Bench Marks:
IDOT BM #15 Chiseled square at the southeast quadrant of the intersection of West Grand Avenue and Hazel Dell Road. Benchmark is located 33 feet south of the centerline of Hazel Dell Road on a headwall of a concrete pipe culvert. NAVD88 El. 602.47
IDOT BM #80 Chiseled cross on the center bolt of the east leg of an iron sign truss over the eastbound lane of Interstate 72. Benchmark is located 1.62 miles east of Il Route 4. NAVD88 El. 601.28
IDOT BM #0150 Disk in monument vault on survey calibration baseline. Benchmark is located 13 feet north of the centerline of Hazel Dell Road and 0.5 miles west of the intersection of Hazel Dell Road and West Grand Avenue. NAVD88 El. 600.47
IDOT BM #374 Railroad spike in power pole west of a bike path and southeast of Recreation Drive.
Benchmark is located [illegible] of the intersection of West Grand Avenue and Hazel Dell Road. NAVD88 El. 604.61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note:
No deck drains will be permitted in the span over tracks or within 10' of crossarms of a railroad pole line.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72	*	SANGAMON		01 / 03 SHEETS
PROJ. NUMB. SECT. NO. 1		ALL FUNDS	PROJ. AND PROJECT	

*184-9-4)HBK,BY,BY-1

APPROVED
SUBJECT TO RR APPROVAL
AUG 0 9 2004

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DESIGN SPECIFICATIONS
AASHTO 2002
AASHTO 2003 Curved Girder Spec.

LOADING HS20-44 & ALT.
Allow 25 psf for future wearing surface.

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.05g
Site Coefficient (S) = 2.0

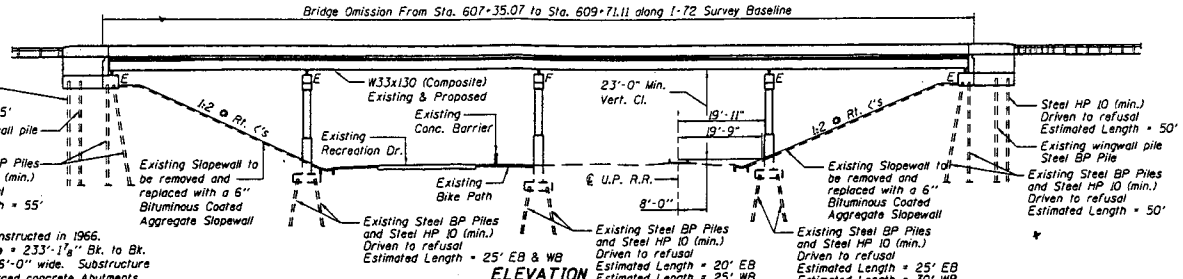
DESIGN STRESSES
FIELD UNITS (Load Factor Design)
f'c = 3,500 psi (Existing and New Concrete)
fy = 40,000 psi (Existing Reinforcement)
fy = 60,000 psi (New Reinforcement)
fy = 36,000 psi ASTM A36 (Existing Structural Steel)
fy = 36,000 psi ASTM A36 (New Structural Steel)

EXISTING STRUCTURE
Sta. 608+52.01 F.A.I. 72
Over Recreation Drive and U.P. Railroad
Dual 4-Span Continuous non-composite steel stringer structure. Constructed in 1966.
Length of W.B. Structure = 241'-3 5/8" and Length of E.B. Structure = 233'-1 7/8" Bk. to Bk.
Abutments along ℄ of Roadway. Both EB and WB Structures are 36'-0" wide. Substructure consists of 6 reinforced concrete piers on steel piles and 4 reinforced concrete Abutments supported on steel piles. Structure No. 084-0074 Eastbound, Structure No. 084-0075 Westbound.

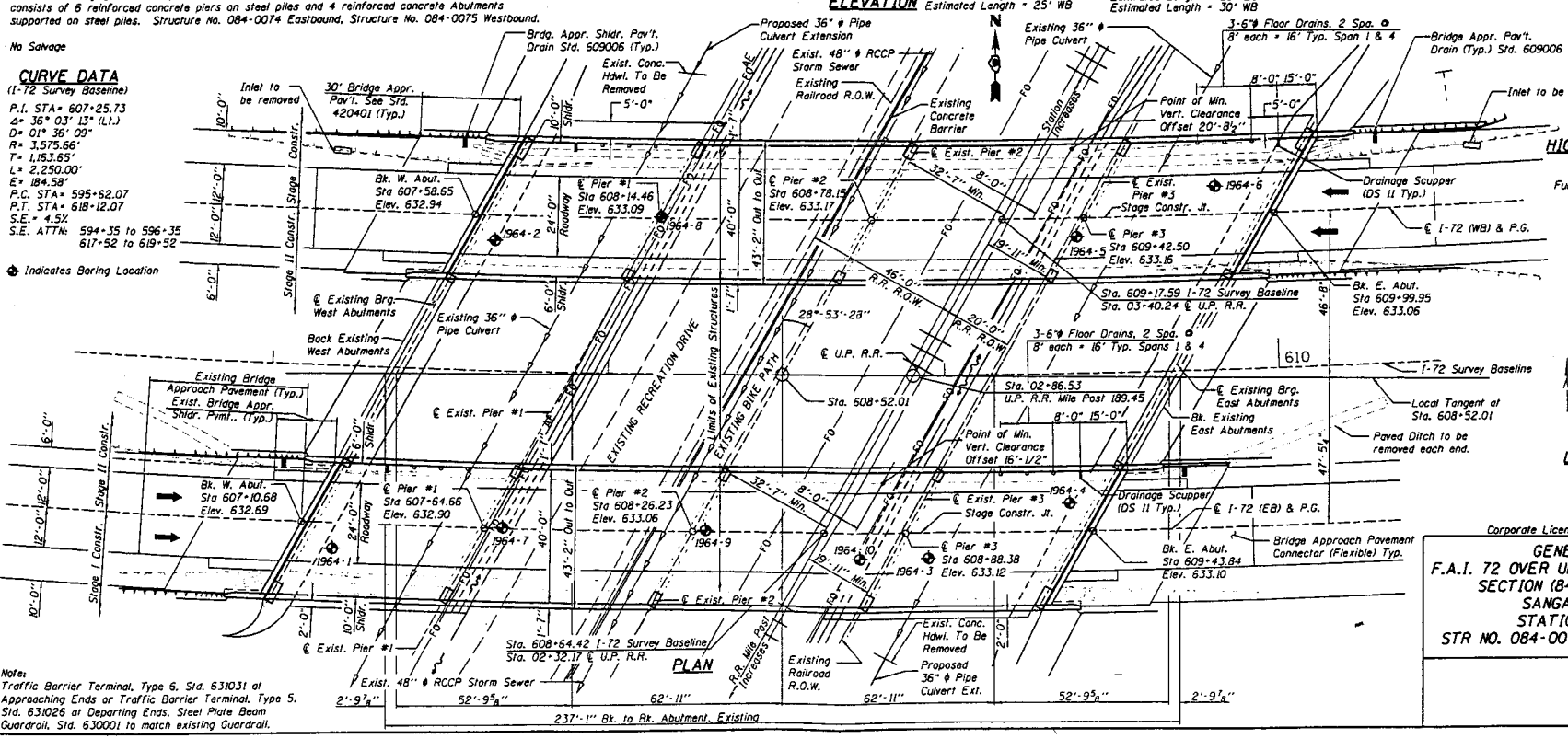
No Salvage

CURVE DATA
(I-72 Survey Baseline)
P.I. STA= 607+25.73
Δ= 36° 03' 13" (Lt.)
D= 01° 36' 09"
R= 3,575.66'
T= 1,163.65'
L= 2,250.00'
E= 184.58'
P.C. STA= 595+62.07
P.T. STA= 618+12.07
S.E.= 4.5%
S.E. ATTN: 594+35 to 596+35
617+52 to 619+52

✠ Indicates Boring Location



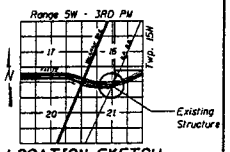
ELEVATION



PLAN

HIGHWAY CLASSIFICATION
FAI 72

Functional Class:	INTERSTATE	
DHV:	3150	(2023)
ADT:	31000	(2003)
	46100	(2023)
ADTT:	620	(2003)
	920	(2023)
Design Speed:	70 m.p.h.	
Posted Speed:	65 m.p.h.	



LOCATION SKETCH

Note:
Traffic Barrier Terminal, Type 6, Std. 631031 at Approaching Ends or Traffic Barrier Terminal, Type 5, Std. 631026 at Departing Ends. Steel Plate Beam Guardrail, Std. 630001 to match existing Guardrail.

Corporate License Number 184-001-084

GENERAL PLAN
F.A.I. 72 OVER UNION PACIFIC RAILROAD
SECTION (84-9-4)HBK,BY,BY-1
SANGAMON COUNTY
STATION 608+52.01
STR NO. 084-0074 EB - 084-0075 WB

96S20028
09/05/03

DRAWN	DAP	07/17/03
REVIEWED	JMM	10/27/03

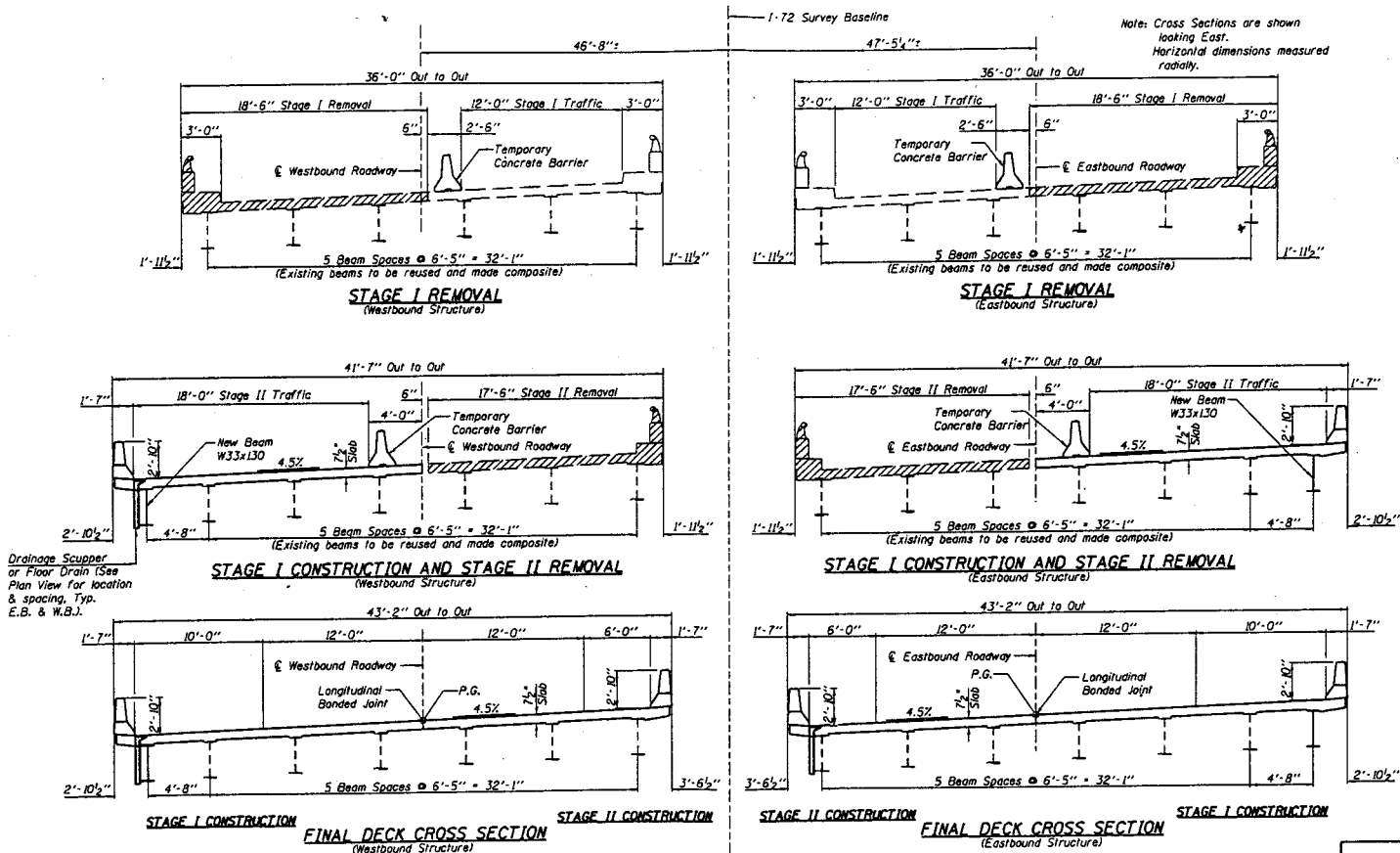
N:\96S20028\96S20028\Struct\72 over UPRR\T SLV.dgn
08/09/2004

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 72	*	SANGAMON		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 02
03 SHEETS

*(84-9-4)HBK,BY,BY-1



DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 20
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

Corporate License Number 184-001-084

DETAILS
F.A.I. 72 OVER UNION PACIFIC RAILROAD
SECTION (84-9-4)HBK,BY,BY-1
SANGAMON COUNTY
STATION 608+52.01
STR NO. 084-0074 EB - 084-0075 WB

96S20028
09/05/03

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

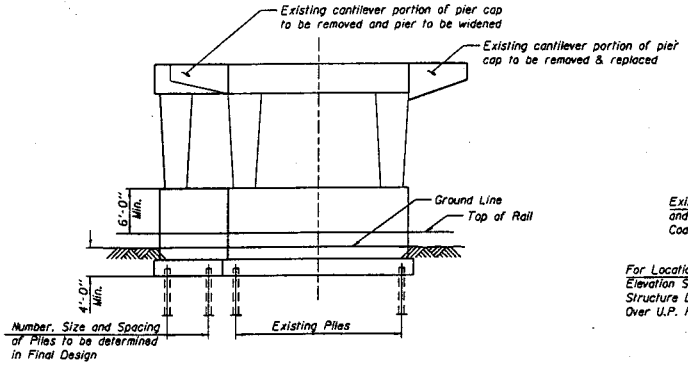
FAI 72	*	SANGAMON		

SHEET NO. 03
03 SHEETS

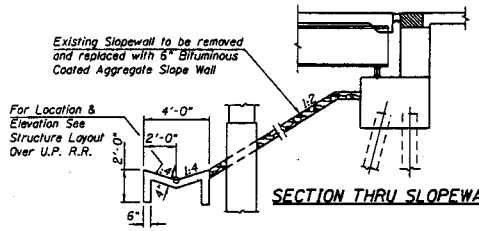
*(84-9-4)HBK.BY.BY-1

PROPOSED IMPROVEMENTS

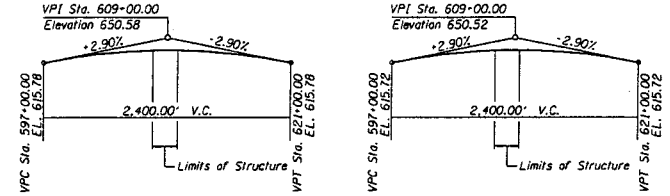
Existing dual structures to be widened. Existing concrete deck to be removed and widened using staged construction. Superstructure will be widened by adding one new beam line, utilizing the same type of beam and bearings as the existing structure. Existing stringers to be cleaned. All diaphragms at the abutments to be replaced. Existing wingwalls and backwalls to be removed, abutments to be widened. Pier cap cantilevers removed, piers to be widened and repaired at locations of cracks and spalled areas. East and West slopewall to be removed and replaced. Existing approach pavements to be removed and replaced with 30' bridge approach pavements. Traffic to be maintained utilizing stage construction.



PIER SKETCH



SECTION THRU SLOPEWALL

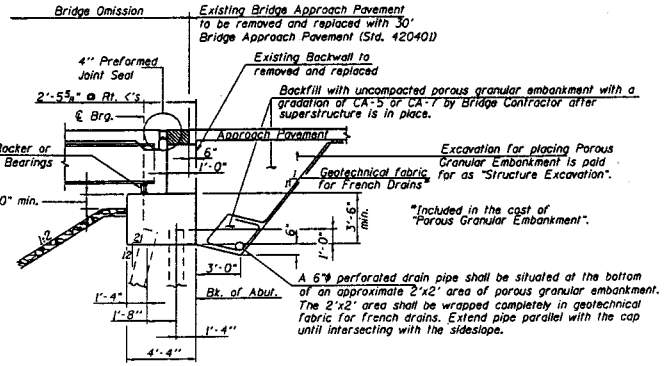


I-72 W.B. PROPOSED PROFILE GRADE I-72 E.B. PROPOSED PROFILE GRADE

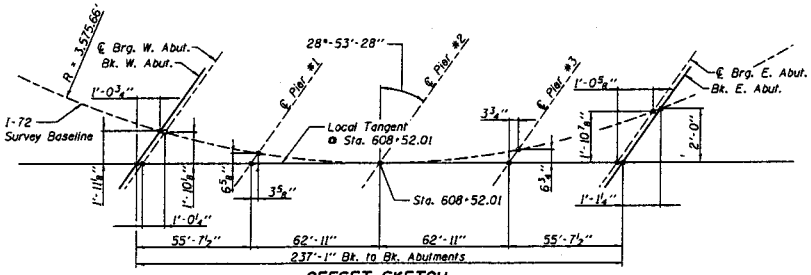
(I-72 WB & EB Proposed Profile Grades shown were adjusted to account for a future mill of 1/4" and an overlay of 3 3/4")

West Rail		East Rail	
Station	Elevation	Station	Elevation
0+00.00	605.31	0+00.03	605.33
0+67.95	605.32	0+67.76	605.35
1+83.47	605.26	1+83.48	605.25
2+80.82	605.24	2+80.71	605.24
3+81.80	605.12	3+81.74	605.13
4+81.65	605.26	4+81.69	605.24
5+78.38	605.39	5+78.51	605.36

EXISTING TOP OF RAIL ELEVATIONS UP R.R.



SECTION THRU ABUTMENT
(Dimensions @ Rt. ℄'s to Bk. of Abutment)



OFFSET SKETCH
I-72 Survey Baseline

Corporate License Number 184-001-084

DETAILS
F.A.I. 72 OVER UNION PACIFIC RAILROAD
SECTION (84-9-4)HBK.BY.BY-1
SANGAMON COUNTY
STATION 608+52.01
STR NO. 084-0074 EB - 084-0075 WB

96520028

09/05/03

DRAWN	DMP	07/17/03
REVIEWED	JMA	10/27/03

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08/05/2004