

SECTION 00920

ADDENDUM

Muskegon County Drain Commissioner  
141 East Apple Avenue  
Muskegon, MI 49442

ADDENDUM NO. 3

DATE: July 21, 2020

ENGINEER: Eng., Inc.  
16930 Robbins Road Suite 105  
Grand Haven, MI 49417

Drawing Revision No: 1

Drawing Sheets Issued Herewith: Sheet 2 revised and re-issued, Sheet 4a added to the set

Bids Due: See below.

Issued to all Plan Holders.

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This Addendum is part of the Contract Documents and modifies the previously issued Bidding Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may result in rejection of the Bid.

ITEM NO. 1 – ADDITIONAL PAY ITEMS AND REVISED QUANTITIES

SECTION 00314: Bid.

Quantities for Items No. 4, 15, and 16 have been revised. Item No. 41 Traffic Control, Part Width Construction has been deleted. Additional Items No. 41-53 have been added to the Bid section. See Addendum No. 3 Bid section included in this addendum; Bidder must use this Addendum No. 3 Bid section to submit Bid.

SECTION 01028: Measurement and Payment.

Delete previous Item No. 41; Insert new items No. 41-53. See Section 01028 included in this Addendum for descriptions of items and units of measure.

ITEM NO. 2 – TIMES OF BIDS DUE AND OPENING OF BIDS

SECTION: 00100: Instructions to Bidders.

The following paragraphs shall replace the corresponding paragraphs in Section 00100.

ARTICLE 13 - SUBMISSION OF BIDS

13.1. Bids shall be submitted to the Muskegon County Drain Commissioner's Office at 141 E. Apple Avenue, Muskegon, MI 49442 **by 10:00 a.m., Friday, July 24, 2020** and shall be enclosed in an opaque, sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by the Bid security and other required documents. Bids will be readily accepted at the Drain Commissioner's Office at the address above on **Friday, July 24<sup>th</sup> until the submission deadline** noted below for Division 1. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

**Bids for Division 1 shall be submitted by 10:00 a.m.**

ARTICLE 15 - OPENING OF BIDS

15.1. Bids will be opened and, unless obviously nonresponsive, read aloud publicly via a digital Zoom meeting. The instructions for joining the bid opening meeting are as follows:

Join Zoom Meeting **via computer**:  
<https://us02web.zoom.us/j/81104094147>  
**Meeting ID: 811 0409 4147**  
**By phone:** 888 475 4499 US Toll-free  
**Meeting ID: 811 0409 4147**

Bids will be opened and read in accordance with the following schedule:

**Division 1: 10:15 a.m.**

ITEM NO. 3 – PROJECT TIMES

SECTION 00314: Bid.

Project times are revised. Paragraph 5 shall read as follows:

Bidder agrees that the Work will be substantially complete on or before September 15, 2021 and completed and ready for final payment in accordance with paragraph 14.07 of Section 00700: General Conditions on or before October 15, 2021. Once work has been initiated at the site, **work shall be substantially complete within 90 calendar days and completed and ready for final payment within 105 calendar days.**

SECTION: 00500: Agreement.

The following paragraph shall replace the corresponding paragraph in Section 00500.

ARTICLE 3 - CONTRACT TIMES

3.1 The Work will be substantially complete by September 15, 2021. All the work will be completed and ready for final payment by October 15, 2021. Once work has been initiated at the site, work shall be **substantially complete within 90 calendar days and completed and ready for final payment within 105 calendar days.**

END OF ADDENDUM NO. 3

SECTION 00314

ADDENDUM NO. 3 BID

Bid of \_\_\_\_\_ hereinafter called Bidder, organized and existing under the laws of or a resident of the State of \_\_\_\_\_, doing business as \_\_\_\_\_.\*  
\*Insert as applicable: “a corporation”, “a partnership” or “an individual”.

To Muskegon County Drain Commissioner, hereinafter called OWNER.

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work for the Black Creek Consolidated Drain – Division No. 1 as specified or indicated in the Contract Documents for the Contract Price and within the Contract Times indicated in the Bid and in accordance with the other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Notice of Letting of Drain Contract and Instructions to Bidders including, without limitation, those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 120 days after the day of bid opening. Bidder will sign and submit the Agreement and the Bonds and other documents required by the Bidding Documents within 15 days after the date of OWNER’s Notice of Award.
3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

- A. Bidder has examined and carefully studied the Bidding Documents and the following Addenda receipt of all which is hereby acknowledged:

<u>Date</u>	<u>Addendum Number</u>
July 17, 2020 _____	1 _____
July 19, 2020 _____	2 _____
July 21, 2020 _____	3 _____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state and local laws and regulations that may affect cost, progress, performance and furnishing of the Work.
- D. Bidder has carefully studied all reports of explorations and test of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) if identified in Section 00800: Supplementary Conditions as provided in paragraph 4.02 of Section 00700: General Conditions. Bidder accepts the determination set forth in paragraph SC-4.02 of Section 00800: Supplementary Conditions of the extent of the “technical data” contained in such reports and drawings upon which Bidder is entitled to rely as provided in paragraph 4.02.1 of Section 00700: General Conditions. Bidder acknowledges that such reports and drawings are not Contract Documents and may not be complete for Bidder’s purposes. Bidder acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in Bidding Documents with respect to Underground Facilities at or contiguous to the Site.
- E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relates to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of the Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.
- F. Bidder is aware of the general nature of Work to be performed by OWNER and others at the Site that relates to Work for which this Bid is submitted as indicated on the Contract Documents.

- G. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings if any are identified in the Contract Documents and all additional or supplementary examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- H. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- I. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other bidder or over OWNER.

4. Bidder will complete the Work for the following unit prices:

Unit Price Schedule

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Amount
1	Culv, Rem, Over 48 inch	EA	1.0	\$	\$
2	Culv, End, Rem, Over 48 inch	EA	2.0	\$	\$
3	Fence, Rem	FT	130.0	\$	\$
4	Pavt, Rem	SYD	<b>395.0</b>	\$	\$
5	Guardrail, Rem	FT	300.0	\$	\$
6	Culv, Precast Conc Box, 14 foot by 8 foot	FT	88.0	\$	\$
7	Culv, Precast Conc Wingwall	EA	4.0	\$	\$
8	Culv, Conc Cutoff Wall	EA	2.0	\$	\$
9	Culv, Conc Apron	EA	2.0	\$	\$
10	Maintain Stream Flow	LSUM	1.0	\$	\$
11	Riprap, Heavy	SYD	155.0	\$	\$
12	Riprap, Heavy, Toe Protection	SYD	100.0	\$	\$
13	Machine Grading	STA	0.5	\$	\$
14	Subbase, CIP, 18 inch	CYD	85.0	\$	\$
15	Aggregate Base, 6 inch	SYD	<b>395.0</b>	\$	\$
16	Shoulder, CL II, 6 inch	SYD	<b>190.0</b>	\$	\$
17	HMA, 4E1	TON	45.0	\$	\$
18	HMA, 5E1	TON	25.0	\$	\$

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Amount
19	Pavt Mrkg, Waterborne, 4 inch, White	FT	100.0	\$	\$
20	Pavt Mrkg, Waterborne, 4 inch, Yellow	FT	25.0	\$	\$
21	Recessing Pavt Mrkg, Longit	FT	100.0	\$	\$
22	Centerline Corrugation, Milled, HMA	FT	50.0	\$	\$
23	Guardrail, Reconst, Type B	FT	220.0	\$	\$
24	Guardrail, Reconst, Type TD	FT	80.0	\$	\$
25	Guardrail Post, Furn and Install, 84 inch	EA	20.0	\$	\$
26	Barricade, Type III, High Intensity, Lighted, Furn	EA	16.0	\$	\$
27	Barricade, Type III, High Intensity, Lighted, Oper	EA	16.0	\$	\$
28	Plastic Drum, High Intensity, Furn	EA	50.0	\$	\$
29	Plastic Drum, High Intensity, Oper	EA	50.0	\$	\$
30	Sign, Type B, Temp, Prismatic, Furn	SFT	750.0	\$	\$
31	Sign, Type B, Temp, Prismatic, Oper	SFT	750.0	\$	\$
32	Sign, Portable, Changeable Message, Furn	EA	2.0	\$	\$
33	Sign, Portable, Changeable Message, Oper	EA	2.0	\$	\$
34	Surface Restoration, Modified	SYD	250.0	\$	\$
35	Mulch Blanket	SYD	250.0	\$	\$
36	Erosion Control, Check Dam, Stone	FT	20.0	\$	\$
37	Erosion Control, Maintenance, Sediment Removal	CYD	20.0	\$	\$
38	Erosion Control, Silt Fence	FT	100.0	\$	\$
39	Mobilization, Max (10%)	LSUM	1.0	\$	\$
40	Minor Traf Devices	LSUM	1.0	\$	\$
<b>41</b>	<b>HMA, Temp Pavt (4E3)</b>	<b>TON</b>	<b>30.0</b>	\$	\$
<b>42</b>	<b>PTS System, Temp, Furn</b>	<b>EA</b>	<b>2.0</b>	\$	\$
<b>43</b>	<b>PTS System, Temp, Oper</b>	<b>EA</b>	<b>2.0</b>	\$	\$
<b>44</b>	<b>Conc Barrier, Temp, Furn</b>	<b>FT</b>	<b>260.0</b>	\$	\$
<b>45</b>	<b>Conc Barrier, Temp, Oper</b>	<b>FT</b>	<b>260.0</b>	\$	\$
<b>46</b>	<b>Conc Barrier, Temp, Relocated</b>	<b>FT</b>	<b>260.0</b>	\$	\$

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Amount
47	Pavt Mrkg, Longit, 6 inch or less width, Rem	FT	4920.0	\$	\$
48	Pavt Mrkg, Waterborne, 24 inch Stop Bar	FT	24.0	\$	\$
49	Pavt Mrkg, Waterborne, 4 inch, Yellow	FT	4500.0	\$	\$
50	Pavt Mrkg, Waterborne, 4 inch, White	FT	250.0	\$	\$
51	24" Directionally Drilled Storm Sewer - (Construction By-Pass)	FT	115.0	\$	\$
52	Abandon 24" Storm Sewer	LSUM	1.0	\$	\$
53	Traffic Regulator Control	LSUM	1.0	\$	\$

Total Amount (numbers) \$ \_\_\_\_\_

Total Amount (words) \_\_\_\_\_ dollars.

5. Bidder agrees that the Work will be substantially complete on or before September 15, 2021 and completed and ready for final payment in accordance with paragraph 14.07 of Section 00700: General Conditions on or before October 15, 2021. Once work has been initiated at the site, work shall be **substantially complete within 90 calendar days and completed and ready for final payment within 105 calendar days.**

Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work on time.

6. The following documents are attached to and made a condition of this bid:

A. Required bid security.

7. Communications to Bidder concerning this Bid shall be addressed to the address indicated below.

8. The terms used in this Bid which are defined in the General Conditions of the construction Contract, included as part of the Contract Documents, have the meanings assigned to them in Section 00700: General Conditions.

SUBMITTED on \_\_\_\_\_, 20\_\_  
 Date\*

BY: \_\_\_\_\_  
 Name of Bidder\*

\_\_\_\_\_  
 Street\*

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 City, State, and Zip\*

\_\_\_\_\_  
 Name and Title of Signatory\*

\_\_\_\_\_  
 Telephone Number\*

\*Typed or printed in ink.

END OF SECTION

SECTION 01028

MEASUREMENT AND PAYMENT - UNIT PRICE WORK

PART 1 - GENERAL

1.01 SUMMARY:

- A. Section includes:
  - 1. This Section includes, but is not necessarily limited to, descriptions of the method of measurement and the basis of payment for Unit Price Work under this Contract as indicated on the Drawings, as specified herein, and as necessary for the proper and complete performance of the Work.
- B. Related Sections:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to:
    - a. General Conditions, Supplementary Conditions and Sections in Division I of these Specifications.
- C. Basis of Contract payments:
  - 1. Final Contract Price shall be determined by actual quantities installed at unit prices stated in CONTRACTOR's Bid.
  - 2. ENGINEER shall determine actual as-built quantities.
  - 3. All work not included as a Bid item shall be considered incidental to construction.
  - 4. Unit price payments for individual items shall include everything necessary for such item to function as intended in the system.
  - 5. OWNER reserves the right to increase, decrease or eliminate any quantities for items listed in CONTRACTOR's Bid or which become a part of the Contract Documents.
- D. Items included as incidental to unit prices for systems and appurtenances:
  - 1. The unit price payment for all underground systems and appurtenance items shall include, but not be limited to:
    - a. Clearing, excavating, trenching, bedding, trench backfill, disposal of items for clearing and unsuitable or excess excavated materials.
    - b. Drainage and dewatering of excavation.
    - c. Temporary sheeting, bracing and shoring of excavations.
    - d. Support, relocation, replacement, connection or reconnection of existing pipelines and utilities.
    - e. Cleanup and surface restoration.
    - f. Appurtenances except such items which are included as Bid items.
    - g. Jacking pits, casing pipes, tunnel liners or similar protective methods.

1.02 REMOVALS AND ADJUSTMENTS:

- A. Item No. 1 – Culv, Rem, Over 48 inch.
  - 1. Includes: All excavation, removal, disposal off-site of existing precast concrete box culverts as indicated for removal on the Drawings or encountered during construction in accordance with Section 203 of the MDOT 2012 Standard Specifications for Construction. Existing storm sewer removed within the same trench as new storm sewer (if 12 inches or smaller) is considered incidental to this pay item. Item also includes backfilling and compaction of the area required for the removal of the box culvert.
  - 2. Unit of measure: Each.
- B. Item No. 2 – Culv, End, Rem, Over 48 inch.
  - 1. Includes: All excavation, removal, disposal off-site of existing concrete wingwalls, aprons, and cutoff walls as indicated for removal on the Drawings or encountered during construction in accordance with Section 203 of the MDOT 2012 Standard Specifications for Construction
  - 2. Unit of measure: Each.
- C. Item No. 3 – Fence, Rem.
  - 1. Includes: Removal and disposal of fences as indicated on the Drawings.
  - 2. Unit of measure: Foot.

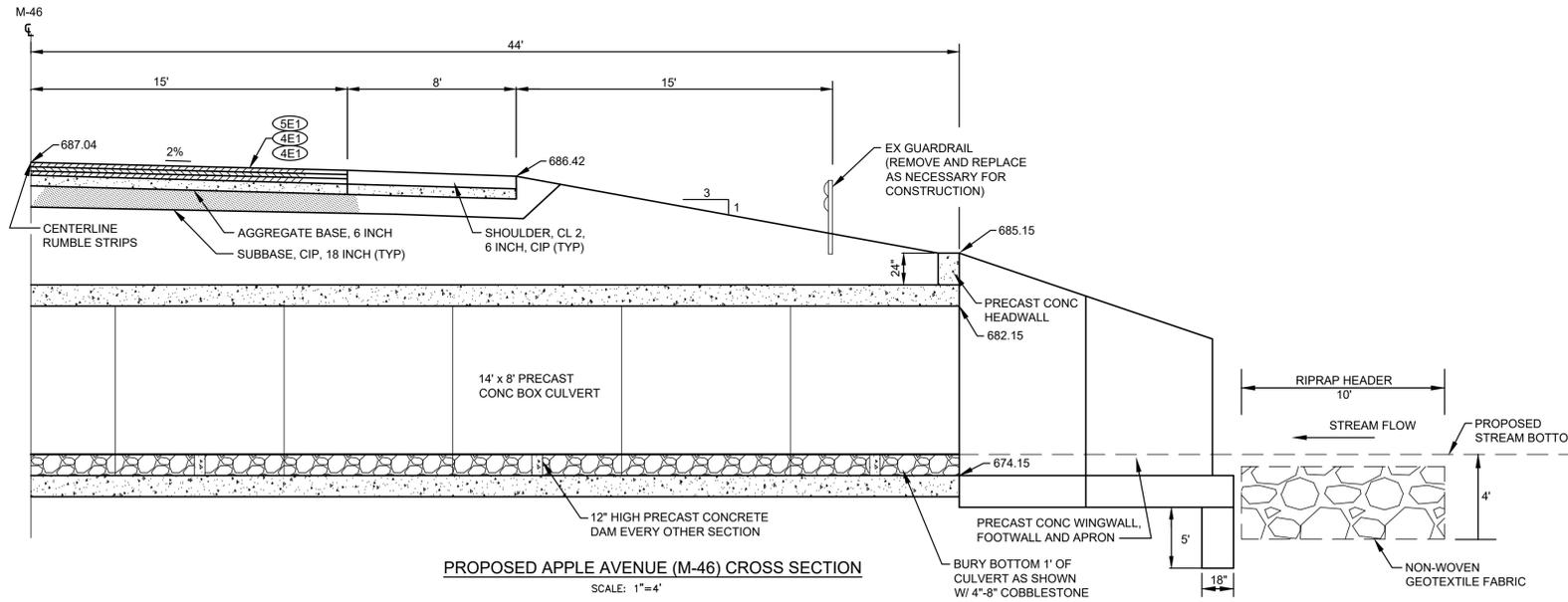
- D. Item No. 4 – Pavt, Rem.
    - 1. Includes: Removal and disposal of pavement as indicated on the Drawings in accordance with Section 205 of MDOT 2012 Standard Specifications for Construction.
    - 2. Unit of measure: Square yard.
  - E. Item No. 5 – Guardrail, Rem.
    - 1. Includes: Removal and disposal of concrete box culvert in accordance with Section 204 of the MDOT 2012 Standard Specifications for Construction.
    - 2. Unit of measure: Foot.
- 1.03 CULVERT APPURTENANCES:
- A. Item No. 6 – Culv, Precast Conc Box, 14 foot x 8 foot.
    - 1. Includes: Furnishing and installation of 14 foot by 8 foot precast concrete box culvert in accordance with the Special Provision and Section 406 of MDOT 2012 Standard Specifications for Construction.
    - 2. Unit of measure: Foot.
  - B. Item No. 7 – Culv, Precast Conc Wingwall.
    - 1. Includes: Furnishing and installation of precast concrete culvert wingwall work in accordance with the Special Provision and Section 406 of MDOT 2012 Standard Specifications for Construction.
    - 2. Unit of measure: Each.
  - C. Item No. 8 – Culv, Conc Cutoff Wall.
    - 1. Includes: Furnishing and installation of concrete cutoff wall in accordance with the Special Provision and Section 706 of the MDOT 2012 Standard Specifications for Construction.
    - 2. Unit of measure: Each.
  - D. Item No. 9 – Culv, Conc Apron.
    - 1. Includes: 12-inch concrete apron with rebar in accordance with the detail on the drawings, Special Provision, and Section 706 of the MDOT 2012 Standard Specifications for Construction.
    - 2. Unit of measure: Each.
  - E. Item No. 10 – Maintain Stream Flow.
    - 1. Includes: Submitting a plan for approval and maintaining stream flow during the preparation and placement of the proposed precast concrete box culvert in accordance with Section 401 of the MDOT 2012 Standard Specifications for Construction **utilizing the 24 inch directionally drilled temporary storm sewer shown on the revised drawings.**
    - 2. Unit of measure: LSUM.
  - F. Item No. 11 – Riprap, Heavy.
    - 1. Includes: Installation of specific material type and size as indicated on the Drawings as well as nonwoven geotextile fabric underneath all areas of applied riprap in accordance with the MDOT 2012 Standard Specifications for Construction and the appropriate detail or location as indicated on the Drawings.
    - 2. Unit of measure: Square yard.
  - G. Item No. 12 – Riprap, Heavy, Toe Protection.
    - 1. Includes: Installation of specific material type and size as indicated on the Drawings as well as nonwoven geotextile fabric underneath all areas of applied riprap in accordance with the MDOT 2012 Standard Specifications for Construction and the appropriate detail or location as indicated on the Drawings.
    - 2. Unit of measure: Square yard.
- 1.04 PAVING:
- A. Item No. 13 – Machine Grading
    - 1. Includes: The following in accordance with MDOT Standard Specification Section 205.
      - a. All material excavation and removal.
      - b. Preparation and grading of subgrade and aggregate base to meet cross-section(s) on the drawings.
    - 2. Unit of measure: Station.

- B. Item No. 14 – Subbase, CIP, 18 inch.
  - 1. Includes the following in accordance with MDOT Standard Specification Section 301.
    - a. All material excavation and removal.
    - b. Preparation of subgrade.
    - c. Subbase, CIP, 18 inch.
    - d. Compaction.
  - 2. Unit of measure: Cubic yard.
- C. Item No. 15 – Aggregate Base, 6 inch.
  - 1. Includes: The following in accordance with MDOT Standard Specification Section 302.
    - a. All material excavation and removal.
    - b. Preparation of subgrade.
    - c. Aggregate Base, 6 inch.
    - d. Compaction.
  - 2. Unit of measure: Square yard.
- D. Item No. 16 – Shoulder, CL II, 6 inch.
  - 1. Includes: The following in accordance with MDOT Standard Specification Section 307.
    - a. All material excavation and removal.
    - b. Preparation of subgrade.
    - c. Shoulder, CL II, 6 inch.
    - d. Compaction.
  - 2. Unit of measure: Square yard.
- E. Items No. 17 and 18 – HMA, 4E1 and HMA, 5E1.
  - 1. Includes: The following in accordance with MDOT Standard Specification Section 501.
    - a. Placement of HMA material.
    - b. Bond coat.
    - c. Rolling and compaction.
  - 2. Unit of measure: Ton.
- F. Items No. 19 and 20 – Pavt Mrkg, Waterborne, 4 inch, White and Pavt Mrkg, Waterborne, 4 inch, Yellow.
  - 1. Includes furnishing and installing pavement marking materials in accordance with MDOT Standard Specification Section 811.
    - a. Pavement Marking, Waterborne, 4 inch, White.
    - b. Pavement Marking, Waterborne, 4 inch, Yellow.
    - c. Glass Beads.
  - 2. Unit of measure: Foot.
- G. Item No. 21 – Recessing Pavt Mrkg, Longit.
  - 1. Includes furnishing and installing pavement marking materials in accordance with MDOT Standard Specification Section 811, Special Provisions, and Standard Details.
  - 2. Unit of measure: Foot.
- H. Item No. 22 – Centerline Corrugation, Milled, HMA.
  - 1. Includes milling or diamond grinding corrugations (rumble strips) into finished hot mix asphalt (HMA) in accordance with MDOT Standard Specification Section 822 including Special Provisions and Standard Details including the following:
    - a. Centerline Corrugations, Milled, HMA.
  - 2. Unit of measure: Foot.
- I. Item No. 23 – Guardrail, Reconst, Type B.
  - 1. Includes: Reinstalling the existing Guardrail beams and terminals utilizing necessary materials, new posts (paid for separately) and new blocks in accordance with Section 807 of the MDOT 2012 Standard Specifications for Construction and as directed by the ENGINEER.
  - 2. Unit of measure: Foot.
  - 3.
- J. Item No. 24 – Guardrail, Reconst, Type TD.
  - 1. Includes: Reinstalling the existing Guardrail beams utilizing necessary materials, new posts (paid for separately) and new blocks in accordance with Section 807 of the MDOT 2012 Standard Specifications for Construction and as directed by the ENGINEER
  - 2. Unit of measure: Foot.

- K. Item No. 25 – Guardrail Post, Furn and Install, 84 inch.
    - 1. Includes: Supply and installing guardrail posts in accordance with Section 807 of the MDOT 2012 Standard Specifications for Construction and as directed by the ENGINEER
    - 2. Unit of measure: Each.
  - L. Items No. 26 and 27 – Barricade, Type III, High Intensity, Lighted, Furn and Barricade, Type III, High Intensity, Lighted, Oper.
    - 1. Includes: Providing, installing, and maintaining Type III Barricades in accordance with maintaining traffic plans, Section 812 of the MDOT 2012 Standard Specifications for Construction, Muskegon County Road Commission and MDOT standards.
    - 2. Unit of measure: Each
  - M. Items No. 28 and 29 – Plastic Drum, High Intensity, Furn and Plastic Drum, High Intensity, Oper.
    - 1. Includes: Providing, installing, and maintaining Plastic Drums in accordance with maintaining traffic plans, Section 812 of the MDOT 2012 Standard Specifications for Construction, Muskegon County Road Commission and MDOT standards.
    - 2. Unit of measure: Each.
  - N. Items No. 30 and 31 – Sign Type B, Temp, Prismatic, Furn and Sign Type B, Prismatic, Oper.
    - 1. Includes: Providing, installing, and maintaining temporary traffic signs in accordance with maintaining traffic plans, Section 812 of the MDOT 2012 Standard Specifications for Construction, Muskegon County Road Commission and MDOT standards.
    - 2. Unit of measure: Square foot.
  - O. Item No. 32 and 33 – Sign, Portable, Changeable, Message, Furn and Sign Portable, Changeable, Message, Oper.
    - 1. Includes: Includes providing, operating, and maintaining PCMS shown on the plans and directed by ENGINEER in accordance with Section 922 of the MDOT 2012 Standard Specifications for Construction.
    - 2. Unit of measure: Each.
- 1.05 SURFACE RESTORATION:
- A. Item No. 34 – Slope Restoration, Modified.
    - 1. Includes: Preparing the soil and placing see and mulch to permanently stabilize disturbed areas as shown on the drawings in accordance with Section 816 of the MDOT 2012 Standard Specifications for Construction, Special Provisions, as noted on the Drawings or as indicated for placement by the ENGINEER.
    - 2. Unit of measure: Square yard.
- 1.06 MISCELLANEOUS AND CONTINGENCY ITEMS:
- A. Item No. 35 – Mulch Blanket.
    - 1. Includes: Supply and install mulch blanket in accordance with Section 917 of the MDOT 2012 Standard Specifications for Construction as noted on the Drawings or as indicated for placement by the ENGINEER. Overlap of blanket will not be included.
    - 2. Unit of measure: Square yard.
  - B. Item No. 36 – Erosion Control, Check Dam, Stone.
    - 1. Includes: Supply and installing Erosion Control, Check Dam, Stone in accordance with Section 208 of the MDOT 2012 Standard Specifications for Construction as indicated on the drawings and/or as directed by the ENGINEER
    - Unit of measure: Foot.
  - C. Item No. 37 – Erosion Control, Maintenance, Sediment Removal
    - 1. Includes: Removal and disposal of accumulated sediment in accordance with Section 208 of the MDOT 2012 Standard Specifications for Construction as directed by the ENGINEER
    - 2. Unit of measure: Cubic yard
  - D. Item No. 38 – Erosion Control, Silt Fence.
    - 1. Includes: Supply and installation of silt fence in accordance with Section 208 of the MDOT 2012 Standard Specifications for Construction as indicated on the drawings and/or as directed by the ENGINEER
    - 2. Unit of measure: Foot.

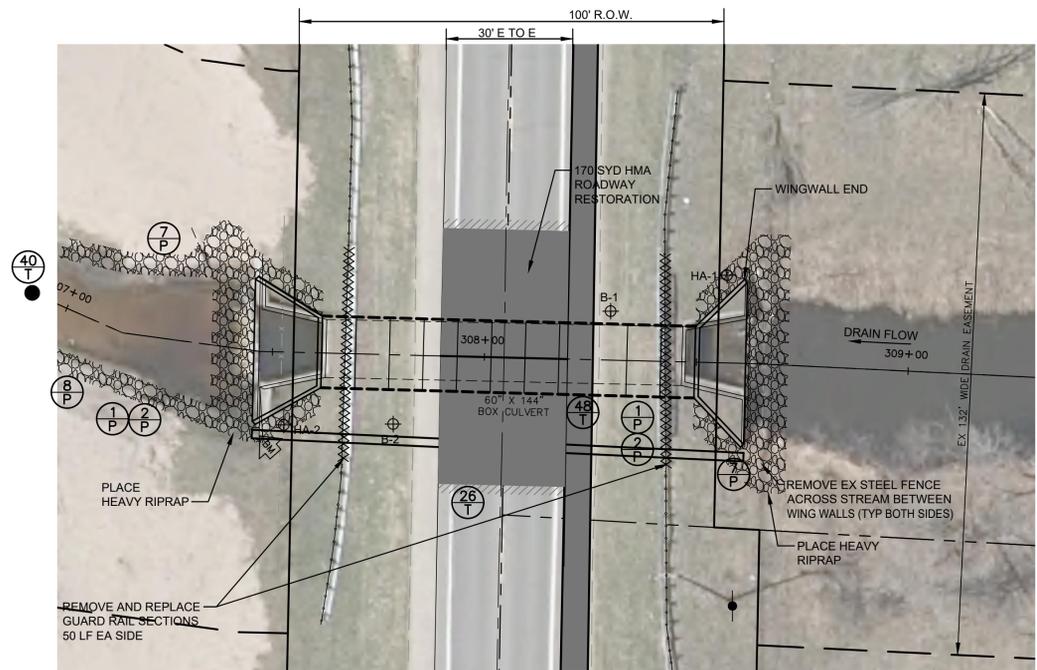
- E. Item No. 39 – Mobilization, Max (10%).
  - 1. Includes: All preparatory work and operations in accordance with Section 105 of the MDOT 2012 Standard Specifications for Construction.
  - 2. Unit of measure: Lump sum.
- F. Item No. 40 – Minor Traf Devices.
  - 1. Includes: Includes providing, installing, maintaining, relocating, and removing traffic cones and other traffic devices not shown on the plans. Also, maintaining local traffic, removing, storing, and reinstalling Department-owned permanent signs and supports and installing reflective conspicuity tape on vehicles and equipment in accordance with Section 812 of the MDOT 2012 Standard Specifications for Construction. Item includes all CONTRACTOR bonds and insurance necessary for securing of MDOT permit.
  - 2. Unit of measure: Lump sum.
- ~~G. Item No. 41 – Traffic Control, Part Width Construction.~~
  - ~~3. Includes: Includes providing an appropriate number of flagmen to adequately control traffic in a sequenced fashion and/or provide a temporary traffic signal which adequately allows alternating timed traffic flows in both directions during part width construction. The item shall include any other traffic control devices not shown on the plans that are required to maintain thru traffic by providing one lane of travel during part width construction.~~
  - ~~4. Unit of measure: Lump sum.~~
- G. Item No. 41 – HMA, Temp Pavt (4E3)
  - 1. Includes: The following in accordance with MDOT Standard Specification Section 501.
    - a. Placement of HMA material.
    - b. Bond coat.
    - c. Rolling and compaction.
  - 2. Unit of measure: Ton.
- H. Items No. 42 and 43 – PTS System, Temp, Furn and PTS System, Temp, Oper
  - 1. Includes: Providing, operating, and relocating temporary traffic signals in accordance with MDOT Standard Specification Section 812 and MDOT Standard Plans.
  - 2. Unit of measure: Each.
- I. Items No. 44, 45, and 46 – Conc Barrier, Temp, Furn; Conc Barrier, Temp, Oper; and Conc Barrier, Temp, Relocated
  - 1. Includes: Providing, maintaining, and relocating temporary concrete barriers in accordance with the drawings and MDOT Standard Details and MDOT Standard Specification Section 812.
  - 2. Unit of measure: Feet.
- J. Items No. 47 – Pavt Mrkg, Longit, 6 inch or less width, Rem
  - 1. Includes: Removing existing pavement markings in accordance with MDOT Standard Specification Section 812.
  - 2. Unit of measure: Feet.
- K. Items No. 48, 49, and 50 – Pavt Mrkg, Waterborne, 24 inch Stop Bar, White; Pavt Mrkg, Waterborne, 4 inch, Yellow; and Pavt Mrkg, Waterborne, 4 inch, White
  - 1. Includes: Installing pavement markings in accordance with MDOT Standard Specification Section 811.
  - 2. Unit of measure: Feet.
- L. Item No. 51 – HDPE - 24 inch, Directionally Drilled, Storm Sewer
  - 1. Includes: Providing and directionally drilling storm sewer in accordance with MDOT Standard Specification Section 402.
  - 2. Unit of measure: Feet.
- M. Item No. 52 – Abandon 24 inch, Storm Sewer
  - 1. Includes: The following in accordance with MDOT Standard Specification Section 203 and as noted below.
    - a. Plugging/capping temporary culvert ends.



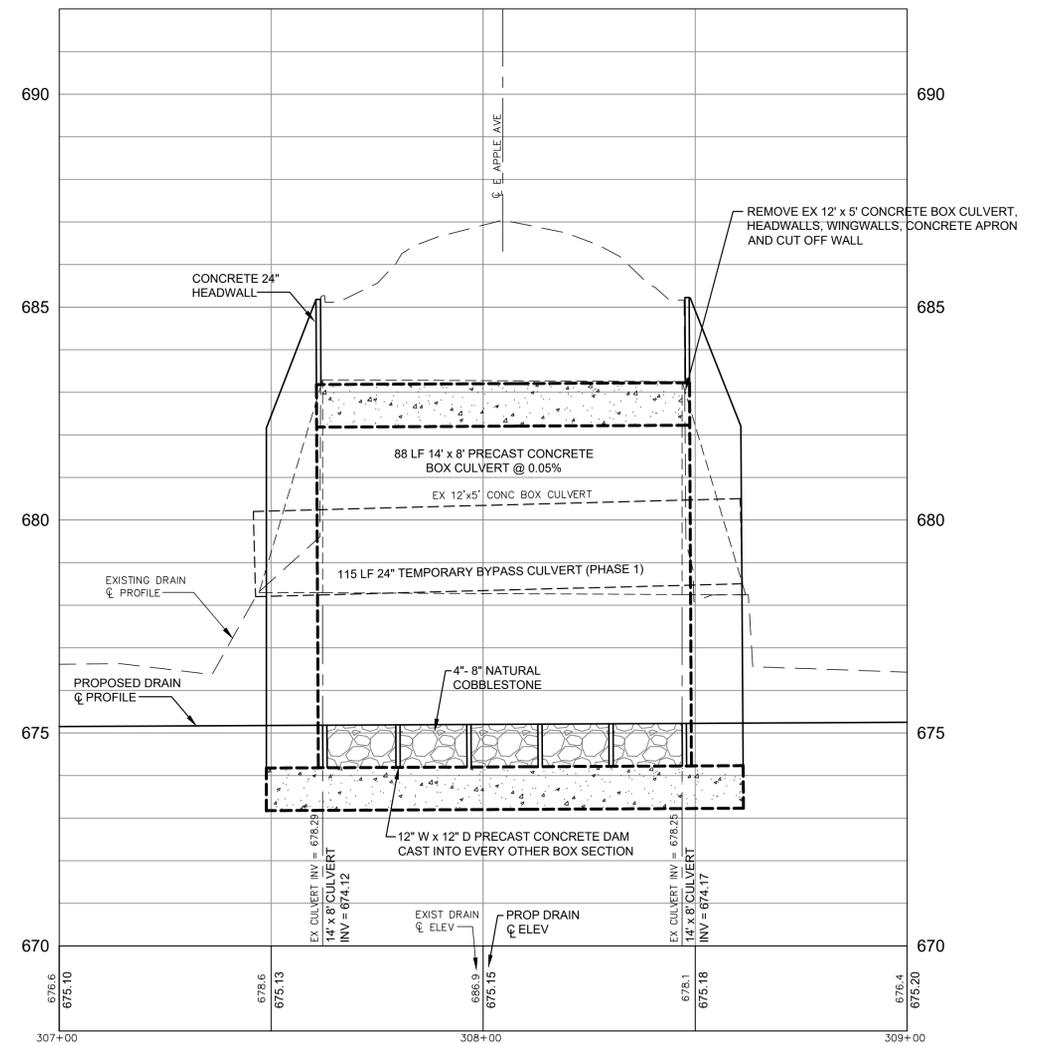
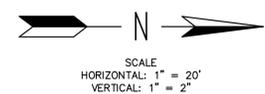


HMA APPLICATION ESTIMATE				
IDENT. NO.	ITEM	RATE PER SYD	PERFORMANCE GRADE	REMARKS
5E1T	HMA, 5E1	220 LB	58-28	TOP COURSE, AWI 260
4E1L	HMA, 4E1	220 LB	58-28	LEVELING COURSE
4E1B	HMA, 4E1	220 LB	58-28	BASE COURSE

- \* SUBBASE SHALL BE MDOT CLASS II GRANULAR MATERIAL
- \*\* AGGREGATE BASE SHALL BE MDOT 21AA MATERIAL
- \*\*\* SLOPE RESTORATION EQUALS GRADING LIMITS. THE LIMITS ARE TO THE RIGHT-OF-WAY LINE OR THE LIMITS OF GRADING PERMITS AND DRAIN EASEMENTS, WHERE APPLICABLE



MUSKEGON-NEWAYGO DRAIN (FMRLY)  
E APPLE AVE (M-46) CROSSING  
(100' R.O.W.)



APPLE AVE (M-46)  
ROADWAY CROSSING DETAIL

NO.	REVISIONS	DATE	BY	DATE	BY
1	ADDENDUM NO. 3	7/21	JAJ	7/21	SPM

**Eng**  
Engineering & Surveying

BRENDA M. MOORE  
MUSKEGON COUNTY DRAIN COMMISSIONER  
STEPHANIE BARRETT, DEPUTY DRAIN COMMISSIONER  
BLACK CREEK CONSOLIDATED DRAIN DRAINAGE DISTRICT  
DIVISION 1  
JTB&S DRAIN AT M-46

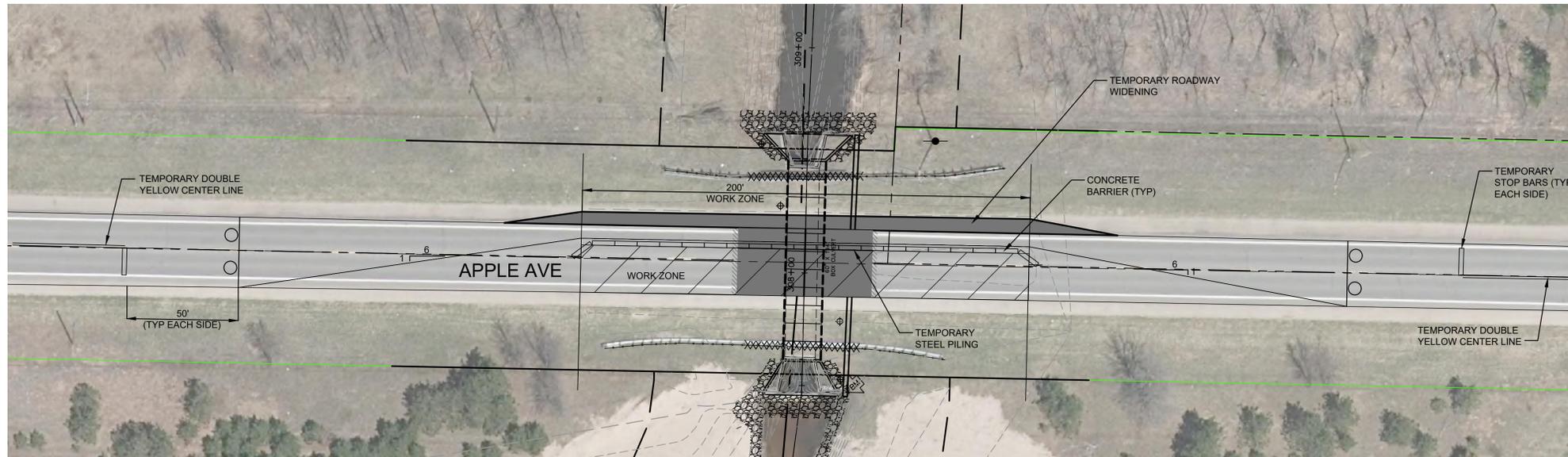
PROJECT NO.  
**16041**

SHEET NO.  
DIVISION 1  
**2 OF 4**

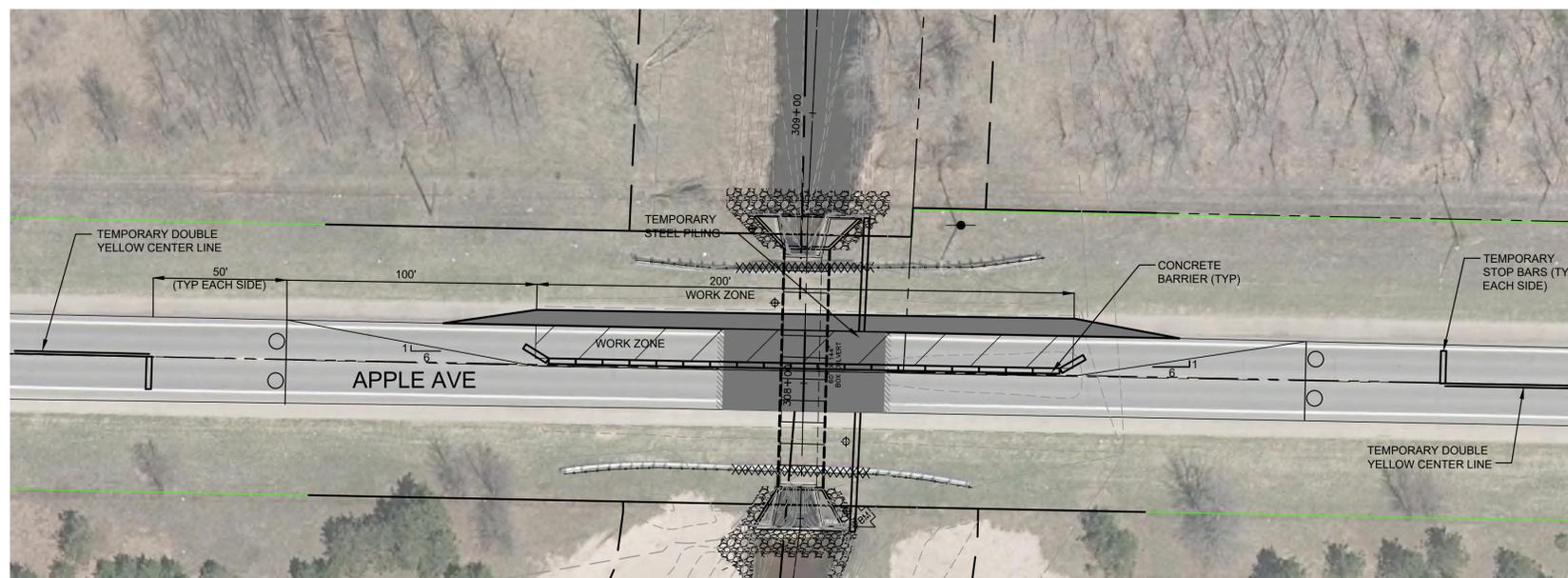
4063 Grand Oak Drive Suite A109  
Lansing, MI 48911  
517.887.1100

18930 Robbins Road Suite 105  
Grand Haven, MI 49417  
616.743.7070

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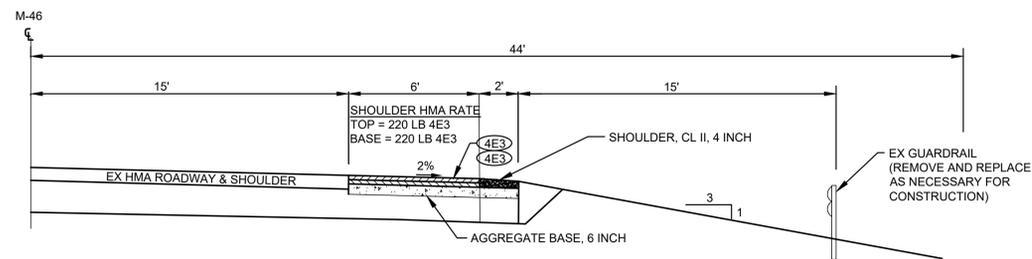
PHASE 1 - DOWNSTREAM PORTION OF CULVERT



PHASE 2 - UPSTREAM PORTION OF CULVERT

LEGEND

- = PROPERTY LINE
- = EDGE OF PAVEMENT
- X - X - X - = FENCE
- - - - - = EXISTING GUARDRAIL
- [Symbol] = WETLANDS (AS MARKED BY OTHERS)
- +860 = EXISTING SPOT ELEVATION
- - - - - = EXISTING CONTOUR ELEVATION
- [Symbol] = EDGE OF WOODS
- [Symbol] = DECIDUOUS TREE
- [Symbol] = CONIFEROUS TREE
- [Symbol] = BUSH
- [Symbol] = STUMP
- GAS - GAS - = EXISTING GAS LINE
- [Symbol] = BENCH MARK LOCATION
- [Symbol] = EXISTING SIGN
- [Symbol] = EXISTING MAILBOX
- [Symbol] = EXISTING LIGHT POLE
- [Symbol] = EXISTING GUY ANCHOR
- [Symbol] = EXISTING UTILITY POLE
- [Symbol] = EXISTING TELEPHONE PEDESTAL



PROPOSED ROADWAY TEMPORARY WIDENING CROSS-SECTION

PHASING PLAN

NO.	REVISIONS
1	ADDENDUM NO. 3

4063 Grand Oak Drive Suite A109  
Lansing, MI 48911  
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BRENDA M. MOORE  
MUSKEGON COUNTY DRAIN COMMISSIONER  
STEPHANIE BARRETT, DEPUTY DRAIN COMMISSIONER  
BLACK CREEK CONSOLIDATED DRAIN DRAINAGE DISTRICT  
DIVISION 1  
JTB&S DRAIN AT M-46

PROJECT NO.  
16041

SHEET NO.  
DIVISION 1

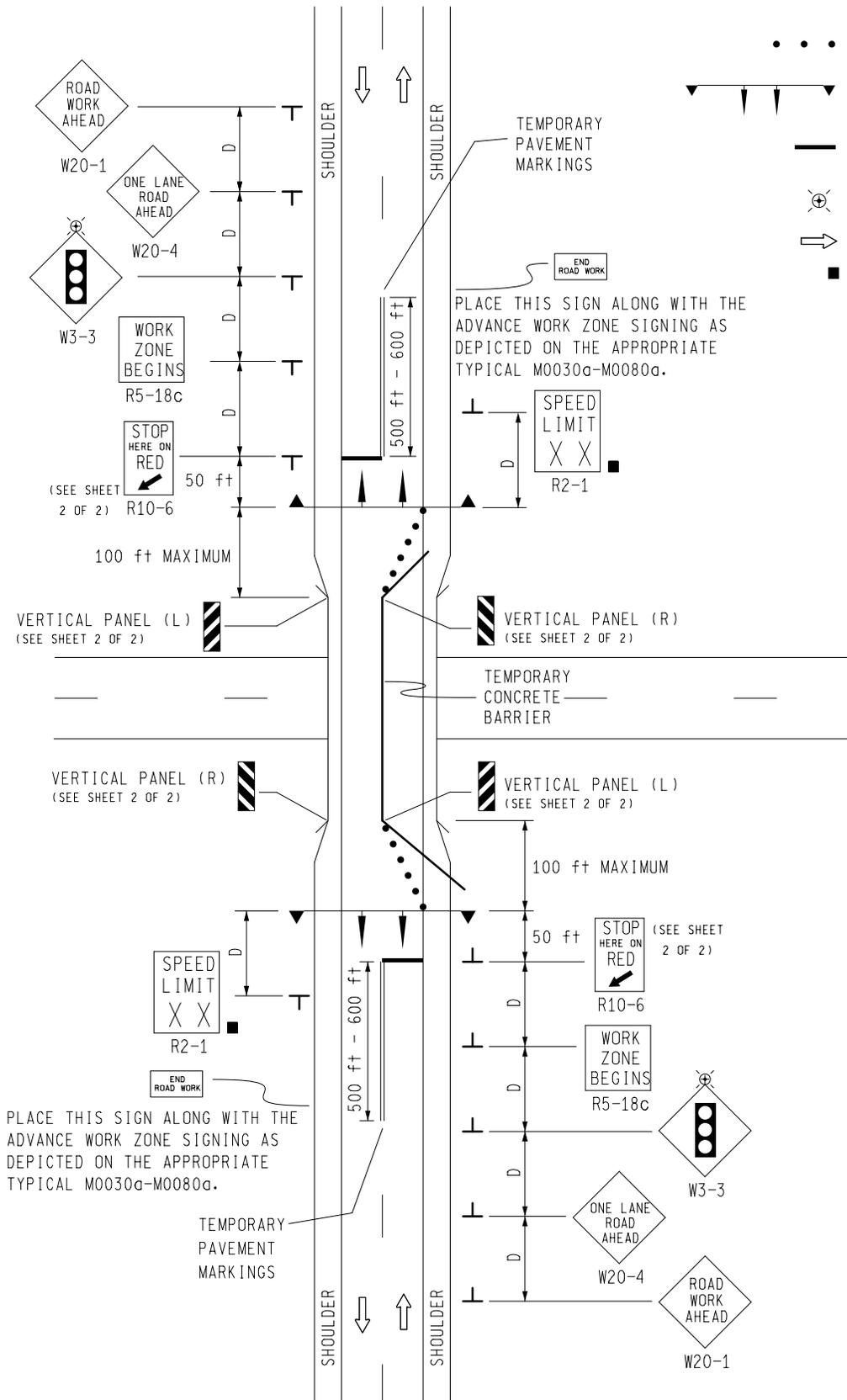
4a OF 4

T:\Autocad Drawings\16041 - Black Creek\RoadCrossings\details.dwg, 7/21/2020 5:04:15 PM, DWG To PDF.pc3

**KEY**

- • • CHANNELIZING DEVICES
- STOP AND GO SIGNALS
- TEMPORARY PAVEMENT MARKING (SOLID 24 " STOP BAR)
- ⊗ STROBE LIGHT (OPTIONAL)
- TRAFFIC FLOW
- REFLECTS EXISTING SPEED LIMIT

SIGN = 12 ft± - TYPE A  
SIGN = 195 ft± - TYPE B



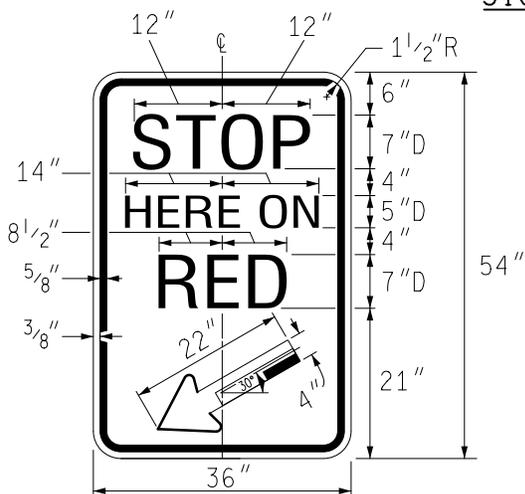
NOT TO SCALE

<p>TRAFFIC AND SAFETY MAINTAINING TRAFFIC TYPICAL</p>	<p>TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TEMPORARY TRAFFIC SIGNAL, TWO-LANE TWO-WAY ROADWAY WITH SIGN PLACEMENT ON ONE SIDE OF ROADWAY NO SPEED REDUCTION</p>	
	<p>DRAWN BY: CON:AE:djf CHECKED BY: BMM:CRB</p>	<p>OCTOBER 2011 PLAN DATE:</p>
<p>FILE: PW RD/TS/Typicals/Signs/MT NON FWY/M0180a.dgn REV. 10/10/2011</p>		

## NOTES

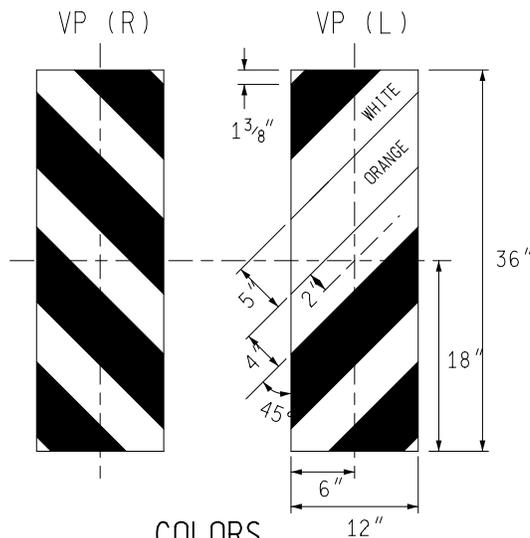
- 1A. SEE M0020a FOR "D" VALUES.
2. ALL NON-APPLICABLE SIGNING WITHIN THE CIA SHALL BE MODIFIED TO FIT CONDITIONS, COVERED OR REMOVED.
3. DISTANCES BETWEEN SIGNS, THE VALUES FOR WHICH ARE SHOWN IN TABLE D, ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.
- 3A. THE "WORK ZONE BEGINS" (R5-18c) SIGN SHALL BE USED ONLY IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE SHALL OMIT THIS SIGN AND THE QUANTITIES SHALL BE ADJUSTED APPROPRIATELY.
- 4C. THE MAXIMUM RECOMMENDED DISTANCE(S) BETWEEN CHANNELIZING DEVICES IN THE TAPER AREA(S) SHOULD BE 15 FEET.
5. FOR OVERNIGHT CLOSURES, TYPE III BARRICADES SHALL BE LIGHTED.
6. WHEN CALLED FOR IN THE FHWA ACCEPTANCE LETTER FOR THE SIGN SYSTEM SELECTED, THE TYPE A WARNING FLASHER, SHOWN ON THE WARNING SIGNS, SHALL BE POSITIONED ON THE SIDE OF THE SIGN NEAREST THE ROADWAY.
7. ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING REQUIREMENTS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS STIPULATED IN THE CURRENT EDITION OF THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MDOT WILL BE ALLOWED.
- 14A. ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEYOND THE W3-3 SIGNS.
21. ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS, SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR DAYTIME-ONLY TRAFFIC PATTERNS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.
22. BARRIER REFLECTORS AND RAISED PAVEMENT MARKERS WHICH ARE EITHER BI-DIRECTIONAL TWO COLOR OR SINGLE REFLECTORS PLACED BACK TO BACK, WHICH REFLECT THE APPROPRIATE COLOR FOR THE TRAFFIC PATTERN, SHOULD BE USED TO DELINEATE EACH EDGE OF THE TRAVELED PATH THROUGH THE WORK AREA.
23. TEMPORARY CONCRETE BARRIER SHALL BE APPLIED AS PER THE CURRENT STANDARD PLAN.
24. VERTICAL PANELS SHALL BE USED IN LIEU OF THE TYPE B HIGH INTENSITY LIGHT SHOWN IN THE STANDARD PLAN FOR TEMPORARY CONCRETE BARRIER.

### SIGN DETAIL



#### COLORS

LEGEND AND BORDER - BLACK (NON-REFLECTORIZED)  
BACKGROUND - WHITE (REFLECTORIZED)



#### COLORS

STRIPES - ORANGE (REFLECTORIZED)  
AND WHITE (REFLECTORIZED)

### SIGN SIZES

DIAMOND WARNING	- 48" x 48"
R2-1 REGULATORY	- 48" x 60"
R5-18c REGULATORY	- 48" x 48"
R10-6 REGULATORY	- 36" x 54"
VERTICAL PANEL	- 12" x 36"

NOT TO SCALE

 TRAFFIC AND SAFETY <b>MAINTAINING TRAFFIC TYPICAL</b>	TYPICAL TEMPORARY TRAFFIC CONTROL FOR A TEMPORARY TRAFFIC SIGNAL, TWO-LANE TWO-WAY ROADWAY WITH SIGN PLACEMENT ON ONE SIDE OF ROADWAY NO SPEED REDUCTION	
	DRAWN BY: CON:AE:djf	OCTOBER 2011
CHECKED BY: BMM:CRB	PLAN DATE:	2 OF 2
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