STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	7	COOK		
FED.ROAD DIST.NO.		ILLINOIS	FED.AID PROJECT-	

Sheet 1 of 2

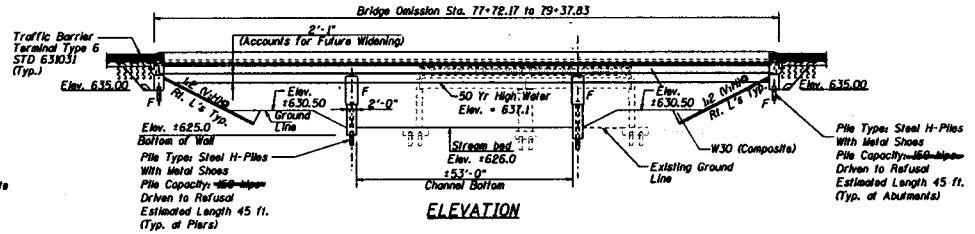
BENCH MARK: Control Point #L "X" On Concrete Island at Southwest Quadrant of Dixie Highway and Flossmoor Road Elevation = 647.768.

The Existing Structure (SN 016-0775) Was Built in 1917 and Widened in 1930. The Superstructure Consists of a Two Span Cast-In-Place Reinforced Concrete Slab. The Substructure Consists of Two Closed Abutments With Wing-Walls on Each Side and One Pier.

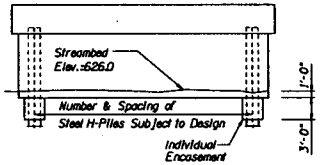
Stage Construction will be Utilized as Shown, Allowing One Lane of Traffic in Each Direction to Remain Open at All Times.

The Existing Bridge will be Removed and Replaced in Two Stages. The Substructure is Designed to Accomodate a Future Superstructure Widening.

No Salvage



ELEVATION



PIER SKETCH

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, (7th Edition)

LOADING HS20-44

Allow 50 psf for Future Wearing Surface

DESIGN STRESSES

FIELD UNITS

f'c = 3500 psi
fy = 50,000 psi
(M 270 Grade 50)
fy = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Category(SPC) = A
Bedrock Acceleration Coefficient (A) 0.04 g
Site Coefficient (S) = 1.0

HIGHWAY CLASSIFICATION

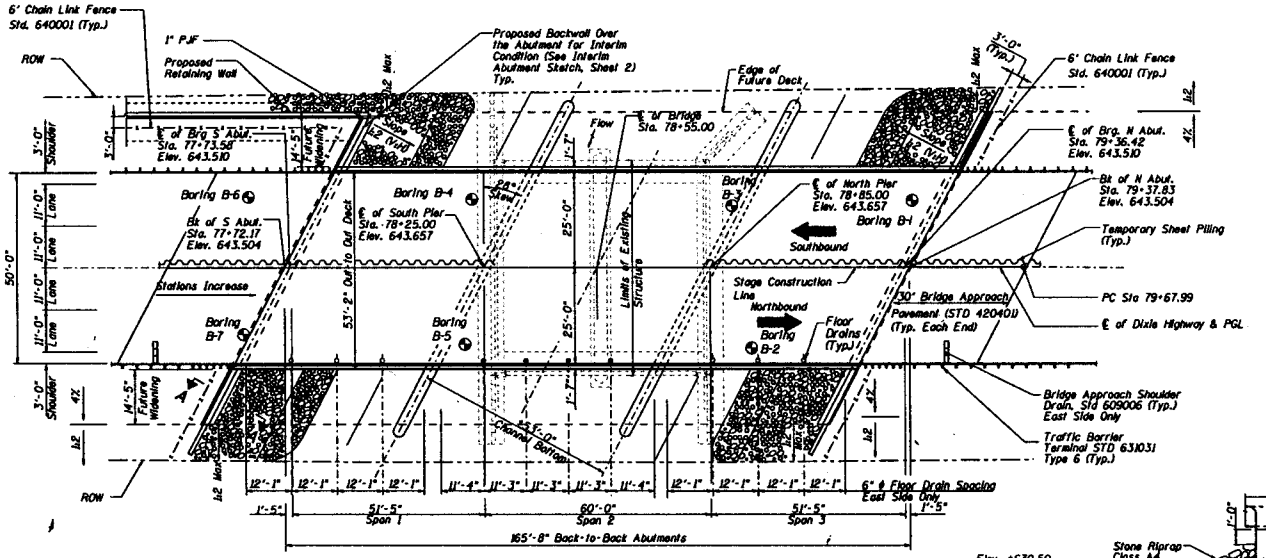
F.A.U. RTE 2843 - Dixie Highway
Class Urban Arterial
ADT 21,572 (2020), 14,000 (2000)
ADTT 3%
DHV 1400 (2000)
Design Speed 45 MPH
Posted Speed 40 MPH

CURVE PDIXIEJ-5

(℄ F.A.U. RTE 2843)
PI STA. = 83+27.12
Δ = 28° 46' 29" (RT)
D = 4° 05' 36"
T = 359.13'
R = 1,400.00'
L = 702.95'
E = 45.33'
SE = 2.4%
P.C. STA. = 79+67.99
P.T. STA. = 86+70.94
Normal Crown Sta. 74+00.00

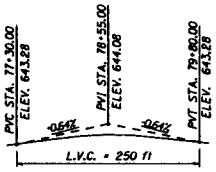
Full Superelevation Sta. 77+19.00 to Sta. 79+91.00

Normal Crown Sta. 84+25.00

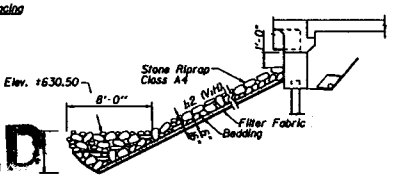


PLAN

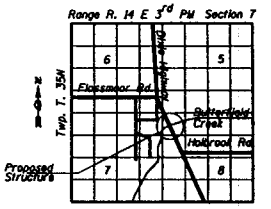
Note:
For Section A-A, See Sheet 2



PROFILE GRADE

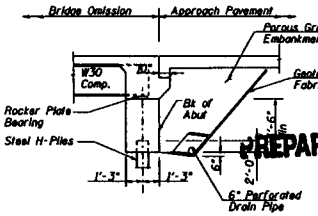


STONE RIP-RAP TREATMENT



LOCATION SKETCH

APPROVED
JUN 22 2005
AS A BASIS FOR PREPARATION OF DETAILED PLANS



SECTION THRU INTEGRAL ABUTMENTS
(Dim Measured at Right Angles)

WATERWAY INFORMATION

Drainage Area = 22.7 Sq. Mi. Prop. Low Grade Elev. = 644.6 ft. @ Sta 75+50

Flood	Freq yr.	Q cfs	Opening ft² Exist.	Opening ft² Prop	Vel. H.W.E.	Head (ft) Exist.	Head (ft) Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1650	337	946	636.4	0.7	0.2	637.1	636.6
Design	50	2305	337	1038	637.1	1.1	0.2	638.2	637.3
Base	100	2775	337	1091	637.5	1.2	0.2	638.7	637.7
Max Calc	500	3920	337	1226	638.5	1.0	0.2	639.5	638.7

REVISIONS	
NAME	DATE

GENERAL PLAN & ELEVATION

DIXIE HIGHWAY OVER
BUTTERFIELD CREEK
F.A.U. ROUTE 2843 SECTION 7
STA. 78+55.00
COOK COUNTY
STRUCTURE NUMBER 016-7946

SCALE: NOT-TO-SCALE
DATE 5-12-05

DRAWN BY TH
DESIGNED BY TH
CHECKED BY MF

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

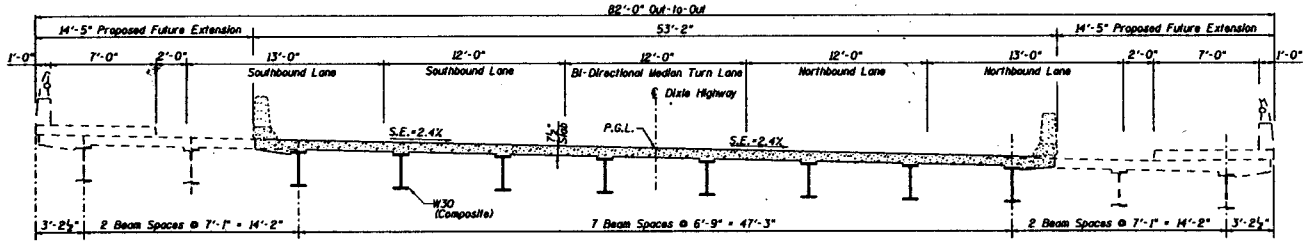
F.A.R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2843	7	COOK		
FEDERAL DIST. NO.	ILLINOIS	FEDERAL PROJECT-		

Sheet 2 of 2

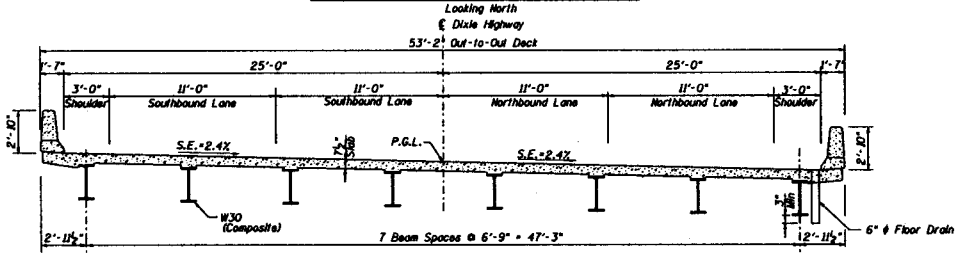
APPROVED

JUN 22 2005

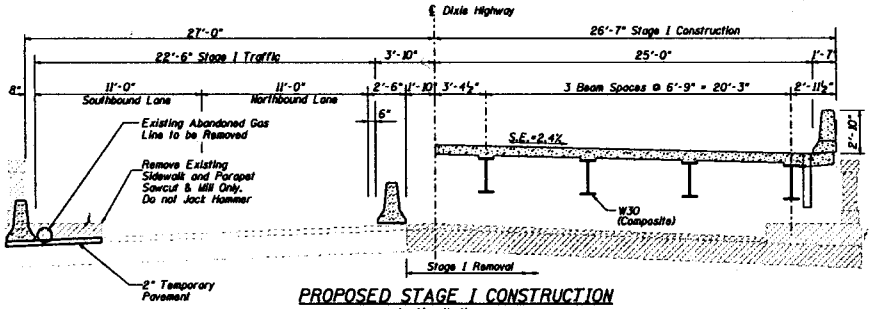
AS A BASIS FOR PREPARATION OF DETAILED PLANS



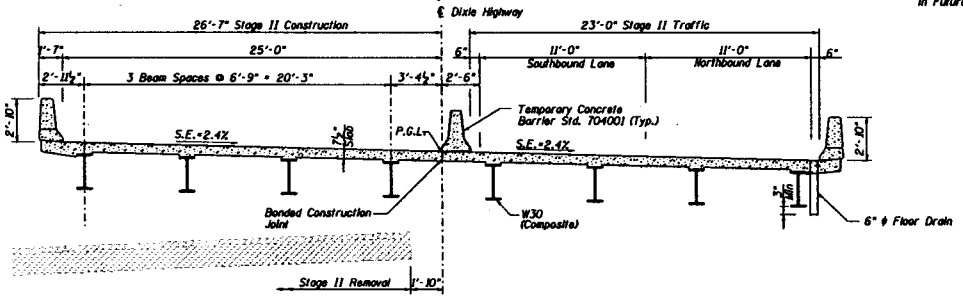
PROPOSED FUTURE BRIDGE SECTION
Looking North



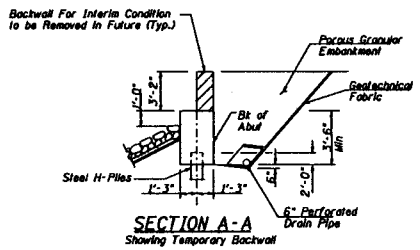
PROPOSED TYPICAL BRIDGE SECTION
Looking North



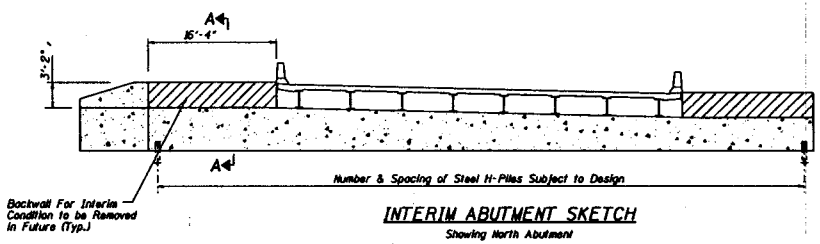
PROPOSED STAGE I CONSTRUCTION
Looking North



PROPOSED STAGE II CONSTRUCTION
Looking North



SECTION A-A
Showing Temporary Backwall



INTERIM ABUTMENT SKETCH
Showing North Abutment

REVISIONS	
NAME	DATE

CONSTRUCTION STAGING

DIXIE HIGHWAY OVER
BUTTERFIELD CREEK
F.A.U. ROUTE 2843 SECTION 7
STA. 78+55.00
COOK COUNTY
STRUCTURE NUMBER 016-7946

SCALE: NOT-TO-SCALE
DATE 5-12-05

DRAWN BY TH
DESIGNED BY TH
CHECKED BY MF