F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
627	(I-1) BR & I	LA SALLE	2	1
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1 OF 2 SHEETS

Benchmarks: 1.) Chiseled "□" at S.E. corner of structure on top of safety barrier @ Sta. 465+71.92/13.81' LT Elevation = 563.63.

2.) Top of guardrail post on the West side of IL Rte. 71 @ back center of the 10th post North from the South end of the rail @ Station 467+60.33/14.84' RT., Elevation = 572.99.

Existing Structure: Structure No. 050-2002, built 1922, Section I-1 at Station 465+27.36 and carries F.A.P. 627 (IL 71) over tributary to Illinois River. Consists of a double barrel 8'x6' reinforced concrete box culvert with wingwalls parallel to the roadway and the out to out of headwall length = 52'-6". The downstream headwall (retaining wall) is approximately 24'-6" high and 87'-9" long. An adjoining ±400' retaining wall was constructed between the roadway and the public trail in the state park. Traffic will be maintained during construction via detour routes.

No salvage.

DESIGN SPECIFICATIONS

AASHTO 2002

LOADING HS20-44

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

DESIGN STRESSES

CAST IN PLACE CONCRETE (FIELD UNITS)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
f'g = 270,000 psi (½" ϕ Low Relaxation Strands)
fsi = 201,960psi (½" ϕ Low Relaxation Strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.038
Site Coefficient (S) = 1.0

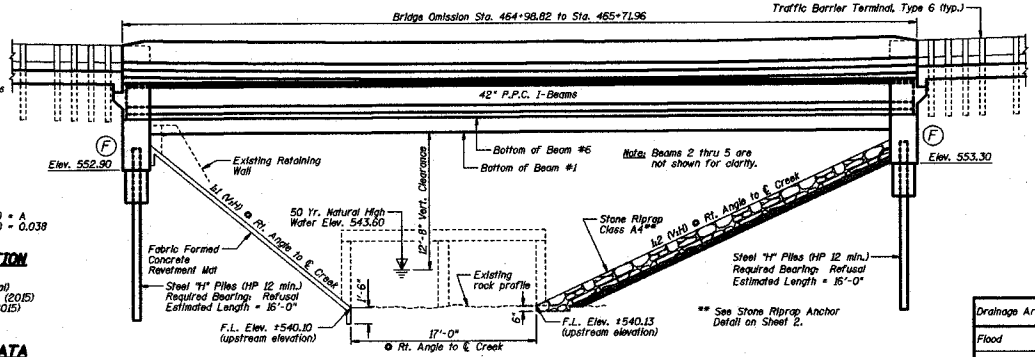
HIGHWAY CLASSIFICATION

F.A.P. Route 627 - IL Rte. 71

Class:	Minor Arterial (Rural)	
A.D.T.:	1325 (2000)	1740 (2015)
D.H.V.:	132 (2000)	174 (2015)
Design Speed:	35 M.P.H.	
Posted Speed:	25 M.P.H.	

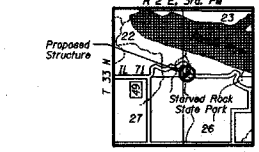
HORIZONTAL CURVE DATA

P.I. STA. = 464+75.79
Δ = 45°36'
D = 18°56'20"
R = 338.61'
T = 142.34'
L = 269.49'
E = 28.7'
S.E. = 0.04'/ft.
P.C. STA. = 463+33.45
P.T. STA. = 466+02.94



ELEVATION

(Looking East)

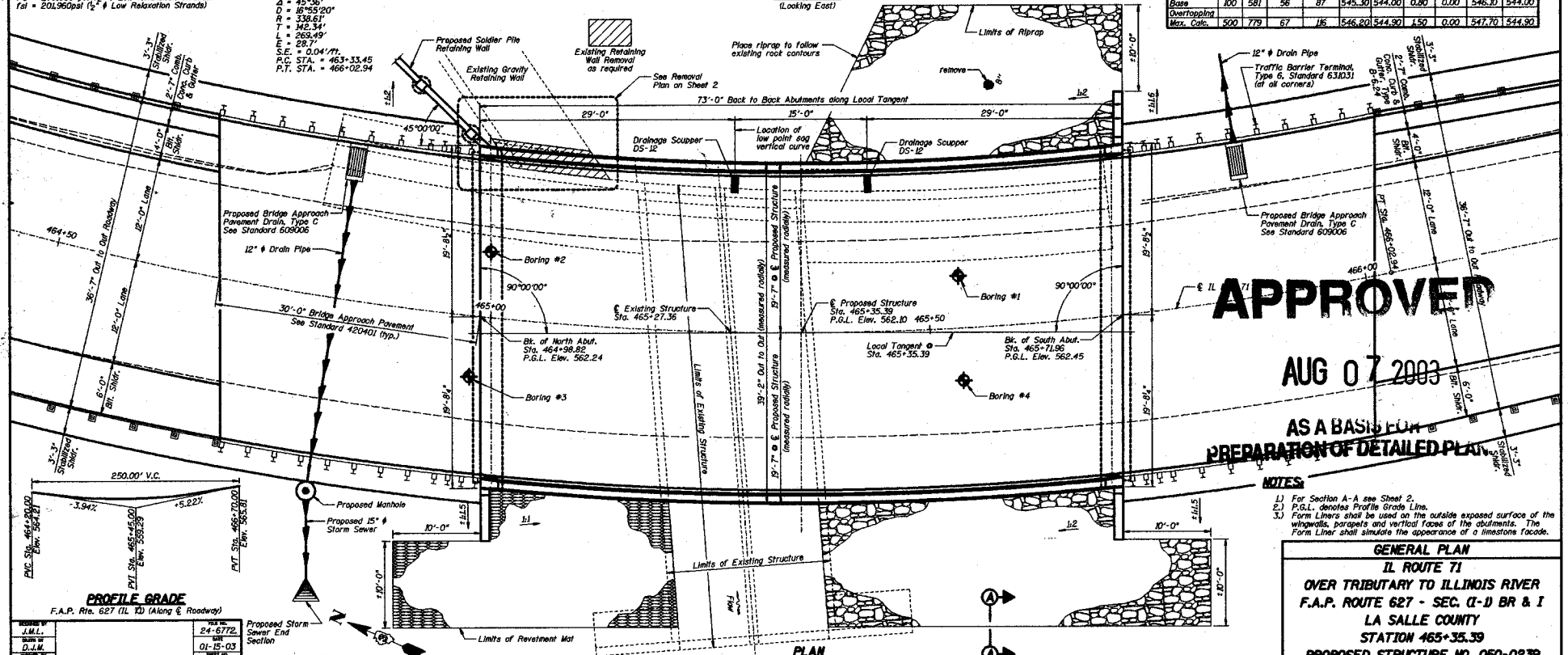


LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area (Sq. Mi.) = 0.42 | Existing Low Grade Elevation = 561.4 ft. @ Sta. 465+45 | Proposed Low Grade Elevation = 562.1 ft. @ Sta. 465+45

Flood	Freq. Year	Q C.F.S.	Opening (Sq. Ft.) Exist.	Opening (Sq. Ft.) Prop.	Ex. Wat. H.W.E.	Pr. Wat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	310	41	53	544.00	542.80	0.20	0.00	544.20	542.80
Design	50	499	52	77	544.90	543.60	0.60	0.00	545.50	543.60
Base	100	581	56	87	545.30	544.00	0.80	0.00	546.10	544.00
Overtopping										
Max. Calc.	500	779	67	116	546.20	544.90	1.50	0.00	547.70	544.90



PLAN

PROFILE GRADE

F.A.P. Rte. 627 (IL 71) (Along ℄ Roadway)

NOTES:

1.) For Section A-A see Sheet 2.
2.) P.G.L. denotes Profile Grade Line.
3.) Form Liners shall be used on the outside exposed surface of the wingwalls, parapets and vertical faces of the abutments. The Form Liner shall simulate the appearance of a limestone facade.

DESIGNED BY	DRAWN BY	CHECKED BY
J.M.L.	D.J.M.	M.S.W.

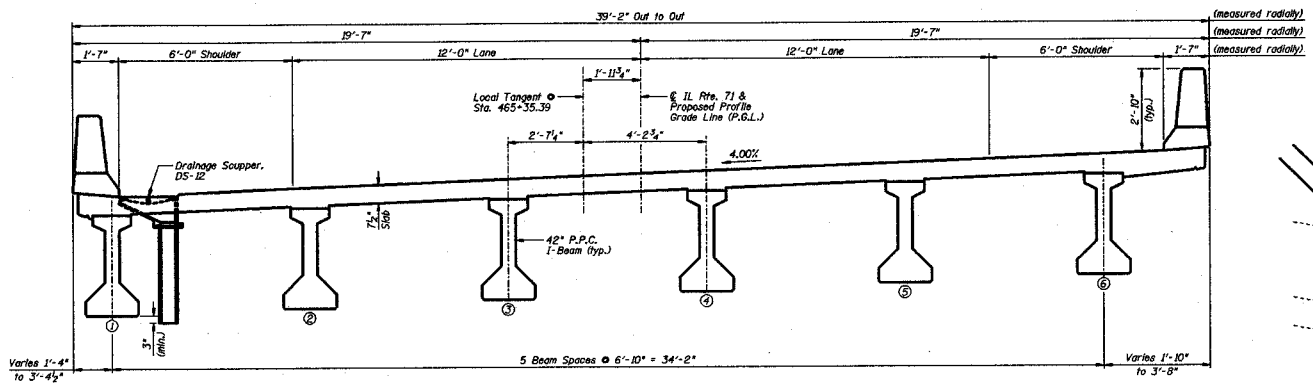
JOB NO.	DATE	SHEET NO.
24-6772	01-15-03	1 of 2

Revised: 07-28-03

GENERAL PLAN
IL ROUTE 71
OVER TRIBUTARY TO ILLINOIS RIVER
F.A.P. ROUTE 627 - SEC. (I-1) BR & I
LA SALLE COUNTY
STATION 465+35.39
PROPOSED STRUCTURE NO. 050-0239

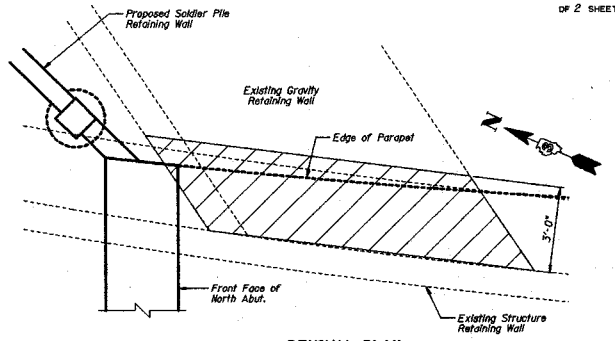
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
627	(1-1) BR & I	LA SALLE	2	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 2 OF 2 SHEETS

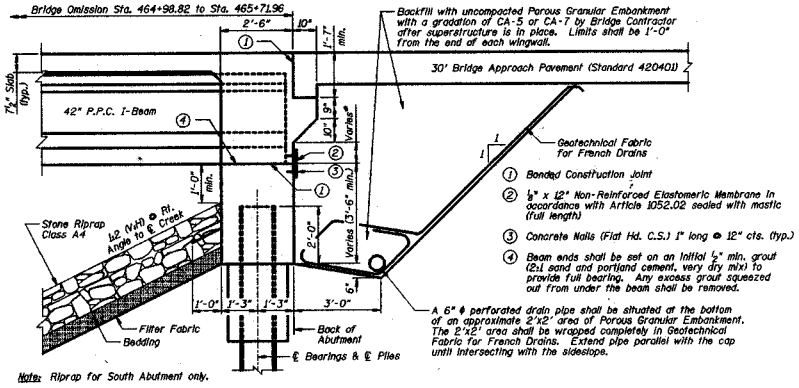


CROSS SECTION

(@ ℄ Looking South)



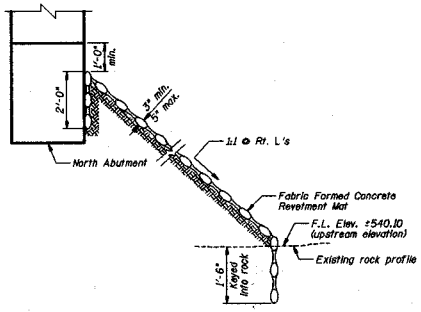
REMOVAL PLAN



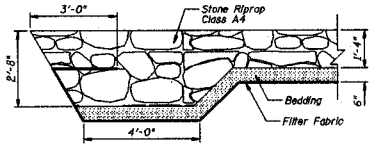
Note: Riprap for South Abutment only.

SECTION THRU ABUTMENT

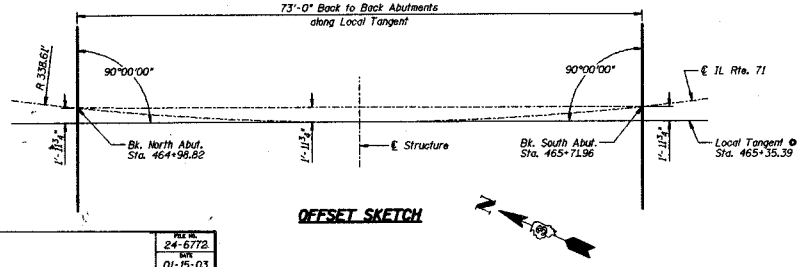
* Elevation at bridge approach pavement seat varies due to the bridge being superelevated.



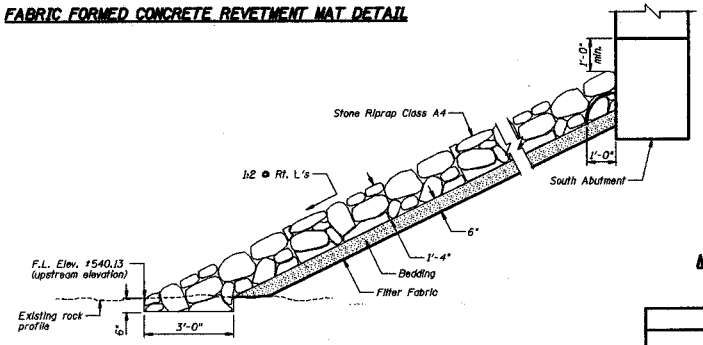
FABRIC FORMED CONCRETE REVETMENT MAT DETAIL



SECTION A-A



OFFSET SKETCH



STONE RIPRAP ANCHOR DETAIL

Note: Riprap toe may be eliminated if sound rock is encountered as approved by the Engineer. Key riprap into sound rock a minimum of 6". The cost to construct the toe is included in the unit cost bid for Stone Riprap Class A4.

NOTE:

For the location of Section A-A see Sheet 1.

SECTIONS AND DETAILS
IL ROUTE 71
OVER TRIBUTARY TO ILLINOIS RIVER
F.A.P. ROUTE 627 - SEC. (1-1) BR & I
LA SALLE COUNTY
STATION 465+35.39
PROPOSED STRUCTURE NO. 050-0239

DESIGNED BY J.M.L.	FILE NO. 24-6772	
DRAWN BY D.J.M.	DATE 01-15-03	
CHECKED BY M.S.W.	SHEET NO. 2 of 2	Revised: 07-28-03