# INDEX OF SHEETS General Plan and Elevation Temp. Soil Retention System - Ç Roadway Pay Limits for Pay Limits for Precast Concrete Box Culverts Pay Limits for Precast Concrete Box Culverts Pay Limits for Box Culvert End Sections Box Culvert End Sections Stage 2 Const. Stage 3 Const. Stage Const. Line —Temp. Soil Temp. Soil Ret. System Ret. System Stage 2 Stage 3 3" Ø Drain holes (See General Notes) Elev. 619.23 Elev. 619.75 0.45% 6" Porous Granular **ELEVATION** Material See Sheets 701, 702 for See Sheets 701, 702 for Precast Box Culvert Precast Box Culvert End End Section Details Section Details ← ⊈ Roadway Flow Sta. 625+16 └─ Ç Culvert 3'-0" 69'-0" 3'-0" 122'-0" Out to Out of Headwalls PLANSCB-GPE 2-17-2017

REVISED

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REVISED

REVISED

USER NAME = dhawes

PLOT DATE = 8/12/2022

DESIGNED

CHECKED

DRAWN

DATE

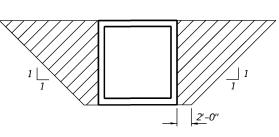
#### GENERAL NOTES

The design fill height for this box is 5 ft. The precast box culvert sections shall conform to the requirements of ASTM C 1577.

Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.

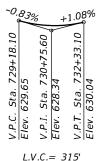
Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment in the required excavation areas on the sides of the box culvert from the top of the box culvert to the bottom of the box culvert. This area of PGE is included in the Porous Granular Embankment pay item. The 6-inch thick layer of porous granular material required under the precast concrete box culvert, according to Section 540.06 of the standard specifications, shall also apply to the end sections. Cost of this porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.



PAY LIMITS FOR POROUS
GRANULAR EMBANKMENT

(Hatched area)



PROFILE GRADE

#### DESIGN SPECIFICATIONS

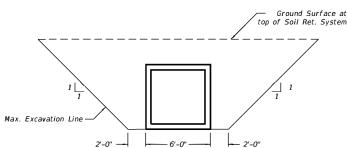
2012 AASHTO LRFD Bridge Design Specifications 6th Edition with 2013 interims

LOADING HL-93

### DESIGN STRESSES

PRECAST UNITS

c = 5,000 psi y = 65,000 psi (Welded Wire Reinforcement)



STAGE 2 & 3 - TEMP. SOIL RETENTION SYSTEM

SCALE:

STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 

## Pay Limits for Box Pay Limits for Precast Culvert End Sections Concrete Box Culverts 12" x 12" x 6" block of CA5, CA7, or 3'-0" CA11 coarse aggregate placed over drain opening. Block of aggregate shall be completely wrapped in nonwoven geotextile fabric. Provide a double layer of 12" x 12" nonwoven geotextile fabric centered over the drain hole. Perimeter of fabric shall be sealed to the concrete with mastic. 3" Ø PVC drain cast with the concrete (Adjust location to clear reinforcement) ½" Square foam blockout around PVC drain (to be removed with formwork)

# <u>DRAIN DETAIL</u>

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

### TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structures No. 6	Each	1
Box Culvert End Sections, Culvert No. 5	Each	$\sim$
Precast Concrete Box Culverts, 5'x4'	Foot	116
Porous Granular Embankment	Cu. Yd.	244
Temp. Soil Retention System	S.F.	1088
Traversable Pipe Grate for	Foot	40
Concrete End Sections		

GENERAL PLAN AND ELEVATION

IL RTE. 71 OVER

F.A.P. RTE. 71 SEC. (1-1)R, BR1

KENDALL COUNTY

STATION 730+47.20

CULVERT NO. 5

 PRECAST BOX CULVERT DETAILS
 F.A.P. SECTION
 COUNTY SHEET NO.
 TOTAL SHEET NO.

 CULVERT NO. 5, STA. 730 + 47.20
 311
 (1-1)R,BR1
 KENDALL
 849
 698A

 SHEET 21
 OF 35
 SHEETS STA.
 TO STA.
 IILLINOIS FED. ALD PROJECT