

MODEL: Default
FILE: W:\Bentley\pwworking\64476\64476.dgn
PROJECT: 64476 - ILLINOIS ROUTE 694
SHEET: 3 OF 6
DATE: 2/14/2025

SUMMARY OF QUANTITIES				STP CONSTR. CODE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	100% STATE ROADWAY 0004 RURAL
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	504	504
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2	2
54010804	PRECAST CONCRETE BOX CULVERTS 8' X 4'	FOOT	60	60
54248510	CONCRETE COLLAR	CU YD	1.4	1.4
54260315	TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION	FOOT	151	151
54261424	CONCRETE END SECTION, STANDARD 542001, 24", 1:4	EACH	1	1
542A0217	PIPE CULVERTS, CLASS A, TYPE 1 12"	FOOT	31	31
542A1069	PIPE CULVERTS, CLASS A, TYPE 2 24"	FOOT	64	64
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1
60500060	REMOVING INLETS	EACH	1	1
61100605	MISCELLANEOUS CONCRETE	CU YD	3	3
61101013	STORM SEWERS PROTECTED, CLASS A, 12 "	FOOT	150	150
61133200	FIELD TILE JUNCTION VAULTS, 3' DIA.	EACH	2	2
61140000	STORM SEWERS (SPECIAL), 8"	FOOT	100	100
61140200	STORM SEWERS (SPECIAL), 12"	FOOT	100	100

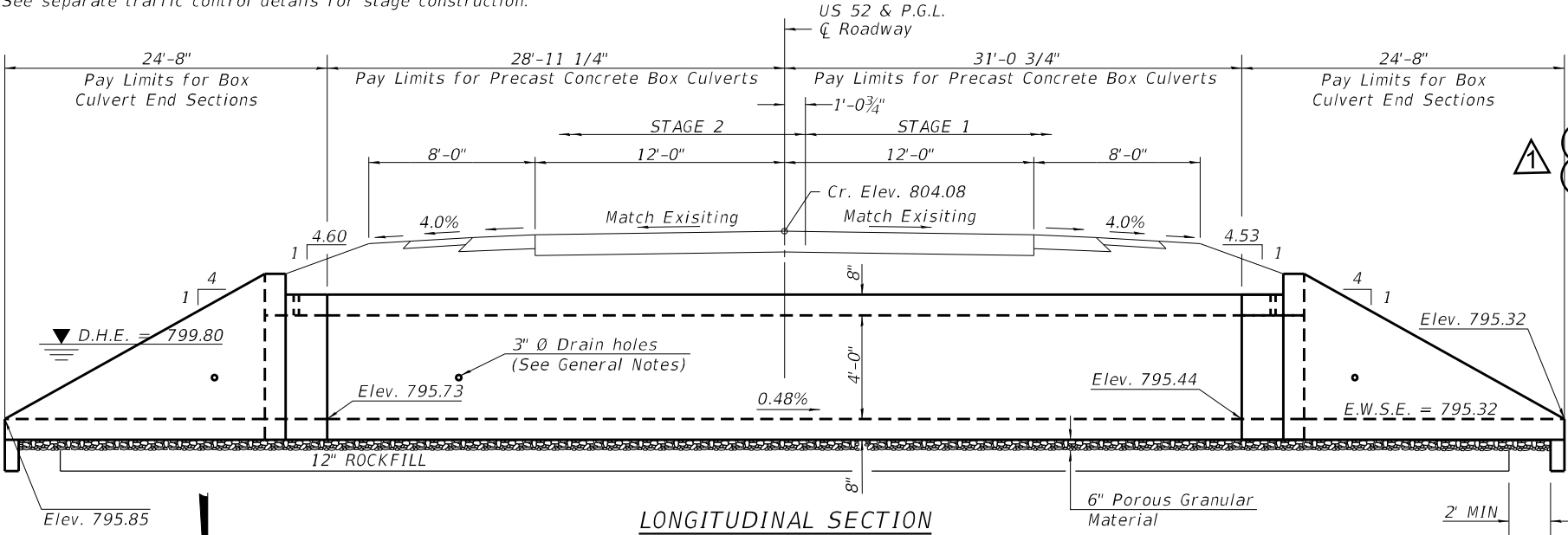
Benchmark: Chiseled "□" in top of SW wingwall of SN 052-1150. 42.9' Right of Station 835+66.92
Elevation = 798.12

Existing Structure: SN 052-1150 was originally constructed in 1964 and consists of 2 - 24" diameter corrugated metal pipes. In 2019, 20" liners were installed to the existing pipes. The existing structure is to be removed.

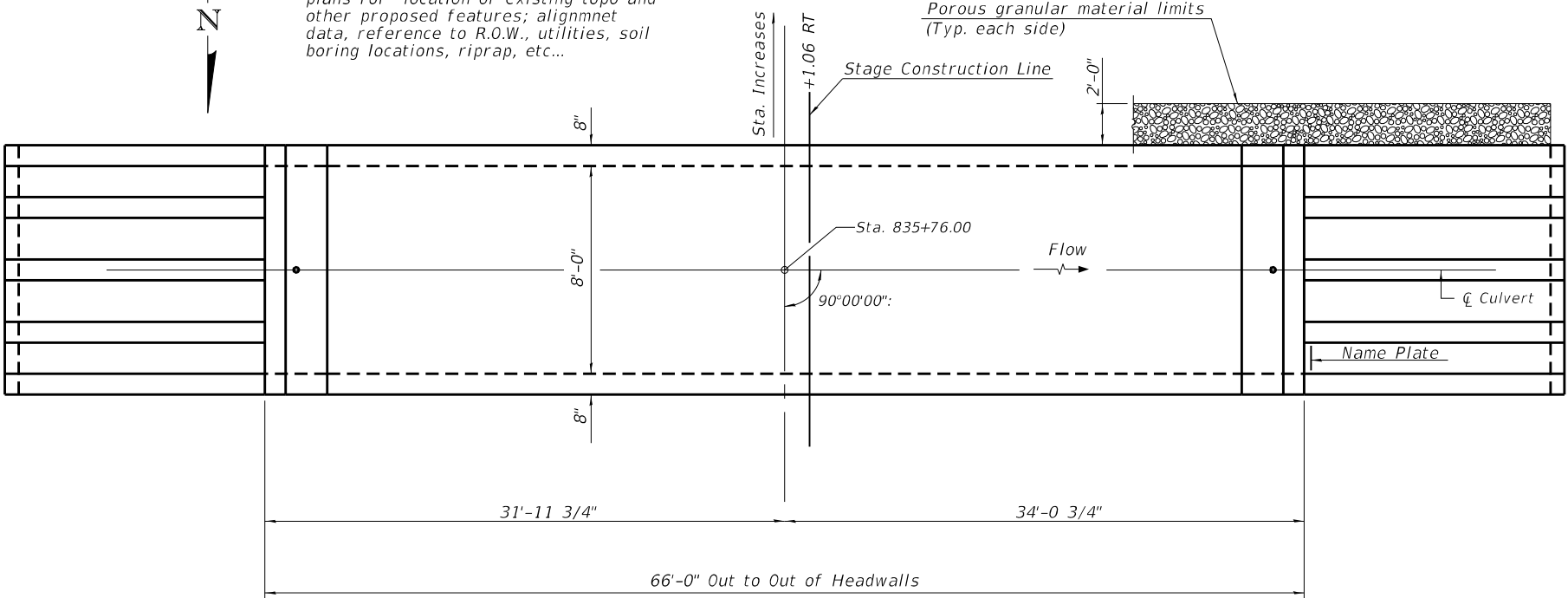
Salvage: No Salvage

Traffic to be maintained by utilizing stage construction.

See separate traffic control details for stage construction.



NOTE: See plan and profile sheet in roadway plans for location of existing topo and other proposed features; alignment data, reference to R.O.W., utilities, soil boring locations, riprap, etc...



WATERWAY INFORMATION

Drainage Area = EX: 114.82; PR 92.48		acres		
Existing Low Grade Elevation:		799.61 ft.	@ Sta. 839+76	
Proposed Low Grade Elevation:		799.61 ft.	@ Sta. 839+76	
Flood	Frequency	EX Discharge	PR Discharge	Headwater Elev. (ft)
Ten-Year	10	106	84	801.01
Design	50	159	122	801.38
Base	100	188	143	801.50
OVT (EXIST)	<10	29.7		799.61
OVT (PROP)	105		157	799.61
	500	261	199	801.71

10-Year Velocity through Existing Culvert = 7.8 fps
10-Year Velocity through Proposed Culvert = 8.1 fps

SCB-GPE

5-15-2023

STATION 835+76
BUILT 2025 BY
STATE OF ILLINOIS
F.A.P. RTE. 694 SEC. 75CR
LOADING HL-93
STR. NO. 052-1154

NAME PLATE
See Std. 515001

GENERAL NOTES

The design fill height for this box is 3.54 ft. (greater than 2.0'). 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.

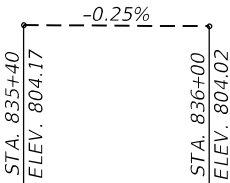
Precast concrete box culverts and box culvert end sections shall be backfilled with Trench Backfill in the required excavation areas on the sides of the box culvert from 1' over the top of the box culvert to the bottom of the box culvert. The 6 in. thick layer of porous granular material required for the precast 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.

Traversable pipe grates will not be paid for separately. The cost shall be included in Box Culvert End Sections, Culvert No. 1

See follow sheets for soil boring information.

PROFILE GRADE

Along C Roadway



DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications
Customary U.S. Units, 9th Edition

LOADING HL-93

DESIGN STRESSES

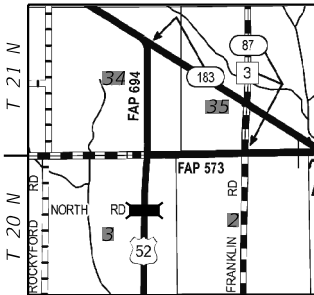
PRECAST UNITS

f'c = 5,000 psi
fy = 65,000 psi (Welded Wire Reinforcement)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Trench Backfill*	Cu. Yd.	152
Removal of Existing Structures No. 1	Each	1
Removal and Disposal of Unsuitable Material for Structures*	Cu. Yd.	78
Name Plates	Each	1
Temporary Soil Retention System*	Sq. Ft.	501
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts, 8'x4'	Foot	60
Traversable Pipe Grate for Concrete End Section	Foot	151
Stone Riprap, Class A5 (Special)	Sq. Yd.	100
Rock Fill	Cu. Yd.	78

*Includes Quantity for Parallel Pipe Culvert
R 10 E



LOCATION SKETCH

GENERAL PLAN AND ELEVATION

US RTE. 52 OVER DRAINAGE WAY

F.A.P. RTE. 694 SEC. 75CR

LEE COUNTY

STATION 835+76.00

S.N. 052-1154

MODEL: Default
FILE: BFW_Engineering\BFW\Projects\2023\PROJECTS\0072 - DOT D2 P/B 190-22 W/O #B FAP Route 694 US 52\DOT\CAD Sheets\Work for 8' x 4' box culvert\026.mxd\scb-culvert.dwg



USER NAME: sskinner
DESIGNED: -
DRAWN: -
PLOT SCALE: 1/8" = 1'-0"
PLOT DATE: 6/3/2025

DESIGNED: -
DRAWN: -
CHECKED: -
DATE: -

REVISED: -
REVISED: -
REVISED: -
REVISED: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 052-1154

SCALE: N.T.S. SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
694	75CR	LEE	50	25
CONTRACT NO. 64M76				
ILLINOIS FED. AID PROJECT				