



MIDLAND
COUNTY ROAD COMMISSION
2334 N. MERIDIAN ROAD
SANFORD, MI 48657

Phone (989) 687-9060
Fax (989) 687-9121
www.midlandroads.com

Request for Bid

ORR ROAD BRIDGE RECONSTRUCTION OVER THE WEEKS DRAIN AND GREY ROAD BRIDGE RECONSTRUCTION OVER THE BULLOCK CREEK

Deadline for Submittal: July 25, 2018 at 10:00 a.m.

Project Description:

The following bid covers all associated costs included in the construction of galvanized tub girders with precast deck panels and GRS abutment seats as described within these bid documents.

Construction may begin within 5 days of award notification. All work including restoration and clean-up must be completed by November 1, 2018.

Manufacture and delivery of Prefabricated Superstructure 55' 6" (galvanized tub girders with attached deck, backwall, tapered precast bearing slab, elastomeric bearings, and materials to cast the keyway joint, and delivery of the Beams and materials). Delivery of the beams will be stacked in grass area southwest of the existing bridge on Orr Road at Weeks Drain, located in section 36 of Ingersoll Township, Midland County. Remaining material will be to Midland County Road Commission Ingersoll facility located at 2100 E. Brooks Road, Ingersoll Township, Midland County.

Manufacture and delivery of Prefabricated Superstructure 50' 0" (galvanized tub girders with attached deck, backwall, tapered precast bearing slab, elastomeric bearings, and materials to cast the keyway joint). Delivery of the beams will be stacked in area designated at the Midland County Road Commission Ingersoll facility located at 2100 E. Brooks Road, Ingersoll Township, Midland County.

Progress Clause:

Work may begin with 5 days of notice of award. In no case shall any work be commenced prior to receipt of formal notice of award by the Road Commission.

All contract work will be paid based on the below schedule:

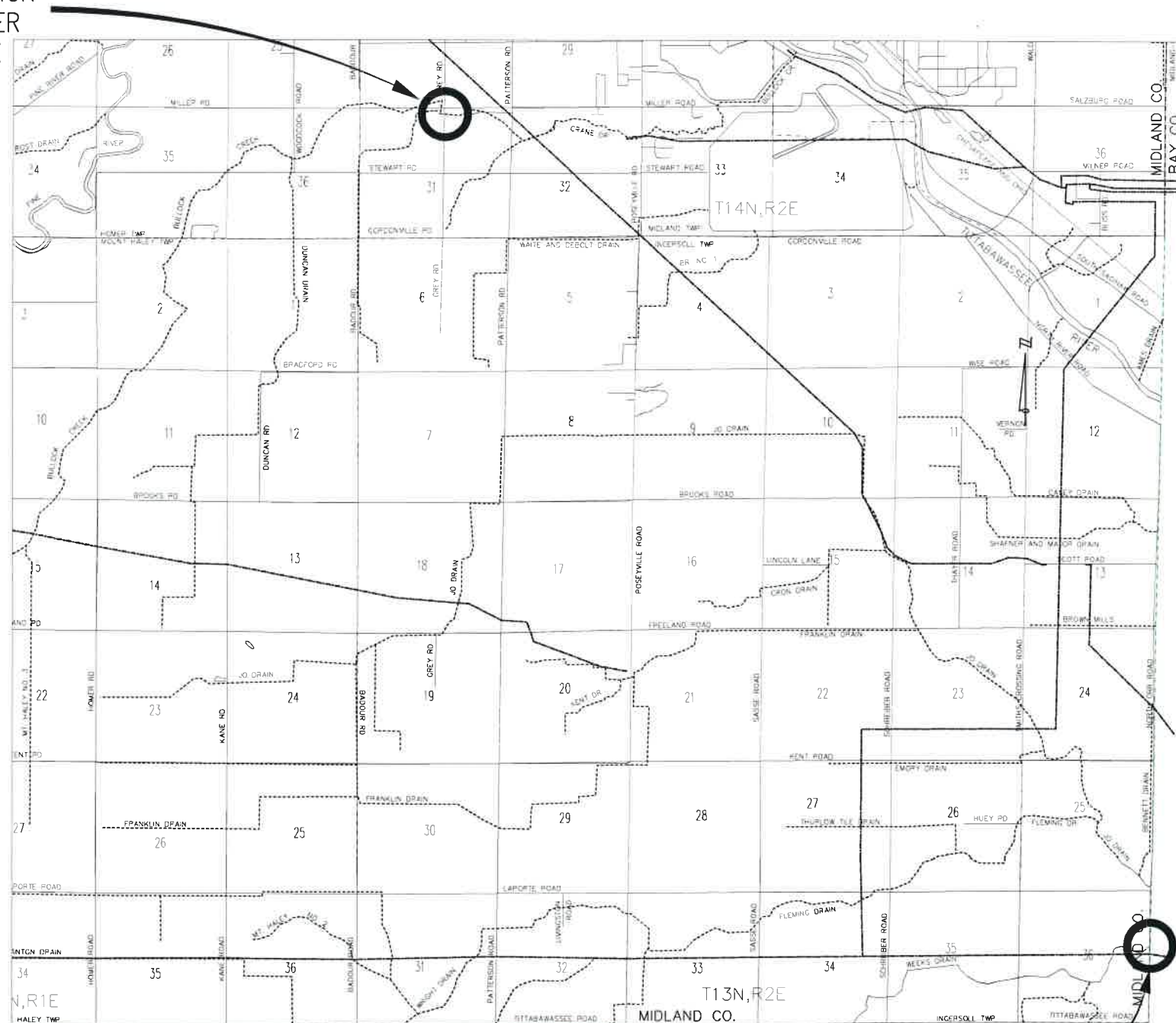
Initial Payment to contractor 50% of award amount not to exceed \$120,000 for Grey Road Bridge and not to exceed \$200,000 for Orr Road Bridge.

Final payment to contractor upon delivery of beams and final inspection.

MIDLAND COUNTY ROAD COMMISSION
MIDLAND COUNTY, MICHIGAN
ORR ROAD OVER WEEKS DRAIN
&
GREY ROAD OVER BULLOCK CREEK
SUPERSTRUCTURE SUPPLY

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	ORR ROAD OVER WEEKS DRAIN
3	GREY ROAD OVER BULLOCK CREEK

PROJECT LOCATION
GREY ROAD OVER
BULLOCK CREEK



LOCATION MAP
N.T.S.

PROJECT LOCATION
ORR ROAD OVER
WEEKS DRAIN

GENERAL PROVISIONS

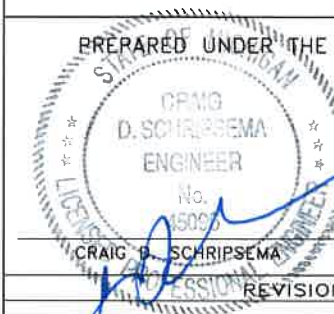
THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE PROPOSAL AND ACCOMPANYING SPECIFICATIONS FOR THIS PROJECT INCLUDING THE 2012 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS DATED 8-28-08.

CONTRACT FOR:
DESIGN, MANUFACTURE, AND DELIVER PREFABRICATED GALVANIZED
PRESS-BRAKE-FORMED, STEEL TUB GIRDER BRIDGE SUPER STRUCTURE.



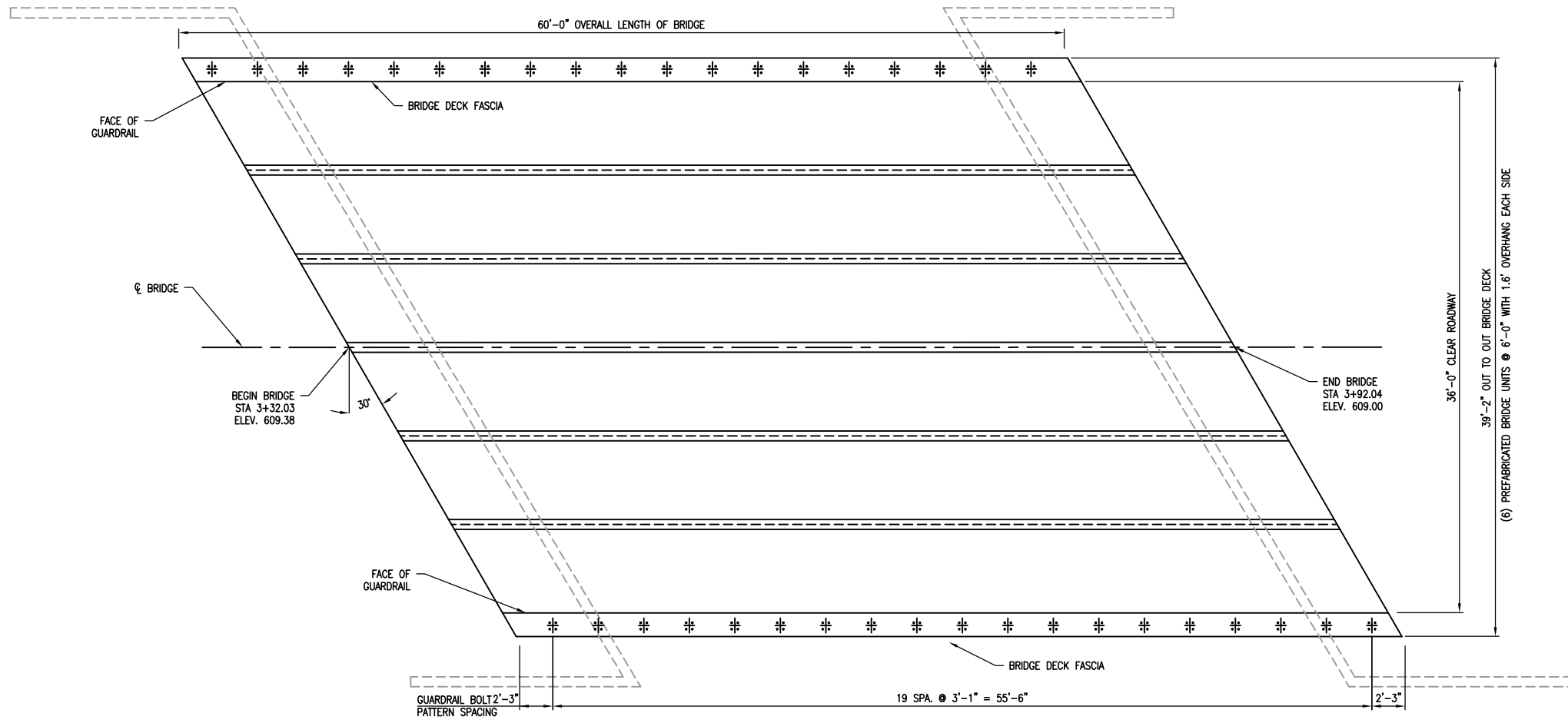
Advancing Communities
415 E Main St | Midland, MI 48640
P (989) 956-2020

PREPARED UNDER THE SUPERVISION OF:

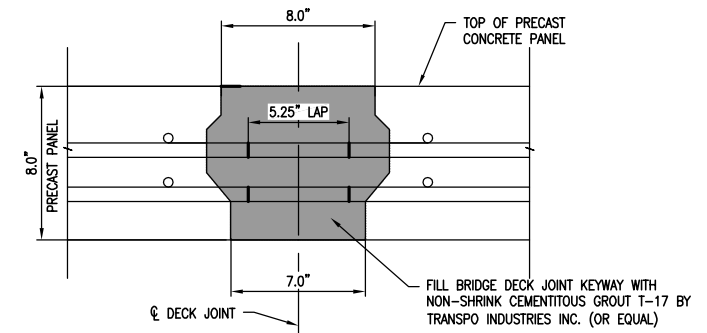


45096
Registration No.
7/9/18
Date

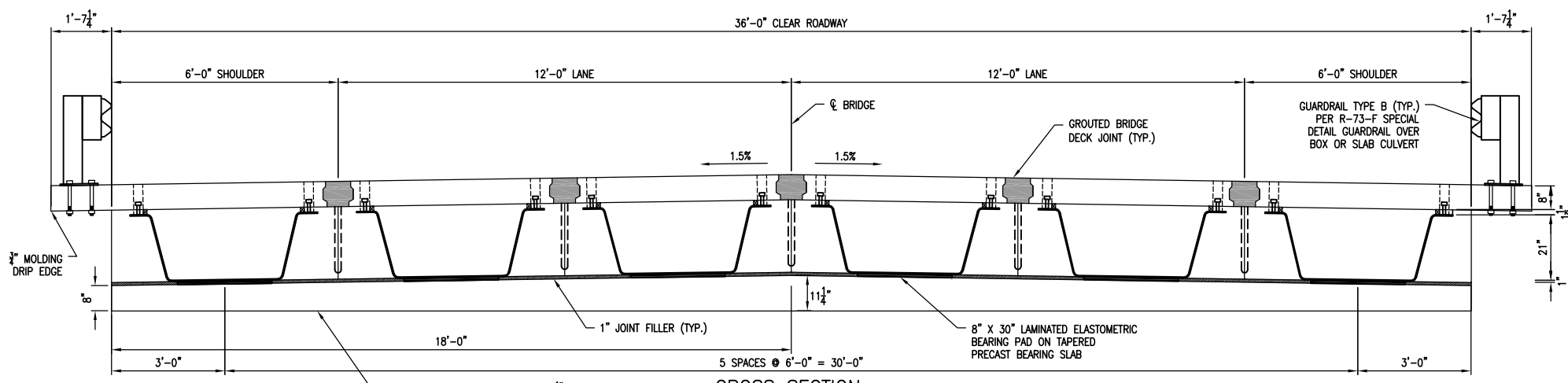
PROJECT NO.	SHEET NO.
5025-18-0020	1 OF 3



PLAN VIEW OF PREFABRICATED BRIDGE
 1" = 5'

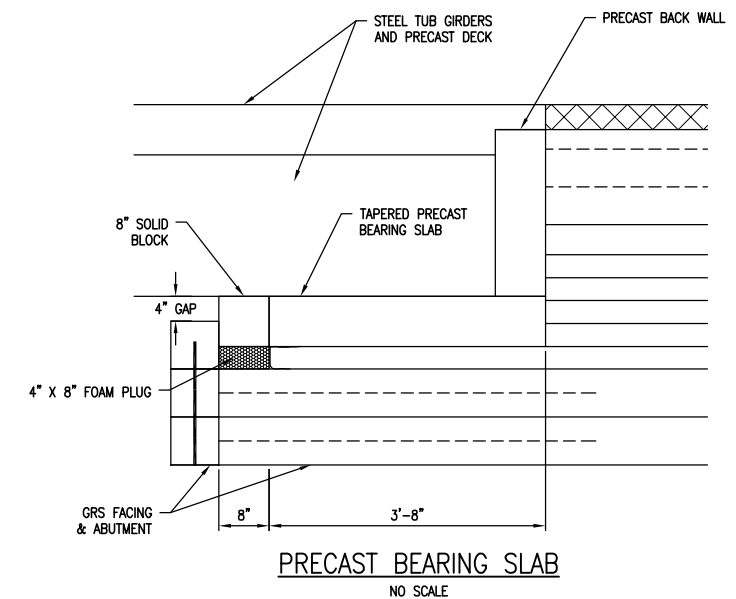


BRIDGE DECK JOINT DETAIL - 8" PANEL
 (THROUGH C OF BRIDGE DECK JOINT TYP.)



CROSS SECTION
 1" = 2'

PROVIDE PRECAST BEARING SLAB 11 1/4" THICK AT C OF TAPERED TO 8" THICK @ 18" FROM C. SLAB CAN BE FABRICATED IN SECTIONS.



PRECAST BEARING SLAB
 NO SCALE

- NOTES:
- 1) DESIGN LOADING HL-93 MODIFIED
 - 2) DESIGN SHALL MEET AASHTO LRFD SPECIFICATIONS
 - 3) DEFLECTION SHALL MEET L₈₀₀.

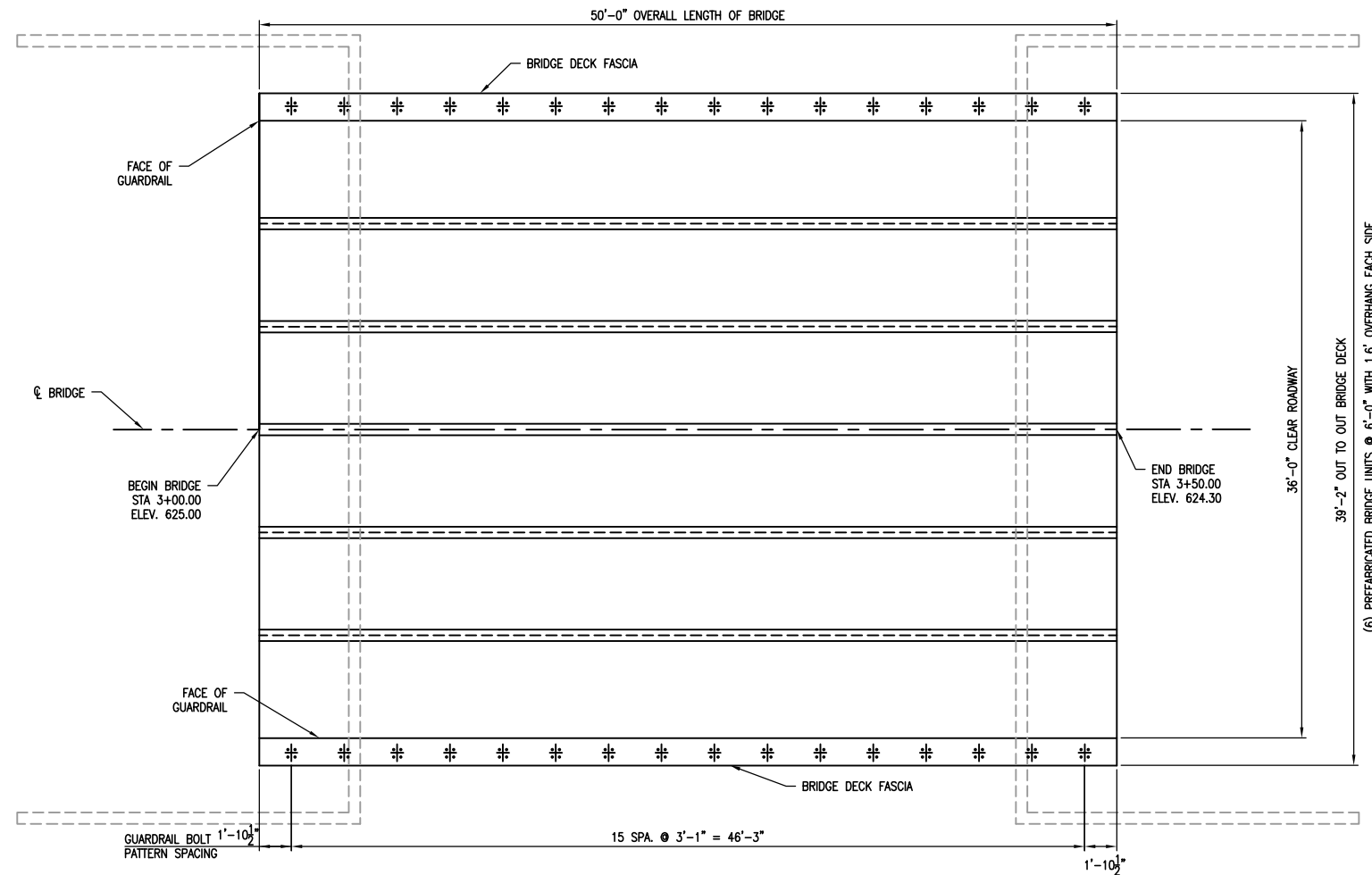


Know what's below.
 Call before you dig.

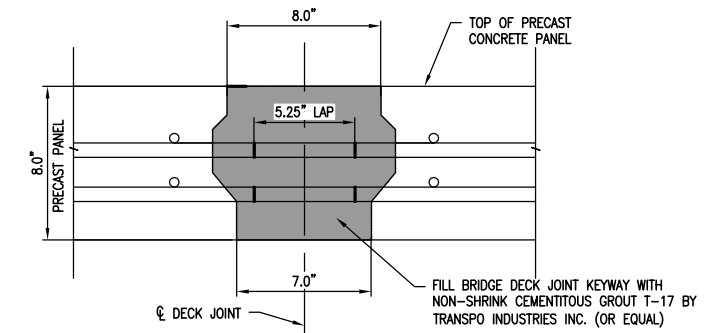
DATE	PROJ NUMBER	DWG	PROJ MGR	CADD	COUNTY	MUNICIPALITY	REVISIONS
	5025-18-0200	SRH	CDS	SBR	MIDLAND	Ypsilanti	
MIDLAND COUNTY ROAD COMMISSION							
ORR ROAD OVER WEEKS DRAIN							
GENERAL PLAN OF SUPERSTRUCTURE							

DRAWING PATH: P:\5000_5499\5025180200_Orr_Road_Over_Weeks_Drain\Drawings\Civil_Details\180200SUPER.dwg Jul 09, 2018 - 3:27pm

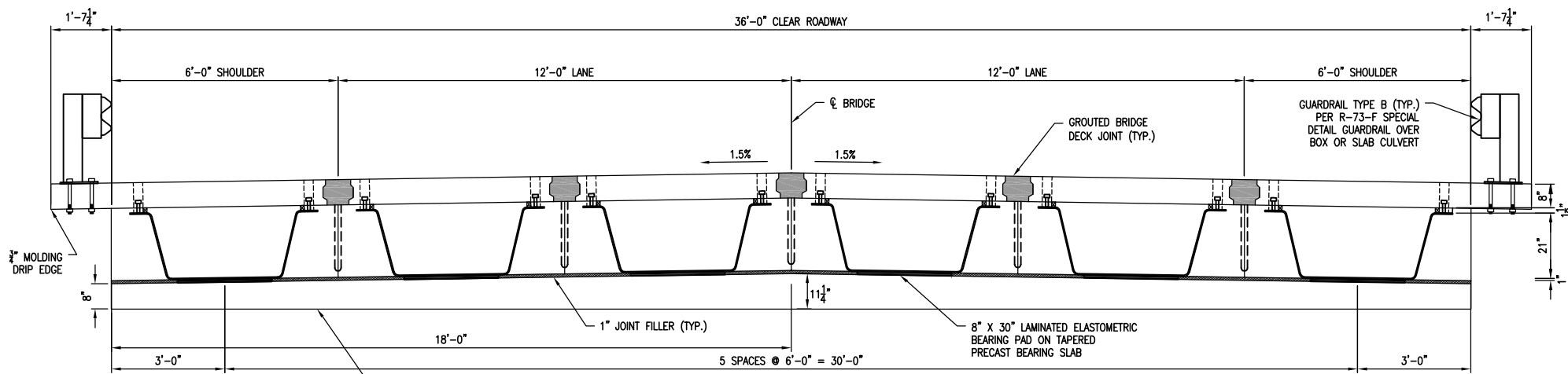
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PLAN VIEW OF PREFABRICATED BRIDGE
 1" = 5'

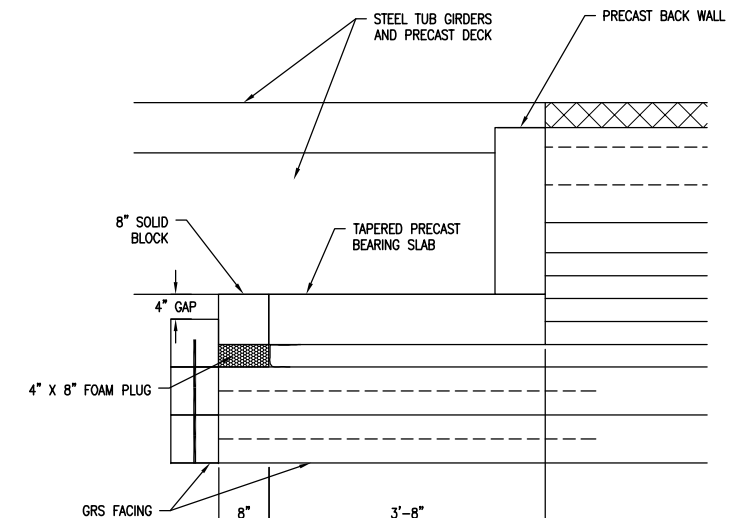


BRIDGE DECK JOINT DETAIL - 8" PANEL
 (THROUGH CL OF BRIDGE DECK JOINT TYP.)



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 1" = 2'

PROVIDE PRECAST BEARING SLAB 11 1/4" THICK AT CL TAPERED TO 8" THICK @ 18' FROM CL. SLAB CAN BE FABRICATED IN SECTIONS.



PRECAST BEARING SLAB
 NO SCALE

- NOTES:
- 1) DESIGN LOADING HL-93 MODIFIED
 - 2) DESIGN SHALL MEET AASHTO LRFD SPECIFICATIONS
 - 3) DEFLECTION SHALL MEET L/800.



Know what's below.
 Call before you dig.

DATE	PROJ NUMBER	DWG	PROJ MGR	CADD	COUNTY	MUNICIPALITY	REVISIONS
7/9/2016	505-17-0080	SRH	CDS	SBR	MIDLAND	Value	
MIDLAND COUNTY ROAD COMMISSION							
GREY ROAD OVER BULLOCK CREEK							
GENERAL PLAN OF SUPERSTRUCTURE							

DRAWING PATH: P:\3000_5499\5025170080_GREY_ROAD_OVER_BULLOCK_CREEK_Drawings\Civil\Details\170080SUPER.dwg Jul 09, 2018 - 3:28pm

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MIDLAND COUNTY ROAD COMMISSION

STANDARD INSTRUCTIONS TO BIDDERS

1. RECEIPT AND OPENING OF PROPOSALS: Sealed bids will be accepted and time stamped upon receipt in the office of the Midland County Road Commission, located at 2334 N. Meridian Rd., Sanford, Michigan, 48657, until the indicated date on the attached Notice to Bidders.
2. BID FORM: Proposals shall be submitted on form if enclosed.
3. SUBMISSION OF BIDS:
 - (a) Envelopes containing bids must be submitted in a sealed, opaque envelope and marked on the face with the name and address of bidder, date and hour of opening, and name of items or commodity in bid.
 - (b) Any proposals received after the advertised time for opening shall be declared void. This applies to bids sent by mail as well as those delivered.
 - (c) Any bidder may withdraw his bid by written request at any time prior to the advertised time for opening.
 - (d) Telephone, faxed or telegraphic bids are not acceptable. Telephone, faxed, or telegraphic amendments or withdrawals will not be accepted under any circumstances.
 - (e) Unless otherwise specified, no bid may be withdrawn for a period of thirty (30) days from date of bid opening.
 - (f) Negligence on the part of the bidder in preparing the bid confers no rights for the withdrawal of the bid after it has been opened.
 - (g) Proposals received prior to time of opening will be securely kept unopened. No responsibility will attach to an officer or person for the premature opening of a proposal not properly addressed and identified.
4. SALES AND EXCISE TAXES:

The Contractor shall include and will be deemed to have included in its bid and contract price all applicable Michigan Sales and Use taxes which have been enacted into law as of the date the bid is submitted. To the extent of any conflict, this Special Provision controls over Division 1 of the 2012 MDOT Standard Specification for Construction.

STANDARD INSTRUCTIONS TO BIDDERS

5. The Road Commission reserves the right to renew the contract for additional one-year terms. Each renewal to be mutually agreed upon by both parties. Pricing, terms, and conditions of the original contract will remain the same for any subsequent one-year renewal period.
6. Bid price on the foregoing materials shall include the cost of delivery to points designated by the Midland County Road Commission and/or the cost of materials F.O.B. the bidder's designated shipping point, should the Midland County Road Commission so desire to transport the material.
7. All materials shall meet and/or conform to Michigan Department of Transportation specifications and certification slips shall be provided upon request. Further information may be obtained from the Midland County Road Commission's office.
8. All construction work performed within the county right-of-way will require appropriate traffic control according to the current Michigan Department of Transportation specifications.
9. FREIGHT PREPAID
10. INSURANCE:
 - (a) Title VI Certification: The Midland County Road Commission assures all its programs and activities will be free from discrimination, whether those programs and activities are federally funded or not.
 - (b) A Certificate of Insurance will be supplied by the bidders for contractor work naming the Midland County Road Commission, its Commissioners and its employees as additionally insured.
11. The Midland County Road Commission reserves the right to reject any and all proposals, to waive any irregularities in the proposals received and to accept the proposal or parts thereof deemed in their opinion, to be in the best interest of the Midland County Road Commission.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION FOR
**PREFABRICATED GALVANIZED PRESS-BRAKE-FORMED STEEL TUB GIRDER
BRIDGE SUPERSTRUCTURE**

OHM:CDS

1 of 5

a. Description. Design, load rate, manufacture, and deliver prefabricated bridge superstructure elements according to the plans, the standard specifications and as contained herein. The superstructure must have a maximum depth, minimum span, minimum concrete deck thickness and skew angle as shown on the plans.

The Prefabricated Bridge Superstructure components shall be sourced through the following manufacturers:

Galvanized Steel Press-Brake-Formed Steel Tub Girders & Misc. Steel Components

Con-Struct Prefabricated Bridge System

TEG Engineering

1505 44th St. SW, Suite B

Wyoming, MI 49509

616-261-8630

616-261-8631

or AISC Certified Steel Fabricator and MDOT Qualified Precaster

b. Design. Certify that the design of the prefabricated bridge superstructure system is in accordance with AASHTO LRFD Bridge Design Specifications. The design live loading must be as indicated on the plans. The load rating shall pass for all Michigan legal loads and Unrestricted Class A for Overloads. As part of the certification, include the horizontal and vertical reactions at the bearing locations and design calculations. The design must be sealed by a Professional Engineer licensed in the State of Michigan.

c. Rating. Perform Load Ratings on the prefabricated bridge according to AASHTO Manual of Bridge Evaluation, Section 6, the most recent Michigan Bridge Analysis Guide and the Michigan Structure Inventory and Appraisal Guide. The following ratings should be calculated:

1. The Inventory Rating, National Bridge Inventory (NBI) Item 66
2. The Operating Rating, NBI Item 64
3. The Michigan Operating Rating, MDOT Item 64M
4. The Michigan Overload Class, MDOT Item 193

Perform the above Load Ratings using as-designed conditions and assuming the future wearing surface has been placed. Prior to manufacture, deliver to Owner the following, in paper or *.pdf electronic format for each load rating case:

- Assumption Sheet - Any assumptions made in the analysis (material properties, section losses, etc.) shall be listed
- Program or Calculation Input and Output
- A completed Bridge Analysis Summary Form

After construction, review the load rating for as-constructed conditions. Perform the load ratings

using as-constructed conditions and as-constructed with the future wearing surface in place. Deliver to Owner the following, in paper or *.pdf electronic format for each load rating case:

- Assumption Sheet - Any assumptions made in the analysis (material properties, section losses, etc.) shall be listed
- Program or Calculation Input and Output
- A completed Bridge Analysis Summary Form

All load ratings must be sealed by a licensed professional Engineer registered in the State of Michigan.

d. Shop Drawings. Furnish the Owner with shop drawings of the prefabricated sections and insert details for approval. Include in the shop drawings the details of the concrete mix design, physical dimensions, methods of manufacture, structural steel dimensions, structural steel material properties, and concrete compressive strength, method of joining adjacent superstructure elements, recommended installation procedure, design assumptions, design loads, and design calculations. Submit the shop drawings to the Owner for review at least 30 calendar days prior to fabrication. The shop drawings must be sealed by a Professional Engineer licensed in the State of Michigan. Do not begin fabrication until written approval of the shop drawings has been received from the Owner.

e. Materials. Use materials meeting the requirements of the MDOT standard specifications including:

1. Concrete. Use Grade D concrete in accordance with subsection 701.03 of the Standard Specifications for Construction.
2. Structural Steel. All structural steel must be high strength in accordance with subsection 906.04.B of the Standard Specifications for Construction. Hot dip galvanize structural steel in accordance with subsection 707.03.C.16.
3. Shear Developers. Shear connector studs must be in accordance with subsection 906.08 of the Standard Specifications for Construction.
4. Steel Reinforcement. Use epoxy coated deformed steel reinforcement in accordance with section 905 of the Standard Specifications for Construction.

f. Manufacture.

1. Placement of Reinforcement. Placing of steel reinforcement must be in accordance with subsection 706.03.D of the Standard Specifications for Construction. Assemble reinforcement using two layers of epoxy coated deformed steel reinforcement. The ends of the reinforcement must not be less than 2 inches nor more than 3 inches from the ends of the deck section. The exposure of epoxy coated spacers used to position the reinforcement will not be cause for rejection.

2. Reinforcement Development Length, Splices and Spacing. Fully develop all reinforcement in accordance with the AASHTO LRFD Bridge Design Specifications. A Professional Engineer licensed in the State of Michigan must perform and submit

calculations to the Owner verifying that the proposed bar spacings meet crack control criteria.

3. Drainage. Provide a minimum transverse cross-slope of 1.0 percent, but no less than is shown on the plans, on the top exterior surface of the concrete deck, as installed, to provide adequate drainage.

4. Placement of Protective Sealant Coating. Place the protective sealant coating on the exterior top surface for those prefabricated units as specified in the plans or proposal.

5. Joints. Provide a 1/2 inch by 1/2 inch beveled edge on the external surface of the joint formed between the prefabricated superstructure units. Joints must be constructed as specified on the plans.

6. Placing Concrete. Place concrete in accordance with subsections 706.03.H, J, K and L of the Standard Specifications for Construction, except that machine finishing of the bridge deck is not required.

7. Forms. Use forms that are sufficiently rigid and accurate to maintain the concrete deck dimensions within the MDOT's permissible variations in accordance with subsection 706.03.D. All the forming surfaces must be of a smooth material.

8. Curing of Bridge Deck Concrete. Curing of precast bridge deck concrete must be in accordance with subsection 706.03.N of the Standard Specifications for Construction.

9. Handling. Handle the prefabricated units by a method approved by the manufacturer and Engineer. Do not drill holes in the prefabricated unit for handling. Cast holes must be tapered. Fill holes with Type R-2 mortar once units are set in final position.

10. Product Marking. Clearly mark the following information on the interior of each prefabricated unit by waterproof paint, or other means approved by the Engineer.

- A. Span and Width.
- B. Date of manufacture.
- C. Name or trademark of the manufacturer.
- D. Design Live Load.

g. Tolerances. All prefabricated elements must meet the tolerances specified by the Designer in addition to the tolerances listed below.

1. Internal Dimensions. Manufacture such that the internal dimensions do not vary more than 1/4 inch from the design dimensions. For prefabricated units with haunches, the haunch dimensions must not vary more than 1/4 inch from the dimensions shown on the shop drawings.

2. Deck Thickness. Manufacture such that the prefabricated deck section thickness is at least 8 inches but not less than the dimensions shown on the shop drawings. A thickness

greater than required will not be cause for rejection, unless, in the opinion of the Designer, it prevents proper sealing of the joints.

3. Length of Opposite Surfaces. Manufacture such that variations in laying lengths of two opposite surfaces of the deck are not more than 1/8 inch.

4. Length of Section. Manufacture such that the underrun in length is not more than 1/4 inches in any prefabricated section.

5. Position of Reinforcement. Manufacture such that the maximum variation in the position of the reinforcement is 3/8 inch.

6. Camber. Manufacture such that the camber is not less than that shown in the shop drawings but no greater than 1 inch more than that shown in the shop drawings.

h. Testing and Inspection.

1. Testing. Test the concrete in accordance with the standard specifications.

2. Workmanship, Finish and Appearance. Provide a smooth finish, free of any fractures, on all the surfaces. The deck surface must have a transversely tined finish. The edges of the prefabricated bridge deck must be parallel to the centerline of the bridge within the limits of variations given above, except when the bridge is designed for a skewed crossing. Repairs must be sound, properly finished and cured, and the repaired section must conform to this special provision.

Causes for rejection include, but are not limited to, the following:

- A. Fractures or cracks in the deck.
- B. Defects that indicate imperfect proportioning, mixing, and/or forming.
- C. Honeycombed or open textured surfaces.
- D. Damaged ends where such damages would prevent making a satisfactory joint.
- E. Insufficient compressive strength of concrete.
- F. Out of tolerance dimensions.
- G. Low/high air content.
- H. Exposed reinforcing steel.

3. Quality Assurance/Quality Control. Submit a quality control plan to the Engineer for approval at least 30 days prior to start of fabrication. Allow 14 calendar days for review. Attend a mandatory prefabrication meeting in accordance with Subsection 707, to be scheduled at least 2 weeks prior to start of fabrication. Provide access for the Department for quality assurance inspection. The quality assurance inspection is not considered a substitute for the Manufacturer's quality control requirements as stated herein.

i. Construction. Construct the prefabricated bridge superstructure according to the standard specifications, as shown on plans, and as specified herein. If required by the plans, construct the footing from pre-cast concrete as specified on the plans.

The actual installation of beams will be completed by Others. The Structural Supplier shall provide installation assistance and technical support. Use the following approved procedure for setting the prefabricated bridge superstructure sections:

Prior to placing the bridge sections onto the footing, place specified bearing pad and expansion joint filler (if required) over the top of the bearing area. Once the bridge sections are placed onto the bearing pads, place 1/2 inch joint filler material between the precast section and cast-in-place (CIP) backwalls, and construct CIP backwalls as shown on the plans. Once CIP backwalls have sufficiently cured in accordance with the standard specifications, apply 18-inch wide preformed joint waterproofing membrane, centered over the horizontal joint between the precast unit and substructure, and centered over the vertical joint between the precast unit and CIP wingwalls. Provide joints between adjacent prefabricated bridge superstructure units consisting of a CIP tie pour or an epoxy grouted precast joint, as specified UHPC, Transpo T-17, or Kwik Bond PPC.

Submit to the Engineer the load rating for the as-constructed conditions as described above.

j. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Bridge, Prefabricated Superstructure, (span) foot.....	Square Foot

Bridge, Prefabricated Superstructure, (span) foot includes all labor, equipment, and material necessary to design, manufacture, and deliver the prefabricated elements, along with all modifications to the contract plans (design, plan quantities, and pay items) to accommodate the selected prefabricated unit. This work includes furnishing expansion joint filler or elastomeric bearings, Type R-2 mortar, epoxy joint sealer, and inserts. Payment is limited to the quantity shown on the plans, or as approved by the Engineer. This work does not include CIP concrete, excavation, protective coating, furnishing and placing backfill material, which is paid for separately.

Owner will provide 50% of the payment as the time of order, and 50% upon delivery to the site.