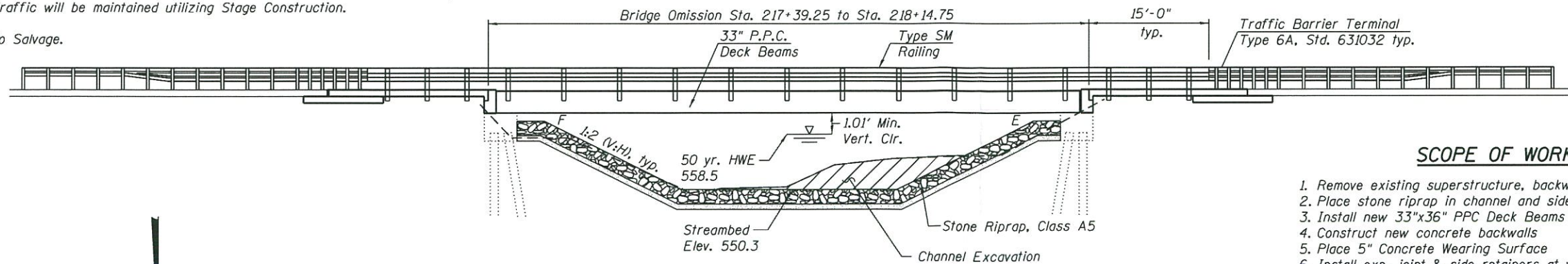


Bench Mark: Chiseled square on NW wingwall of SN 078-0032; Sta 218+15, 21.5' Lt., Elev. 562.940.

Existing Structure: Existing structure S.N. 078-0032 built in 1977 as F.A. Route 619, Section 120BR at Station 217+77.00. A single span P.P.C. deck beam bridge 76'-6" back-to-back abutments and 42'-0" out-to-out width, with pile bent abutments. The existing superstructure is to be removed and replaced with PPC deck beams. Traffic will be maintained utilizing Stage Construction.

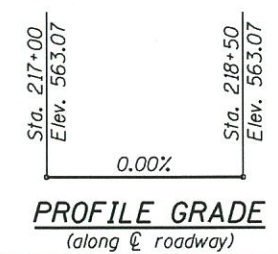
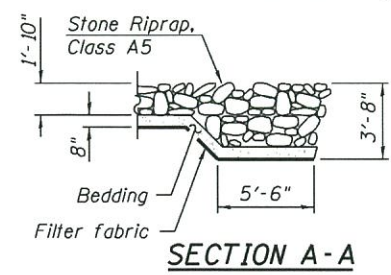
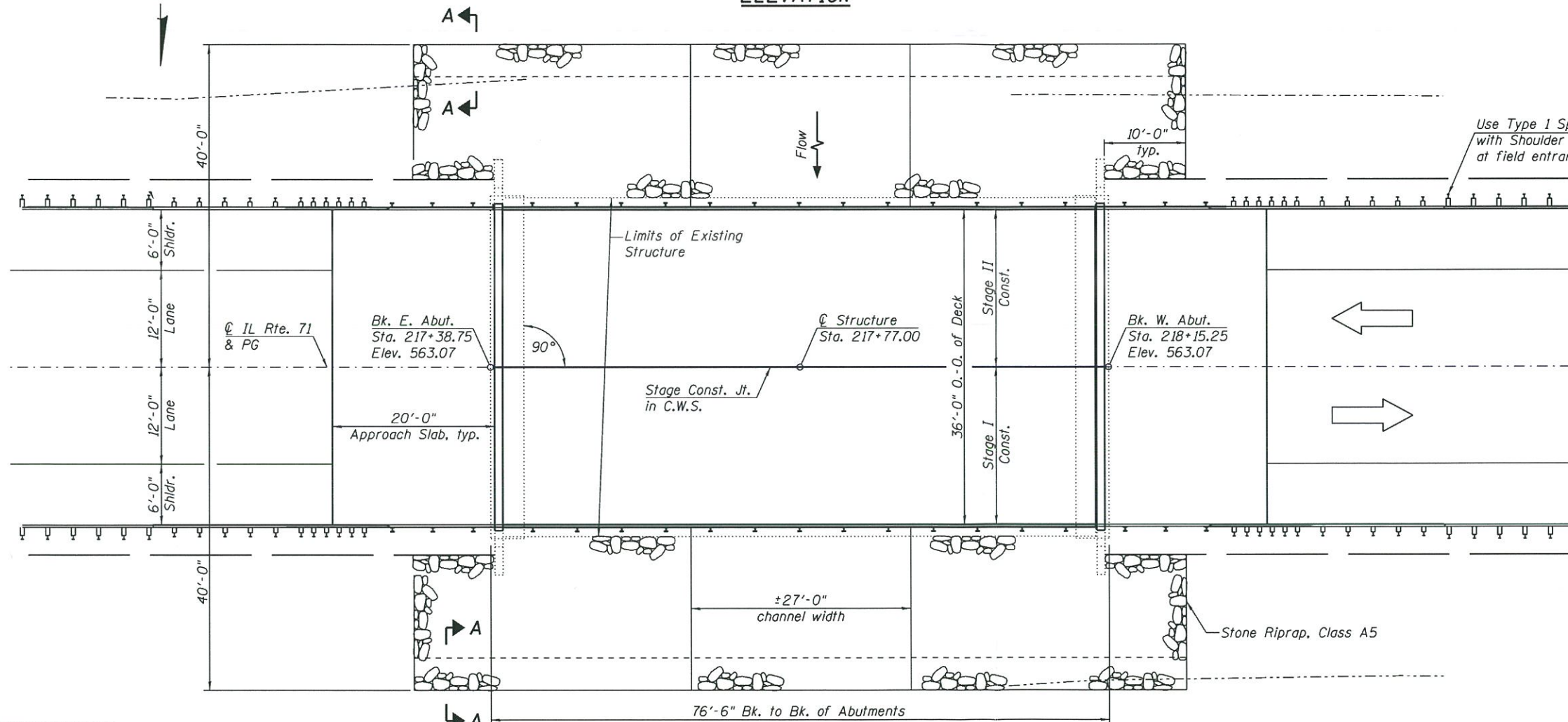
No Salvage.



**SCOPE OF WORK**

1. Remove existing superstructure, backwalls, and slope walls
2. Place stone riprap in channel and side slopes
3. Install new 33"x36" PPC Deck Beams
4. Construct new concrete backwalls
5. Place 5" Concrete Wearing Surface
6. Install exp. joint & side retainers at west abut.
7. Install Steel Bridge railing

**ELEVATION**



**PLAN**

**APPROVED**

DEC 24 2013

AS A BASIS FOR PREPARATION OF DETAILED PLANS

**WATERWAY INFORMATION**

Drainage Area = 4.63 mi<sup>2</sup> Low Grade Elev. 562.81 @ Sta. 218+14

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	1100	208.2	294.6	556.8	0.5	0.5	557.3	557.3
Base	50	1850	302.2	383.6	558.5	0.6	0.6	559.1	559.1
Overlapping	100	2200	335.2	417.8	559.0	0.3	0.3	559.3	559.3
Max. Calc.	500	3080	348.4	445.1	559.9	1.3	1.3	561.2	561.2

10 year velocity through existing bridge = 5.6 fps  
10 year velocity through prop. bridge = 5.6 fps

**DESIGN SPECIFICATIONS**

(NEW CONSTRUCTION)

2013 AASHTO LRFD Bridge Design Specifications, 6th Edition

**DESIGN STRESSES**

FIELD UNITS (NEW CONSTRUCTION)

f'<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

f'<sub>c</sub> = 6,000 psi  
f'<sub>ci</sub> = 5,000 psi  
f'<sub>s</sub> = 270,000 psi (1/2" φ low lax. strands)  
f'<sub>si</sub> = 201,960 psi (1/2" φ low lax. strands)  
f<sub>y</sub> = 60,000 psi (Reinforcement)

**HIGHWAY CLASSIFICATION**

FAP Rte. 619 (IL Rte. 71)  
Functional Class: Minor Arterial (Non-Urban)  
ADT: 3200 (2011); 4145 (2037)  
ADTT: 736 (2011); 954 (2037)  
DHW: 415 (2037)  
Design Speed: 55 m.p.h.  
Posted Speed: 55 m.p.h.  
2-Way Traffic  
Directional Distribution: 50:50

**LOADING HL-93**

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

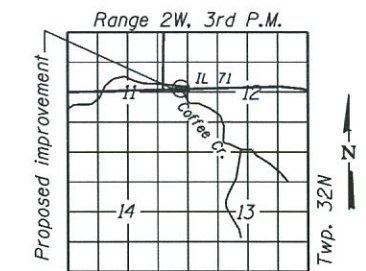
**SEISMIC DATA**

(EXISTING CONSTRUCTION)

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.037g  
Site Coefficient (S) = 1.5

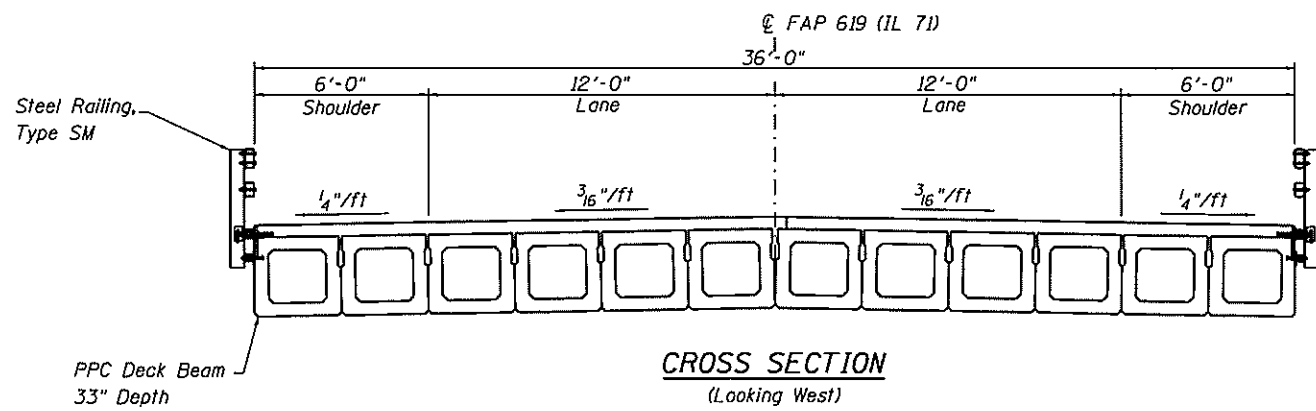
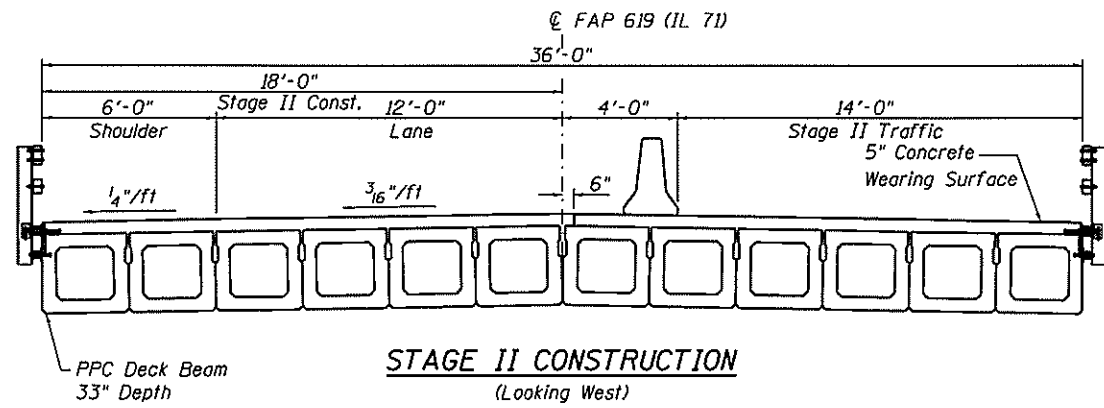
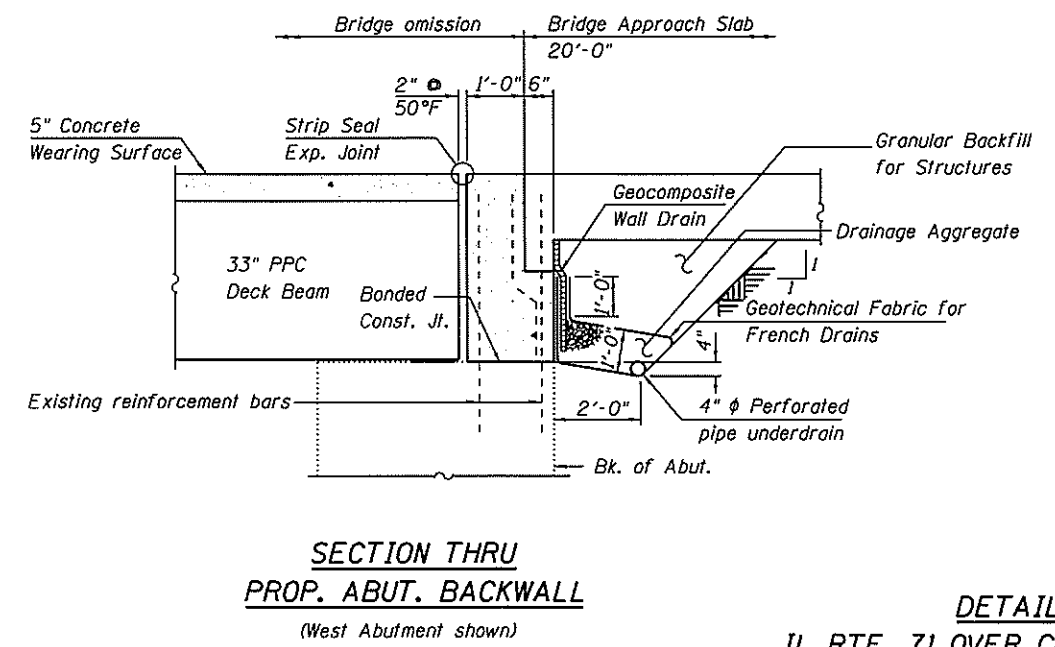
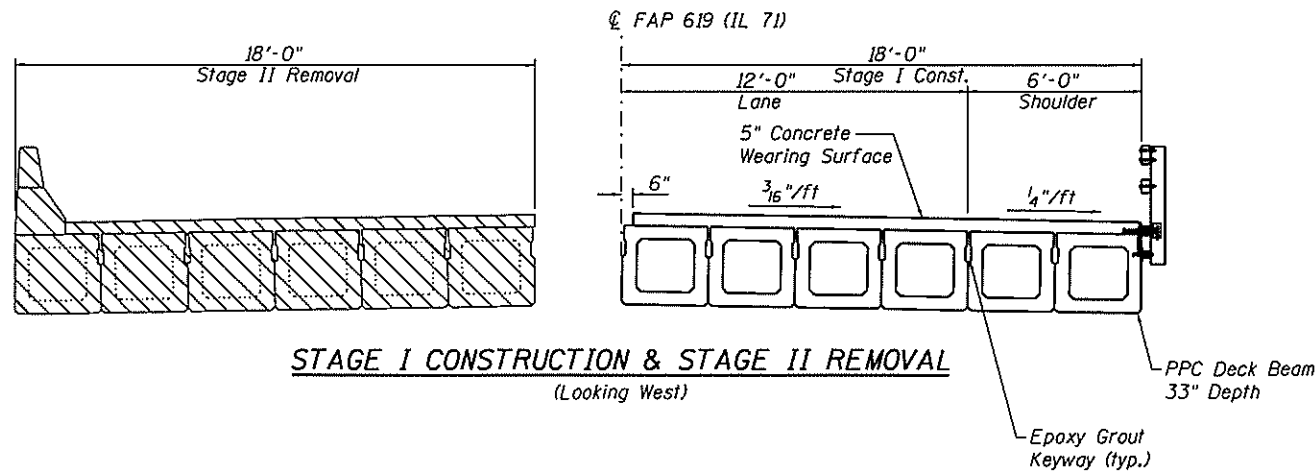
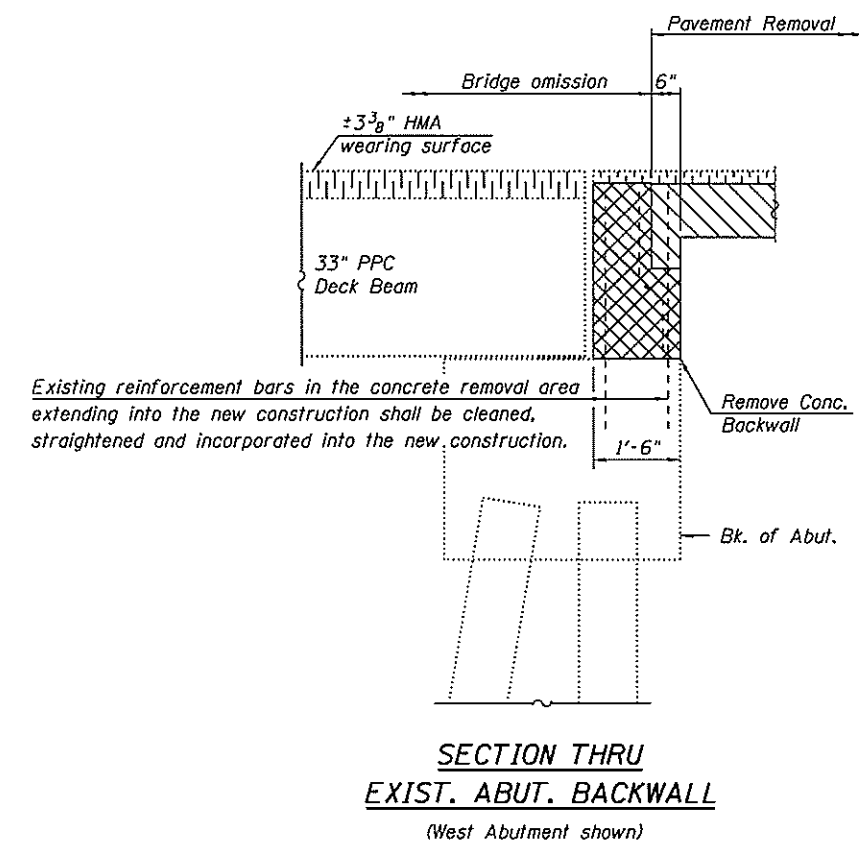
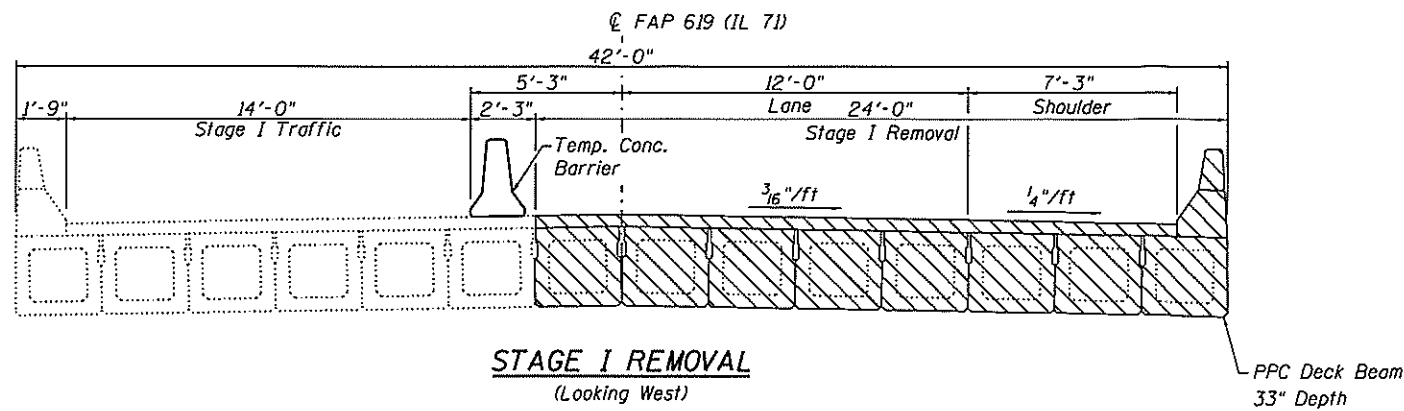
**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	555.86	555.83



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**  
**IL RTE. 71 OVER COFFEE CREEK**  
**F.A.P. RTE. 619 - SEC. (120-BR)BR**  
**PUTNAM COUNTY**  
**STATION 217+77.00**  
**STRUCTURE NO. 078-0032**



DETAILS  
IL RTE. 71 OVER COFFEE CREEK  
F.A.P. RTE. 619 - SEC. (120-BR)BR  
PUTNAM COUNTY  
STATION 217+77.00  
STRUCTURE NO. 078-0032

FILE NAME = ...NCADD\CADD SHEETS\TSL.dgn	USER NAME = .USER.	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SCALE: SHEET OF SHEETS STA. 213+60 TO STA. 219+90	F.A.P. RTE. 619	SECTION (120-BR)BR	COUNTY PUTNAM	TOTAL SHEETS 2	SHEET NO. 2	
THE UPCHURCH GROUP, INC.	PLOT SCALE = 16.6667' / 1" =	DRAWN -	REVISED -			CONTRACT NO. 68741					
	PLOT DATE = 12/18/2013	CHECKED -	REVISED -			[ILLINOIS] FED. AID PROJECT					
		DATE -	REVISED -								