

**CITY OF DOVER
TUSCARAWAS COUNTY, OHIO**

REBID #2 – TUS-E 20TH ST BRIDGE REPLACEMENT

ADDENDUM #1

February 6, 2024

THRASHER PROJECT #101-080-10026

TO WHOM IT MAY CONCERN:

The following are clarifications and responses to questions posed by contractors for the above-referenced project.

A. GENERAL

1. **THE BID FORM (PAGE 48) HAS BEEN REVISED. YOU MUST USE THE REVISED BID FORM PAGE WHEN PREPARING YOUR BID PACKAGE FOR THIS PROJECT.**

B. DRAWINGS

1. Sheets 19 and 20 have been revised (attached).

C. QUESTIONS AND RESPONSES

QUESTION

1. On line item #53, Low Strength Mortar Backfill, could you please provide a detail and quantity calculations for this item?

RESPONSE

Please see the revised drawings, sheets 19 and 20 (attached).

If you have any questions or comments, please feel free to contact me at bolinger@thethrashergroup.com. As a reminder, bids will be received until 10:00 a.m. on Wednesday, February 14, 2024, at the Municipal Building located at 116 East Third Street (Rear), Dover, OH 44622. Good luck to everyone and thank you for your interest in the project.

Sincerely,

THE THRASHER GROUP, INC.



Brad Olinger, PE
Project Manager

45	512	33000	TYPE 2 WATERPROOFING	SY	182			
46	512	33010	TYPE 3 WATERPROOFING	SY	210			
47	516	13600	1" PREFORMED EXPANSION JOINT FILLER	SF	64			
48	516	13900	2" PREFORMED EXPANSION JOINT FILLER	SY	18			
49	518	21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	CY	15			
50	530	13000	SPECIAL – FORM LINER	SF	296			
51	601	32200	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CY	61			
52	611	97400	CONDUIT, MISC: 21' X 8.5' CONDUIT, TYPE A, 706.05	FT	76			
53	613	41200	LOW STRENGTH MORTAR BACKFILL	CY	450			
54	614	11000	MAINTAINING TRAFFIC	LUMP	1			
55	619	16010	FIELD OFFICE, TYPE B	MNTH	3			
56	623	10000	CONSTRUCTION LAYOUT STAKES AND SURVEYING	LUMP	1			
57	624	10000	MOBILIZATION	LUMP	1			

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING: VEHICULAR LIVE LOAD: HL-93 FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES: CAST-IN-PLACE STRUCTURES CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI, (FOOTING, WINGWALL AND FORESLOPE WALL) CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI, (SIDEWALK AND PARAPET) REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI, EPOXY COATED PRECAST STRUCTURES - COMPRESSIVE STRENGTH 5.0 KSI, THE PARAPET SHALL BE DESIGNED FOR TL-3 CRASH LOADING.

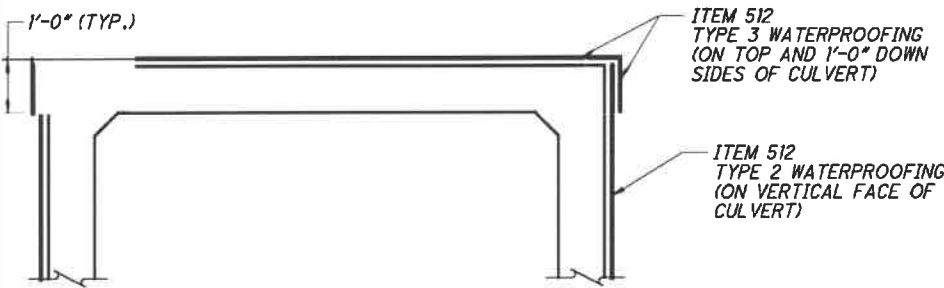
REMOVAL OF EXISTING STRUCTURE: THE EXISTING STRUCTURE SHALL BE REMOVED AS PER PLANS. FOUNDATION TO BE REMOVED TO 1 FOOT BELOW FINAL GRADE OR AS NEEDED TO CONSTRUCT PROPOSED FOUNDATION.

SEE SHEET [3/41] FOR ASBESTOS SURVEY NOTE FOR STRUCTURE REMOVAL.

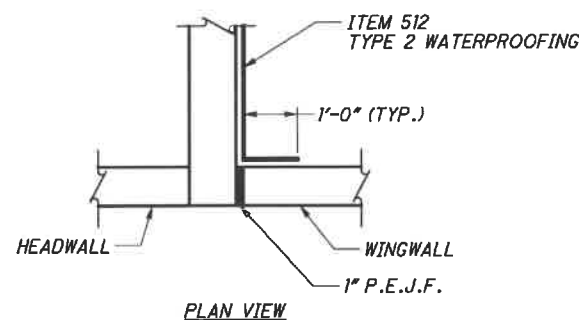
BOX CULVERT WALL AND TOP SLAB THICKNESS: THE WALL AND TOP OF SLAB THICKNESS SHOWN ON THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP SLAB THICKNESS OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE PROJECT.

ITEM 512, TYPE 2 AND TYPE 3 WATERPROOFING: TYPE 2 WATERPROOFING SHALL BE APPLIED AS SHOWN ON THE DETAILS BELOW.

MEMBRANE WATERPROOFING TYPE 3 SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES BY 12 INCHES.



SECTION VIEW



PLAN VIEW

ITEM 611, CONDUIT, MISC.: 2' X 8.5' CONDUIT, TYPE A, 706.05 PARAPET: THE PARAPET SHAPE SHALL BE PER THE CULVERT MANUFACTURER. THE PARAPET SHALL MEET THE DESIGN PARAMETERS, HEIGHT AND THICKNESS AS SHOWN IN THE PLANS. THE PARAPET SHALL HAVE ARCHITECTURAL TREATMENT ON THE BACK FACE AND FRONT FACE. THE TREATMENT MUST MEET NOTES FOR ITEM 530, SPECIAL - FORM LINER. FULL COMPENSATION INCLUDING CONCRETE AND REINFORCEMENT OF THE PRECAST PARAPET SHALL BE INCLUDED IN ITEM 611.

SIDEWALK: THE SIDEWALK SHALL BE PER THE CULVERT MANUFACTURER. THE SIDEWALK SHALL MEET THE HEIGHT AND THICKNESS AS SHOWN IN THE PLANS. FULL COMPENSATION INCLUDING CONCRETE AND REINFORCEMENT OF THE PRECAST SIDEWALK SHALL BE INCLUDED IN ITEM 611.

PRECAST WINGWALLS, FORESLOPE WALLS AND FOOTERS: AT THE OPTION OF THE CONTRACTOR, A PRECAST WINGWALL, FORESLOPE WALL, OR FOOTER MAY BE FURNISHED PER ITEM 602. THE PRECAST OPTION FURNISHED WILL MEET THE CAST-IN-PLACE STRUCTURAL DESIGN LOADINGS, DESIGN HEIGHT, AND DESIGN LENGTH DIMENSIONS.

FULL COMPENSATION FOR THE PRECAST WINGWALL, FORESLOPE WALL, OR FOOTER IS THE NUMBER OF CUBIC YARDS OF ITEM 511 AND POUNDS OF ITEM 509 FOR THE CORRESPONDING CAST-IN-PLACE STRUCTURE.

ITEM 530, SPECIAL - FORM LINER: DESCRIPTION: CONCRETE FORM LINERS SHALL BE USED ON THE PARAPETS ACCORDING TO THE DETAILS IN PLANS.

THE FORM LINER USED SHALL MEET THE DETAILS SHOWN IN THE PLANS FOR STAGGERED (INTERLOCKING) PATTERNS, INCLUDING DEPTH OF RELIEF AND SIZE OF STONE PATTERN. HORIZONTAL JOINTS IN THE STONE PATTERN SHALL BE ALIGNED AND AT THE SAME ELEVATION. THE FINISHED TEXTURE OF THE ROUGH CUT STONE SHALL BE SIMILAR TO THAT OF RUBBED CONCRETE.

FORM LINERS SHALL MATCH THE DIMENSIONAL SPECIFICATIONS OF THE FOLLOWING MANUFACTURER OR APPROVED EQUAL:

PATTERN #2018 CUSTOM ROCK FORM LINER 2020 W. 7TH STREET ST. PAUL, MN. 55116 800-637-2447 WWW.CUSTOMROCK.COM

THE FORM LINER MANUFACTURER SHALL SUBMIT EVIDENCE OF AT LEAST TWO SIMILAR ARCHITECTURAL CONCRETE CONSTRUCTION PROJECTS WITHIN THE PAST FIVE YEARS FOR A REVIEW AND APPROVAL BY THE ENGINEER. COMPLETE SHOP DRAWINGS DETAILING THE STONE PATTERNS SHALL BE SUBMITTED IN ACCORDANCE WITH 501.04 FOR APPROVAL PRIOR TO PLACING ANY CONCRETE WHERE THE FORM LINERS WILL BE USED. SHOP DRAWINGS SHALL INCLUDE FORM LINER INSTALLATION AND CASTING INSTRUCTIONS, AND INDICATE FORM LINER BACKUP, REVEAL AND CHAMFER STRIP LOCATIONS. THE CONTRACTOR SHALL COORDINATE WITH FORM LINER MANUFACTURER TO ASSURE UNDERSTANDING OF FORM LINER USE. TEST FINAL CONSTRUCTION PROCEDURES.

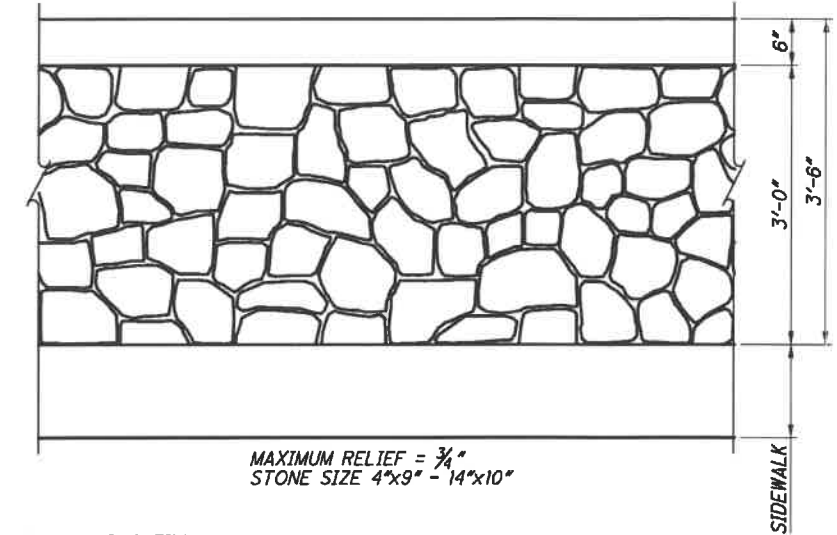
MATERIALS: THE FORM LINER SHALL BE FABRICATED WITH SHAPES THAT ALLOW REMOVAL OF THE FORMS WITHOUT DAMAGE OR VISUAL IMPAIRMENT OF THE CONCRETE, AND SHALL HAVE 1/8" MINIMUM RADIUS WITH NO SHARP EDGES. THE FORM LINER SHALL BE CAPABLE OF WITHSTANDING APPLIED CONCRETE POUR PRESSURE WITHOUT LEAKAGE, PHYSICAL DEFECT, OR VISUAL IMPAIRMENT.

CONSTRUCTION REQUIREMENTS: FORM LINERS SHALL BE CLEANED BEFORE EACH USE. DAMAGED FORM LINERS WHOSE CONTINUED USE OR REPAIR WOULD NEGATIVELY IMPACT THE AESTHETICS OF THE FINISHED CONCRETE SHALL BE REPLACED. FORM LINER JOINTS SHALL BE SEALED TO PREVENT CEMENT PASTE FROM BLEEDING. FORM LINERS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS. CHAMFERED CORNERS SHALL FORM SMOOTH, SOLID UNBROKEN CONTINUOUS SURFACES WHICH ARE UNIFORMLY STRAIGHT. AN APPROVED COMPATIBLE FORM LINER RELEASE AGENT SHALL BE APPLIED AT A RATE RECOMMENDED BY THE MANUFACTURER.

PORTIONS OF THE PARAPET DETAILED IN THE PLAN SET SHALL BE CAST WITH STONE FACING FORM LINER TEXTURE AND BE SEALED WITH ITEM 512 - SEALING CONCRETE SURFACES (EPOXY-URETHANE).

METHOD OF MEASUREMENT: ROUGH CUT STONE FORM LINERS WILL NOT BE MEASURED INDIVIDUALLY FOR PAYMENT UNDER THIS ITEM.

BASIS OF PAYMENT: ITEM 530, SPECIAL - FORM LINER, WILL BE PAID FOR AT THE CONTRACT SQ. FT. PRICE. THE WORK SHALL INCLUDE FABRICATION AND ERECTION OF FORM LINERS, PREPARATION OF FORM LINER SHOP DRAWINGS, AND CONSTRUCTION AND REMOVAL OF THE PRE-CONSTRUCTION PARAPET SECTION, AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS INCLUDING SEALING OF CONCRETE SURFACE (EPOXY URETHANE) REQUIRED TO COMPLETE THIS ITEM.



POROUS BACKFILL: POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEP HOLE. WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

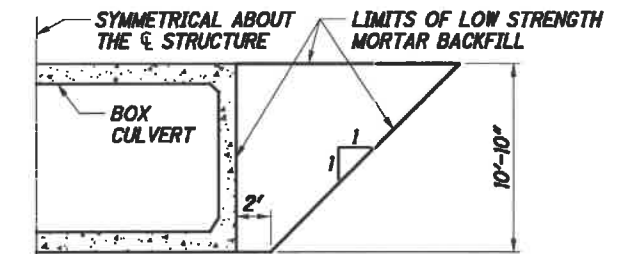
PERFORMED EXPANSION JOINT FILLER: PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING, BETWEEN THE SIDES OF THE BOX CULVERT, AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

FORESLOPE WALL ANCHOR DOWELS: ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH OF 5". PAYMENT FOR THE DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED IN ITEM 511.

AS AN ALTERNATIVE TO RESIN BONDING, THREADED INSERTS OR NONPROTRUDING MECHANICAL CONNECTORS CAST INTO THE CULVERT BY THE MANUFACTURER MAY BE USED PROVIDED THEY CAN RESIST AN ULTIMATE PULL-OUT STRENGTH OF 12 KIPS AND MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS MUST PROVIDE AN "L SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS SHALL BE INCLUDED IN ITEM 603.

FOUNDATION BEARING PRESSURE: WINGWALL AND CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 1.15 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 1.54 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 4.0 KIPS PER SQUARE FOOT.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL: CONSTRUCT THE PROPOSED 2' X 8.5' CONDUIT, TYPE A AS PER ITEM 611. IN LIEU OF THE BACKFILL REQUIREMENTS OF CMS 611.06, PROVIDE LOW STRENGTH MORTAR BACKFILL TO THE LIMITS AS DETAILED ON THIS SHEET.



TO BE PLACED FROM END-TO-END OF THE POROUS BACKFILL. CALCULATION: 2 x (2' x 10.83' + 0.5 x 10.83' x 10.83') x 75.5' + 27 = 449.34 CU. YD.

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DESIGN AGENCY: THRASHER DESIGN GROUP, INC. 400 3RD STREET SE SUITE 309 CANTON, OHIO 44702
DATE: 11/30/2023
REVIEWED: CMK
DRAWN: SCN
CHECKED: JWA
STRUCTURE FILE NUMBER: T960191
GENERAL NOTES: BRIDGE NO. TUS020-5320 EAST 20TH STREET OVER GOETTGE RUN
TUS-E. 20TH ST. PID No. 108696
2/14
19/41

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ESTIMATE OF QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	CULVERT	WINGWALL 1	WINGWALL 2	WINGWALL 3	WINGWALL 4	SIDEWALK/ PARAPET	SHEET REFERENCE
202	11001	1	LS	STRUCTURE REMOVED, AS PER PLAN							2/14
503	11100	1	LS	COFFERDAMS AND EXCAVATION BRACING							
503	21100	697	CY	UNCLASSIFIED EXCAVATION	697						
509	10000	12332	LB	EPOXY COATED REINFORCING STEEL	12332						
510	10000	112	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	112						
511	46010	30	CY	CLASS QCI CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING		8	7	7	8		
511	46510	74	CY	CLASS QCI CONCRETE, FOOTING	74						
511	46610	4	CY	CLASS QCI CONCRETE, HEADWALL	4						
512	10100	155	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	36	11	9	10	9	80	
512	33000	182	SY	TYPE 2 WATERPROOFING	181						
512	33010	210	SY	TYPE 3 WATERPROOFING	210						
516	13600	64	SF	1" PREFORMED EXPANSION JOINT FILLER	64						
516	13900	18	SF	2" PREFORMED EXPANSION JOINT FILLER	18						
518	21200	15	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		3	4	4	4		
530	13000	296	SF	SPECIAL - FORM LINER						296	
601	32200	61	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	61						
611	97400	76	FT	CONDUIT, MISC.: 21' X 8.5' CONDUIT, TYPE A, 706.05	76.5						2/14
613	41200	450	CY	LOW STRENGTH MORTAR BACKFILL	450						

ABBREVIATIONS:

B.F.	BACK FACE
BOT.	BOTTOM
C.	CENTERLINE
C.I.P.	CAST-IN-PLACE
CLR.	CLEAR
DIA.	DIAMETER
EL.	ELEVATION
F.F.	FRONT FACE
F.L.	FLOW LINE
FT.	FOOT / FEET
LT.	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
RT.	RIGHT
R/W	RIGHT OF WAY
SHLDR.	SHOULDER
S.O.	SQUARE
STA.	STATION
T & B	TOP AND BOTTOM
TYP.	TYPICAL

DESIGNED
RLC
CHECKED
JWA

DRAWN
SCN
REVISED

REVIEWED
CMK 11/30/2023
STRUCTURE FILE NUMBER
7960191

DATE
11/30/2023

DESIGN AGENCY
THRASHER
CANTON, OHIO 44702

ESTIMATED QUANTITIES
BRIDGE NO. TUS020-S320
EAST 20TH STREET OVER GOETTIGE RUN

TUS-E 20TH ST.
RD No. 108696