

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		167.5	167.5
Stone Riprap, Class A4	Sq. Yd.		869	869
Filter Fabric	Sq. Yd.		869	869
Removal of Existing Structure No. 1	Each	1		1
Structure Excavation	Cu. Yd.		71.8	71.8
Concrete Structures	Cu. Yd.		77.9	77.9
Concrete Superstructure	Cu. Yd.	258.3		258.3
Bridge Deck Grooving	Sq. Yd.	567		567
Concrete Encasement	Cu. Yd.		5.0	5.0
Protective Coat	Sq. Yd.	690		690
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	1239		1239
Reinforcement Bars, Epoxy Coated	Pound	62090	8070	70160
Bar Splicers	Each	477	102	579
Steel Railing (Temporary)	Foot	27.0		27.0
Furnishing Steel Piles HP12x53	Foot		988	988
Driving Piles	Foot		988	988
Test Pile Steel HP12x53	Each		1	1
Temporary Soil Retention System	Sq. Ft.		616	616
Name Plates	Each	1		1
Anchor Bolt 1" φ	Each	28		28
Geocomposite Wall Drain	Sq. Yd.		81.2	81.2
Pipe Underdrains for Structures, 4"	Foot		186	186

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 3. Bolts 3/4" φ, holes 15/16" φ, unless otherwise noted.
 Calculated weight of Structural Steel = 85300 lbs.
 All structural steel shall be AASHTO M 270 Grade 50W.
 No field welding is permitted except as specified in the contract documents.
 Reinforcement bars designated (E) shall be epoxy coated.
 Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
 The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
 Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
 The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I Removal to ensure the remaining portion will not be prematurely damaged.

WATERWAY INFORMATION

		*Structure No.		Discharge (cfs)		Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
Flood Year	Freq.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	060-0072		3	879	262	535	466.8	0.1	—	466.9	466.8	
		060-0234		2752	1876	1168	1168						
		Total		2755	2755	1430	1703						
Base	50	060-0072		850	1393	278	535	471.1	—	0.1	471.1	471.2	
		060-0234		3610	3067	1198	1198						
		Total		4460	4460	1476	1733						
Overtopping	100	060-0072		1000	1639	278	535	473.8	—	—	473.8	473.8	
		060-0234		4250	3611	1198	1198						
		Total		5250	5250	1476	1733						
Overtopping	20	060-0072		648	1062	278	535	469.0	0.1	0.1	469.1	469.1	
		060-0234		2752	2338	1198	1198						
		Total		3400	3400	1476	1733						

10 year velocity through existing bridge = 0 ft/s
 10 year velocity through proposed bridge = 1.6 ft/s

Downstream railroad structure is very constrictive and creates a tailwater condition at the Illinois 157 bridges.

*IL 157 over Sugar Creek (SN 060-0072) is an overflow structure for IL 157 over Mooney Creek (SN 060-0234), and shares the same floodplain.

DESIGN SCOUR ELEVATION TABLE

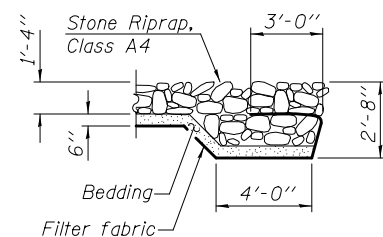
	W. Abut.	E. Abut.
Design Scour Elev. 50 Year (ft.)	461.28	462.05

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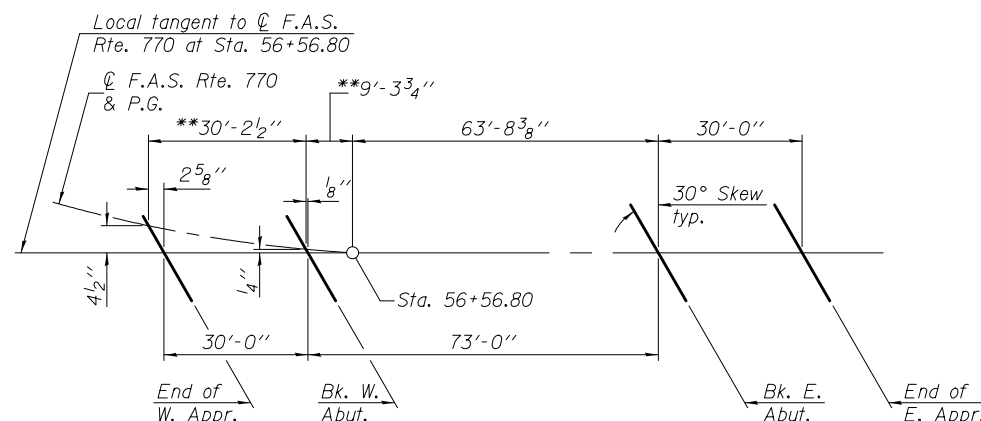
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CURVE DATA

Δ = 6°29'54" Lt.
 D = 2°46'24"
 T = 117.29'
 L = 234.32'
 E = 3.33'
 R = 2,066.01'
 S.E. = 4.8%
 P.C. = Sta. 54+22.48
 P.T. = Sta. 56+56.80
 P.I. = Sta. 55+39.77
 S.E. begins Sta. 52+99.9
 Max. S.E. at Sta. 54+62.9 to Sta. 56+16.4
 Normal crown at Sta. 57+79.4

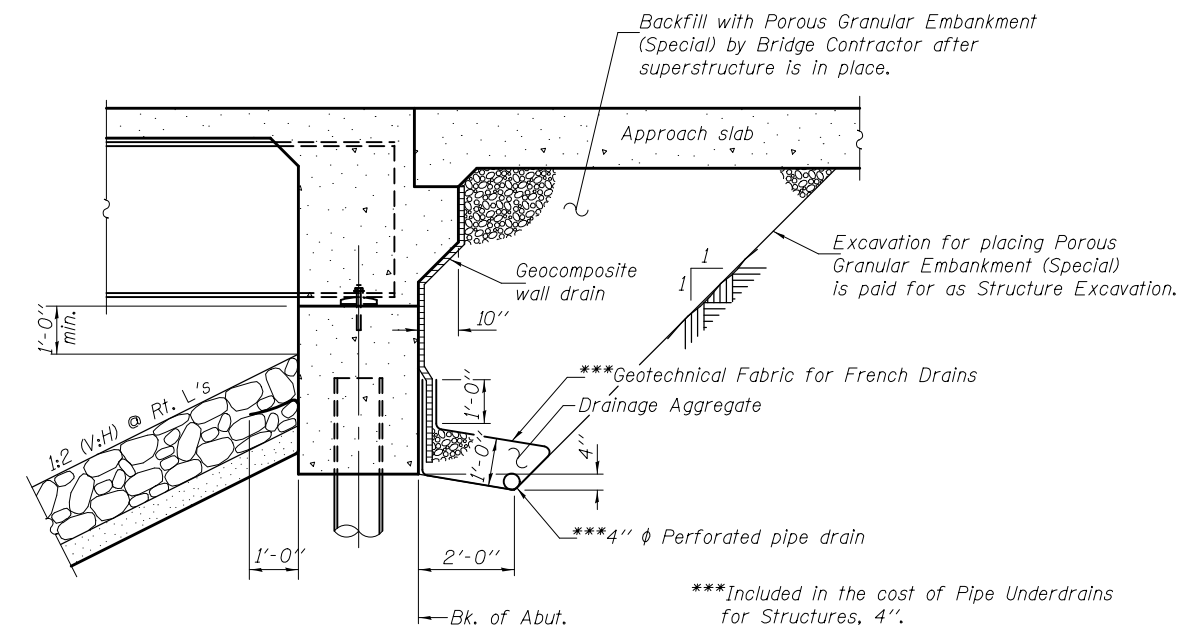


SECTION A-A



OFFSET SKETCH

**Along F.A.S. Rte. 770



SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

DESIGNED - Stephen M. Ryan	EXAMINED - Thomas Domagalaki	DATE - MARCH 20, 2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		GENERAL DATA STRUCTURE NO. 060-0204		F.A.S. RTE. 770	SECTION 64-1BR	COUNTY MADISON	TOTAL SHEETS 137	SHEET NO. 76
CHECKED - Fess Teklehaimanot	PASSED - [Signature]	REVISOR	SHEET NO. 2 OF 26 SHEETS		ILLINOIS FED. AID PROJECT		CONTRACT NO. 76401				