The Contractor shall correct any areas where the trench backfill settles by adding fill, topsoil, and re-seeding.

### 3.11 Miscellaneous Pipe Repair

When an existing sewer pipe, drain pipe, field tile, or other existing pipe is damaged as a result of construction activities and is not designated for removal or abandonment on the plans or by the Engineer, it shall be repaired by the Contractor.

The section of damaged pipe shall be removed to existing joints or to sawed joints where the existing pipe is sound and undamaged. A length of new pipe of the same size as the original pipe shall be furnished and installed to replace the section of pipe removed. The new pipe may be any one of the following materials:

- A. Same material, class or thicknesses, as the original pipe
- B. PVC Schedule 40, for pipes 8 inches or less in diameter
- C. PVC SDR 26, for pipes 8 inches or greater in diameter
- D. Other pipe material approved by the Engineer

Each end of the new section of pipe shall be connected to the remaining sections of existing pipe using a rubber gasketed sleeve, suitable for the pipe materials and sizes being joined, to provide a watertight connection. The repaired section of pipe shall be firmly bedded in sand or aggregate, compacted according to Section 01 45 16.02 – Density and Aggregate Testing.

\*\*\*END OF SECTION\*\*\*

SECTION 33 44 00  
STORM SEWERS

PART 1 - GENERAL

1.01 Work Included

This work includes construction of storm sewers, drainage structures, and appurtenances. Drainage structures include catch basins, inlets, manholes, and manhole tees.

1.02 References

Where materials or methods of construction are listed as being in conformance with a standard specification, it shall refer to the latest edition of the standard specification or any interim revision.

- A. AASHTO M36 – Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains
- B. AASHTO M170 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- C. AASHTO M294 – Standard Specification for Corrugated Polyethylene Pipe, 300-mm to 1,500-mm (12-in. to 60-in.) Diameter
- D. ASTM A48 – Standard Specification for Gray Iron Castings
- E. ASTM C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
- F. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
- G. ASTM C478 – Standard Specifications for Circular Precast Reinforced Concrete Manhole Sections
- H. ASTM D1056 – Standard Specification for Flexible Cellular Materials-Sponge or Expanded Rubber
- I. ASTM D4101 – Standard Specifications for Polypropylene Injection and Extrusion Materials
- J. Michigan Department of Transportation 2020 Standard Specifications for Construction
- K. Michigan Department of Transportation Standard Plans

1.03 Related Work

- A. Section 01 45 16.02 – Density and Aggregate Testing
- B. Section 01 71 23.15 – Construction Staking
- C. Section 01 74 50 – Cleanup and Restoration
- D. Section 02 21 14 – Audio-Video Construction Area Survey

- E. Section 31 23 02 – Excavating and Backfilling for Utility Construction
- F. Section 31 25 00 – Soil Erosion and Sedimentation Control
- G. Section 32 92 00 – Turf Establishment

#### 1.04 Submittals

The Contractor shall submit shop drawings or certificates of compliance to the Owner and Engineer for the following items.

- A. Pipe, fittings, and joint material
- B. Manholes and manhole adjusting rings and castings
- C. Pipe bedding and backfill material

#### 1.05 Quality Assurance and Quality Control

##### A. Grade and Alignment

Grade and alignment shall be maintained using a laser. The Contractor shall verify that the sewer is constructed at the proper alignment by checking grades and offsets at each manhole, at 50 feet upstream from manholes, and at 100-foot intervals. The Contractor shall report as-constructed measurements to the Engineer.

##### B. Acceptance Tests

The completed sewer(s) shall be subjected to the following tests, prior to acceptance by the Owner. Acceptance tests shall be completed by the Contractor, in the presence of the Engineer (or Owner's representative).

##### 1. Physical Inspection

The physical inspection shall be completed in accordance with Section 3.07.A.

## PART 2 - PRODUCTS

### 2.01 Materials

#### A. Pipe

Unless a specific type, class or thickness is called for on the plans or in the proposal, material class shall meet the requirements of Pipe Alternates for Storm Sewer Classes, as described in Section 402 of the Michigan Department of Transportation 2020 Standard Specifications for Construction. Corrugated steel pipe may be used only where shown on the drawings.

##### 1. Reinforced Concrete Pipe

Pipe shall meet ASTM C76. Where no class is shown on the drawings or on the proposal, Class III or better shall be provided.

Joints shall be rubber gaskets in accordance with ASTM C443.

Reinforced concrete pipe to be installed by jacking shall be Class V and shall be provided with full circular reinforcement. Pipe joints shall be butt type.

2. Smooth-Lined Corrugated Plastic Pipe

Where storm sewers from 12-inch to 24-inch diameter are called for on the plans, with at least 3 feet of cover over the pipe, and when a particular kind of sewer pipe is not specified, the Contractor may furnish smooth-lined corrugated plastic pipe (SLCPP).

SLCPP shall be corrugated polyethylene pipe meeting the requirements of AASHTO M294, Type S. Any fittings required shall also meet the requirements of AASHTO M294. Only fittings supplied or recommended by the pipe manufacturer shall be used. When gaskets are used in couplings to provide watertight or silt-tight joints, gaskets shall be a band of expanded rubber meeting the requirements of ASTM D1056 for Type 2 closed cell rubber, or O-rings meeting the requirements of ASTM C443.

3. PVC Pipe

All PVC pipe shall be ASTM D3034 gasketed sewer pipe with a SDR of 26 or lower. PVC pipe conforming to ASTM D1785 Schedule 40 and ASTM D2665 is acceptable for 6-inch service leads.

4. Corrugated Galvanized Steel Pipe

Pipe with circular cross section and reformed pipe with pipe arch shape shall conform to AASHTO M36. The Contractor shall furnish the Owner with two copies of a certification of compliance, with the chemical requirements of the base metal, as specified in AASHTO M36.

Corrugated metal pipe shall be a minimum of 8-gauge or wall thickness of 0.168 inches.

For pipe arch shapes, minimum thickness shall be based on the next larger size if the actual span dimension is not listed.

B. End Sections

End sections shall be flared and beveled to conform with ditch slopes.

Metal end sections shall conform with AASHTO M36, where applicable. The metallic coating on the end sections shall be the same as on the pipe. End sections shall be furnished complete with coupling bands or hardware necessary for connecting them to the end of the pipe culvert.

Concrete end sections shall be constructed of precast concrete and reinforcement conforming to the requirements of AASHTO M170 (ASTM C76) Class III or as shown on the drawings. Connection of end section to concrete pipe shall be made by tongue and groove joints.

C. Drainage Structures

Drainage structures shall be precast concrete units meeting the requirements of ASTM C478 with rubber gaskets conforming to ASTM C443. Drainage structures shall be 4 feet in diameter, unless shown otherwise on the plans or in the proposal. Precast concrete grade rings meeting ASTM C478 shall be used to adjust the top of the structure to the final grade. At least 6 inches, but not more than 18 inches, of vertical adjustment shall be provided with grade rings. Manhole lifting holes shall not be permitted in the manhole sections. Lifting lugs shall be cast into the manhole for lifting.

Manhole steps shall be copolymer polypropylene plastic steps with a steel reinforcement bar, with a minimum diameter of ½-inch, a minimum width of 10 inches center to center of wall anchor, and complete with anti-skid side plates conforming to ASTM D4101. Steps shall be manufactured with the manhole wall and spaced at a maximum of 16 inches on center. Gray iron castings shall be heavy duty classification and shall conform to ASTM A48 Class 35B coated with asphalt coating.

D. Castings

Castings shall meet the requirements of the Michigan Department of Transportation 2020 Standard Specifications for Construction, and the Michigan Department of Transportation Standard Plans.

PART 3 - EXECUTION

3.01 Excavation

Excavation shall be completed in accordance with Section 31 23 02 – Excavating and Backfilling for Utility Construction.

3.02 Pipelaying

Sections of sewer pipe shall be carefully laid in the prepared trench, bell ends upgrade, with the spigot end fully entered in the adjacent bell. Each section shall have firm bearing throughout its length and shall be substantially true to the line and grade required. The use of blocks to bring sections to grade will not be permitted.

Circular concrete pipe with lift holes shall be installed with the lift holes on top of the pipe. Holes shall be plugged with suitable concrete plugs before backfilling.

Existing live sewers that are to remain shall be carefully protected during construction of the new sewers. If they are damaged in any way, they shall be immediately repaired or replaced, as directed by the Engineer.

All junctions with house or building leads shall be made in a manner acceptable to the Engineer.

Flexible watertight joints shall be installed in accordance with the manufacturer's recommendations.

Connections to sewers owned by other agencies shall be done in accordance with their requirements.

Connections to existing sewers having a plug or bulkhead shall be made with a watertight joint. The plug or bulkhead shall be removed without damage to the sewer, and the plug material shall be removed from the sewer and properly disposed of.

If there are no openings in the existing pipe or structures at the point of connection, an opening shall be cut in the pipe or the structure sufficiently large enough to permit 3 inches of mortar to

be packed around the entering pipe and the mortar pointed up smooth and flush with the inner wall. Pipe passing through pipe or structure walls shall be cut at the end to conform with the shape of the inside of the wall and to be flush therewith. On the outside of the pipe or structure, the entering pipe shall be encased with sufficient mortar to provide bearing under the pipe. Any existing pipe broken or cracked while making the connection shall be replaced at the Contractor's expense.

When replacing an existing sewer, connections to the original sewer or drain that are encountered shall be reconnected to the new sewer.

Sewers and drainage structures shall be reasonably free of accumulation of silt debris and other foreign matter at the time of final acceptance.

### 3.03 Backfill

Backfill shall meet the requirements of Section 31 23 02 – Excavating and Backfilling for Utility Construction.

### 3.04 Additional Requirements of Construction for SLCPP Sewers

SLCPP shall be installed in accordance with Section 3.01. and the additional requirements provided here.

Joints in SLCPP shall be wrapped with a 2-foot wide strip of non-woven geotextile filter fabric with a 1-foot lap at the fabric joint.

The installed pipe shall not be deformed such that any diameter is reduced by 5 percent or more. Deformed pipe shall be removed and replaced at the Contractor's expense. The completed pipeline shall be tested for deformation by the Contractor under the Engineer's supervision. The Contractor shall furnish a 9-point mandrel having a diameter equal to at least 95 percent of the original uninstalled inside diameter of the pipe. The mandrel shall meet the Engineer's approval. Mandrel testing shall be performed no less than thirty calendar days after installation.

### 3.05 Additional Requirements for Construction of Corrugated Steel Pipe Sewers

#### A. Repair of Damaged Galvanized Surfaces

The Contractor shall take special care when removing, salvaging, storing, handling, or placing new culverts or culverts that are to be relaid so that they are not dented, scraped, or the galvanized coating is otherwise damaged.

Large diameter or long culverts shall be provided with shop attached lift rings to facilitate handling. Lift holes shall not be cut in corrugated steel pipe.

Saw cut ends of corrugated steel pipe shall be reasonably free from excessive jagged burrs or sharp spurs.

Surfaces on which the spelter coating has been damaged, whether by transporting, handling, or installation, shall be thoroughly cleaned by wire brushing and then painted with two (2)

coats of zinc rich paint conforming to federal specification: Paint shall be High Zinc Dust Content, Galvanizing Repair (Ready Mixed Type) MIL-P-21035.

**B. Laying and Jointing Pipe**

All pipe shall be laid true to the lines and grades given. Each length shall have full, firm bearing throughout its length.

Separate sections of corrugated pipe shall be securely joined together with standard corrugated metal bands. The bands may be up to 2 standard thicknesses lighter than the culvert, but shall not be less than 0.64 inches (16-gauge). Bands for culverts shall not be less than the following widths:

<b>Pipe Diameter</b>	<b>Band Minimum Width</b>
up to & including 18 inches	7 inches
21 inches through 60 inches	12 inches
over 60 inches	24 inches

The corrugations of the band shall match those of the pipes being joined. The band shall be secured with bolts and angles. Couplings may be either one piece or two pieces. Smooth coupling bands, dimpled bands, and helical-rod and lug bands will not be considered acceptable.

**3.06 Drainage Structures**

Precast concrete units shall be placed on a 6-inch sand base, leveled, and thoroughly compacted. Joints shall be sealed with mortar. Joints shall be thoroughly wetted prior to sealing. The joints inside the structure shall be flush with the walls. Joints shall be completely filled with mortar.

Pipe or tile connections to concrete drainage structures shall extend through the structure wall and be cut flush with the inside surface. The opening around the pipe shall be neatly filled with mortar to prevent leakage.

Drainage structure covers shall be new and adjusted to the finish elevation using precast concrete grade rings. Covers shall be of the type called for on the plans. Covers and grade rings shall be set in full mortar beds.

Cover elevations given on the plans are for information only. The final elevation will be determined in the field, based on as-constructed conditions.

Drainage structures shall be maintained reasonably free of accumulations of silt, debris, and other foreign matter at the time of final acceptance.

**3.07 Acceptance Tests - Storm Sewers**

The methods of testing shall be approved by the Engineer. The Contractor shall provide the necessary equipment and labor for making the tests, and the cost of testing and repair shall be included in the unit price bid for completed storm sewer. The Engineer shall determine when grouting or relaying of faulty pipe is required.

A. Physical Inspection

Upon completion of all work, the Contractor shall open all manholes in the presence of the Engineer to demonstrate that the manholes are complete and free of debris.

3.08 Removal of Storm Sewer

Existing storm sewer shall be removed where shown on the drawings or directed by the Engineer.

Existing storm sewer structures shall be removed where shown on the drawings or directed by the Engineer.

Where directed, the existing storm sewer and storm sewer structures shall be removed in their entirety. The Contractor shall fill the excavation resulting from the excavation and removal of the pipe and structures. Backfill within the 1:1 influence of pavements, roads, driveways, or structures shall be sand and compacted according to Section 01 45 16.02 – Density and Aggregate Testing. Backfill in other areas shall be suitable soil, free of rocks, debris, and frozen material and compacted according to Section 01 45 16.02 – Density and Aggregate Testing.

3.09 Abandoning Storm Sewer

Existing storm sewer shall be abandoned where shown on the drawings or directed by the Engineer.

If the abandoned storm sewer pipe is to remain in place, the open ends of the pipe shall be bulkheaded.

If the abandoned storm sewer structure is to remain in place, remove the cover and break down portions of existing structures, not interfering with new construction, to 3 feet below the finished grade within the influence of pavements, roads, driveways, or structures and to 1 foot below finished grade in other areas.

A. Break or perforate the bottom of the structure to provide drainage, and fill the remaining structure sections with sand and compacted according to Section 01 45 16.02 – Density and Aggregate Testing.

The Contractor shall fill the excavation resulting from the excavation and removal of the structure sections. Backfill within the 1:1 influence of pavements, roads, driveways, or structures shall be sand and compacted according to Section 01 45 16.02 – Density and Aggregate Testing. Backfill in other areas shall be suitable soil, free of rocks, debris, and frozen material and compacted according to Section 01 45 16.02 – Density and Aggregate Testing.

\*\*\*END OF SECTION\*\*\*

**St. John Street Neighborhood  
Memorial Park**



**FOUR (4)  
READER RAIL SIGNS**  
PAGE 3

**ONE (1)  
VERTICAL SIGN**  
PAGE 4

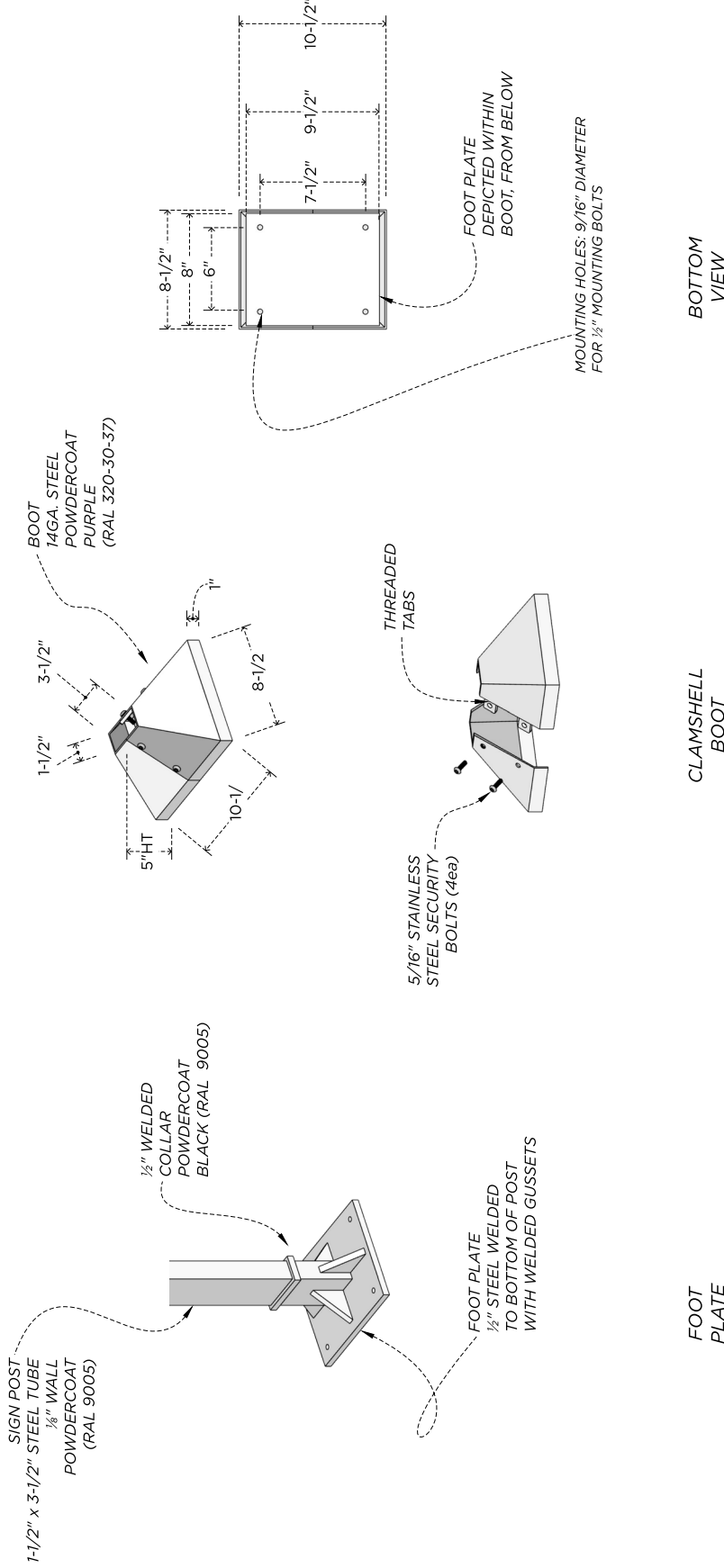
**ONE (1)  
KIOSK**  
PAGE 5

**THREE (3)  
BRONZE MEDALLIONS**  
PAGE 7

**SEVEN (7)  
BRONZE PLAQUES**  
PAGE 8

PERSPECTIVE VIEWS  
(NOT TO SCALE)

Typical Foot & Boot



SCALE 1:8

**F&W**  
MUSEUM PROJECTS

**City of Flint**  
**St. John Street Neighborhood Memorial Park**  
**Interpretive Signage**

Flutter & Wov Museum Projects  
Jason Stevens, Principal  
jason@flutterwov.com  
3660 Plaza Drive • Suite 4  
Ann Arbor • MI • 48103  
734.224.3727

A/E Collaborative  
Karen Burton, Principal  
karenb@spacelabdetroit.com  
607 Shelby Street • Suite 730  
Detroit • MI • 48226  
313.603.5685

City of Flint  
1101 S. Saginaw Street  
Flint • MI • 48502  
St. John St. Nbrhd Memorial Park  
3400 W. Boulevard Drive  
Flint, Michigan

DOCUMENT TITLE  
FW\_STJ Interpretive Signage\_071425

PREPARED BY  
JJS

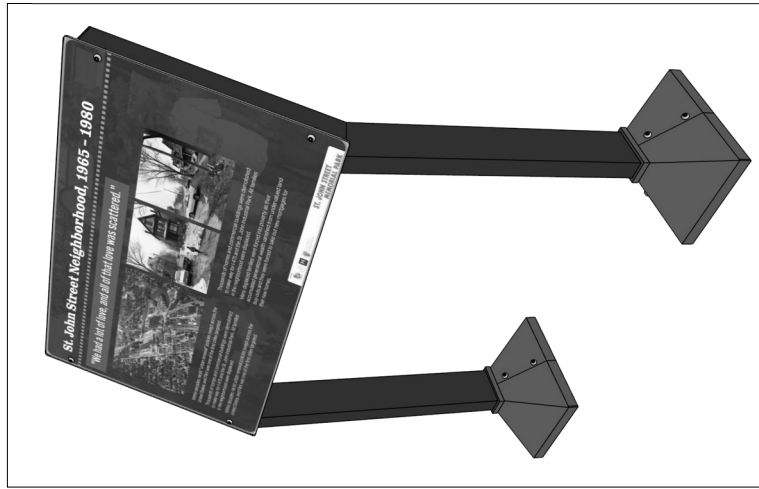
ISSUE  
July 14, 2025

**2**

**Reader Rail Sign, Typical**

MAKE FOUR (4)  
OF UNIQUE WIDTHS  
(TBD)

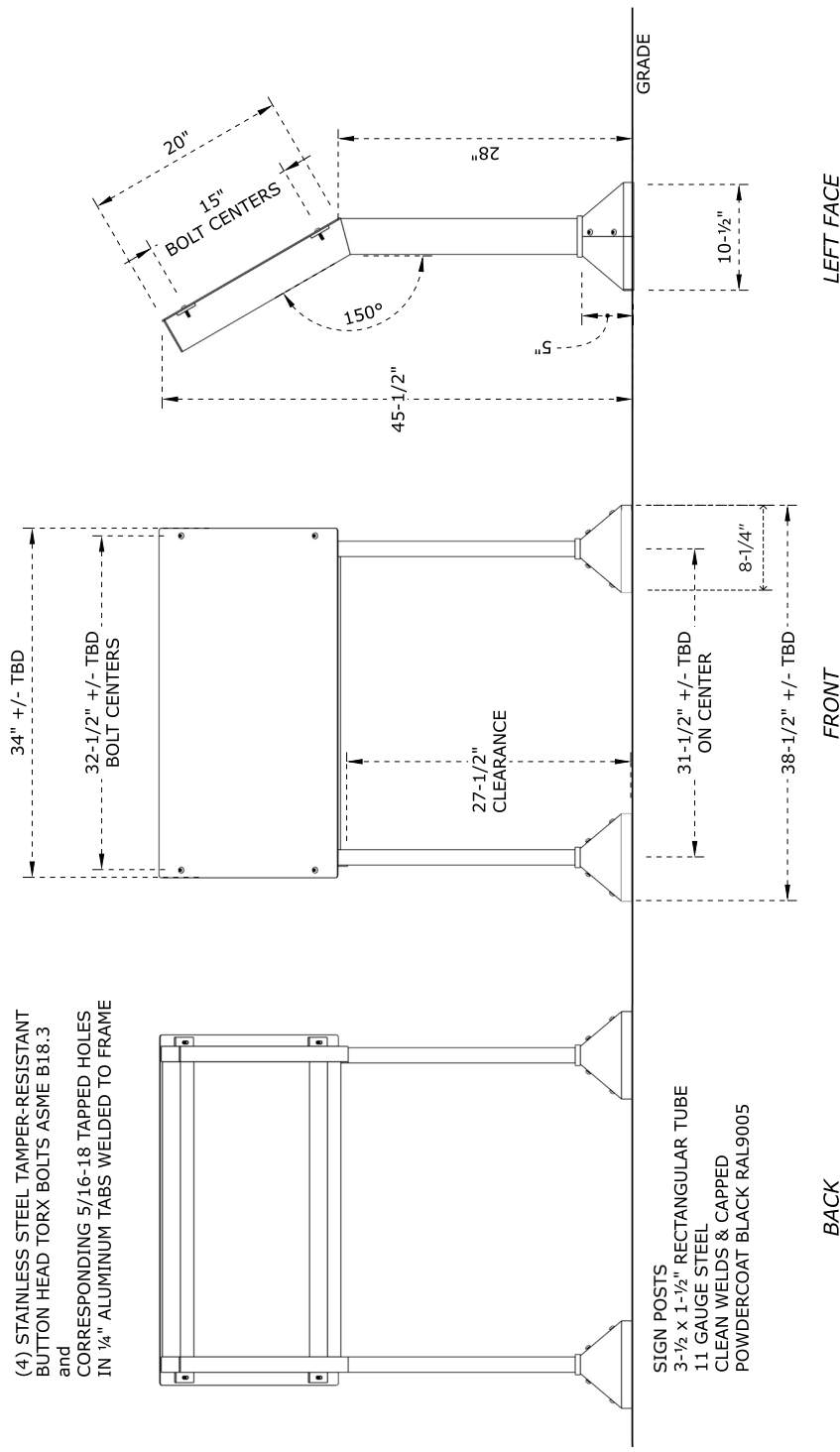
DIRECT-TO-SUBSTRATE IMAGELOC GRAPHIC  
.125 ALUMINUM SUBSTRATE  
34" (+/- TBD) x 20"



MOUNTED TO CONCRETE PAD  
OR BURIED WITH APPROPRIATE FOOTINGS

ISO

(4) STAINLESS STEEL TAMPER-RESISTANT  
BUTTON HEAD TORX BOLTS ASME B18.3  
and  
CORRESPONDING 5/16-18 TAPPED HOLES  
IN 1/4" ALUMINUM TABS WELDED TO FRAME



1 INCH = 1 FOOT

**3**

**City of Flint**  
**St. John Street Neighborhood Memorial Park**  
**Interpretive Signage**



Flutter & Wov Museum Projects  
Jason Stevens, Principal  
jason@flutterwov.com  
3660 Plaza Drive • Suite 4  
Ann Arbor • MI • 48103  
734.224.3727

A/E Collaborative  
Karen Burton, Principal  
karenb@spacealabdetroit.com  
607 Shelby Street • Suite 730  
Detroit • MI • 48226  
313.603.5685

City of Flint  
1101 S. Saginaw Street  
Flint • MI • 48502  
St. John St. Nbrhd Memorial Park  
3400 W. Boulevard Drive  
Flint, Michigan

DOCUMENT TITLE  
FW\_STJ Interpretive Signage\_071425

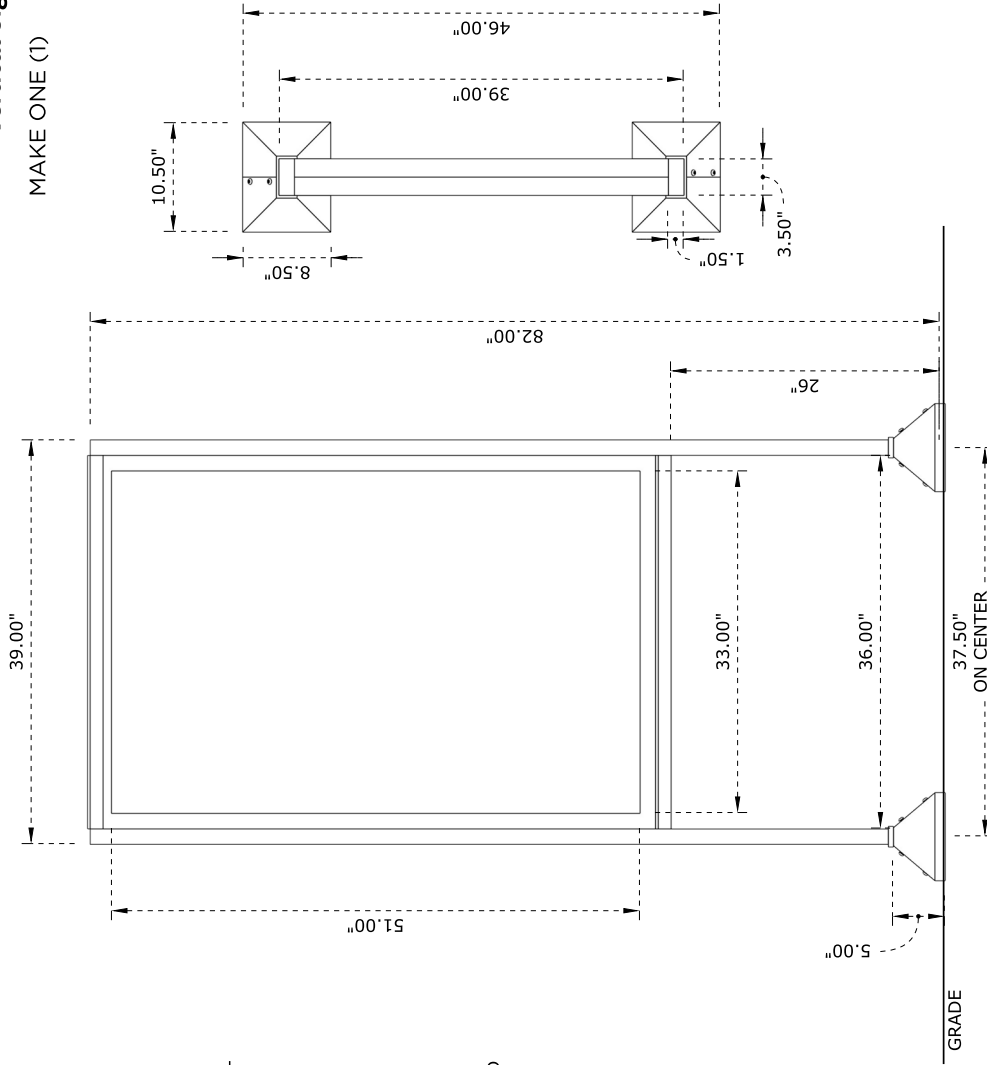
PREPARED BY  
JJS

ISSUE  
July 14, 2025



**Vertical Sign**

MAKE ONE (1)



- DIRECT-TO-SUBSTRATE IMAGELOC GRAPHIC
- .125 ALUMINUM SUBSTRATE
- 33" x 51" VISIBLE, TWO-SIDED
- AFFIXED WITHIN IPE (OR SIMILAR) WOOD RAIL AND CAP WITH 5° PITCHED TOP SURFACES
- (2) 3-1/2 x 1-1/2" RECTANGULAR TUBE
- 11 GAUGE STEEL POSTS
- POWDERCOAT BLACK RAL9005
- TOP SURFACES ARE 5° PITCHED AND CAPPED
- WHERE EXPOSED FASTENERS ARE USED: STAINLESS STEEL TAMPER-RESISTANT BUTTON HEAD TORX BOLTS ASME B18.3
- CONNECTIONS BETWEEN WOOD MEMBERS AND METAL INCLUDE EXPANSION SLOTS
- FLANGE MOUNTED TO CONCRETE PAD OR BURIED WITH APPROPRIATE FOOTINGS

150

PLAN

ELEVATION

1 INCH = 1 FOOT

**4**

**City of Flint  
St. John Street Neighborhood Memorial Park  
Interpretive Signage**



Flutter & Wov Museum Projects  
Jason Stevens, Principal  
jason@flutterwov.com  
3660 Plaza Drive • Suite 4  
Ann Arbor • MI • 48103  
734.224.3727

A/E Collaborative  
Karen Burton, Principal  
karenb@spacelabdetroit.com  
607 Shelby Street • Suite 730  
Detroit • MI • 48226  
313.603.5685

City of Flint  
1101 S. Saginaw Street  
Flint • MI • 48502  
St. John St. Nbrhd Memorial Park  
3400 W. Boulevard Drive  
Flint, Michigan

DOCUMENT TITLE  
FW\_STJ Interpretive Signage\_071425  
PREPARED BY  
JJS  
ISSUE  
July 14, 2025

**Kiosk, view**



- DIRECT-TO-SUBSTRATE IMAGELOC GRAPHIC
- .125 ALUMINUM SUBSTRATE
- 33" x 51" VISIBLE, TWO-SIDED
- AFFIXED WITHIN IPE (OR SIMILAR) WOOD TOP & BOTTOM RAILS WITH 5° PITCHED TOP SURFACES
- (6) 3-1/2 x 1-1/2" RECTANGULAR TUBE 11 GAUGE STEEL POWDERCOAT BLACK RAL9005
- WELDED SEAMS ON CENTER COLUMN
- TOP SURFACES ARE 5° PITCHED AND CAPPED WHERE APPROPRIATE
- WHERE EXPOSED FASTENERS ARE USED: STAINLESS STEEL TAMPER-RESISTANT BUTTON HEAD TORX BOLTS ASME B18.3
- CONNECTIONS BETWEEN WOOD MEMBERS AND METAL INCLUDE EXPANSION SLOTS
- FLANGE MOUNTED TO CONCRETE PAD OR BURIED WITH APPROPRIATE FOOTINGS

ISO

**City of Flint**  
**St. John Street Neighborhood Memorial Park**  
**Interpretive Signage**



Flutter & Wow Museum Projects  
Jason Stevens, Principal  
jason@flutterwow.com  
3660 Plaza Drive • Suite 4  
Ann Arbor • MI • 48103  
734.224.3727

A/E Collaborative  
Karen Burton, Principal  
karenb@spacealabdetroit.com  
607 Shelby Street • Suite 730  
Detroit • MI • 48226  
313.603.5685

City of Flint  
1101 S. Saginaw Street  
Flint • MI • 48502  
St. John St. Nbrhd Memorial Park  
3400 W. Boulevard Drive  
Flint, Michigan

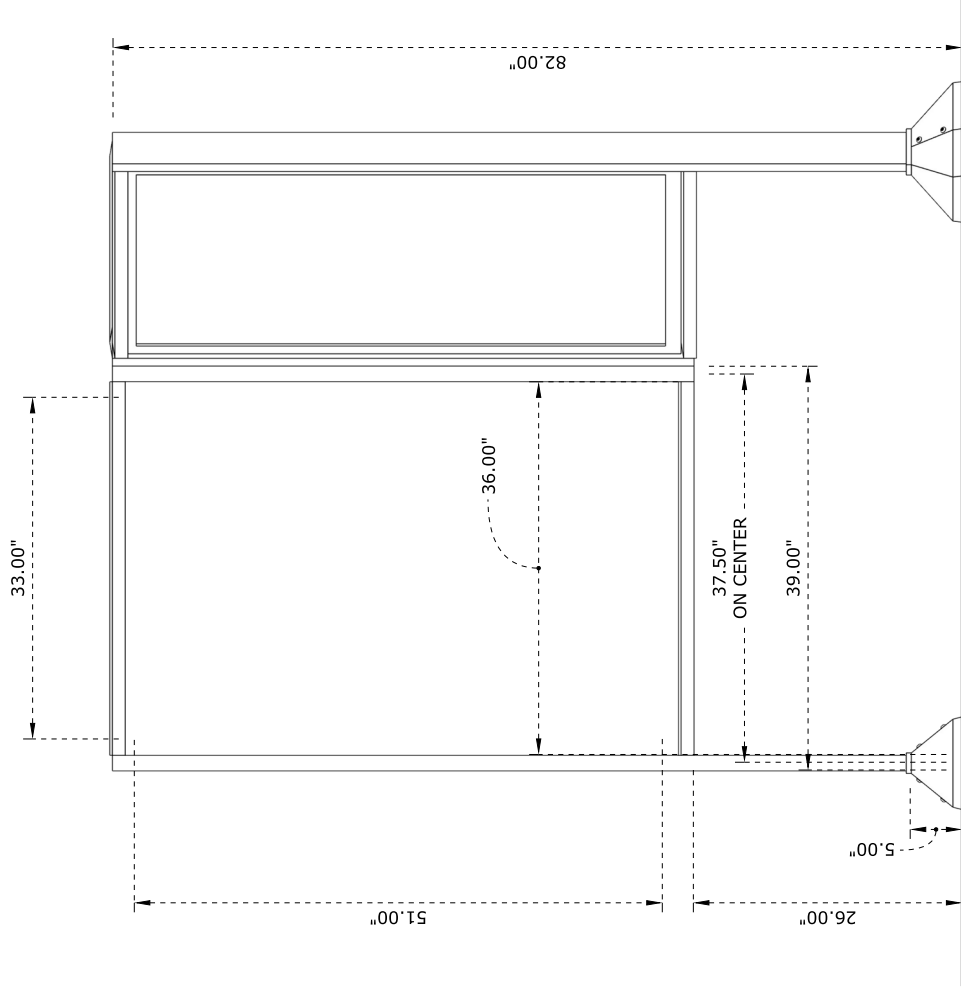
DOCUMENT TITLE  
FW\_STJ Interpretive Signage\_071425

PREPARED BY  
JJS

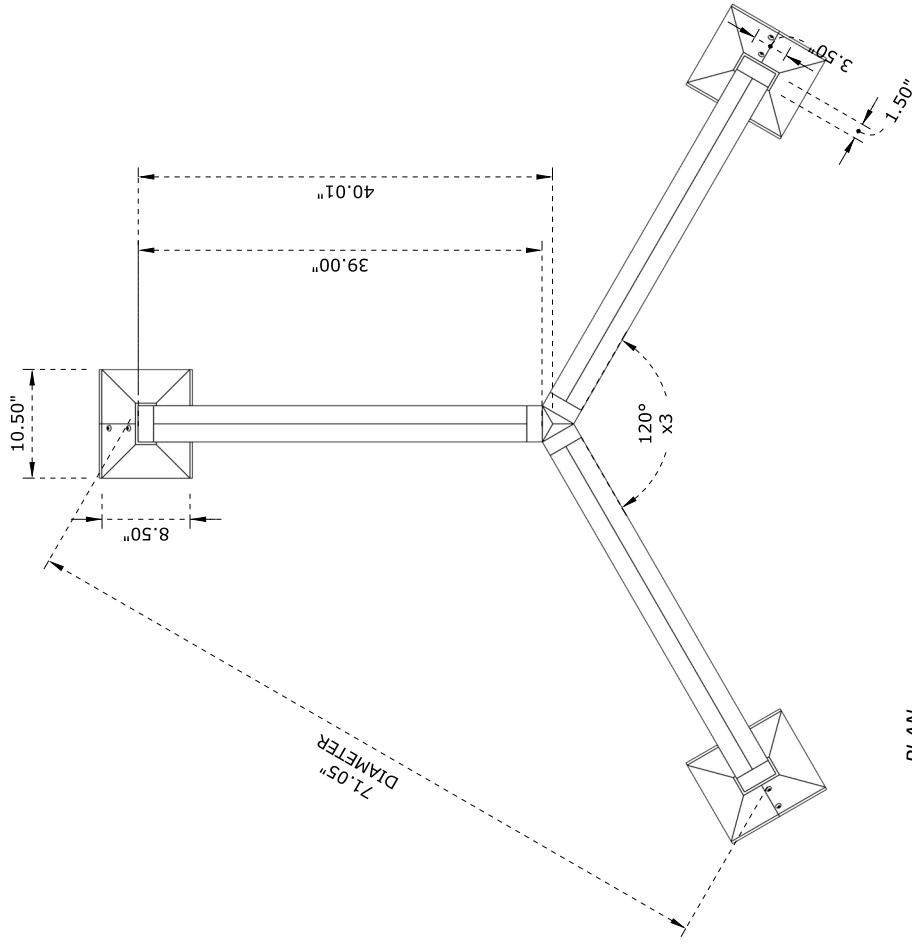
ISSUE  
July 14, 2025

**Kiosk, dimensions**

MAKE ONE (1)



**ELEVATION**



**PLAN**

1 INCH = 1 FOOT

**6**

DOCUMENT TITLE  
FW\_STJ Interpretive Signage\_071425  
PREPARED BY  
JJS

City of Flint  
1101 S. Saginaw Street  
Flint • MI • 48502  
St. John St. Nibhd Memorial Park  
3400 W. Boulevard Drive  
Flint, Michigan

A/E Collaborative  
Karen Burton, Principal  
karenb@spacelabdetroit.com  
607 Shelby Street • Suite 730  
Detroit • MI • 48226  
313.603.5685

Flutter & Wow Museum Projects  
Jason Stevens, Principal  
jason@flutterwow.com  
3660 Plaza Drive • Suite 4  
Ann Arbor • MI • 48103  
734.224.3727

**City of Flint**  
**St. John Street Neighborhood Memorial Park**  
**Interpretive Signage**



ISSUE  
July 14, 2025

**Medallion**

MAKE THREE (3)

BRONZE CASTING OF CUSTOM SCULPTURE SET ON 3" MIN. CAST CONCRETE (FOAM FILLER CORE)

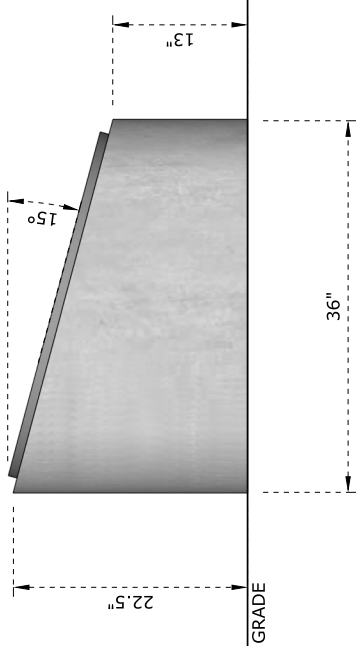


CONCRETE TO BE CAST ONSITE WITH PREFABRICATED MOLDS UPON DELIVERY OF MEDALLIONS

MEDALLIONS TO HAVE (MIN) 1/2" DIAMETER SETTING POSTS ON AN 8" GRID, WELDED TO BOTTOM SURFACE

TOP SURFACE WILL BE ELLIPTICAL, APPROX. 1.25" TALLER THAN IT IS WIDE

PROVIDE TEMPLATE AND/OR RECONCILE WITH SCULPTOR



ISO

PLAN  
[MEASUREMENTS AT BASE]

ELEVATION

1 INCH = 1 FOOT

**City of Flint**  
**St. John Street Neighborhood Memorial Park**  
**Interpretive Signage**

Flutter & Wow Museum Projects  
Jason Stevens, Principal  
jason@flutterwow.com  
3660 Plaza Drive • Suite 4  
Ann Arbor • MI • 48103  
734.224.3727

A/E Collaborative  
Karen Burton, Principal  
karenb@spacelabdetroit.com  
607 Shelby Street • Suite 730  
Detroit • MI • 48226  
313.603.5685

City of Flint  
1101 S. Saginaw Street  
Flint • MI • 48502  
St. John St. Nbrhd Memorial Park  
3400 W. Boulevard Drive  
Flint, Michigan

DOCUMENT TITLE

FW\_STJ Interpretive Signage\_071425

PREPARED BY

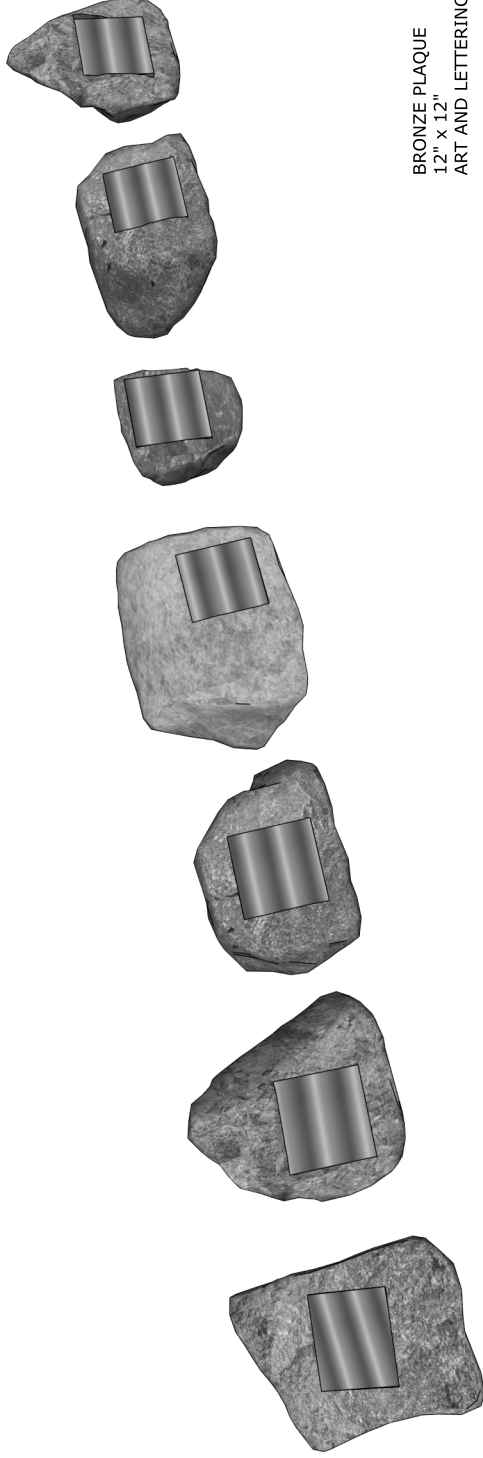
JJS

ISSUE

July 14, 2025

# Boulders with Bronze Plaques

MAKE SEVEN (7)



BRONZE PLAQUE  
12" x 12"  
ART AND LETTERING  
POST MOUNTED, WITH EPOXY  
ASSEMBLED ONSITE

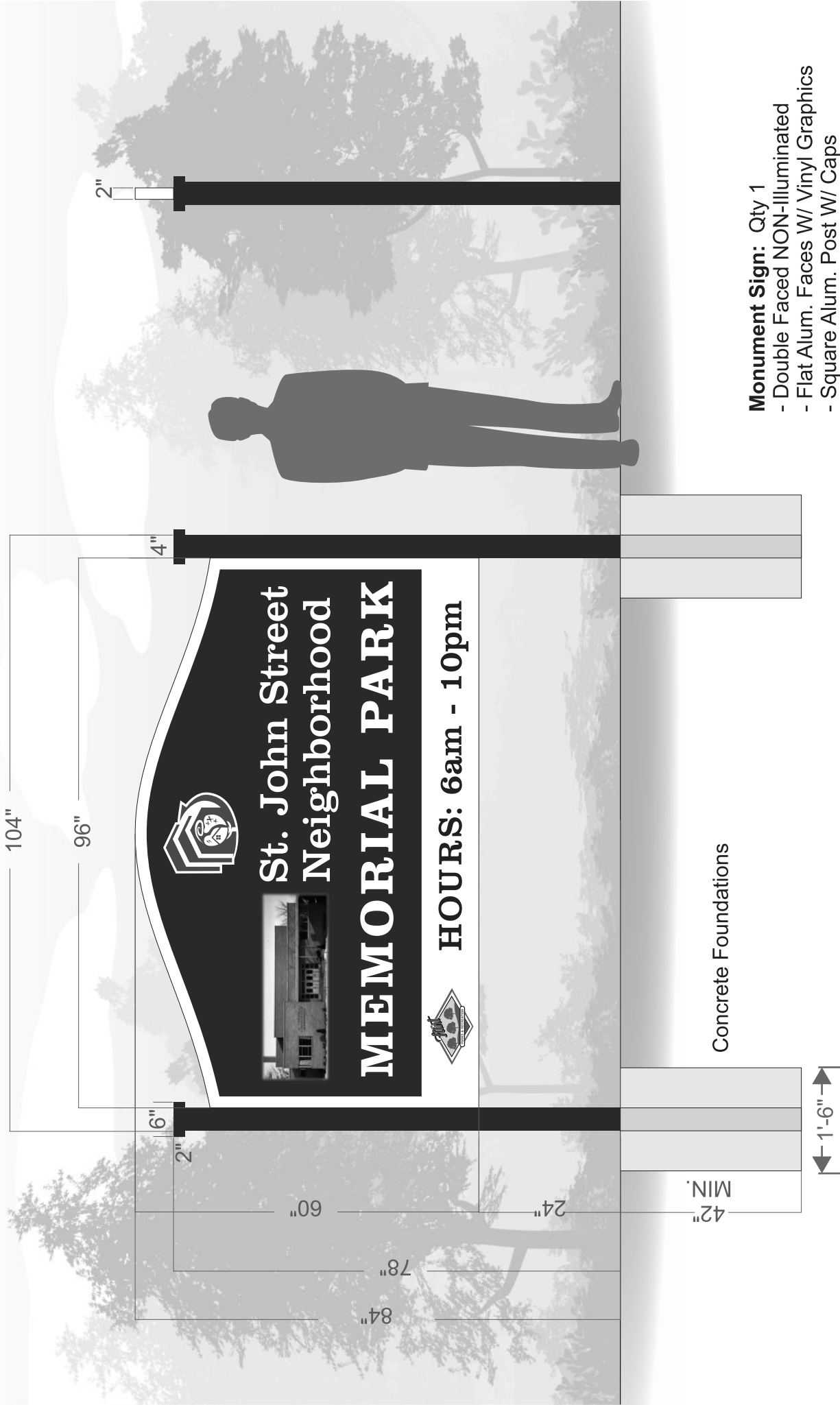
**City of Flint**  
**St. John Street Neighborhood Memorial Park**  
**Interpretive Signage**

**Flutter & Wow Museum Projects**  
Jason Stevens, Principal  
jason@flutterwow.com  
3660 Plaza Drive • Suite 4  
Ann Arbor • MI • 48103  
734.224.3727

**A/E Collaborative**  
Karen Burton, Principal  
karenb@spacealabdetroit.com  
607 Shelby Street • Suite 730  
Detroit • MI • 48226  
313.603.5685

**City of Flint**  
1101 S. Saginaw Street  
Flint • MI • 48502  
St. John St. Nbrhd Memorial Park  
3400 W. Boulevard Drive  
Flint, Michigan

**DOCUMENT TITLE**  
FW\_STJ Interpretive Signage\_071425  
**PREPARED BY**  
JJS  
**ISSUE**  
July 14, 2025



**Monument Sign: Qty 1**

- Double Faced NON-Illuminated
- Flat Alum. Faces W/ Vinyl Graphics
- Square Alum. Post W/ Caps

X

Signature for approval of artwork - Proceed to production as shown

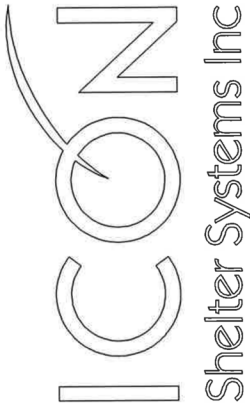


4145 Market Place  
Flint, Michigan 48507  
810-487-0000  
www.SignsByCrannie.com

**Customer:** St. Johns Park  
**Address:** X  
**Salesperson:** Nick T  
**Date:** 1-8-24  
**Drawn By:** S. Schlaud  
**Scale:** 1/2"=1'-0"

**Filename:** St. Johns Park-24-MON  
**Revision:** GA 4-4-24 GA 5-2-24 GA 5-7-24  
GA 5-24-24





JOB NUMBER: 11318  
 JOB NAME: ST. JOHNS NEIGHBORHOOD MEMORIAL PARK  
 JOB LOCATION: FLINT, MI 48505

REVISION: A  
 A - INITIAL SUBMITTAL REVISION (OTH 7/24/2025)

APPROVAL FOR FABRICATION REQUIRED:  
 BY SIGNING THIS FABRICATION APPROVAL, I AUTHORIZE ICON SHELTERS TO FABRICATE THE PRODUCT AS REPRESENTED AND DESCRIBED WITHIN THIS SUBMITTAL PACKAGE WITH NO FURTHER CHANGES OR AMENDMENTS REQUIRED. THIS APPROVED SUBMITTAL DOCUMENT SUPERSEDES ALL OTHER DESIGN DOCUMENTS RELATED TO THIS SHELTER/PRODUCT AND REPRESENTS THE FINAL DESIGN TO BE FABRICATED.

PRINT NAME: \_\_\_\_\_  
 SIGNATURE: \_\_\_\_\_  
 DATE: 7/24/2025

**TABLE OF CONTENTS**

- 1.0-1.1 COVER SHEET/ NOTES
- 2.0 ELEVATION
- 3.0-3.1 ANCHOR BOLT LAYOUT
- 4.0-4.1 FRAME LAYOUT
- 5.0-5.1 FRAME CONNECTIONS
- 6.0-6.1 RIGID CONNECTIONS
- 7.0-7.1 RIGID CONNECTIONS
- 8.0-8.1 RIGID CONNECTIONS
- 9.0-9.1 RIGID CONNECTIONS
- 10.0-10.1 RIGID CONNECTIONS
- 11.0-11.1 RIGID CONNECTIONS
- 12.0-12.1 RIGID CONNECTIONS
- 13.0-13.1 RIGID CONNECTIONS
- 14.0-14.1 RIGID CONNECTIONS
- 15.0-15.1 RIGID CONNECTIONS
- 16.0-16.1 RIGID CONNECTIONS
- 17.0-17.1 RIGID CONNECTIONS
- 18.0-18.1 RIGID CONNECTIONS
- 19.0-19.1 RIGID CONNECTIONS
- 20.0-20.1 RIGID CONNECTIONS
- 21.0-21.1 RIGID CONNECTIONS
- 22.0-22.1 RIGID CONNECTIONS
- 23.0-23.1 RIGID CONNECTIONS
- 24.0-24.1 RIGID CONNECTIONS
- 25.0-25.1 RIGID CONNECTIONS
- 26.0-26.1 RIGID CONNECTIONS
- 27.0-27.1 RIGID CONNECTIONS
- 28.0-28.1 RIGID CONNECTIONS
- 29.0-29.1 RIGID CONNECTIONS
- 30.0-30.1 RIGID CONNECTIONS
- 31.0-31.1 RIGID CONNECTIONS
- 32.0-32.1 RIGID CONNECTIONS
- 33.0-33.1 RIGID CONNECTIONS
- 34.0-34.1 RIGID CONNECTIONS
- 35.0-35.1 RIGID CONNECTIONS
- 36.0-36.1 RIGID CONNECTIONS
- 37.0-37.1 RIGID CONNECTIONS
- 38.0-38.1 RIGID CONNECTIONS
- 39.0-39.1 RIGID CONNECTIONS
- 40.0-40.1 RIGID CONNECTIONS
- 41.0-41.1 RIGID CONNECTIONS
- 42.0-42.1 RIGID CONNECTIONS
- 43.0-43.1 RIGID CONNECTIONS
- 44.0-44.1 RIGID CONNECTIONS
- 45.0-45.1 RIGID CONNECTIONS
- 46.0-46.1 RIGID CONNECTIONS
- 47.0-47.1 RIGID CONNECTIONS
- 48.0-48.1 RIGID CONNECTIONS
- 49.0-49.1 RIGID CONNECTIONS
- 50.0-50.1 RIGID CONNECTIONS
- 51.0-51.1 RIGID CONNECTIONS
- 52.0-52.1 RIGID CONNECTIONS
- 53.0-53.1 RIGID CONNECTIONS
- 54.0-54.1 RIGID CONNECTIONS
- 55.0-55.1 RIGID CONNECTIONS
- 56.0-56.1 RIGID CONNECTIONS
- 57.0-57.1 RIGID CONNECTIONS
- 58.0-58.1 RIGID CONNECTIONS
- 59.0-59.1 RIGID CONNECTIONS
- 60.0-60.1 RIGID CONNECTIONS
- 61.0-61.1 RIGID CONNECTIONS
- 62.0-62.1 RIGID CONNECTIONS
- 63.0-63.1 RIGID CONNECTIONS
- 64.0-64.1 RIGID CONNECTIONS
- 65.0-65.1 RIGID CONNECTIONS
- 66.0-66.1 RIGID CONNECTIONS
- 67.0-67.1 RIGID CONNECTIONS
- 68.0-68.1 RIGID CONNECTIONS
- 69.0-69.1 RIGID CONNECTIONS
- 70.0-70.1 RIGID CONNECTIONS
- 71.0-71.1 RIGID CONNECTIONS
- 72.0-72.1 RIGID CONNECTIONS
- 73.0-73.1 RIGID CONNECTIONS
- 74.0-74.1 RIGID CONNECTIONS
- 75.0-75.1 RIGID CONNECTIONS
- 76.0-76.1 RIGID CONNECTIONS
- 77.0-77.1 RIGID CONNECTIONS
- 78.0-78.1 RIGID CONNECTIONS
- 79.0-79.1 RIGID CONNECTIONS
- 80.0-80.1 RIGID CONNECTIONS
- 81.0-81.1 RIGID CONNECTIONS
- 82.0-82.1 RIGID CONNECTIONS
- 83.0-83.1 RIGID CONNECTIONS
- 84.0-84.1 RIGID CONNECTIONS
- 85.0-85.1 RIGID CONNECTIONS
- 86.0-86.1 RIGID CONNECTIONS
- 87.0-87.1 RIGID CONNECTIONS
- 88.0-88.1 RIGID CONNECTIONS
- 89.0-89.1 RIGID CONNECTIONS
- 90.0-90.1 RIGID CONNECTIONS
- 91.0-91.1 RIGID CONNECTIONS
- 92.0-92.1 RIGID CONNECTIONS
- 93.0-93.1 RIGID CONNECTIONS
- 94.0-94.1 RIGID CONNECTIONS
- 95.0-95.1 RIGID CONNECTIONS
- 96.0-96.1 RIGID CONNECTIONS
- 97.0-97.1 RIGID CONNECTIONS
- 98.0-98.1 RIGID CONNECTIONS
- 99.0-99.1 RIGID CONNECTIONS
- 100.0-100.1 RIGID CONNECTIONS

**DESIGN LOADS**

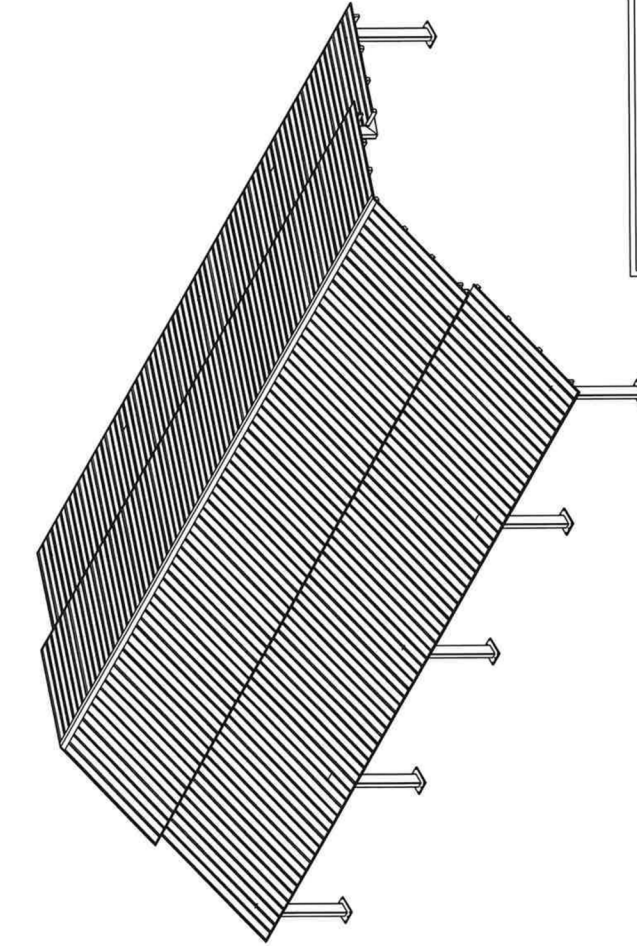
CODE: 2021 INTERNATIONAL BUILDING CODE

TOTAL DEAD: 12.50 P.S.F.  
 FRAME DEAD: 9.50 P.S.F.  
 ROOF DEAD: 1.20 P.S.F.  
 COLLATERAL DEAD: 1.80 P.S.F.  
 ROOF LIVE LOAD: 20.00 P.S.F.  
 GROUND SNOW LOAD: 30.00 P.S.F.  
 ROOF SNOW LOAD: 25.20 P.S.F.  
 WIND SPEED: 107.00 M.P.H.  
 EXPOSURE: C  
 SEISMIC USE GROUP: I  
 SEISMIC SITE CLASS: D  
 SEISMIC DESIGN CATEGORY: A  
 SEISMIC ANALYSIS: SIMPLIFIED

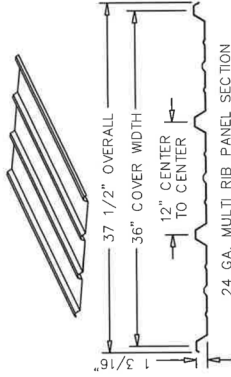
**MATERIALS**

TUBE STEEL (HSS HOLLOW STRUCTURAL SECTION)  
 WIDE FLANGE SECTIONS  
 STRUCTURAL STEEL PLATE  
 ROOF PANELS (STEEL)  
 ANCHOR BOLTS  
 CONNECTION BOLTS

(ASTM DESIGNATION)  
 A-500 GRADE B/C  
 A-992  
 A-36, A-572 GRADE 50  
 A-792  
 F1554 GRADE 55  
 F3125 GRADE A325



ROOF



NOTE:  
 CUSTOMER TO PROVIDE ELECTRICAL  
 CUTOUT LOCATIONS AND SIZES  
 BEFORE FABRICATION WILL BEGIN

FABRICATOR APPROVALS  
 CLARK COUNTY STEEL FABRICATOR NUMBER: 707  
 CITY OF LOS ANGELES FABRICATOR NUMBER: FB03254



THIS SEAL REMAINS VALID TO THE MATERIALS AND FABRICATION SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS A SUBSTITUTE FOR REVISIONS TO THE PROJECT DRAWINGS OR SEALS AND SHALL NOT BE CONSIDERED AS SUCH.



1455 LINCOLN AVE.  
 HOLLAND MI, 49423  
 616.396.0919  
 616.396.0918  
 616.396.0944 FX

COVER SHEET

DRAWN BY: \_\_\_\_\_  
 DTH \_\_\_\_\_  
 DATE: 7/24/2025  
 JOB NO.: 11318  
 REVISION: A  
 BUILDING TYPE: RG50X70M2C-P4

PROJECT NAME:  
 ST. JOHNS  
 NEIGHBORHOOD  
 MEMORIAL PARK  
 FLINT, MI  
 48505

SHEET  
 1.0

PRINTED ON :

**NOTES:**

ALL WELDING CONFORMS TO THE LATEST EDITION OF AWS D1.1 OR D1.3 AS REQUIRED.  
ALL WELDING IS PERFORMED BY AWS CERTIFIED WELDERS. THERE IS NO FIELD WELDING REQUIRED, U.N.O.  
FOUNDATIONS HAVE BEEN DESIGNED WITH CLASS 5 SOILS PRESUMPTIVE LOAD-BEARING VALUES IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS. VERTICAL FOUNDATION PRESSURE: 1500 PSF. LATERAL BEARING PRESSURE: 100 PSF/FT. COHESION 130 PSF. IF SITE-SPECIFIC SOILS DO NOT MEET THE REQUIREMENTS FOR SOIL CLASS 5, CONTACT A LOCAL GEOTECHNICAL ENGINEER.  
DUE TO STANDARDIZED FABRICATION, PARTS SHOWN MAY BE UPGRADED. REFER TO THE SHIPPING BILL OF MATERIALS FOR POSSIBLE SUBSTITUTIONS.

ICON SHELTER SYSTEMS INC. RECOMMENDS THAT THE PRIMARY FRAMING INSTALLER AND THE ROOF INSTALLER HAVE A MINIMUM OF FIVE (5) YEARS OF DOCUMENTED EXPERIENCE INSTALLING THIS TYPE OF PRODUCT.

HIGH STRENGTH BOLTING:  
ALL HIGH STRENGTH BOLTS ARE F3125 GRADE A325 BOLTS WITH HEAVY HEX NUTS. THE BOLTS ARE TO BE INSTALLED UTILIZING THE "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS" (8/1/2014) AS PREPARED BY RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) FOR THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). THE BOLTS SHALL BE INSTALLED AS SNUG-TIGHTENED WHICH IS DEFINED AS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE PILES INTO FIRM CONTACT, WHICH IS THE CONDITION WHEN THE PLANES OF CONTACT BETWEEN TWO PILES ARE SOLIDLY SEATED AGAINST EACH OTHER, BUT NOT NECESSARILY IN CONTINUOUS CONTACT WITH UTILIZATION OF THE SNUG TIGHTENING METHOD. NO WASHERS ARE REQUIRED.  
ALL CONNECTIONS ARE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE.

BEFORE ERECTING THE FRAME, VERIFY ALL BOLTS AND NUTS ARE CLEAN OF DEBRIS AND BURRS - INCLUDING THE HARDWARE ALREADY FASTENED INSIDE THE MEMBERS. CHASING THREADS ON SOME BOLTS AND NUTS MAY BE REQUIRED. APPLICATION OF THREAD WAX MAY BE USED TO ASSIST IN TIGHTENING (NOT BY ICON).

IT IS THE RESPONSIBILITY OF THE INSTALLER TO INSURE PROPER TIGHTNESS.  
PROPER ERECTION OF THE FRAMING MEMBERS REQUIRES THE MAIN COLUMNS TO BE PLUMB & SQUARE, COLUMNS, RAFTER, AND TIE BEAM CONNECTIONS MUST BE TIGHTENED BEFORE INSTALLING THE PURLINS. PURLINS MUST BE PARALLEL TO THE TIE BEAMS AND EAVE BEAMS.

ICON RECOMMENDS TO NOT FULLY TIGHTEN CONNECTION HARDWARE UNTIL THE MAJORITY OR ENTIRETY OF FRAME COMPONENTS ARE ERECTED. PURLINS OR OTHER MEMBERS THAT REQUIRE SCREW FASTENERS SHOULD BE INSTALLED LAST. THIS ALLOWS FOR MOVEMENT OF MEMBERS TO HELP ALIGN THE SHELTER AS INTENDED.

THE TOUCH-UP KIT SHOULD BE UTILIZED FOR ANY EXPOSED STEEL (CHIPS, SCUFFS, OR SCRATCHES) THAT MAY RESULT FROM SHIPPING, HANDLING, OR INSTALLATION OF SHELTER COMPONENTS. ROUTINE TOUCH-UP IS RECOMMENDED.

WHEN DRILLING OPERATIONS ARE REQUIRED, METAL SHAVINGS CAN ACCUMULATE AND MUST BE QUICKLY AND CAREFULLY REMOVED TO PREVENT RUST AND STAINS ON SHELTER COMPONENTS (FRAME AND ROOF). THIS SHOULD BE CHECKED AND PERFORMED AT THE END OF EACH DAY OF INSTALLATION BY SWEEPING, BRUSHING, AND/OR USING COMPRESSED AIR.

THE ENGINEERING AND DETAILING FOR THIS STRUCTURE IS ONLY VALID IF ICON SHELTERS SYSTEMS FABRICATES THE COMPONENTS.

**CARE & MAINTENANCE:**

ICON REQUIRES THAT THE COATED PRODUCTS LOCATED NEAR A SEASHORE (SALT WATER) ENVIRONMENT BE SYSTEMATICALLY CLEANED, TO REMOVE SALT DEPOSITS PER THE FOLLOWING CLEANING PROGRAM:

- A. PERIODIC CLEANING AND INSPECTION OF THE STRUCTURES IS REQUIRED TO REMOVE CONTAMINANTS THAT CAN CAUSE CHEMICAL OR MECHANICAL FILM DEGRADATION IF LEFT EXPOSED FOR LONG PERIODS OF TIME.
- B. CLEANING AND INSPECTION MUST COMMENCE IMMEDIATELY AFTER INSTALLATION TO CLEAN ANY SOILS, CONCRETE, OR OTHER CONTAMINANTS THAT HAVE BEEN DEPOSITED DURING THIS TIME. FOR APPLICATION OF WARRANTY, CLEANING MUST BE DOCUMENTED, AND PROPER RECORDS KEPT, OR WARRANTIES ARE CONSIDERED NULL AND VOID.
- I. NON-HAZARDOUS ENVIRONMENTS - CLEAN AND CHECK EVERY 12 MONTHS.
- II. TROPICAL ENVIRONMENTS - CLEAN AND CHECK EVERY 9 MONTHS.
- III. SWIMMING AND LEISURE POOLS - CLEAN AND CHECK EVERY 3 MONTHS.
- IV. MARINE ENVIRONMENTS - CLEAN AND CHECK EVERY 3 MONTHS.
- V. INDUSTRIAL ENVIRONMENTS - CLEAN AND CHECK EVERY 3 MONTHS.
- VI. HAZARDOUS ENVIRONMENTS - CLEAN AND CHECK MONTHLY.
- C. DO NOT USE ABRASIVE CLEANERS OR ABRASIVE IMPLEMENTS SUCH AS STEEL WOOL, SANDPAPER, OR WIRE BRUSHES.
- D. CLEANING AGENTS SHOULD ALWAYS BE TESTED IN AN AREA THAT IS NOT EASILY SEEN BEFORE USE.
- E. STRONG SOLVENTS SHOULD NOT BE USED.
- F. ALWAYS RINSE CLEANER WITH PLENTIFUL AMOUNTS OF CLEAN WATER.
- G. MILDEW CAN BE REMOVED WITH A SOLUTION OF:
  - I. 1/3 CUP DETERGENT.
  - II. 2/3 CUP TRISODIUM PHOSPHATE
  - III. 1-QUART SODIUM HYPOCHLORITE, 5% SOLUTION (BLEACH)

**RECEIVING SHIPMENTS:**

PERFORM A FULL INVENTORY OF ALL ITEMS RECEIVED UPON DELIVERY. ANY DEFECTS OR DAMAGE MUST BE ANNOTATED ON THE BILL OF LADING AND REPORTED TO ICON SHELTER SYSTEMS AS SOON AS POSSIBLE.

PLASTIC WRAP ON COMPONENT BUNDLES MUST BE REMOVED WITHIN 5 DAYS OF DELIVERY. FAILURE TO COMPLY MAY DAMAGE COATING AND WILL VOID WARRANTY. EXTRA PRECAUTION SHOULD BE TAKEN TO AVOID DAMAGE TO MEMBER FINISH.

TOUCH-UP KITS SHOULD BE REMOVED FROM SHIPMENT BUNDLES AND STORED INDOORS WITH MINIMAL HEAT FLUCTUATION. OPTIMAL STORAGE TEMPERATURE IS 70 DEG F. PAINT WILL QUICKLY DEGRADE AT TEMPERATURES LOWER THAN 40 DEG F, AND HIGHER THAN 90 DEG F.

IF METAL ROOF PANELS ARE NOT TO BE INSTALLED WITHIN 2 WEEKS, ICON RECOMMENDS KEEPING IN A CLIMATE CONTROLLED STORAGE FACILITY OR A COVERED, LOW HUMIDITY ENVIRONMENT. ROOF MATERIALS CAN QUICKLY DEVELOP STORAGE STAINS FROM EXCESS MOISTURE BETWEEN PANELS/TRIM WHICH CAN BE DIFFICULT, OR IMPOSSIBLE, TO FULLY REMOVE.

**ICON Shelter Systems Inc**  
DISTINCTIVE STEEL SHELTERS  
WWW.ICONSHelters.COM  
CORPORATE HEADQUARTERS  
SYSTEMS, INC.  
1485 LINCOLN AVE.  
HOLLAND, MI 49423  
616.396.0919  
616.396.0944

NOTES

DRAWN BY: \_\_\_\_\_  
DTH  
DATE: 7/24/2025  
JOB NO.: 11318  
REVISION: A

BUILDING TYPE: RC50X70M2C-P4

PROJECT NAME: ST. JOHNS NEIGHBORHOOD MEMORIAL PARK  
FLINT, MI 48505

SHEET 1.1

let jf 7/28/25

THIS SEAL VALID ONLY TO THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS A SUBSTITUTE FOR THE PROJECT ENGINEER'S RECORD AND SHALL NOT BE CONTROVERSIALLY USED.

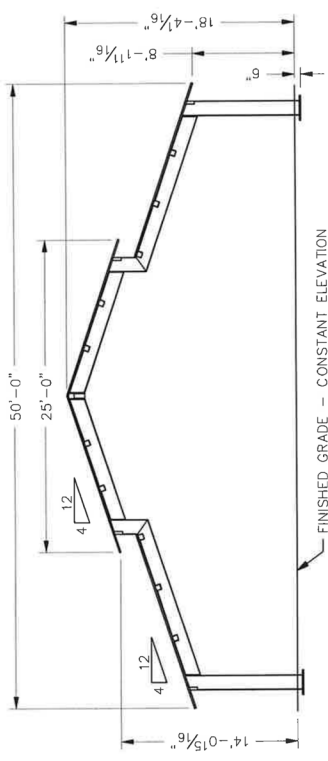
PRINTED ON :

**ICON**  
 Shelter Systems Inc  
 DISTINCTIVE STEEL SHEETERS  
 MANUFACTURING CORPORATION  
 COPROCESSOR SHEET METAL  
 SYSTEMS, INC.  
 1455 LINCOLN AVE.  
 HOLLAND, MI 49423  
 616.396.0919  
 616.396.0944  
 616.396.0944 FAX

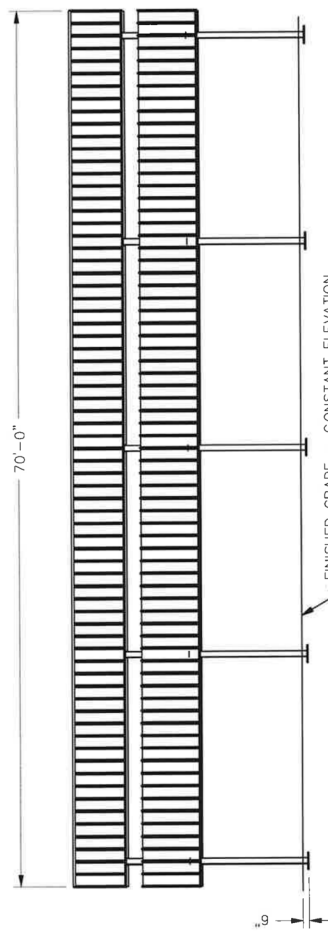
ELEVATION

DRAWN BY: \_\_\_\_\_  
 DTH \_\_\_\_\_  
 DATE: 7/24/2025  
 JOB NO.: 11318  
 REVISION: \_\_\_\_\_  
 A  
 BUILDING TYPE: R650X70M2C-P4  
 PROJECT NAME: ST. JOHNS NEIGHBORHOOD MEMORIAL PARK  
 FULTON, MI 48850

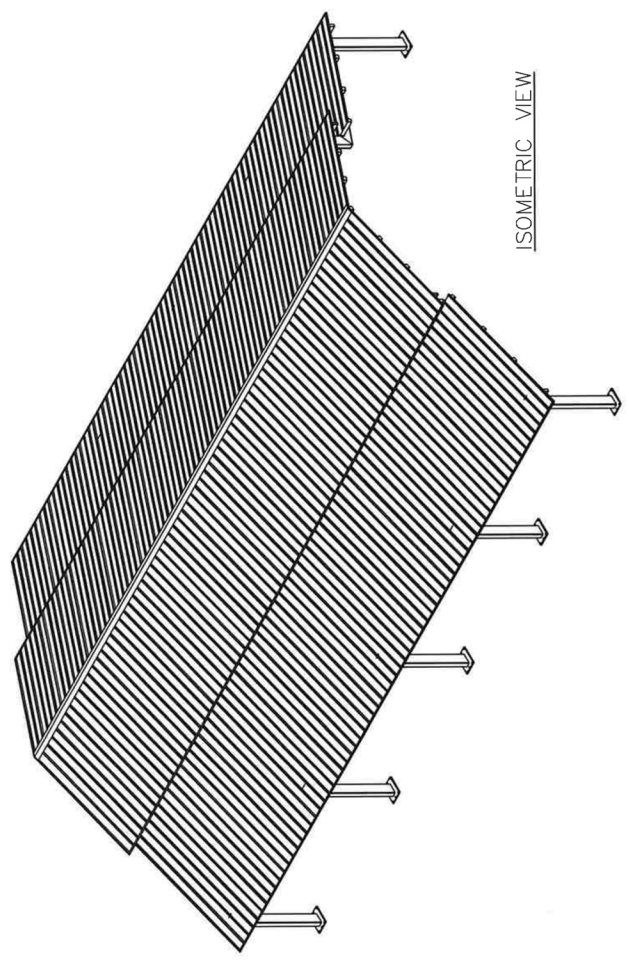
SHEET  
 2.0



FRONT VIEW



SIDE VIEW



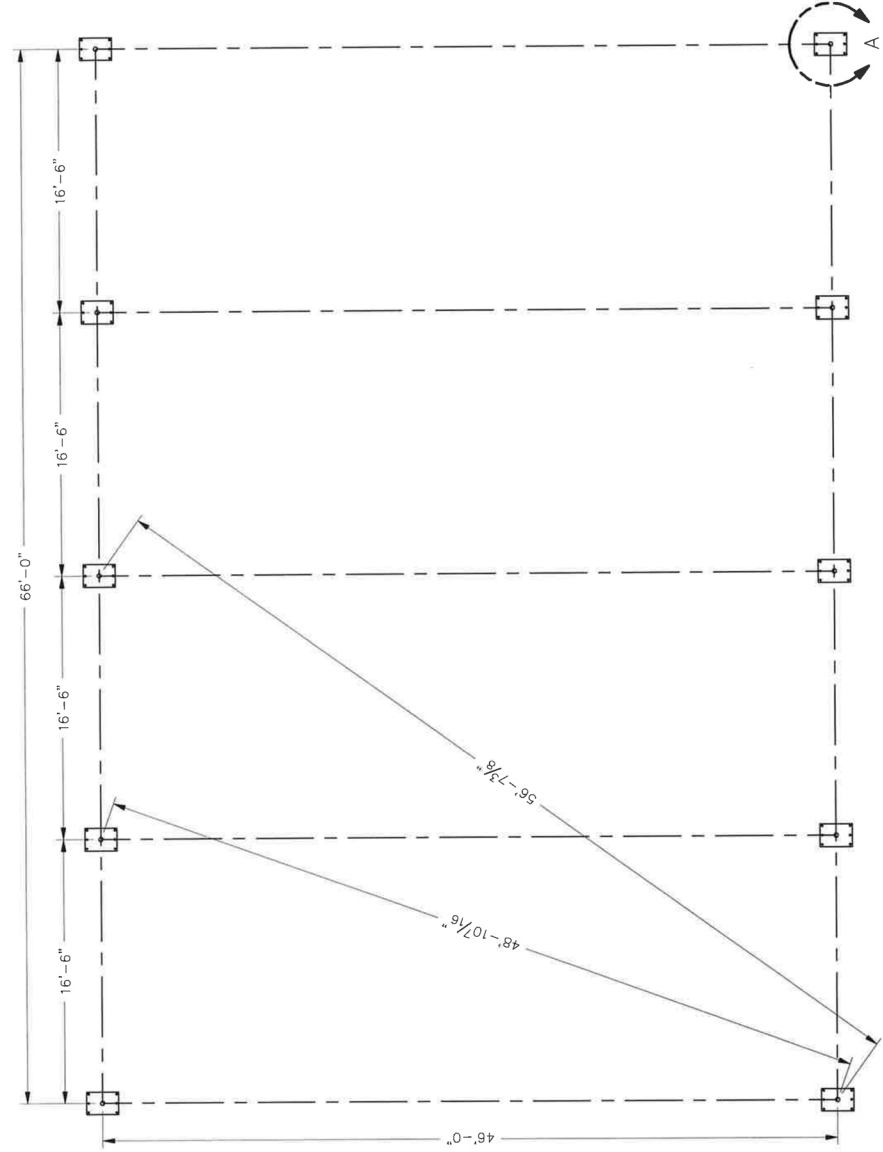
ISOMETRIC VIEW



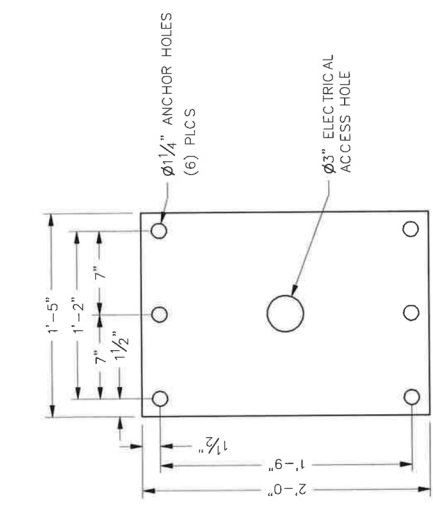
*7/28/25*  
 THIS SEAL, POTENTIALLY TO INCLUDE ANY ADDITIONAL INFORMATION, IS VALID ONLY IF THESE DRAWINGS, IN & SEAL, 2025, NOT BE REUSED OR REPRODUCED AS SUCH. PROJECT ENGINEER OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

PRINTED ON :

NOTE:  
 IT IS ESSENTIAL THAT ANCHOR BOLTS ARE PLACED ACCURATELY!  
 MEASUREMENTS SHOULD BE TAKEN BEFORE AND AFTER FOUNDATIONS  
 ARE POURED TO CONFIRM DIMENSIONS ARE MET AND COMPONENTS HAVE  
 NOT SHIFTED. ICON STRONGLY RECOMMENDS UTILIZING ANCHOR BOLT  
 TEMPLATES TO AID IN THIS PROCESS.



ANCHOR BOLT LAYOUT  
 FINISHED GRADE ASSUMED AT CONSTANT ELEVATION UNLESS NOTED OTHERWISE



DETAIL A  
 BASE PLATE MATERIAL  
 1 1/4" THICK GR50

THIS SEAL IS VALID ONLY TO THE MATERIALS AND EQUIPMENT SPECIFIED ON THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS A SUBSTITUTE FOR THE PROJECT DIRECTOR OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

**ICON**  
 Shelter Systems Inc  
 DISTINCTIVE STEEL SHEETING  
 SYSTEMS, INC.  
 1455 LINCOLN AVE.  
 HOLLAND MI, 49423  
 616.396.0910  
 800.248.0985  
 616.396.0944 FX

ANCHOR BOLT LAYOUT

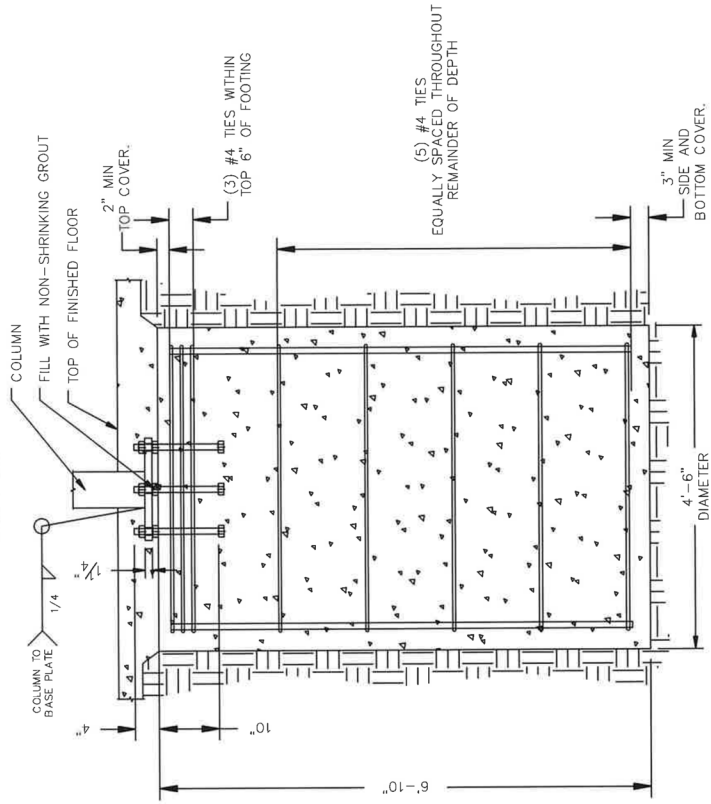
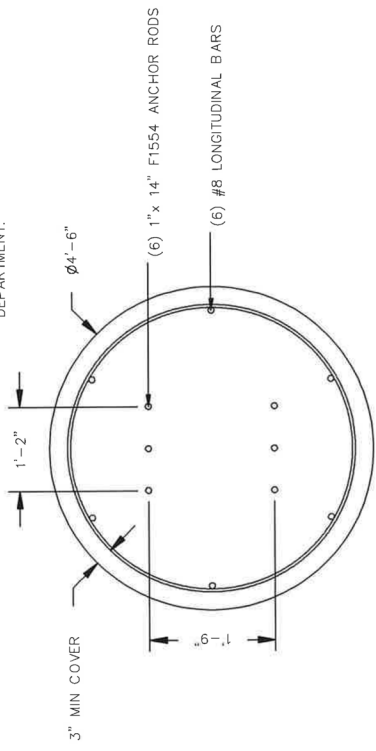
DRAWN BY:	
DTH	
DATE:	7/24/2025
JOB NO.:	11318
REVISION:	A
BUILDING TYPE:	RG50X70M2C-P4
PROJECT NAME:	ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FULTON MI 48505

SHEET  
 3.0

PRINTED ON :

NOTE:  
 IT IS ESSENTIAL THAT ANCHOR BOLTS ARE PLACED ACCURATELY. MEASUREMENTS SHOULD BE TAKEN BEFORE AND AFTER FOUNDATIONS ARE POURED TO CONFIRM DIMENSIONS ARE MET AND COMPONENTS HAVE NOT SHIFTED. ICON STRONGLY RECOMMENDS UTILIZING ANCHOR BOLT TEMPLATES TO AID IN THIS PROCESS.

CONCRETE STRENGTH  $F'_c = 4500$  PSI  
 REBAR GRADE  $F_y = 60$  KSI  
 SLAB IS REQUIRED. IF NO SLAB IS TO BE  
 INSTALLED, CONTACT THE ICON ENGINEERING  
 DEPARTMENT.



(5) #4 TIES  
 EQUALLY SPACED THROUGHOUT  
 REMAINDER OF DEPTH



*let it 7/28/25*  
 THIS SEAL REMAINS VALID TO THE MATERIALS AND METHODS SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS A REPRESENTATION OF THE PROJECT ENGINEER'S RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

**ICON**  
 Shelter Systems Inc  
 DISTINCTIVE STEEL SHELTERS  
 WWW.ICONSTEEL.COM  
 CORPORATION SHELLER  
 SYSTEMS, INC.  
 1465 LINCOLN AVE.  
 HOLLAND, MI 49423  
 616.396.0919  
 800.746.0945  
 616.396.0945 FAX

ANCHOR BOLT LAYOUT

DRAWN BY:	DTH
DATE:	7/24/2025
JOB NO.:	11318
REVISION:	A
BUILDING TYPE:	RG50X70M2C-P4
PROJECT NAME:	ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FLINT, MI 48505

SHEET  
**3.1**

PRINTED ON :

**ICON**  
 Shelter Systems Inc  
 DISTINCTIVE STEEL SHELTERS  
 FOR COMMERCIAL AND RESIDENTIAL  
 APPLICATIONS  
 COPYRIGHT © 2004, ICON SHELTER  
 SYSTEMS, INC.  
 1455 LINCOLN AVE.  
 HOLLAND MI, 49423  
 616.396.0919  
 616.396.0944 FAX

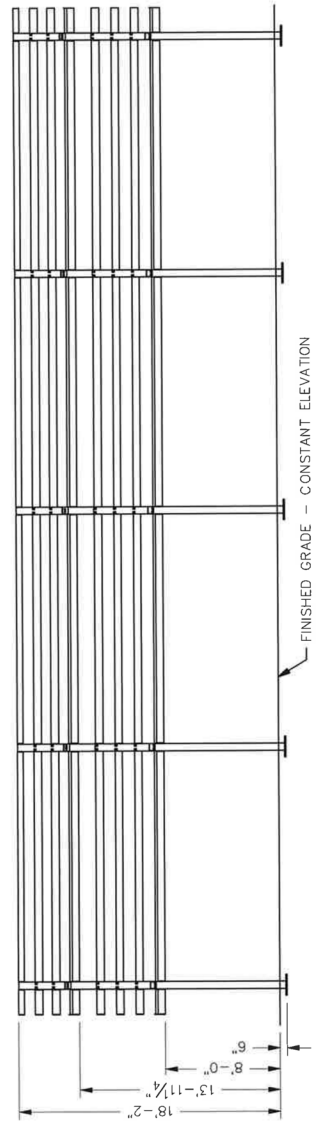
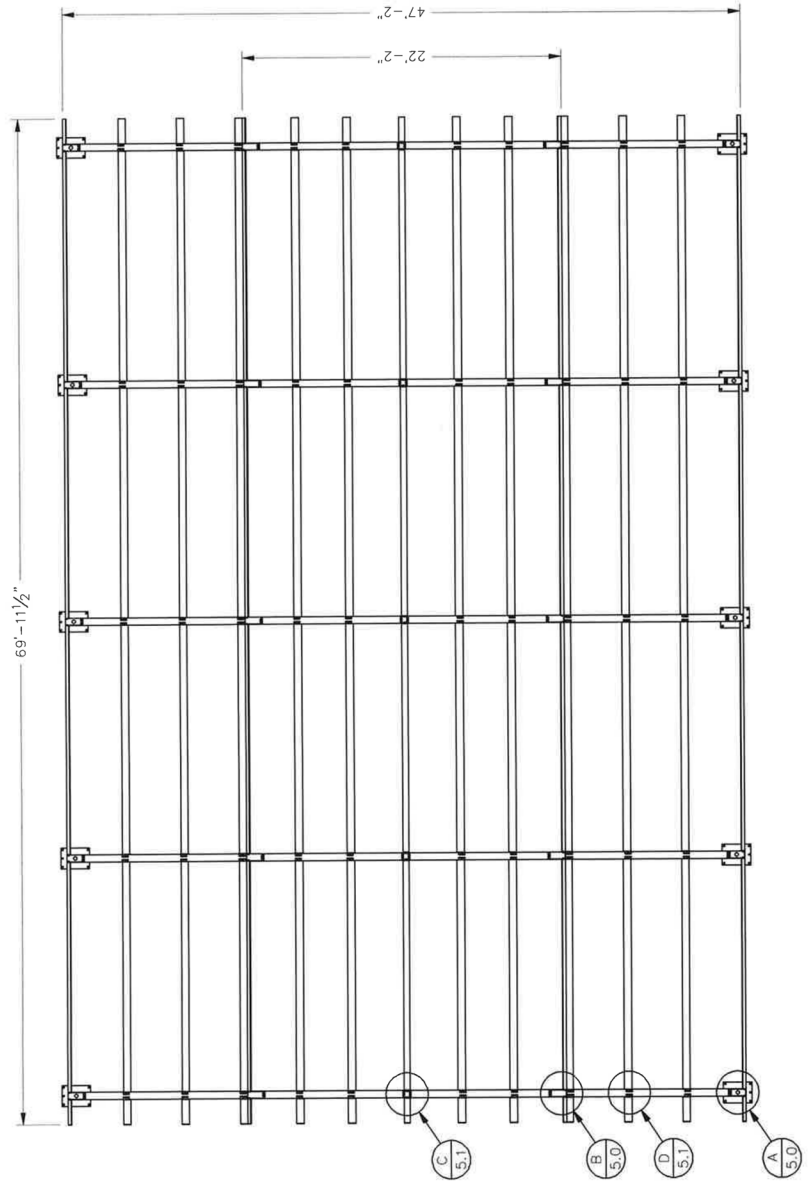
FRAME LAYOUT

DRAWN BY: \_\_\_\_\_  
 DTH \_\_\_\_\_  
 DATE: 7/24/2025  
 JOB NO.: 11318  
 REVISION: \_\_\_\_\_  
 A  
 BUILDING TYPE: R650X70M2C-P4  
 PROJECT NAME: ST. JOHNS NEIGHBORHOOD MEMORIAL PARK  
 FLINT, MI 48505

SHEET  
 4.0



*July 27, 2025*  
 THIS SEAL, PORTIANS ONLY TO THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS. IT IS SEAL 2025 NOT BEING AS - OR REPRESENT - THE PROJECT DESIGNER OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.



PRINTED ON :

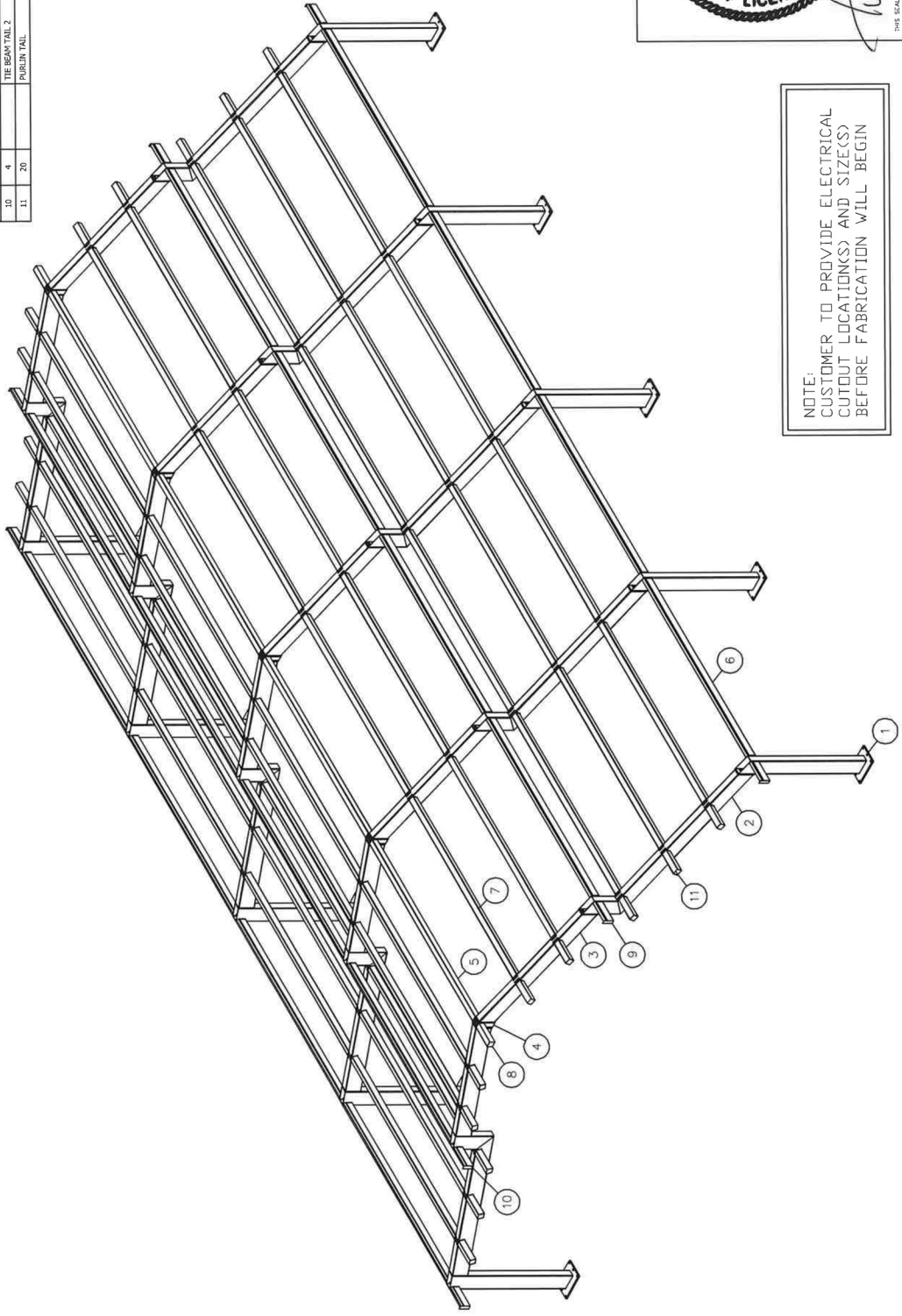
**ICON**  
**Shelter Systems Inc.**  
 DISTINGUISHIVE STEEL SHELTERS  
 WWW.ICONSHELTERS.COM  
 CORPORATION  
 14511 NICOLEY AVE.  
 HOLLAND, MI 49423  
 616.394.0919  
 800.746.0945  
 616.394.9415

FRAME LAYOUT

DRAWN BY:	DTH
DATE:	7/24/2025
JOB NO.:	11318
REVISION:	A
BUILDING TYPE:	RG50X70M2C-P4
PROJECT NAME:	ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FUNERAL HOME

SHEET  
**4.1**

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH	UNIT WEIGHT
1	10		COLUMN	HSS14X6X0.25		439 lb/miss
2	10		RAFTER RISER	HSS14X6X0.25		504 lb/miss
3	10		RAFTER	HSS14X6X0.25		351 lb/miss
4	5		CONNECTOR	HSS2X6X0.500		44 lb/miss
5	4		RIDGE BEAM	HSS2X6X0.1875		146 lb/miss
6	16		TIE BEAM	HSS2X6X0.125		145 lb/miss
7	40		PURLIN	HSS2X6X0.1875		151 lb/miss
8	2		RIDGE BEAM TAIL	HSS2X6X0.125		17 lb/miss
9	4		TIE BEAM TAIL 1	HSS2X6X0.125		18 lb/miss
10	4		TIE BEAM TAIL 2	HSS2X6X0.125		18 lb/miss
11	20		PURLIN TAIL	HSS2X6X0.125		15 lb/miss



NOTE:  
 CUSTOMER TO PROVIDE ELECTRICAL  
 CUTOFF LOCATIONS) AND SIZE(S)  
 BEFORE FABRICATION WILL BEGIN



*July 27, 2025*

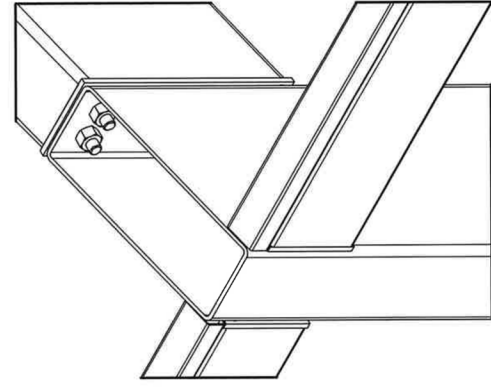
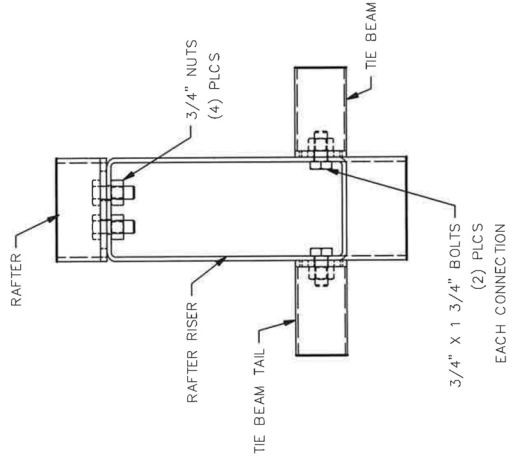
THIS SEAL PERMITS ONLY THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS OR REPRESENT THE PRODUCT ENGINEER OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

PRINTED ON :

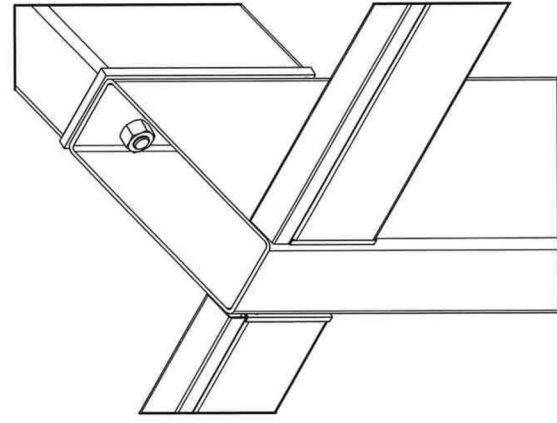
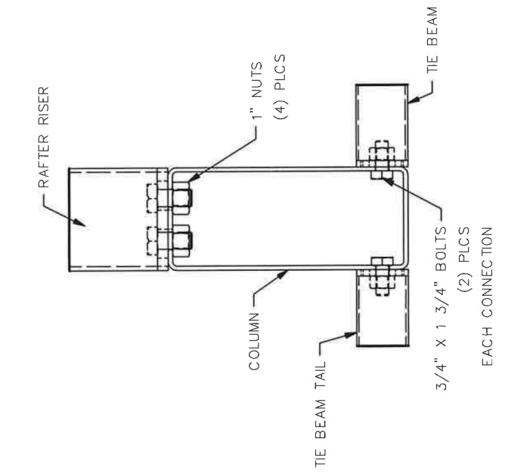
FRAME CONNECTIONS

DRAWN BY:	
DTH	
DATE:	7/24/2025
JOB NO.:	11318
REVISION:	A
BUILDING TYPE:	R650X70M2C-P4
PROJECT NAME:	ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FLINT, MI 48505

SHEET  
**5.0**



RAFTER AND TIE BEAM  
 CONNECTION @ RAFTER RISER



RAFTER RISER AND TIE BEAM  
 CONNECTION @ COLUMN

NOTE TO INSTALLERS:  
 WITH FACTORY POWDERCOATED  
 SHELTERS, PAINT EXPOSED  
 FASTENERS OF COMPRESSION RINGS,  
 ORNAMENTATION, KNIFE PLATES, ETC.  
 WITH PROVIDED TOUCH UP PAINT TO  
 PREVENT RUSTING OF FASTENERS

PAINT EXPOSED FASTENERS



*John T. 7/28/25*  
 THIS SEAL IS VALID ONLY TO THE MATERIALS AND INFORMATION SHOWN ON  
 THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS "OR RESEMBLE" THE  
 PRODUCT ENGINEER OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

PRINTED ON :

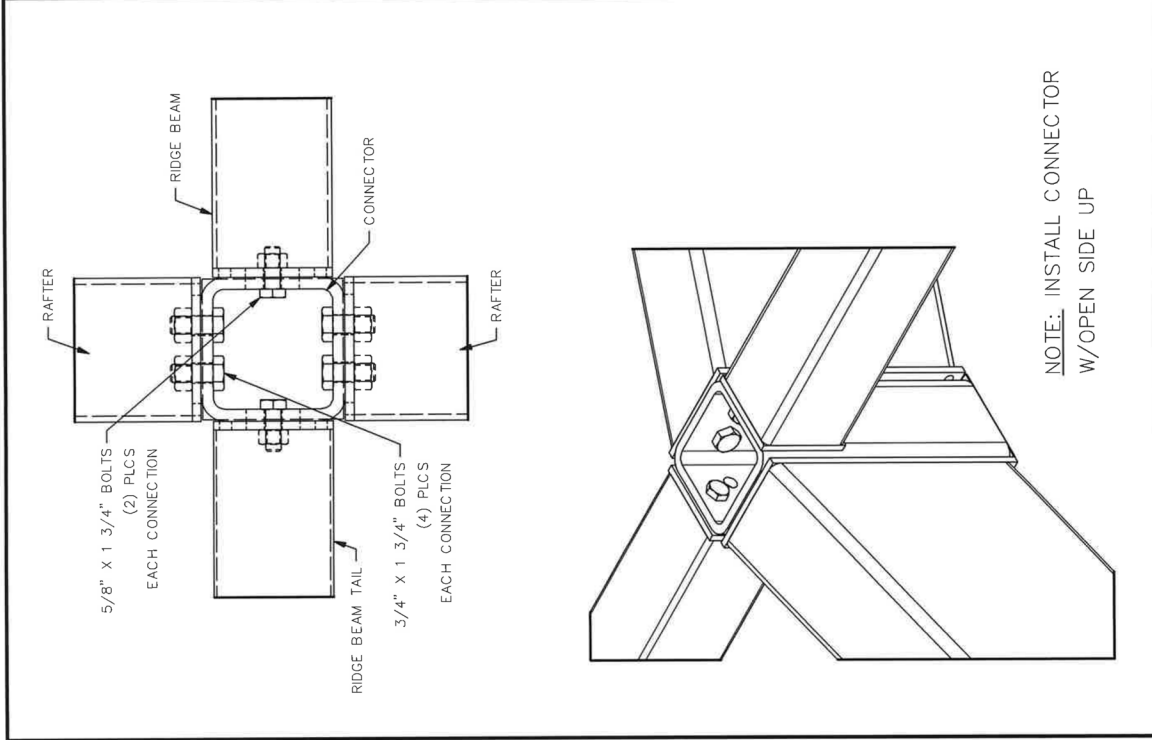
NOTE TO INSTALLERS:  
 WITH FACTORY POWDERCOATED SHELTERS, PAINT EXPOSED FASTENERS OF COMPRESSION RINGS, ORNAMENTATION, KNIFE PLATES, ETC. WITH PROVIDED TOUCH UP PAINT TO PREVENT RUSTING OF FASTENERS

PAINT EXPOSED FASTENERS



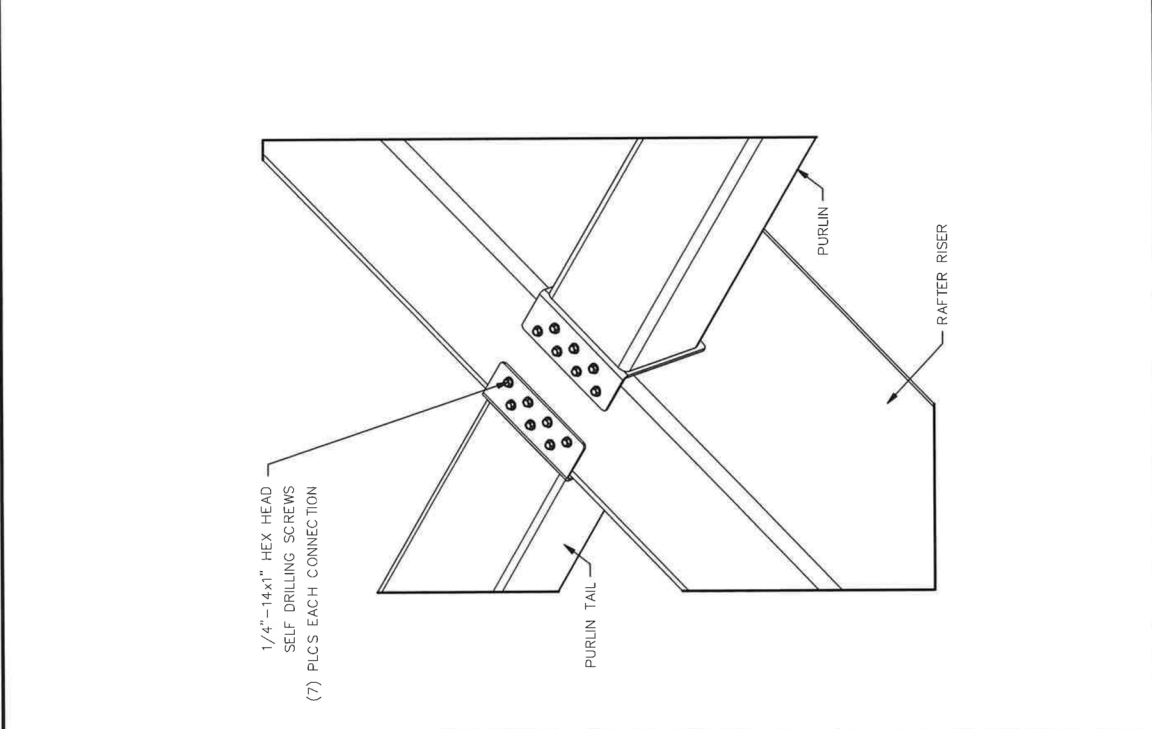
*Jeff J. J. J. J.*  
 THIS SEAL PERTAINS ONLY TO THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS. IT IS VOID IF NOT USED AS SHOWN OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. PRODUCT LIABILITY OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

PRINTED ON :



NOTE: INSTALL CONNECTOR W/OPEN SIDE UP

DETAIL C



DETAIL D  
 PURLIN CONNECTION  
 @ RAFTER RISER

DETAIL D

INSTALLED CORRECTLY



THE SEALING MATERIAL IS SLIGHTLY VISIBLE AROUND THE METAL WASHER

INSTALLED TOO TIGHT



THE SEALING MATERIAL IS DEFORMED BEYOND THE EDGE OF THE METAL WASHER

INSTALLED TOO LOOSE



THE SEALING MATERIAL IS NOT VISIBLE AROUND THE EDGE OF THE METAL WASHER

THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE METAL ROOFING SYSTEM. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS OR CODES. CHANGES TO THE DETAILS MAY BE REQUIRED DUE TO FIELD CONDITIONS.

THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL INSTALLATION INSTRUCTION MATERIAL BEFORE STARTING WORK.

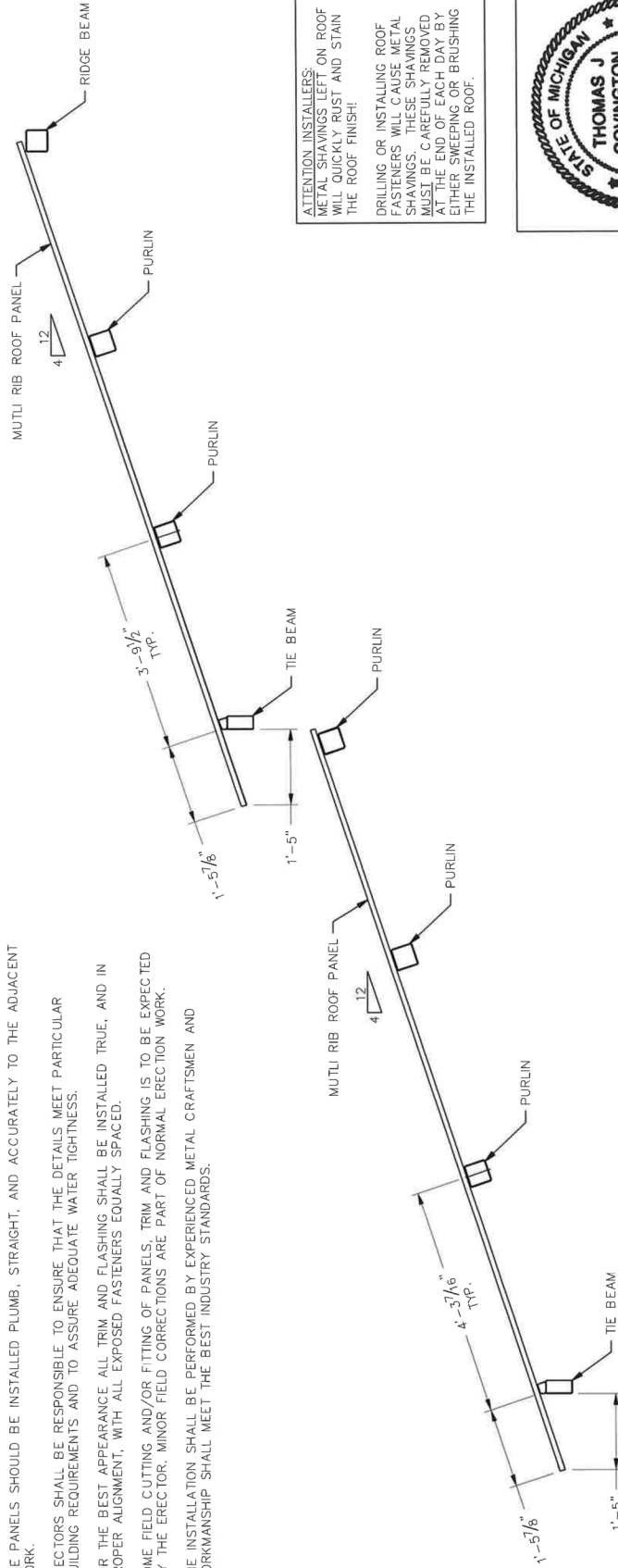
THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

ERECTORS SHALL BE RESPONSIBLE TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.

FOR THE BEST APPEARANCE ALL TRIM AND FLASHING SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ALL EXPOSED FASTENERS EQUALLY SPACED.

SOME FIELD CUTTING AND/OR FITTING OF PANELS, TRIM AND FLASHING IS TO BE EXPECTED BY THE ERECTOR. MINOR FIELD CORRECTIONS ARE PART OF NORMAL ERECTION WORK.

THE INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN AND WORKMANSHIP SHALL MEET THE BEST INDUSTRY STANDARDS.



ATTENTION INSTALLERS:  
 METAL SHAVINGS LEFT ON ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH!  
 DRILLING OR INSTALLING ROOF FASTENERS WILL CAUSE METAL SHAVINGS. THESE SHAVINGS MUST BE CAREFULLY REMOVED AT THE END OF EACH DAY BY EITHER SWEEPING OR BRUSHING THE INSTALLED ROOF.



THIS SEAL PERAINS ONLY TO THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS OR REPRESENT THE PRODUCT INTEGRITY OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.

PRINTED ON :

**ICON**  
 Shelter Systems Inc  
 DISTINCTIVE STEEL SHELTERS  
 WWW.ICONSHelters.COM  
 SHELFER SYSTEMS, INC.  
 1451 LINDEN AVE  
 HOLLAND, MI 49423  
 616.396.0919  
 800.748.0985  
 616.396.0915 FAX

ROOF LAYOUT

DRAWN BY:	DTH
DATE:	7/24/2025
JOB NO.:	11318
REVISION:	A
BUILDING TYPE:	RG50X70M2C-P4
PROJECT NAME:	ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FUNERAL HOME

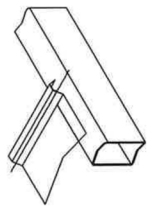
SHEET  
 6.0

**ICON**  
**Shelter Systems Inc**  
 DISTINCTIVE STEEL SHELTERS  
 WWW.ICONSTEEL.COM  
 CORP. 1455 LINCOLN AVE  
 HOLLAND MI 49423  
 616.396.0919  
 800.746.0985  
 616.396.0944 FX

1455 LINCOLN AVE  
 HOLLAND MI, 49423  
 616.396.0919  
 800.746.0985  
 616.396.0944 FX

ROOF LAYOUT

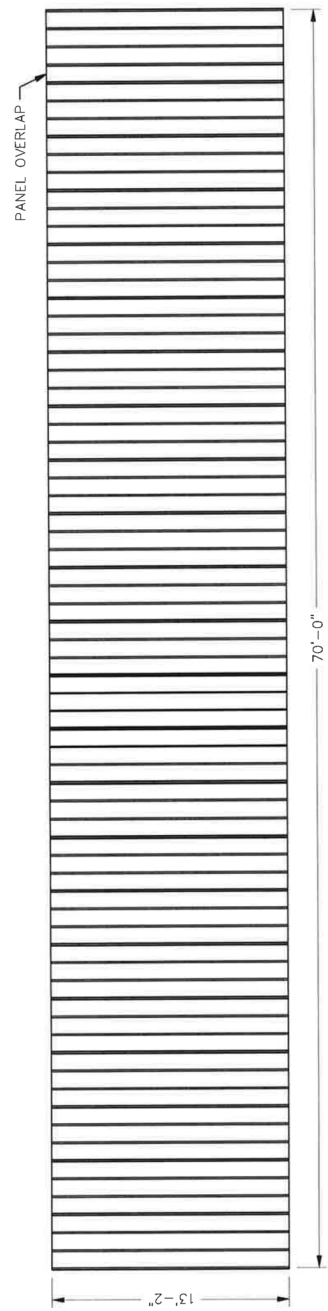
ATTENTION INSTALLERS:  
 METAL SHAVINGS LEFT ON ROOF  
 WILL QUICKLY RUST AND STAIN  
 THE ROOF FINISH.  
 DRILLING OR INSTALLING ROOF  
 FASTENERS WILL CAUSE METAL  
 SHAVINGS. THESE SHAVINGS  
 MUST BE CAREFULLY REMOVED  
 AT THE END OF EACH DAY BY  
 EITHER SWEEPING OR BRUSHING  
 THE INSTALLED ROOF.



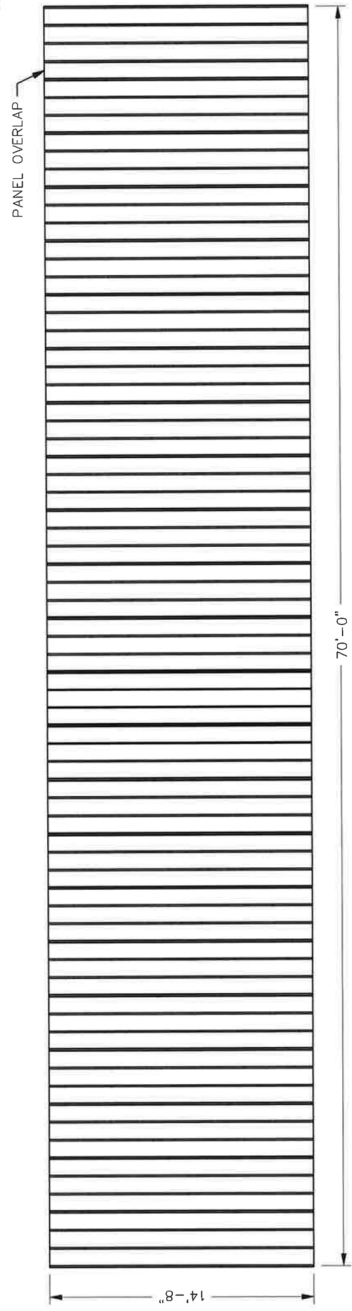
- STEPS FOR PROPER PANEL INSTALLATION:
1. MARK THE CENTER OF THE TIE BEAM AND COMPRESSION RING (OR PURLIN ON MULTI TIER BUILDINGS).
  2. FIND ONE OF THE LONGEST PANELS.
  3. ALIGN THAT PANEL WITH THE CENTER OF THE RIB AT THE CENTER LINE OF FRAME. (SEE ROOF LAYOUT FOR THE CORRECT RIB TO CENTER)
  4. INSTALL REMAINING PANELS WORKING OUT TOWARDS THE CORNERS.
  5. INSTALL ALL ROOF SECTIONS USING THIS METHOD.



*Thomas J. Covington*  
 THIS SEAL REMAINS ONLY TO THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS THIS SEAL DOES NOT SERVE AS OR REPRESENT THE PROJECT DIRECTOR OF RECORD AND SHALL NOT BE CONSIDERED AS SUCH.



MULTI RIB ROOF LAYOUT — UPPER



MULTI RIB ROOF LAYOUT — LOWER

BUILDING TYPE:  
 RG50X70M2C-P4  
 PROJECT NAME:  
 ST. JOHNS  
 NEIGHBORHOOD  
 MEMORIAL PARK  
 FLINT, MI  
 48505

SHEET  
**6.1**

PRINTED ON :



ROOF DETAILS

DWG: - RG50X70M2C-P4 - St. Johns Neighborhood Memorial Park Engineering\Info Drawings\Submittals\RI-000033.dwg

DRAWN BY: \_\_\_\_\_  
DTH \_\_\_\_\_  
DATE: 7/24/2025  
JOB NO.: 11318  
REVISION: A

BUILDING TYPE: RG50X70M2C-P4  
PROJECT NAME: ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FLINT, MI 48505

SHEET R1.0

PRINTED ON: 12/28/2017



ORDER OF INSTALLATION:  
\*STARTING W/ UPPER MOST TIER

PANEL END CAP 10' LONG  
SEE DETAIL M-G1

EAVE TRIM 10' LONG  
W/ WEEP HOLES  
SEE DETAIL M-E1

HIGH SIDE TRIM 10' LONG  
W/O WEEP HOLES  
SEE DETAIL M-V1

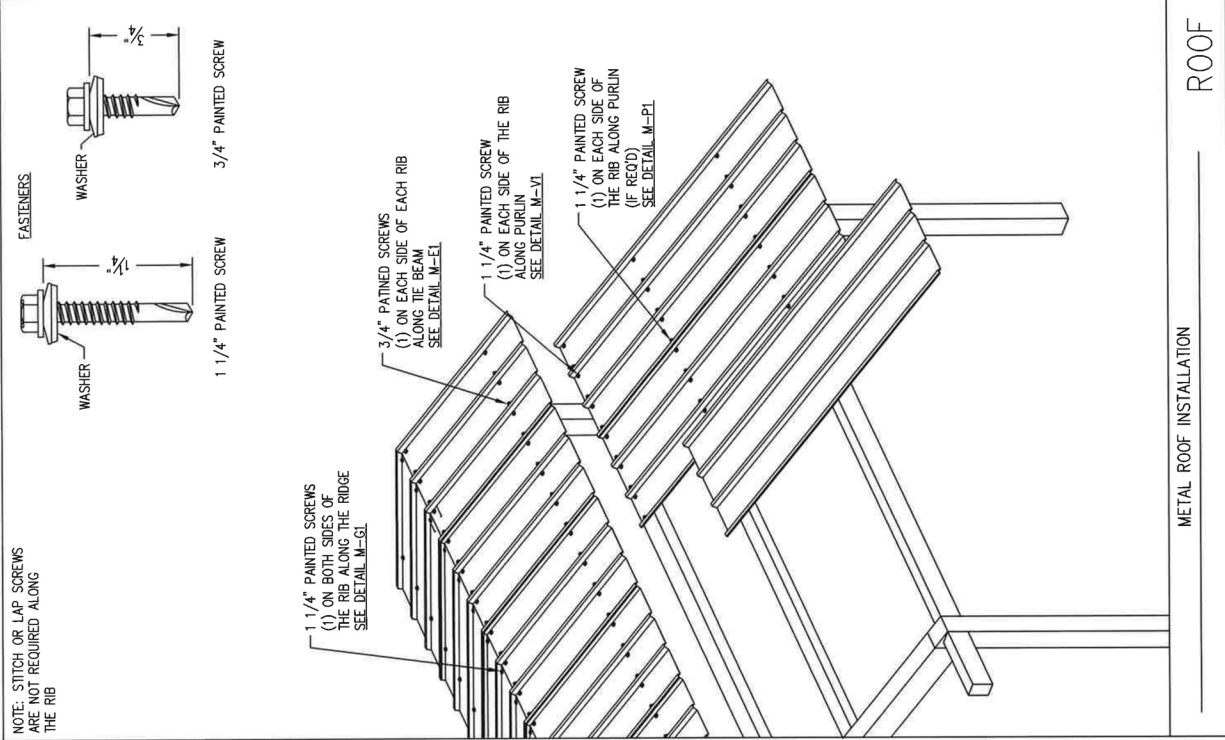
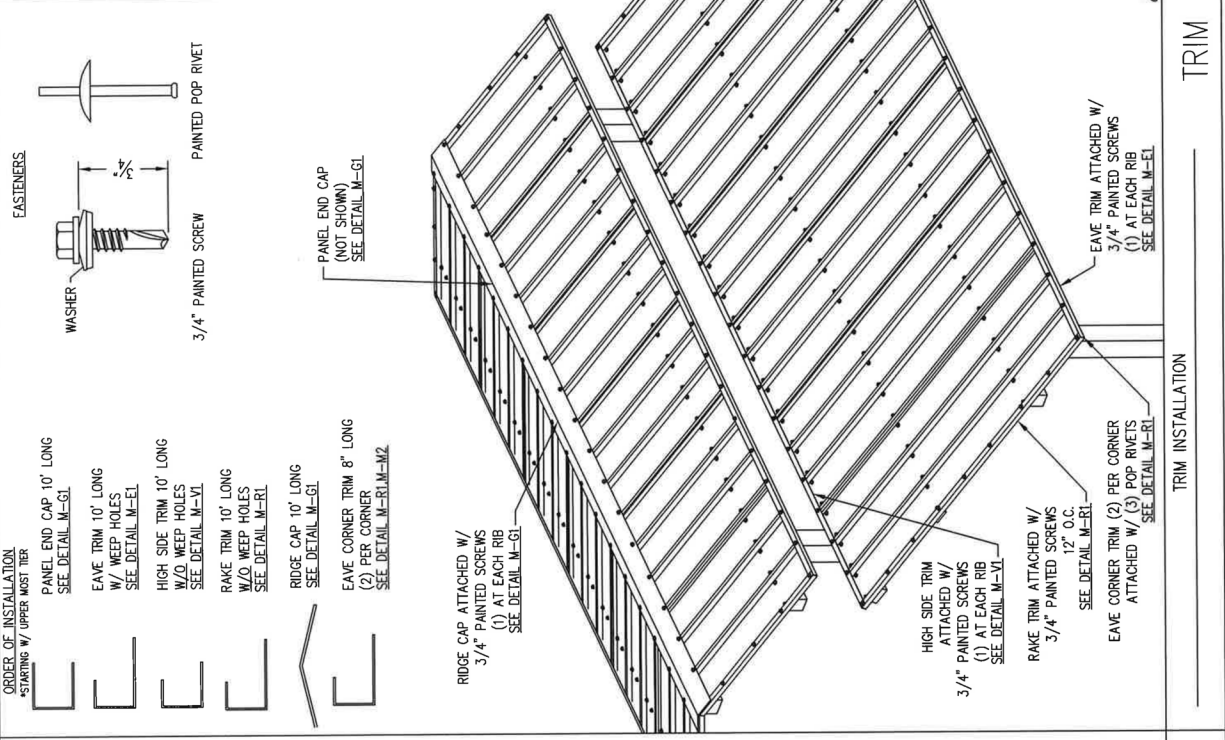
RAKE TRIM 10' LONG  
W/O WEEP HOLES  
SEE DETAIL M-E1

RIDGE CAP 10' LONG  
SEE DETAIL M-G1

EAVE CORNER TRIM 8" LONG  
(2) PER CORNER  
SEE DETAIL M-B1M-W2

TRIM INSTALLATION

TRIM



**ICON**  
 Shelter Systems Inc  
 DISTINCTIVE STEEL STRUCTURES  
 COPYRIGHT 2004, ICON SHELTER  
 SYSTEMS, INC.  
 1455 LINCOLN AVE.  
 HOLLAND MI, 49423  
 616.396.0919  
 800.748.0985  
 616.396.0944 FX

ROOF DETAILS

DRAWN BY: \_\_\_\_\_  
 DTH \_\_\_\_\_  
 DATE: 7/24/2025  
 JOB NO.: 11318  
 REVISION: A  
 BUILDING TYPE: RC50X70M2C-P4  
 PROJECT NAME: ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FLINT, MI 48505

SHEET R11

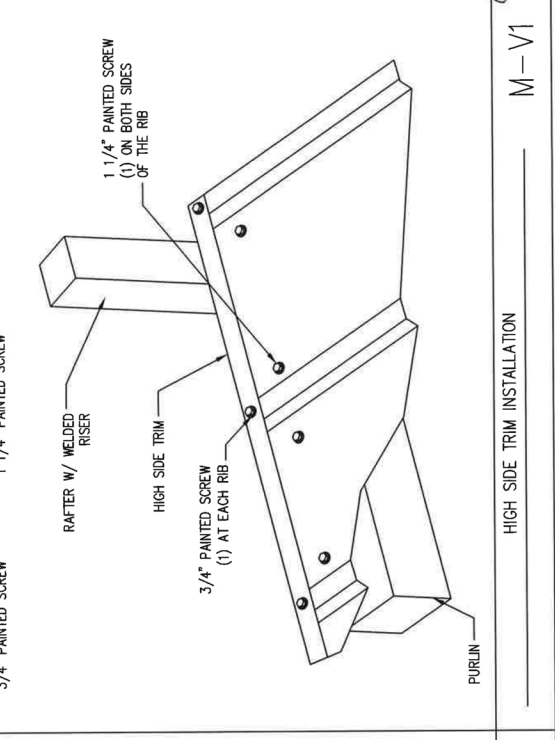
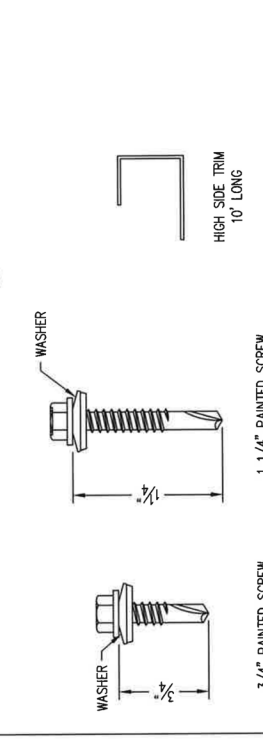
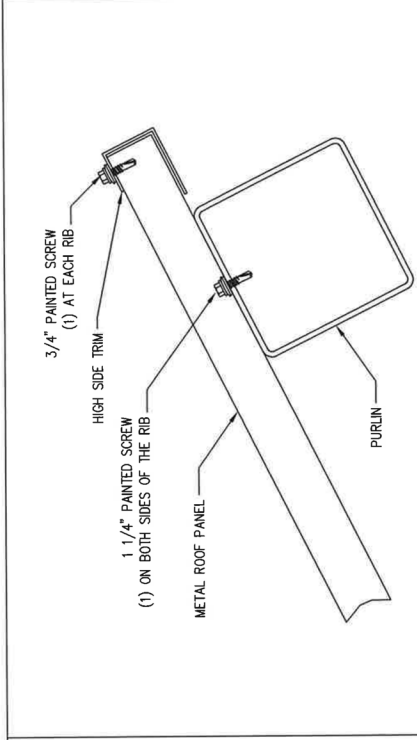
DWG - RG50X70M2C-P4 - St. Johns Neighborhood Memorial Park \Engineering\Info\Drawings\Submittals\RI~000033.dwg



*See it 7/28/25*

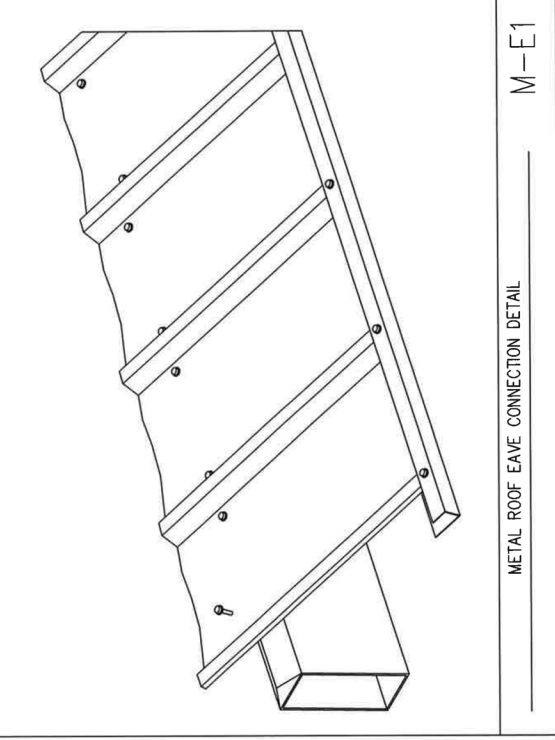
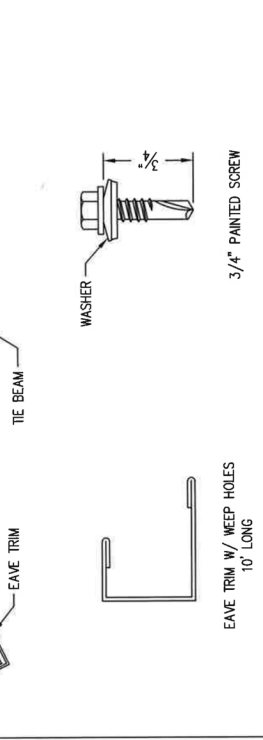
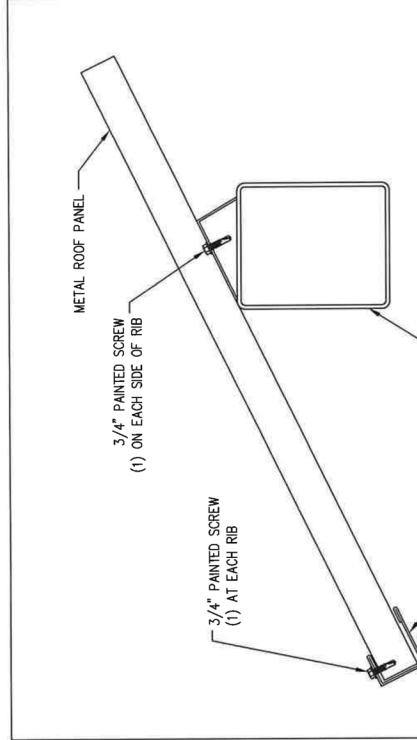
THIS SEAL IS VALID ONLY FOR THE MATERIALS AND REVISIONS SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT GUARANTEE THE QUALITY OF THE WORK. THIS SEAL SHALL NOT BE REPRODUCED OR COPIED.

PRINTED ON: 12/28/2017



M-VI

HIGH SIDE TRIM INSTALLATION



M-E1

METAL ROOF EAVE CONNECTION DETAIL

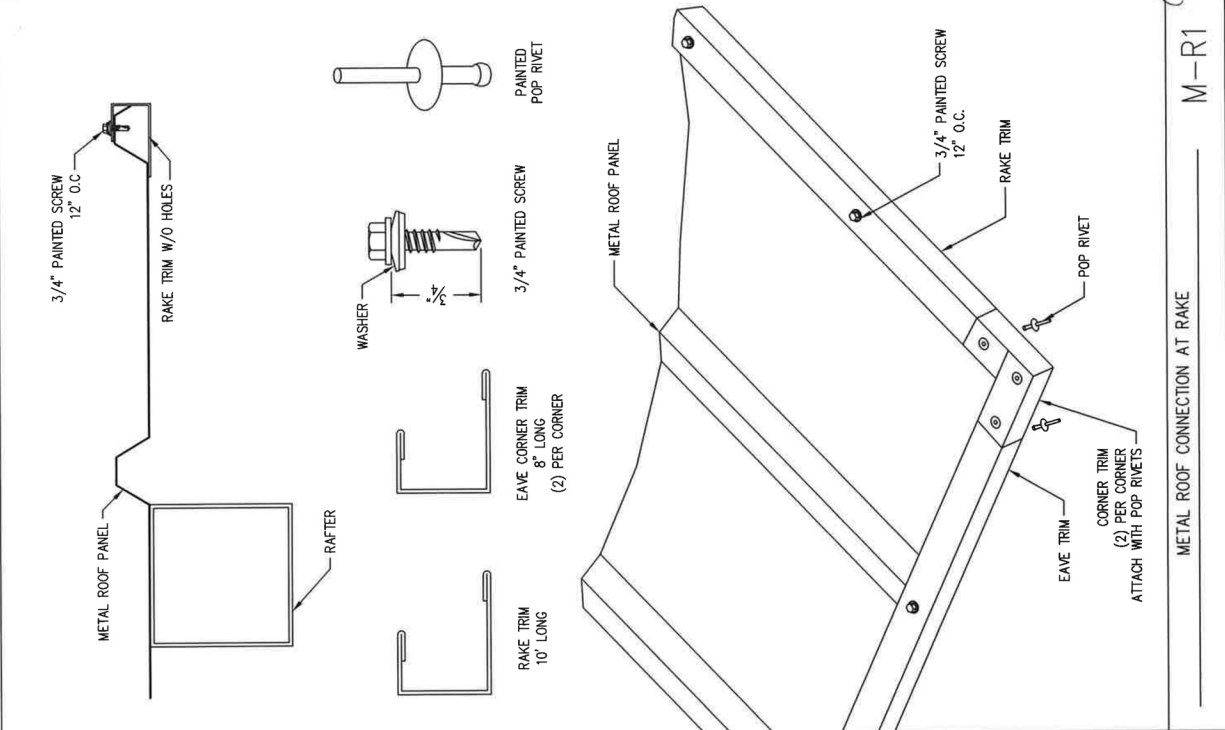
ROOF DETAILS

DRAWN BY:	DTH
DATE:	7/24/2025
JOB NO.:	11318
REVISION:	A
BUILDING TYPE:	RG50X70M2C-P4
PROJECT NAME:	ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FLINT MI 48505

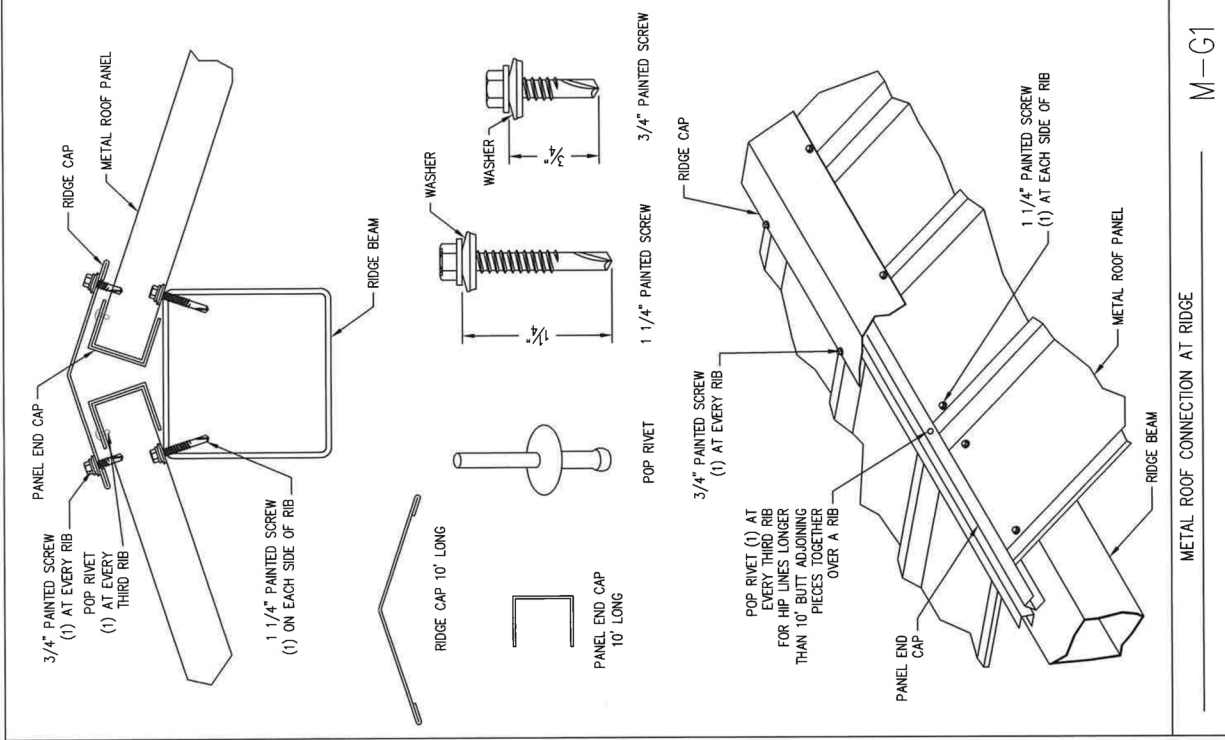
SHEET  
 R1.2  
 PRINTED ON: 12/28/2017



THE SEAL IS VALID ONLY IF THE MATERIALS AND METHODS ARE IDENTICAL TO THOSE SHOWN ON THESE DRAWINGS. THE SEAL DOES NOT GUARANTEE THE QUALITY OF THE WORK. THE SEAL DOES NOT GUARANTEE THE ACCURACY OF THE DRAWINGS.



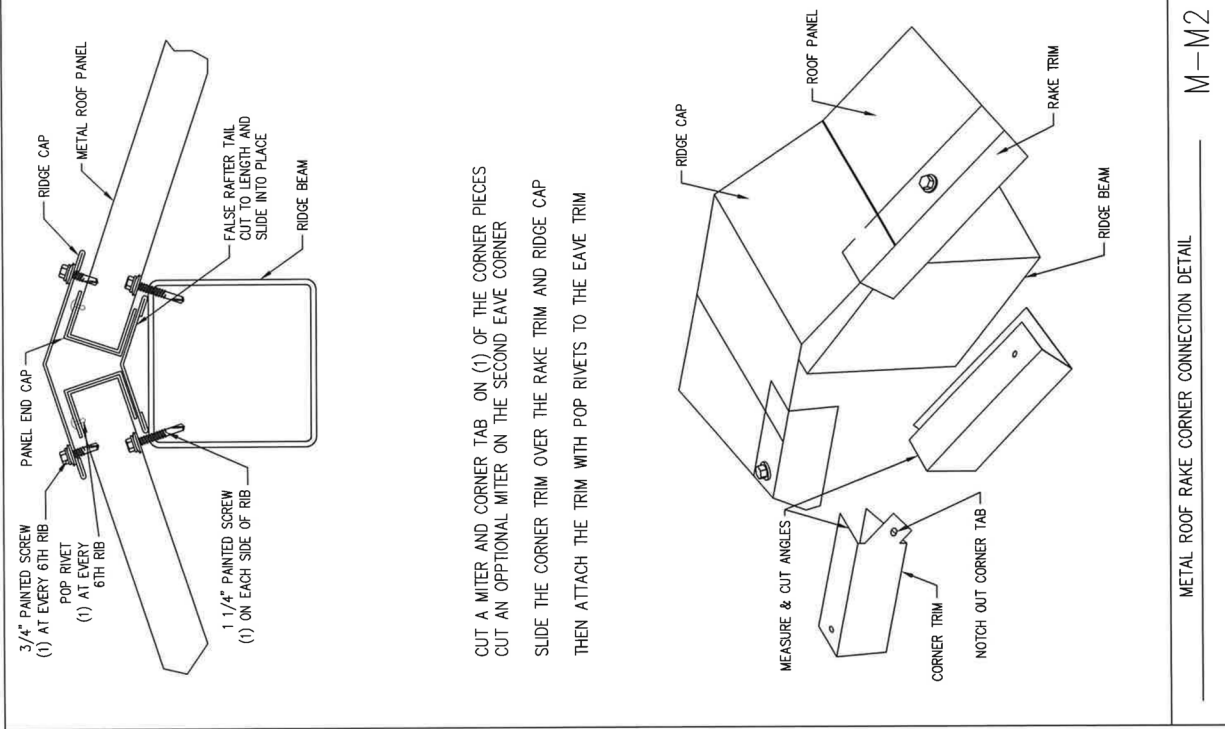
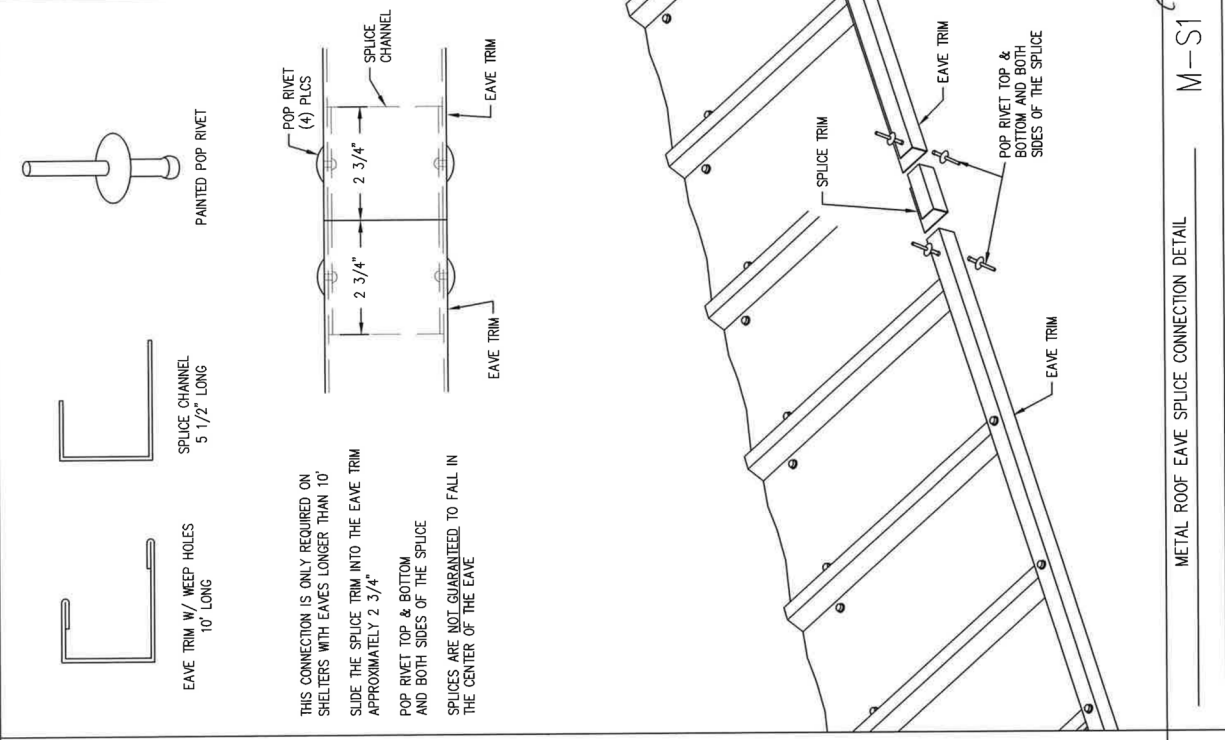
M-R1



M-G1

METAL ROOF CONNECTION AT RIDGE

METAL ROOF CONNECTION AT RAKE



M-S1

METAL ROOF EAVE SPICE CONNECTION DETAIL

M-M2

METAL ROOF RAKE CORNER CONNECTION DETAIL

**ICON**  
**Shelter Systems Inc**  
 DISTINCTIVE STEEL SHELTERS  
 AN IRONWORKS COMPANY  
 COPYRIGHT 2004, ICON SHELTER  
 SYSTEMS, INC.  
 1455 LINCOLN AVE  
 HOLLAND MI, 49423  
 616.396.0919  
 616.396.0944 FX

ROOF DETAILS

DRAWN BY: \_\_\_\_\_  
 DTH \_\_\_\_\_  
 DATE: 7/24/2025  
 JOB NO.: 11318  
 REVISION: A

BUILDING TYPE: RG50X70M2C-P4  
 PROJECT NAME: ST. JOHNS NEIGHBORHOOD MEMORIAL PARK FLINT, MI 48505

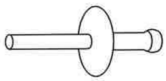
SHEET

R14



*Let it 7/28/25*  
 THIS SEAL APPLIES ONLY TO THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT SIGNIFY THAT THE DRAWING OR THE PROJECT SHALL BE GUARANTEED BY THE SEAL.

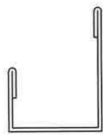
PRINTED ON: 12/28/2017



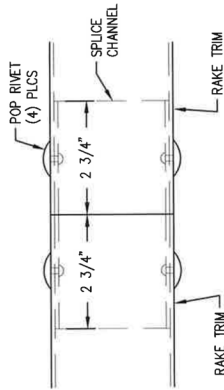
PAINTED POP RIVET



SPLICE CHANNEL  
5 1/2" LONG

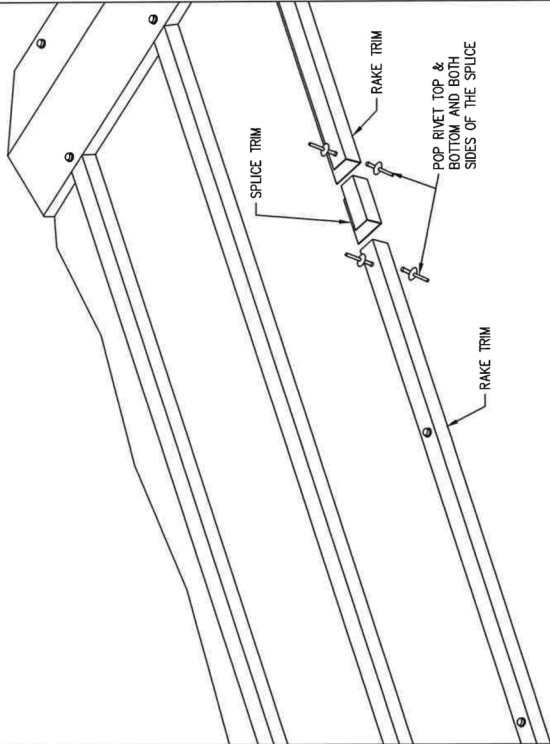


RAKE TRIM W/O WEEP HOLES  
10" LONG



THIS CONNECTION IS ONLY REQUIRED ON SHELTERS WITH RAKES LONGER THAN 10'. SLIDE THE SPLICE TRIM INTO THE RAKE TRIM APPROXIMATELY 2 3/4"

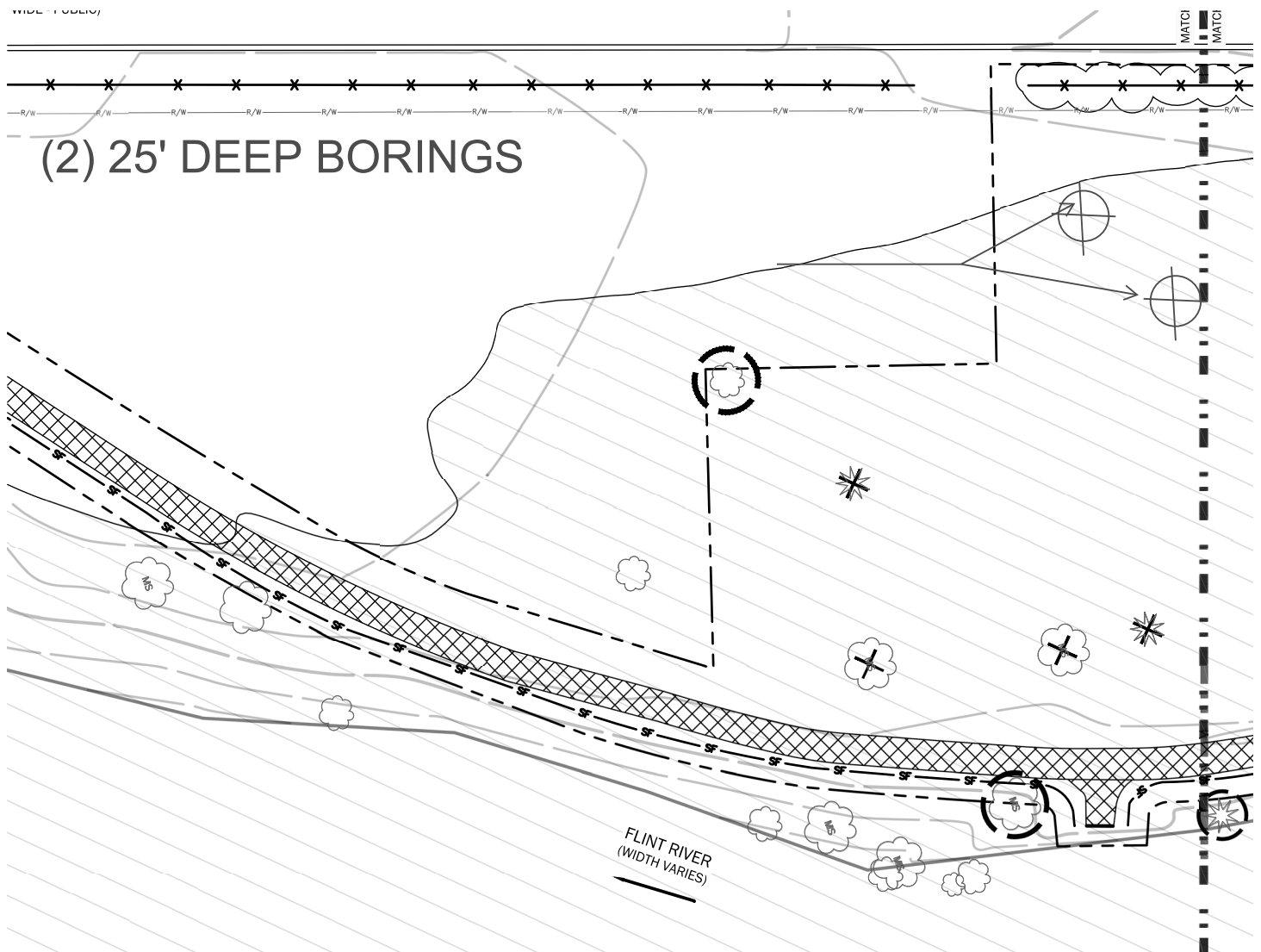
POP RIVET TOP & BOTTOM AND BOTH SIDES OF THE SPLICE SPLICES ARE NOT GUARANTEED TO FALL IN THE CENTER OF THE LEAVE



M-S2

METAL ROOF RAKE SPLICE CONNECTION DETAIL

# Soil; Boring Location



Project Name: Proposed St. John Memorial Trail Pavillon

Project Location: 3400 West Memorial Drive  
Flint, Michigan 48505

G2 Project No. 260165



Soil Boring No. B-1  
CONSULTING GROUP

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (15 inches)	1.3						
		Fill: Loose Brown Gravelly Sand with trace silt and gravel	3.0	S-1	4 5 5	10			
5		Fill: Very Loose Black Silty Sand with trace gravel and organic matter (Organic Matter Content = 1.6%)	6.0	S-2	2 1 2	3	8.3		
		Fill: Very Loose Black and Brown Silty Sand with trace gravel and organic matter (Organic Matter Content = 6.9%)	9.5	S-3	4 2 1	3	44.3		
10		Medium Brown and Gray Silty Clay with trace sand and gravel	10	S-4	2 2 2	4	20.2		1500*
		Very Loose Gray Silty Sand with trace gravel	15	S-5	0 1 2	3			
		Hard Gray Sandy Clay with trace silt and gravel	17.5	S-6	10 15 17	32	11.2		9000*
25		End of Boring @ 25 ft	25.0	S-7	8 39 50/5"	---	7.8		9000*
30			30						

Total Depth: 25 ft  
Drilling Date: March 24, 2026  
Inspector:  
Contractor: Triple R Drilling  
Driller: R. Rau

Drilling Method:  
2-1/4 inch inside diameter hollow-stem augers

Water Level Observations:  
13 feet during; 11 feet upon completion

Notes:  
\* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:  
Auger cuttings

Figure No. 1

Project Name: Proposed St. John Memorial Trail Pavillon

Project Location: 3400 West Memorial Drive  
Flint, Michigan 48505

G2 Project No. 260165



Soil Boring No. B-2

CONSULTING GROUP

SUBSURFACE PROFILE			SOIL SAMPLE DATA						
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Dark Brown Silty Sand (12 inches)	1.0						
		Fill: Medium Compact Dark Brown Silty Sand with trace gravel and organic matter (Organic Matter Content = 4.2%)	3.0	S-1	12 13 8	21	8.1		
5		Fill: Very Loose Black and Brown Silty Sand with trace gravel	5.5	S-2	2 1 2	3			
		Fill: Medium Brown and Dark Brown Silty Clay with trace sand, gravel, and organic matter (Organic Matter Content = 2.6%)	8.0	S-3	2 1 3	4	22.4		1500*
10		Fill: Loose Dark Brown Silty Sand with trace gravel, occasional clay seams	10	S-4	2 2 3	5			
		Very Loose Gray Silty Sand with trace gravel	12.0						
15			15	S-5	2 1 1	2			
			16.5						
20		Hard Gray Sandy Clay with trace silt and gravel	20	S-6	13 15 16	31	10.4		9000*
			25.0						
25			25	S-7	7 12 20	32	8.6		9000*
		End of Boring @ 25 ft							
30			30						

Total Depth: 25 ft  
Drilling Date: March 24, 2026

Inspector:  
Contractor: Triple R Drilling  
Driller: R. Rau

Drilling Method:  
2-1/4 inch inside diameter hollow-stem augers

Water Level Observations:  
12 feet during; 11 feet upon completion

Notes:  
Borehole collapsed at 16 ft after auger removal  
\* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:  
Auger cuttings

Figure No. 2