



Department of Public Service
5330 Seaman Road
Oregon, Ohio 43616
(419) 698-7047
FAX (419) 691-0241

February 20, 2020

ADDENDUM No. 2

**LUC-SEAMAN ROAD & YARROW STREET BRIDGE REPLACEMENTS
PID 107148**

**CITY OF OREGON
DEPARTMENT OF PUBLIC SERVICE**

BIDS TO BE OPENED: Wednesday, February 26, 2020 at 10:00 AM

Plan holders of the City of Oregon's LUC-Seaman Road & Yarrow Street Bridge Replacements are hereby notified of the following amendments to the Contract Documents. The following additions, alterations, deletions and/or clarifications shall be part of the bid specifications as much as if they were originally included in the Contract Documents. This Addendum No. 2 is hereby made a part of the Contract Documents.

CONTRACT CHANGES

1) PLAN REVISIONS

Replace PLAN SHEETS 43 and 50 in the Plan Set with the attached **REVISED PLAN SHEETS 43 and 50 DATED 2/18/20**.

*** * * END OF ADDENDUM NO. 2 * * ***

A handwritten signature in blue ink, appearing to read "Paul Roman".

Paul Roman, P.E
Director of Public Service

O:\Projects\Ann Arbor\IER\210040\200-210040-18001\CAD\107148_LUC-SEAMAN\Design\Structures\LUCSEA_0168C_Sheets\SEA_0168C_Sheets.dgn Sheet 2/18/2020 11:08 PM dave.charville

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

HW-1.1 DATED (REVISED) 07-20-18
 RM-5.2 DATED (REVISED) 01-18-19

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800 DATED 01-17-20
 832 DATED 10-19-18

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8TH EDITION, INCLUDING THE MAY 2018 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN LOADING

DESIGN LOADING: HL-93 (MODIFIED) - CULVERT CONDUIT
 HL-93 - FOOTING

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC1 -COMPRESSIVE STRENGTH 4.0 KSI (FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL -MINIMUM YIELD STRENGTH 60 KSI

THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS

THE WALL AND TOP 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 ON THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DEIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO ADDITIONAL COST TO THE CITY.

FOUNDATION BEARING RESISTANCE

CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 2.87 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 3.59 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 3.6 KIPS PER SQUARE FOOT.

ITEM 511, CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN AND ITEM 511, CLASS QC1 CONCRETE, HEADWALL, AS PER PLAN:

THE CITY WILL PERMIT THE USE OF PRECAST CONCRETE IN LIEU OF CAST-IN-PLACE CONCRETE FOR HEADWALLS AND WINGWALLS IN ACCORDANCE WITH C&S 602.03. WHEN PRECAST WINGWALLS AND/OR HEADWALLS ARE USED, PAYMENT WILL BE MADE AT THE PLAN QUANTITIES AND BID UNIT PRICES FOR THE ASSOCIATED CLASS QC1 CONCRETE AND EPOXY COATED REINFORCING STEEL ITEMS.

WATERPROOFING

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL BE APPLIED TO THE TOP SURFACE AND EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. A MINIMUM LAP LENGTH OF 6" SHALL BE USED AT THE JOINTS IN THE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING, AS PER PLAN.

PREFORMED 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.

POROUS BACKFILL WITH GEOTEXTILE FABRIC

2'-0" 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 WEEPHOLE.

POROUS BACKFILL WITH GEOTEXTILE FABRIC (CONTINUED)

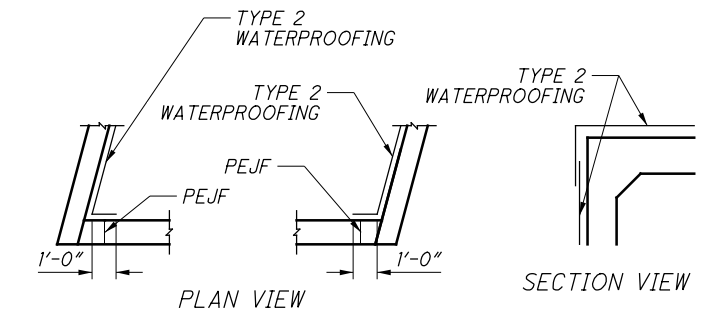
WEEPHOLES SHALL BE PLACED 6' TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE. A MINIMUM OF TWO WEEPHOLES SHALL BE PROVIDED PER WINGWALL.

ITEM 607, FENCE, MISC: WOOD FENCE, AS PER PLAN

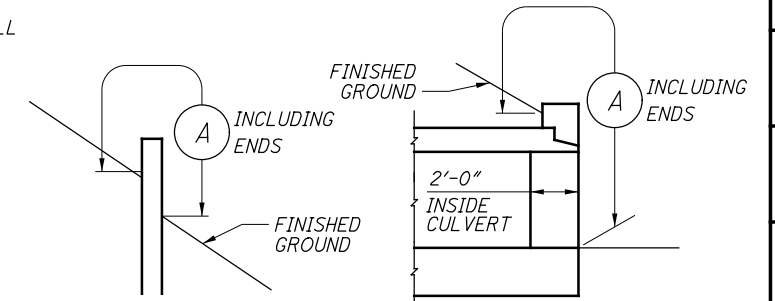
THE WOOD FENCE INSTALLED PER THIS ITEM SHALL BE PER STD. CONST. DWG. RM-5.2 EXCEPT AS SHOWN IN THESE PLANS.

ITEM 613, LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

LOW STRENGTH MORTAR BACKFILL SHALL BE PLACED AS SHOWN AND Laterally TO 5' BEYOND THE EDGE OF PAVEMENT ON THE NORTH SIDE AND TO THE BACK OF SIDEWALK ON THE SOUTH SIDE. VERTICALLY THIS BACKFILL SHALL BE PLACED NO HIGHER THAN 3' BELOW THE TOP SURFACE OF THE TOP OF THE CULVERT AS SHOWN. PAYMENT FOR LOW STRENGTH MORTAR BACKFILL SHALL BE MADE ONLY FOR BACKFILL PLACED TO THE LIMITS SHOWN. LIFTS SHALL BE LIMITED TO 4' AND SHALL BE PLACED TO EQUAL HEIGHTS ON EACH SIDE OF THE CULVERT. A SUBSEQUENT LIFT SHALL NOT BE PLACED ON TOP OF A LIFT UNTIL 24 HOURS HAVE ELAPSED.

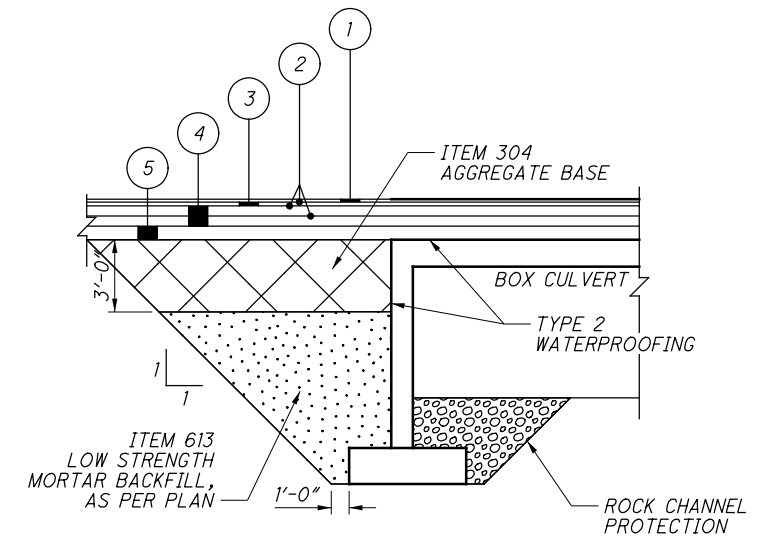


WATERPROOFING DETAILS



LIMITS OF ITEM 512-SEALING CONCRETE SURFACES (NON-EPOXY)

(A) - SEAL ENTIRE CONCRETE SURFACE AREA



LEGEND

- (1) ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), 1-1/4" THICK
- (2) ITEM 407 NON-TRACKING TACK COAT
- (3) ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), 1-3/4" THICK
- (4) ITEM 301 ASPHALT CONCRETE BASE, PG64-22 9" THICK
- (5) ITEM 304 6" AGGREGATE BASE

ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
202	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN
503	LUMP		UNCLASSIFIED EXCAVATION
509	18281	LB	EPOXY COATED REINFORCING STEEL
511	28	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN
511	145	CY	CLASS QC1 CONCRETE, FOOTING
511	4	CY	CLASS QC1 CONCRETE, HEADWALL, AS PER PLAN
512	383	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)
512	155	SY	TYPE 2 WATERPROOFING, AS PER PLAN
516	54	SF	1" PREFORMED EXPANSION JOINT FILLER
518	15	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
601	248	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER ¹
607	110	FT	FENCE, MISC.: WOOD FENCE, AS PER PLAN
611	56	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT, AS PER PLAN (28'-0" SPAN X 10'-0" RISE)
613	404	CY	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

² - 2/18/20 REVISED WINGWALL/HEADWALL A.P.P. GENERAL NOTE

¹ - 2/13/20 FILTER MATERIAL REMOVED FROM ITEM

DESIGN AGENCY: TETRA TECH
 480 N. WASHINGTON ST., SUITE 1001
 TOLEDO, OH 43604
 DATE: 9/24/2019
 REVIEWED: DTC
 DRAWN: TSR
 CHECKED: TJD
 STRUCTURE FILE NUMBER: 4863128
 GENERAL NOTES: SEAMAN ROAD BRIDGE OVER THE OTTER CREEK
 LUC-SEAMAN RD & YARROW ST BR.
 2 / 7
 43 / 55

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DESIGN LOADING

DESIGN LOADING: HL-93

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC1 -COMPRESSIVE STRENGTH 4.0 KSI (FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL -MINIMUM YIELD STRENGTH 60 KSI

THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS

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FOUNDATION BEARING RESISTANCE

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ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN

DUE TO THE POTENTIAL FOR LOOSENING OF THE SOIL UPON EXCAVATION AND OCCURRENCE BELOW THE STREAM BOTTOM, THE SOIL EXCAVATED FOR THE FOOTING SHALL BE OVEREXCAVATED BY 1 FOOT AND REPLACED WITH LEAN CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 1.5 KIPS PER SQUARE INCH (KSI) OR OTHER FLOWABLE CONTROLLED-DENSITY FILL (CDF) HAVING A MINIMUM COMPRESSIVE STRENGTH OF 0.3 KSI AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN (CONT'D)

INCLUDE IN THE CONTRACT LUMP SUM PRICE BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

ITEM 511, CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN AND ITEM 511, CLASS QC1 CONCRETE, HEADWALL, AS PER PLAN:

THE CITY WILL PERMIT THE USE OF PRECAST CONCRETE IN LIEU OF CAST-IN-PLACE CONCRETE FOR HEADWALLS AND WINGWALLS IN ACCORDANCE WITH C&MS 602.03. WHEN PRECAST WINGWALLS AND/OR HEADWALLS ARE USED, PAYMENT WILL BE MADE AT THE PLAN QUANTITIES AND BID UNIT PRICES FOR THE ASSOCIATED CLASS QC1 CONCRETE AND EPOXY COATED REINFORCING STEEL ITEMS.

WATERPROOFING

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL BE APPLIED TO THE TOP SURFACE AND EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. A MINIMUM LAP LENGTH OF 6" SHALL BE USED AT THE JOINTS IN THE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING, AS PER PLAN.

PREFORMED EXPANSION JOINT FILLER

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POROUS BACKFILL WITH GEOTEXTILE FABRIC

2'-0" 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 WEEPHOLE.

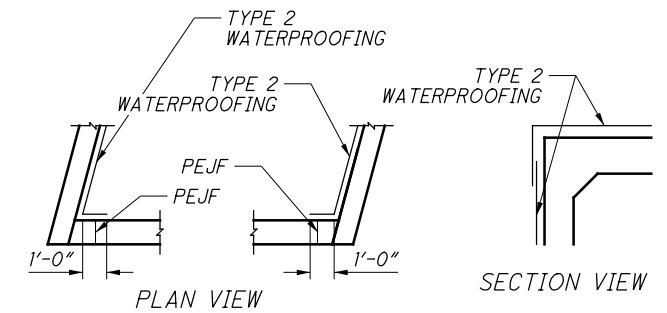
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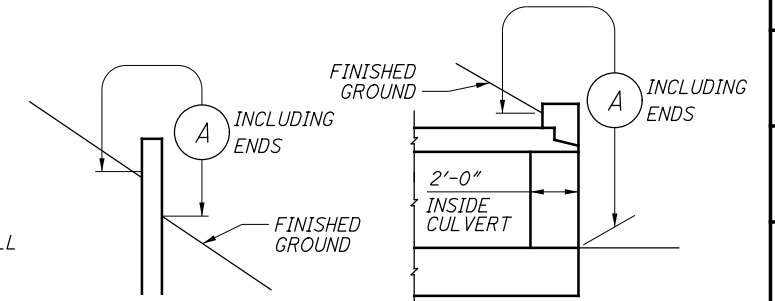
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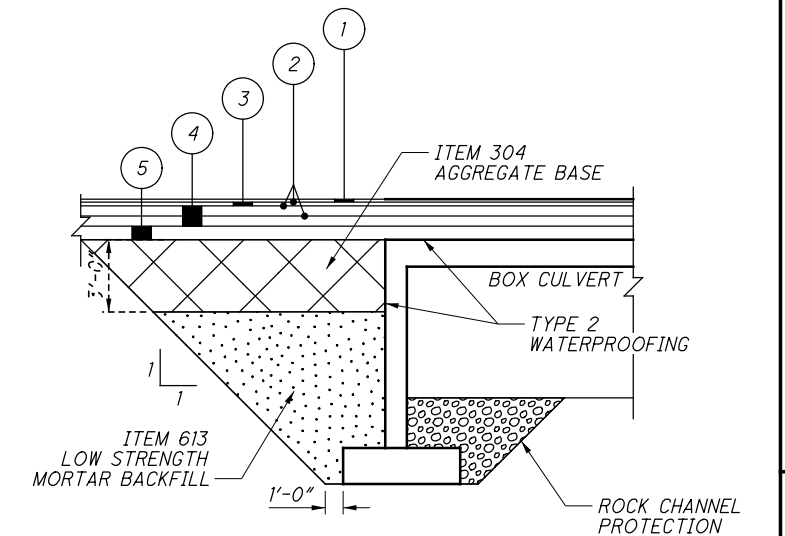


WATERPROOFING DETAILS



LIMITS OF ITEM 512-SEALING CONCRETE SURFACES (NON-EPOXY)

(A) - SEAL ENTIRE CONCRETE SURFACE AREA



LEGEND

- 1 ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), 1-1/4" THICK
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- 4 ITEM 301 ASPHALT CONCRETE BASE, PG64-22 9" THICK
- 5 ITEM 304 6" AGGREGATE BASE

ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
202	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN
503	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN
509	13161	LB	EPOXY COATED REINFORCING STEEL
511	25	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN
511	104	CY	CLASS QC1 CONCRETE, FOOTING
511	5	CY	CLASS QC1 CONCRETE, HEADWALL, AS PER PLAN
512	383	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)
512	97	SY	TYPE 2 WATERPROOFING
516	47	SF	1" PREFORMED EXPANSION JOINT FILLER
518	12	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
601	96	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
607	100	FT	FENCE, MISC.: WOOD FENCE, AS PER PLAN
611	40	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT, AS PER PLAN (28'-0" SPAN X 8'-0" RISE)
613	206	CY	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

2 - 2/18/20 REVISED WINGWALL/HEADWALL A.P.P. GENERAL NOTE

1 - 2/13/20 FILTER MATERIAL REMOVED FROM ITEM