

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				80% FEDERAL 20% STATE	
				0005	RURAL
* 78008300	POLYUREA PAVEMENT MARKING TYPE II - LETTERS AND SYMBOLS	SQ FT	94	94	
* 78008310	POLYUREA PAVEMENT MARKING TYPE II - LINE 4"	FOOT	74886	74886	
* 78008340	POLYUREA PAVEMENT MARKING TYPE II - LINE 8"	FOOT	593	593	
* 78008350	POLYUREA PAVEMENT MARKING TYPE II - LINE 12"	FOOT	951	951	
* 78008370	POLYUREA PAVEMENT MARKING TYPE II - LINE 24"	FOOT	161	161	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	400	400	
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	20	20	
* 78200020	CURB REFLECTORS	EACH	17	17	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	303	303	
X0323660	DROP BOX NO.1	EACH	1	1	
X0323661	DROP BOX NO.2	EACH	1	1	
<del>X0323662</del>	<del>DROP BOX NO.3</del>	<del>EACH</del>	<del>1</del>	<del>1</del>	
X0323663	DROP BOX NO.4	EACH	1	1	
* X0326899	SOLAR-POWERED FLASHING BEACON ASSEMBLY (COMPLETE)	EACH	1	1	

\* = SPECIALTY ITEM



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USER NAME = zWaters	DESIGNED - JRD	REVISED -
PLOT SCALE = 2,000' / in.	DRAWN - ZJW	REVISED -
PLOT DATE = 12/9/2020	CHECKED - SLD	REVISED -
	DATE - 12/9/2020	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

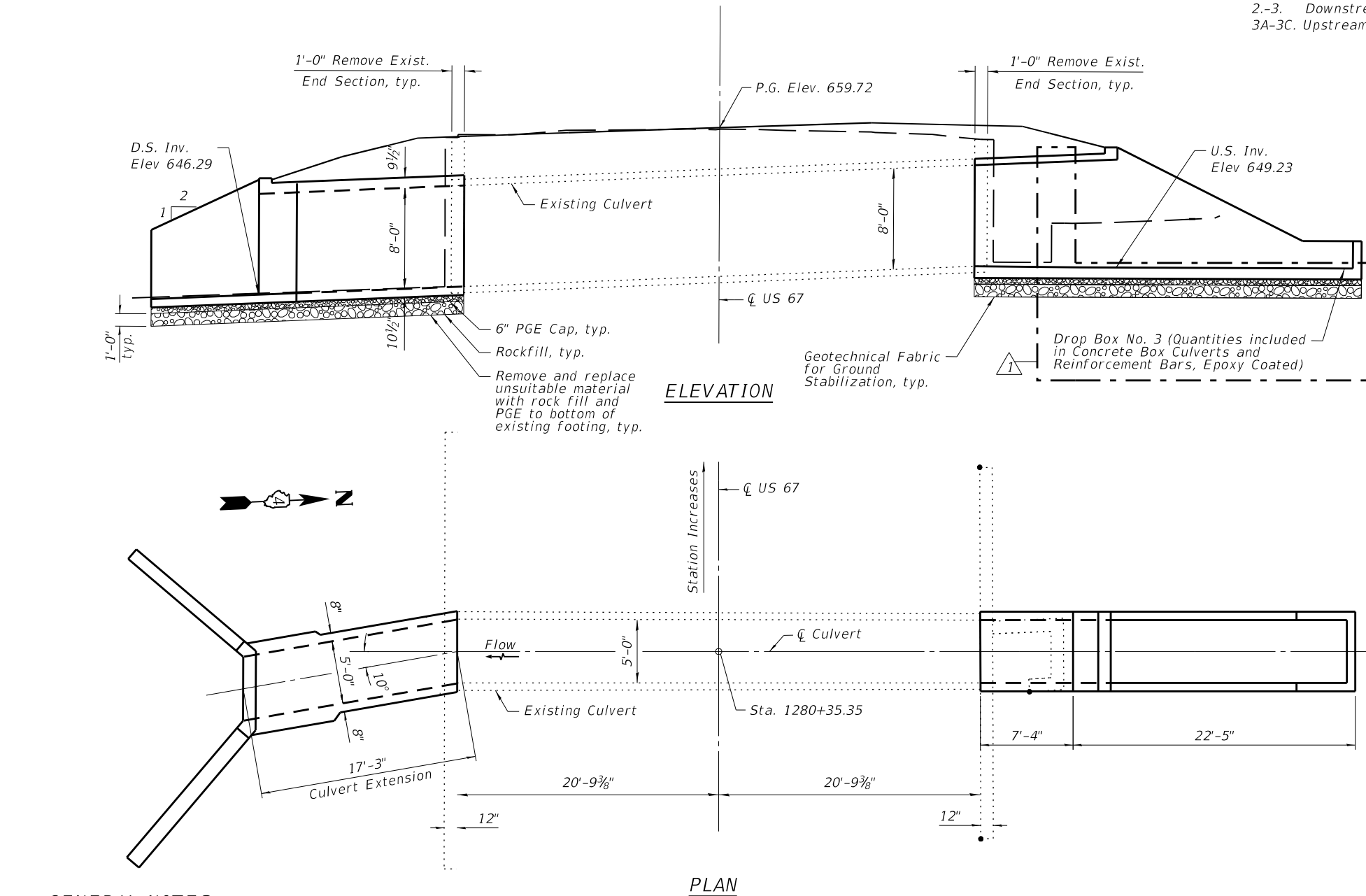
**SUMMARY OF QUANTITIES**

SCALE: N.A. SHEET 11 OF 13 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	101W-1,RS-2; 28W-1,RS-5	WARREN/MERCER	234	16
CONTRACT NO. 68636				
ILLINOIS FED. AID PROJECT				

Existing Structure: The existing structure is a single cell reinforced concrete box culvert. The culvert is 42'-6" in length (out-to-out headwalls). The cell width is approximately five (5) feet and the cell height is approximately eight (8) feet. The structure spans north to south and carries one lane each of eastbound and westbound traffic for a total of two (2) lanes. Extend the north end of the culvert 16'-0" and extend the south end of the culvert 10'-4".

Salvage: None.



**GENERAL NOTES**

- The design fill height for this box is 1.0 ft.
- The 6 in. thick layer of porous granular material required for the concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the 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.
- 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.
- Concrete box culverts shall be backfilled with Porous Granular Embankment below the top of the box culvert extending to a vertical plane 2 ft from the exterior sides of the culvert, 2 ft from the back face of the end sections, and not closer than 2 ft from the face of embankment.
- Expansion bolts shall be 3/4" hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete and a minimum of 5" into existing concrete.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

**SCOPE OF WORK**

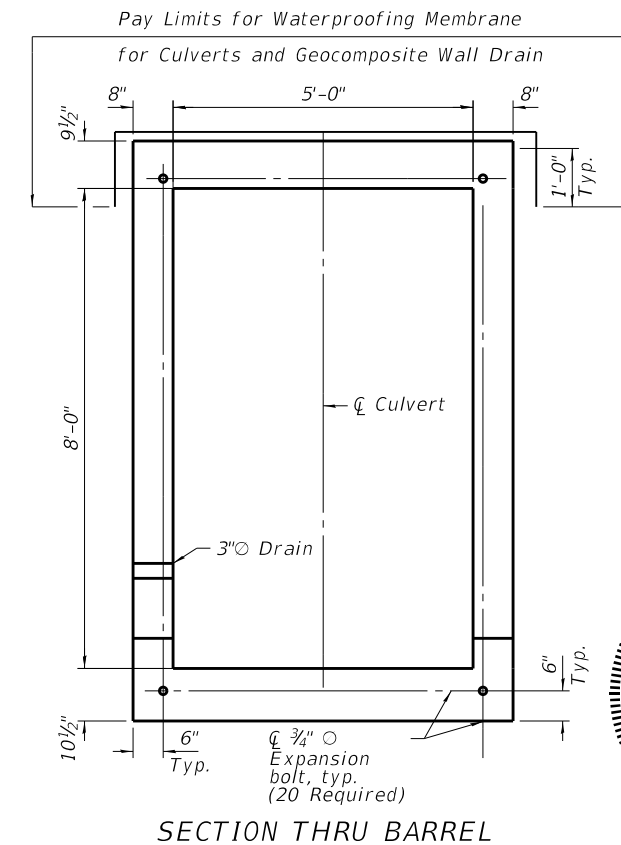
- Construct the north and south end sections.

**INDEX OF SHEETS**

- General Plan and Elevation
- 3. Downstream extension and wingwall details
- 3A-3C. Upstream extension and drop box details

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	103
Geotechnical Fabric for Ground Stabilization	Sq. Yd.	39
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	19
Reinforcement Bars, Epoxy Coated	Pound	9,230
Expansion Bolts, 3/4"	Each	40
Concrete Box Culverts	Cu. Yd.	43.5
Geocomposite Wall Drain	Sq. Yd.	22
Membrane Waterproofing System for Buried Structures	Sq. Yd.	22
Remove Concrete Box Culvert End Section	Each	2
Rock Fill	Ton	20



**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

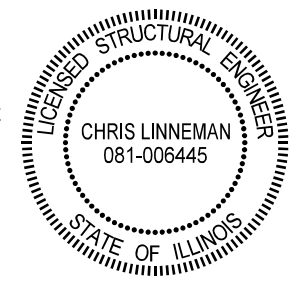
**LOADING HS-20**

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

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)



Signed: *[Signature]*  
Date: 2/4/2021  
License Expires: 11/30/2022

**GENERAL PLAN AND ELEVATION**  
**US RTE. 67 OVER DRAINAGE DITCH**  
**F.A.P. RTE. 310 SEC. 101W-1,RS-2; 28W-1,RS-5**  
**WARREN/MERCER COUNTY**  
**STATION 1280+35.35**

MODEL: Default  
FILE NAME: 145-D468636-shnt-box1\_01.dgn

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**EFK•Moen**  
Civil Engineering Design

USER NAME = cdl	DESIGNED - MJM	REVISED 1 2-5-2021 C.D.L.
PLOT SCALE = 0.1667"/in.	CHECKED - CDL	REVISED
PLOT DATE = \$DATE	DRAWN - MJM	REVISED
	CHECKED - CDL	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION**  
**CULVERT EXTENSION 1**

SHEET 1 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	101W-1,RS-2; 28W-1,RS-5	WARREN/MERCER	234	145
CONTRACT NO. 68636				

ILLINOIS FED. AID PROJECT

REV. 2/10/21