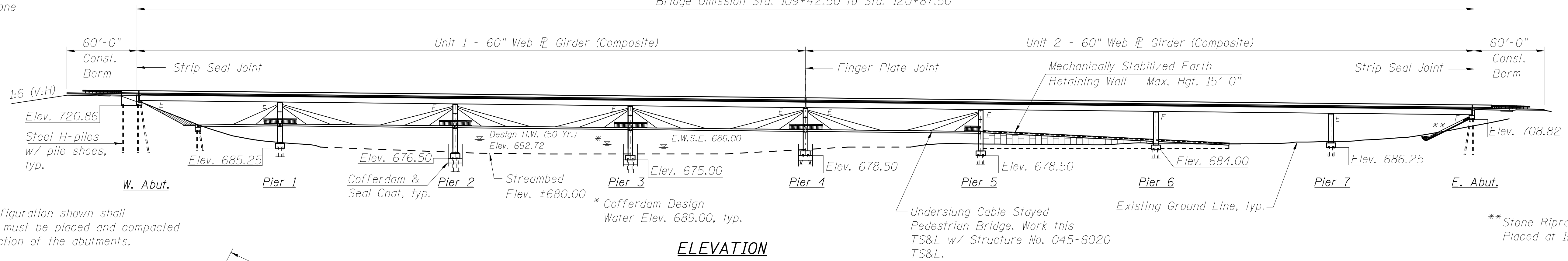


Benchmark: Steel Rod at GPS Monument KAN31 2B (Elev. 754.27)

Existing Structure: None

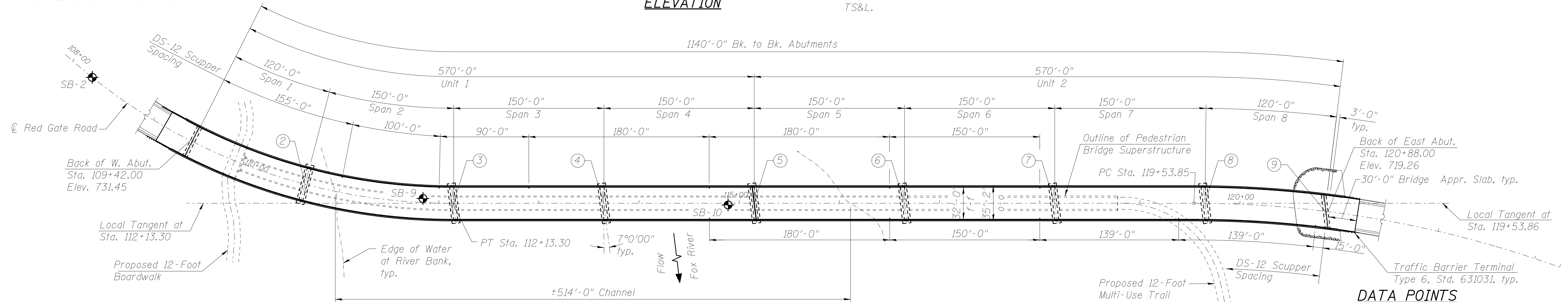
Salvage: None

Bridge Omission Sta. 109+42.50 to Sta. 120+87.50



The embankment configuration shown shall be the minimum that must be placed and compacted prior to the construction of the abutments.

ELEVATION



PLAN

Dimensions measured along \hat{C} Roadway unless noted otherwise

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 & 2009 Interims
2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50W)

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.06g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.19g
Soil Site Class = B

HIGHWAY CLASSIFICATION

Red Gate Road
Functional Class: Minor Arterial, Urban
ADT: N/A (2008); 15,500 (2030)
ADTT: N/A (2008); 310 (2030)
DHW: 1,550
Design Speed: 45 m.p.h.
Posted Speed: 40 m.p.h.
2-Way Traffic

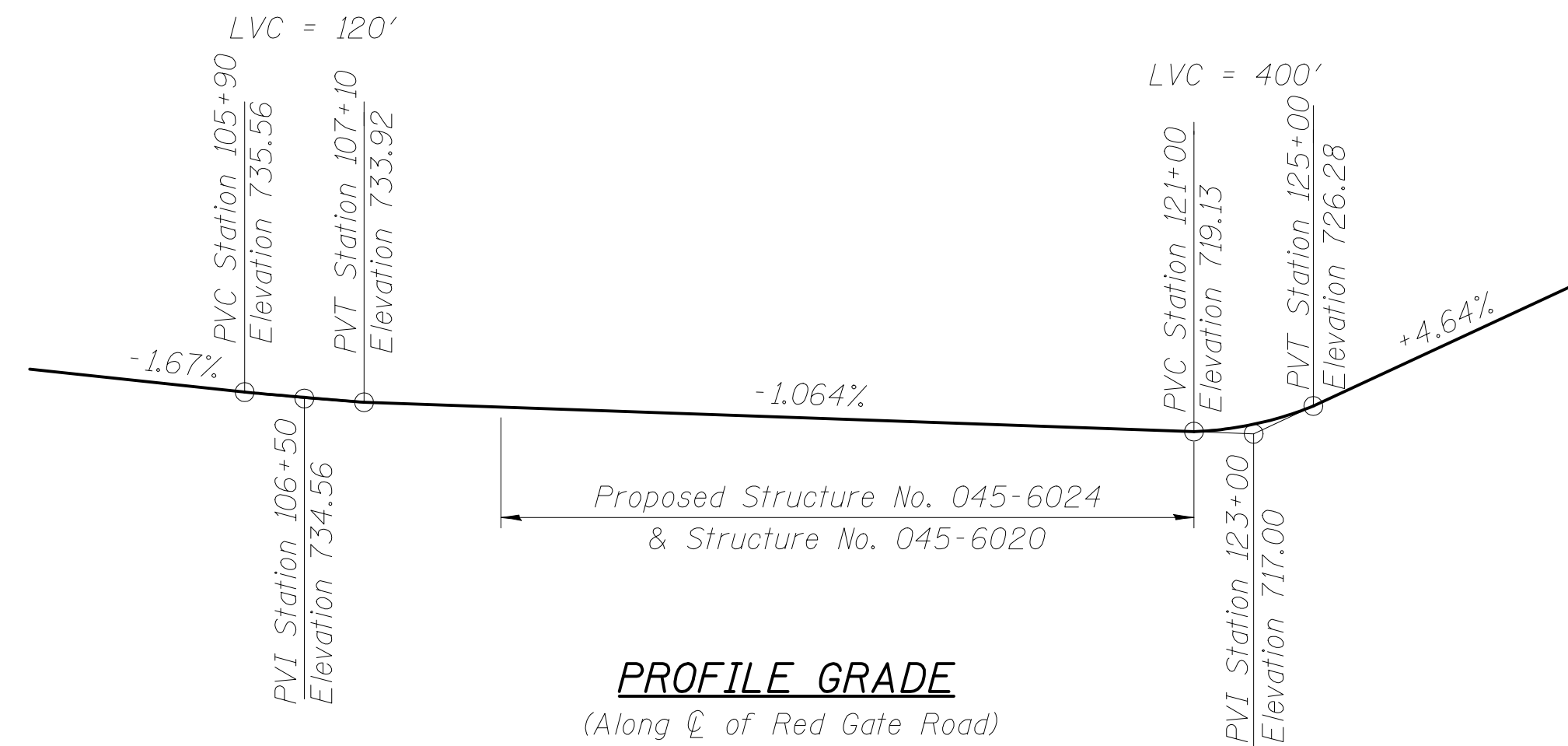
CURVE DATA

(RGI-2)
 $\Delta = 42^\circ 06' 28''$ (LT)
 $D = 9^\circ 57' 52''$
 $T = 221.34'$
 $L = 422.58'$
 $E = 41.13'$
 $R = 575.00'$
 $S.E. = 120'$
P.C. = Sta. 107+90.71
P.T. = Sta. 112+13.29
P.I. = Sta. 110+12.05

CURVE DATA

(RGI-3)
 $\Delta = 19^\circ 51' 13''$
 $D = 5^\circ 19' 47''$
 $T = 188.14'$
 $L = 372.50'$
 $E = 16.34'$
 $R = 1075.00'$
 $S.E. = 120'$
P.C. = Sta. 119+53.85
P.T. = Sta. 123+26.35
P.I. = Sta. 121+41.99

DATA POINTS			
①	\hat{C} Brg. W. Abut. Sta. 109+45.00 Elev. 731.42	⑥	\hat{C} Brg. Pier 5 Sta. 116+65.00 Elev. 723.76
②	\hat{C} Pier 1 Sta. 110+65.00 Elev. 730.14	⑦	\hat{C} Pier 6 Sta. 118+15.00 Elev. 722.16
③	\hat{C} Pier 2 Sta. 112+15.00 Elev. 728.55	⑧	\hat{C} Pier 7 Sta. 119+65.00 Elev. 720.57
④	\hat{C} Pier 3 Sta. 113+65.00 Elev. 726.95	⑨	\hat{C} Brg. E. Abut. Sta. 120+85.00 Elev. 719.29
⑤	\hat{C} Pier 4 Sta. 115+15.00 Elev. 725.35		



PROFILE GRADE

(Along \hat{C} of Red Gate Road)

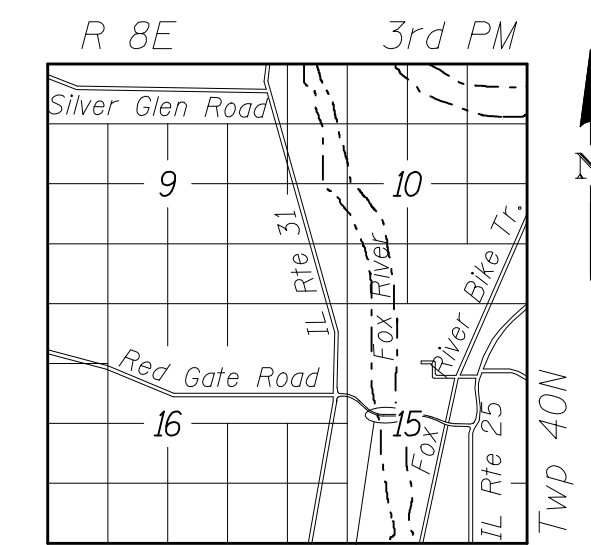
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
	720.86	685.25	676.31	674.93	678.49	684.14	684.17	686.21	708.82

WATERWAY INFORMATION

Drainage Area = 1,540 sq. mi. Low Grade Elev. 724.45 @ Sta. 116+00									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	7,535	N/A	4,600	690.91	N/A	0.01	N/A	690.92
Base	50	11,225	N/A	6,006	692.72	N/A	0.01	N/A	692.73
Overtopping	100	12,250	N/A	6,361	693.15	N/A	0.01	N/A	693.16
Max. Calc.	500	16,875	N/A	7,873	694.89	N/A	0.01	N/A	694.90

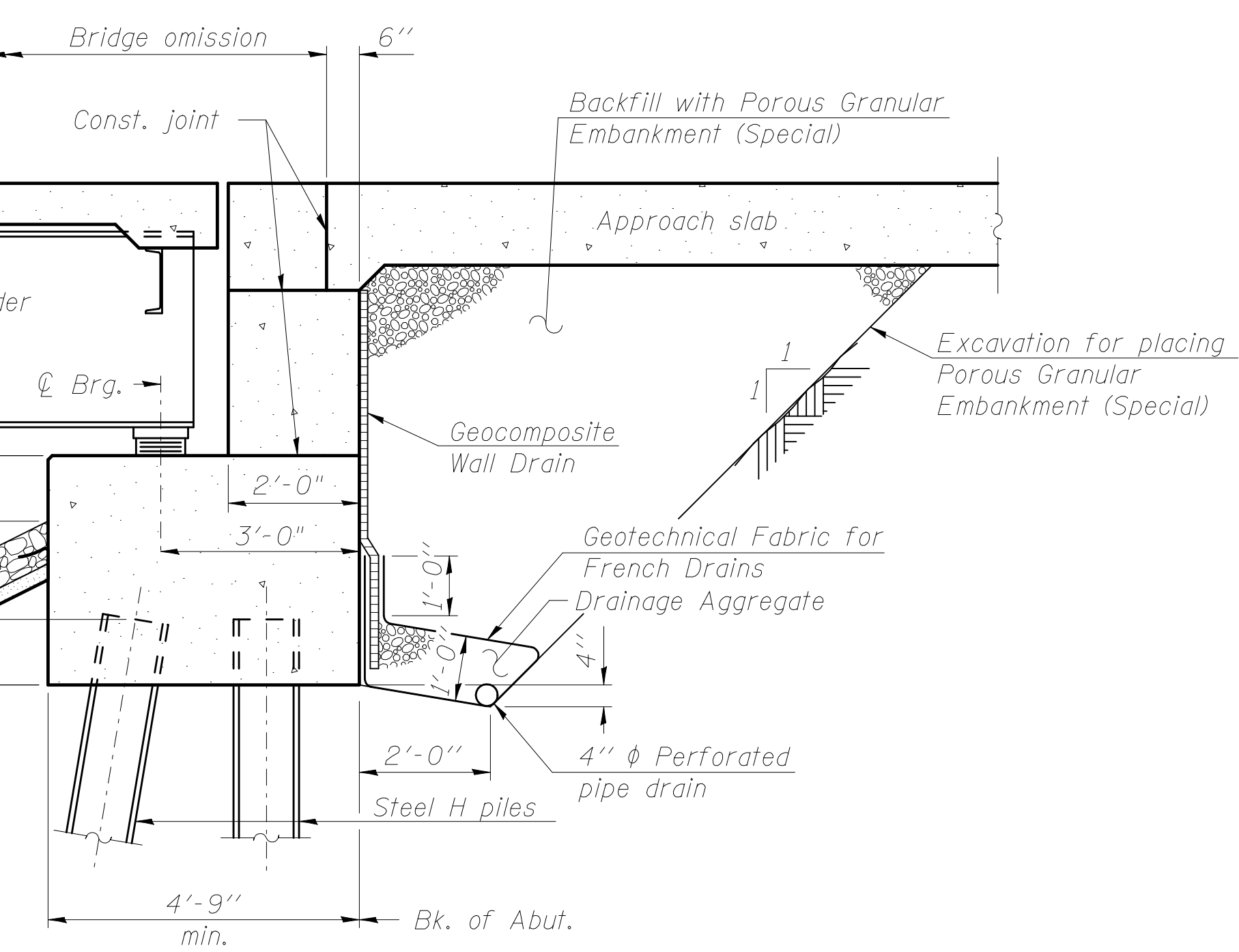
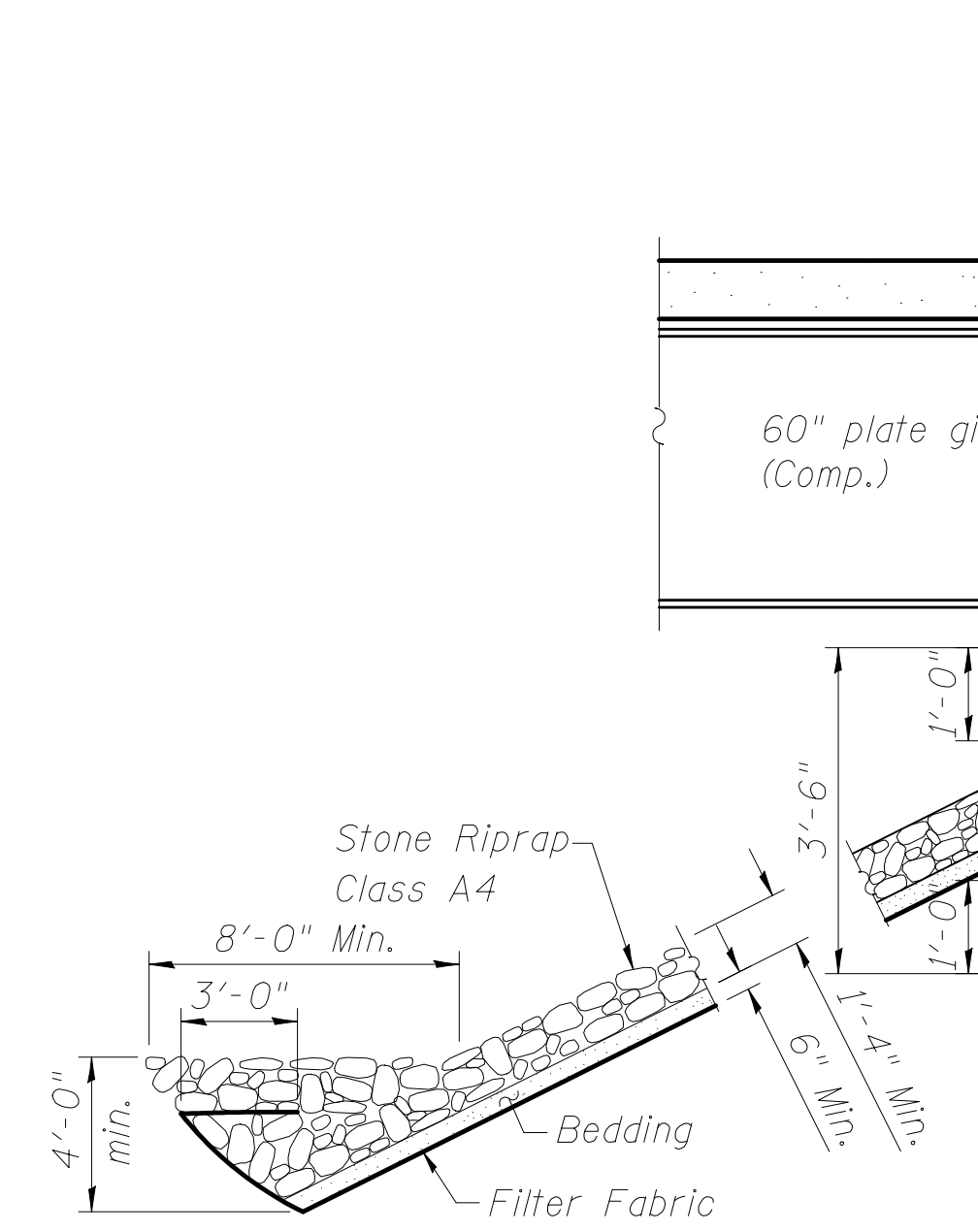
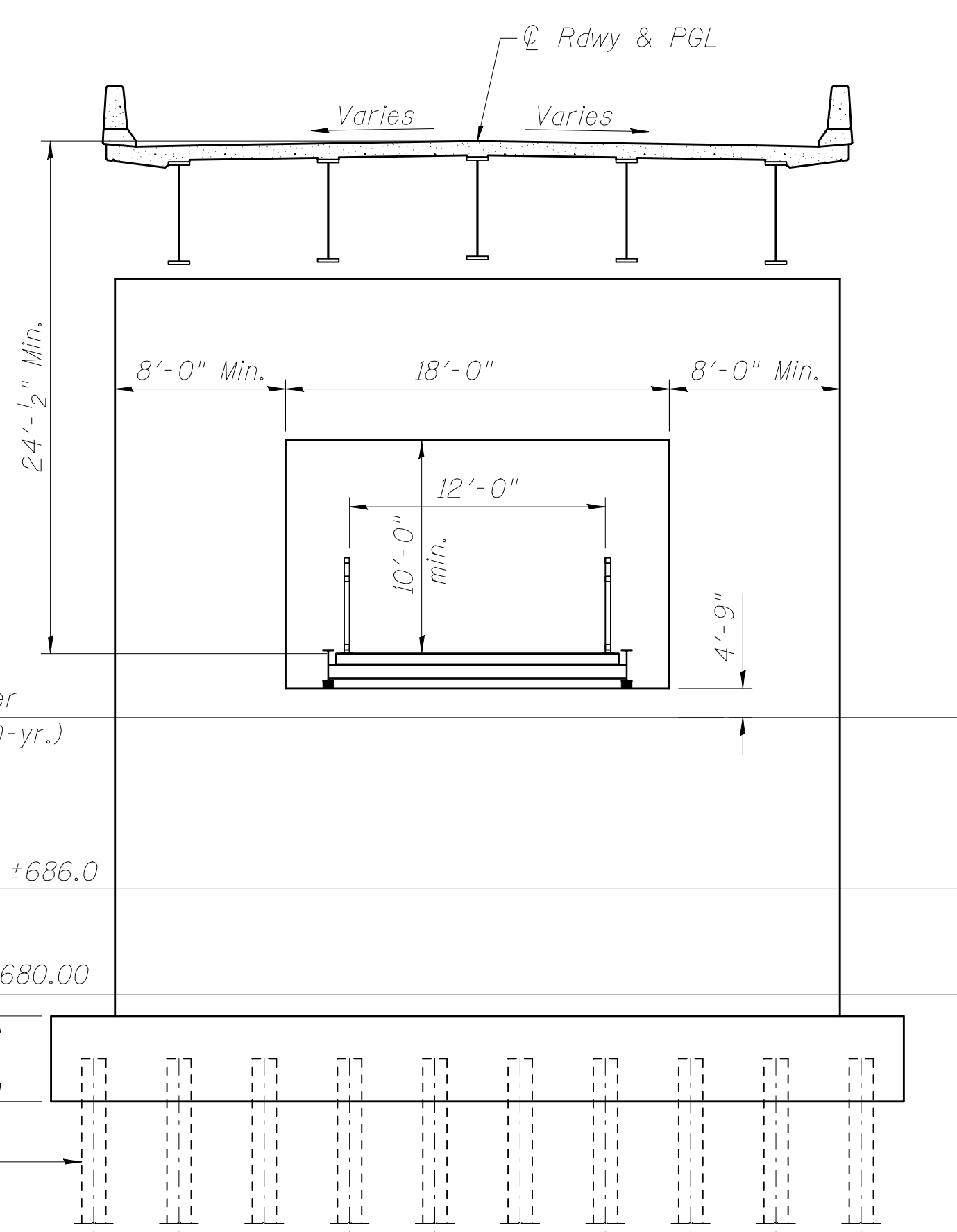
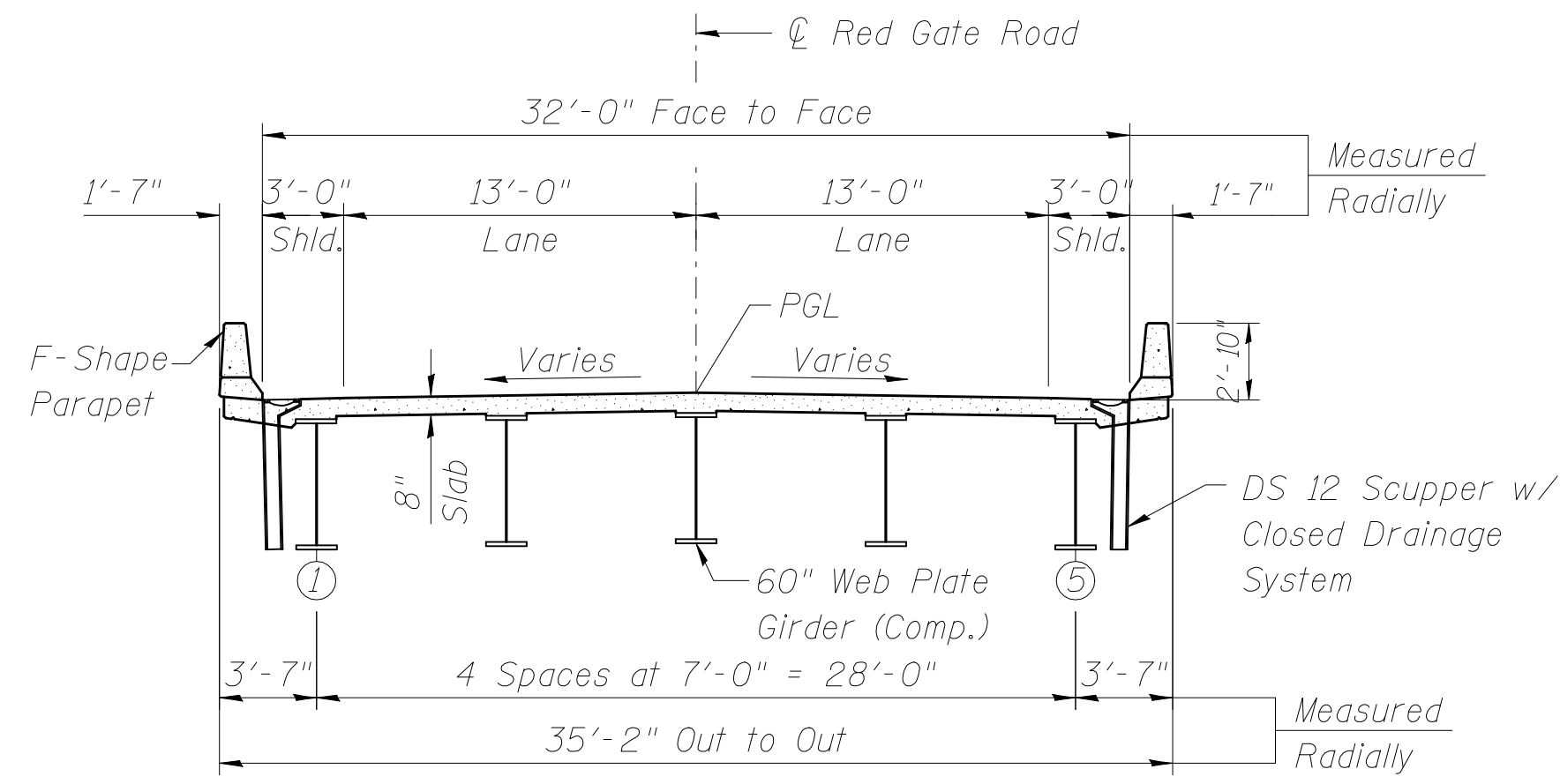
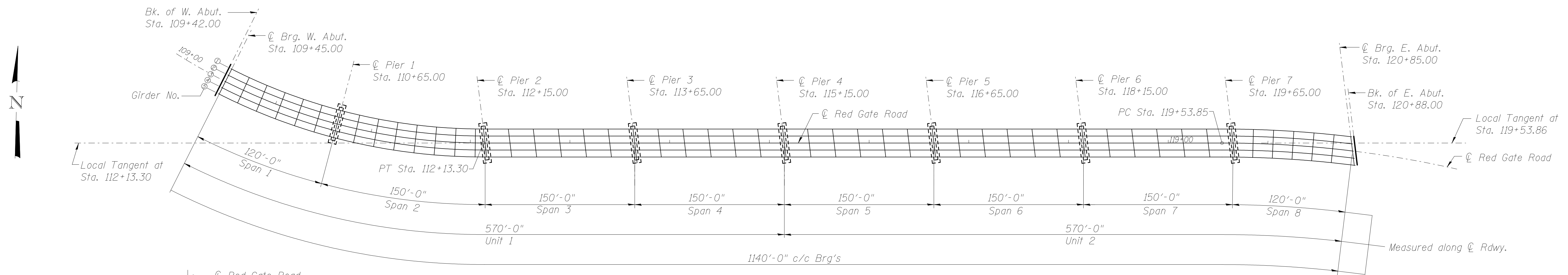
DESIGNED	AEU
CHECKED	DS
DRAWN	AEU/AH
CHECKED	DS



LOCATION SKETCH



SHEET NO. 1 2 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	xxx	04-00092-00-BR	KANE		
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
CONTRACT NO.					



DECK CROSS-SLOPE TRANSITIONS
(Looking Upstation)

4%	Sta. 109+42	Bk. of W. Abut.
2.43%	Sta. 112+15	
2%	Sta. 113+65	
1.87%	2.00%	Sta. 118+15
2.38%	Sta. 119+65	
3.40%	Sta. 120+88	Bk. of E. Abut.

DETAILS
RED GATE ROAD OVER FOX RIVER
"PUBLIC WATER"
SEC. 04-00092-00-BR
KANE COUNTY
STATION 115+15
STRUCTURE NO. 045-6024

DESIGNED	AEU
CHECKED	DS
DRAWN	AEU/AH
CHECKED	DS

OFFSET SKETCH

WILLS BURKE KELSEY ASSOCIATES LTD.
116 West Main Street, Suite 201
St. Charles, Illinois 60174
(830) 443-7759
Lic. #184.002097

SHEET NO. 2 2 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	xxx	04-00092-00-BR	KANE		
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
CONTRACT NO.					