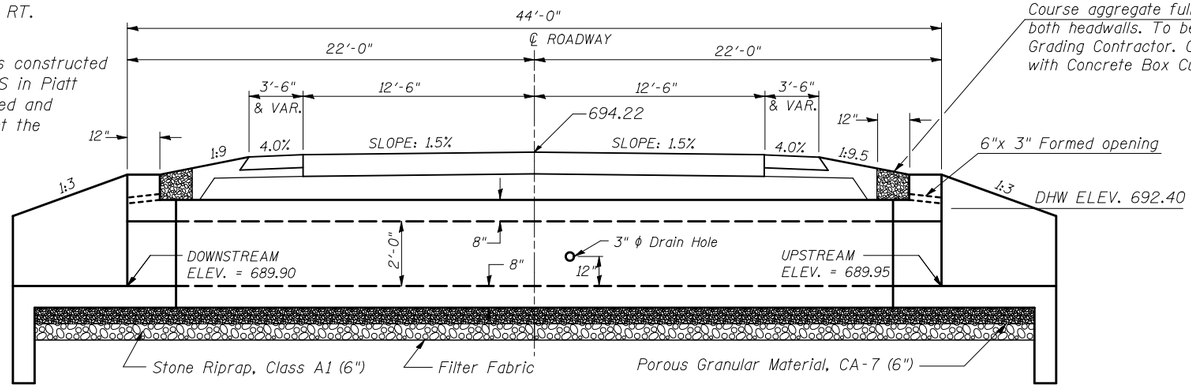
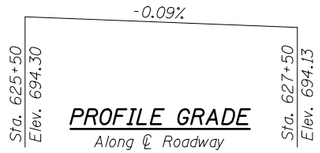
BENCHMARK ELEVATION: 692.32' Chiseled square on the north headwall of existing 24" CMP culvert. Station 626+48.87, 22.23' RT.

EXISTING STRUCTURE: An existing 24" CMP culvert was constructed in 1960 as part of Section 8W-1,(9,10)W & 8RS-1,(9,10)RS in Piatt County. The existing structure is to be completely removed and replaced. Staged construction will be utilized to construct the new structure.



ELEVATION

(DIMENSIONS AT RIGHT ANGLES TO ℄ OF ROADWAY)



PROFILE GRADE

Along ℄ Roadway

STATION 626+50.00
BUILT 2011 BY
STATE OF ILLINOIS
F.A.P. RT. 741 SEC. (8,9,10)CR
LOADING HS 20
STRUCTURE NO. 074-8062

NAME PLATE

See Std. 515001

INDEX OF SHEETS

DESIGN SPECIFICATIONS

2002 AASHTO

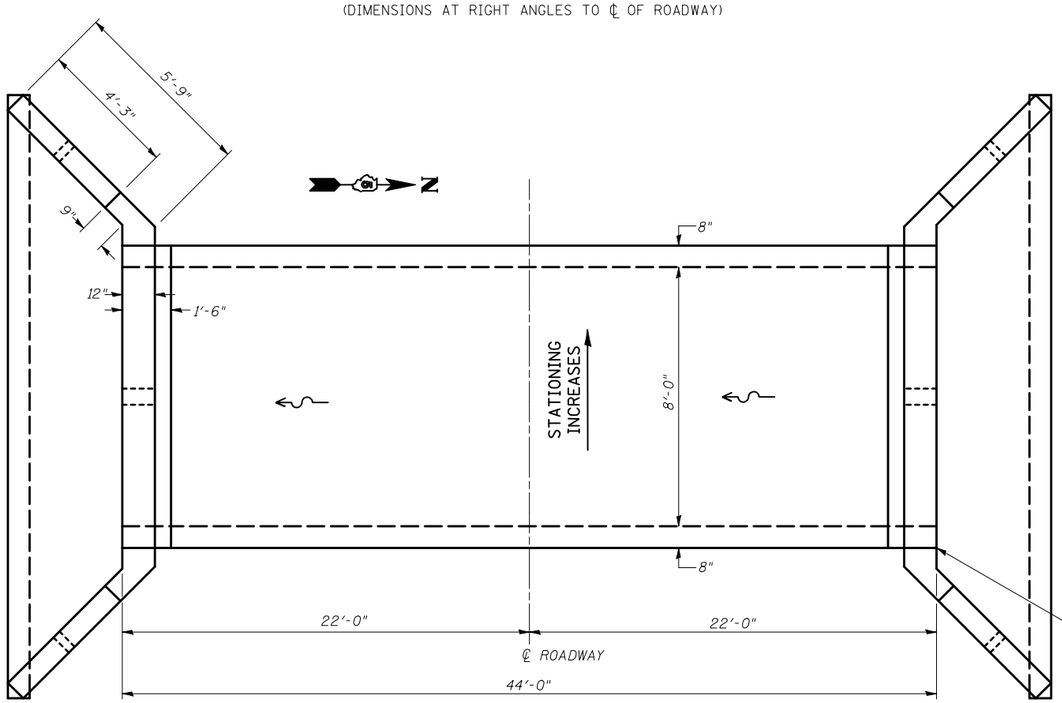
LOADING HS20-44

Allow 50#/sq.ft. for future wearing surface

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 65,000 psi (welded wire fabric)

PRECAST UNITS
f'c = 5,000 psi
fy = 65,000 psi (welded wire fabric)



PLAN

WATERWAY INFORMATION

Drainage Area = 0.220 sq.mi. Low Grade Elev. 694.09 @ Sta. 628+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	53	3	15				Over	691.8
Design	50	84	3	16				Over	692.4
Base	100	98	3	16				Over	692.8
Overtopping									
Max. Calc.	500	132	3	16				Over	694.0

10 year velocity through existing bridge = 3.01 fps 10 year velocity through proposed bridge = 4.25 fps
Note: Information provided utilizing USGS Method (2004-5103)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	686.95	686.90

GENERAL NOTES

All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of ASTM A706 Gr. (IL Modified). See Special Provisions.

The 6" Porous Granular Material required per Art. 540.06 of the Standard Specifications shall also extend beneath the Box Culvert End Sections and shall be considered included in the cost of Precast Concrete Box Culverts and Box Culvert End Sections.

When lapping sheets of welded wire fabric, the overlap measured between the outermost cross wires of each fabric sheet shall not be less than 8".

End Sections will be paid for at the contract unit price per each for BOX CULVERT END SECTIONS, as outlined in Section 540 of the Standard Specifications.

Class SI Concrete shall be used throughout.

Concrete, Rebar, and Welded Wire Fabric quantities and lengths calculated for the cast-in-place End Sections may vary based on the precast box culverts supplied.

Drain holes shall be provided in accordance with Article 503.11 of the Standard Specifications.

The design reinforcement areas shall conform to those found in Table 1 of AASHTO M273 for an 8'x2' box section except the extension of the As1 bars into the top slab shall be equal to (23 inches + 2 longitudinal wire spaces).

The box culvert end section may be built in the field or using precast construction methods. If the contractor elects to use precast construction methods, shop drawings and a proposed construction sequence shall be submitted to the Engineer for approval. See Special Provisions.

The ends of the precast box sections adjacent to the end section shall be formed without the male and female shapes specified in Article 8.1 of AASHTO M273. See Sections B-B, D-D and E-E on Sheet 2.

The design fill height for this box is less than 2 feet. The Precast Concrete Box Culvert Sections shall conform to the requirements of AASHTO M 273.

The joints between precast box sections shall be sealed and all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place and protected during the backfilling process.

All dimensions are in FEET (') - INCHES (") unless otherwise noted.

TOTAL BILL OF MATERIAL

Item	Unit	Total
Removal of Existing Structures No. 2	Each	1
Precast Concrete Box Culvert 8'x2' (M273)	Foot	41
Box Culvert End Section, Culvert No. 2	Each	2
Name Plates	Each	1
Permanent Bench Marks, Type I	Each	1
Porous Granular Embankment	Cu Yd	35.1
Stone Riprap, Class A1	Ton	19.5

GENERAL PLAN AND ELEVATION SINGLE 8'x2' PRECAST BOX CULVERT F.A.P. ROUTE 741 - SECTION (8,9,10)CR STATION 626+50.00, S.N. 074-8062 CULVERT NO. 2

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		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/19/2010	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION S.N. 074-8062 (CULVERT #2)

SCALE: | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
741	(8,9,10)CR	Piatt	65	26
		CONTRACT NO. 70800		
	ILLINOIS	FED. AID PROJECT		