

Specifications for Precast Concrete Box Culvert and Headwalls

Scope: This specification shall cover precast box culverts and headwall railings designed in accordance with the AASHTO LRFD Bridge Design Specifications for HL-93 modified live load. Project consists of removal and replacement of the existing Old M-20 (W Echo Drive) bridge over Robinson Creek, Sherman Township, Newaygo County. Bidding is for the design, fabrication, delivery and load rating of the precast box culvert and headwall package only. Installation will be bid separately at a later date.

General Specifications

A. Quantities:

39 feet of 20 ft x 6 ft Box Culvert
2 each Precast Headwall Railings

B. Delivery:

Material shall be subject to delivery to the following location within Newaygo County under the following conditions:

1. Approximately 2351 W. Echo Drive (Old M-20) over Robinson Creek (near Robinson Lake)
2. On site Contractor will coordinate delivery with the supplier.

C. Inspection:

1. Material will be subject to inspection by the Newaygo County Road Commission during manufacture and upon delivery.
2. If material fails to meet the requirements of the specifications and as bid, they will be rejected and returned to the Vendor at the Vendor's expense without any charges incurred by the Road Commission.

D. Price:

1. FOB job site listed in B. 1.
2. Price (less all state and federal taxes) shall be per foot of length for culvert and by the unit for each headwall railing.

Technical Specifications

A. Standard Specifications:

1. All material and box culvert products shall comply with the Michigan Department of Transportation 2020 "Standard Specifications for Highway Construction", Section 406.
2. Where the Standard Specifications are referred to, the Michigan Department of Transportation, the 2020 Standard Specifications for Construction shall apply.
3. Headwall railings shall be designed for the applied earth and traffic loading as well as NCHRP 350 crash loading.
4. Load rating calculations shall be submitted in accordance with MDOT 406.03.B and shall be signed and sealed by a Professional Engineer registered in the State of Michigan.

B. Sections cast for the end of a structure designed without precast concrete box culvert end sections shall not be cast with male or female ends on the exterior end of the section but shall have a finished appearance.

C. Precast concrete box sections shall be constructed in accordance with ASTM C 1577 as applicable, the attached plan, and shall have sufficient structural integrity to withstand handling, transportation, and installation. For purpose of this bid request, the installed earth coverage height (from surface of roadway to top of box culvert) will vary from 1.0 feet to 3.0 feet.

D. Shop drawings will be required for all box culvert installations. Shop drawings will be subject to approval by the Newaygo County Road Commission prior to fabrication.

E. Gasket and mastic materials shall be provided by the culvert manufacturer per MDOT Standard Specifications. The cost for these materials shall be included with the box culvert. Joint waterproofing will be applied by the on-site contractor and will be paid for separately.

F. Producer shall have Q-Cast Certification and shall be an MDOT-approved manufacturer.

Note: Questions concerning specifications should be directed to Wayne Harrall, Acting Engineer at Newaygo County Road Commission, at 616-262-0668.

Submit bids to Newaygo County Road Commission prior to 5:00pm on Tuesday, May 30, 2023.

Bids will be received:

By mail at 935 E 1 Mile Road, White Cloud, MI 49349

By email at derekw@newaygoroads.org

By fax at 231-689-5994

It is the bidder's responsibility to ensure that the bid is delivered by the due date and time, regardless of delivery method. If you are unable to meet the size or other project requirements, please return this form indicating "no bid" in the bid form. The Road Commission will award the work based on a combination of cost and timeframe for delivery as deemed to be in the best interest of the Road Commission.

Box Culverts, contd.

**Bid Form for
Precast Concrete Box Culverts and Headwalls**

<u>Item</u>	<u>Quantity</u>	<u>Price Per LFT or Each</u>	<u>Total Cost</u>
20' x 6' Box Culvert	39 LFT	\$ _____	\$ _____
Precast Headwall (N)	1 Ea	\$ _____	\$ _____
Precast Headwall (S)	1 Ea	\$ _____	\$ _____
		Total	\$ _____

HL-93 Load Rating \$ _____

Estimated Timeframe from Order to Delivery _____ calendar days

Bid price shall include design, load rating, shop drawings, fabrication and delivery to the project site. When the construction contract for the project is awarded, the box culvert order will be transferred to the contractor. The contractor will purchase and install the culvert and will pay associated sales tax.

Company Name _____

Company Address _____

Telephone Number _____ Fax Number _____

Email _____

Signature of Authorized Agent and Title _____

written

typed/printed

Date _____

Federal Employer ID# _____