Bench Mark: Chiseled square on top of the northwest wingwall, 18.81' left @ Sta. 1131+16.98. Elevation = 656.32

Existing Structure: S.N. 021-0014, originally built in 1938 as S.B.I. Route 121, Section 144SB-1-FAGH, 144SF-1-FAGH as a three span wide flange structure. In 1974, the superstructure was replaced with PPC deck beams and the substructure was widened. The substructure consists of stub abutments and three-column piers on spread footings. The existing structure measures 95'-6½" back to back of abutments and 45'-0" out to out of deck. The existing structure is to be removed and replaced. Traffic will be detoured.

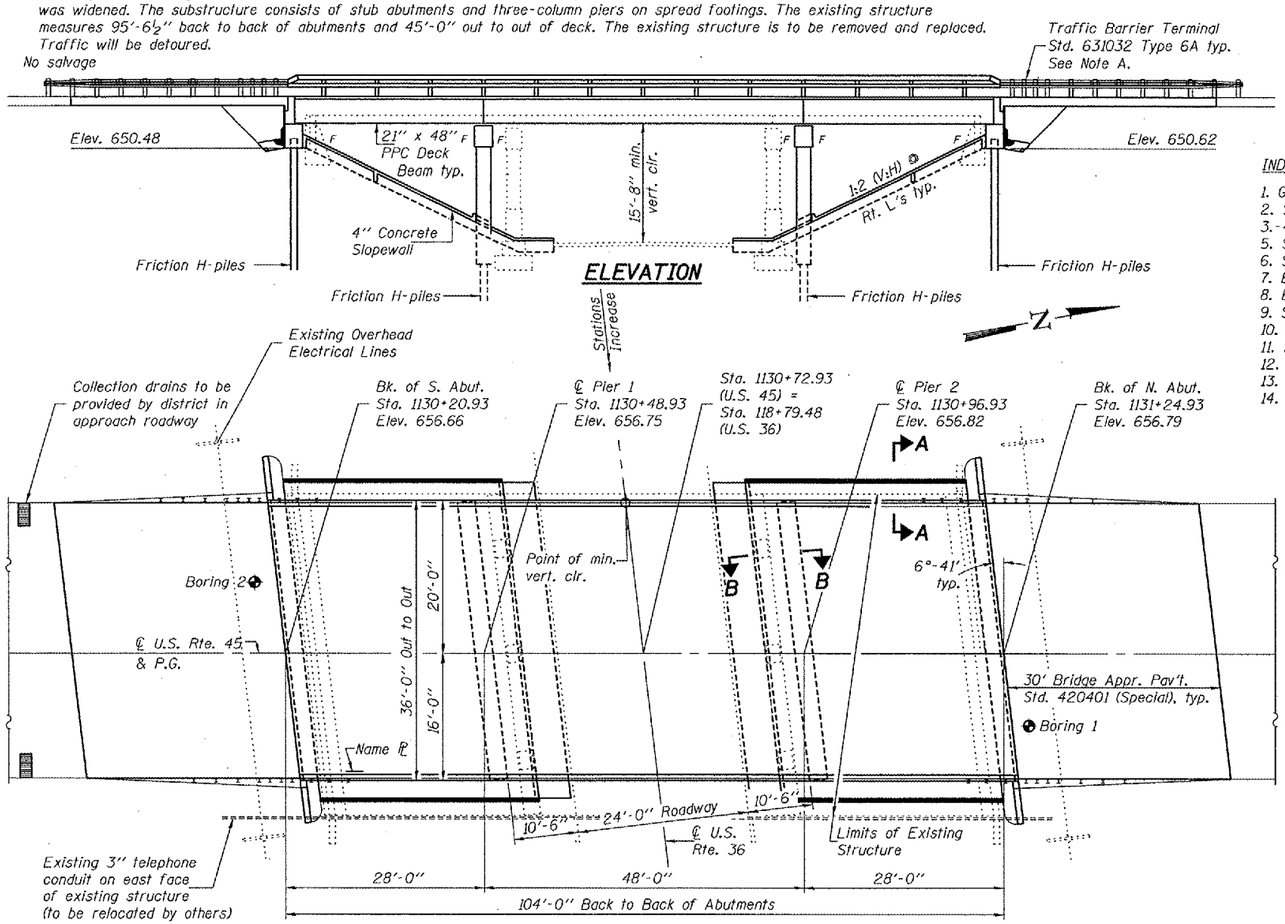
No salvage

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1671	**	DOUGLAS	181	71
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
14 SHEETS

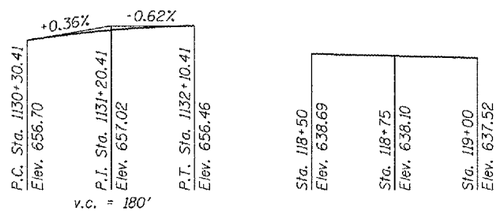
Contract #70258 **144SBR-2 & 22VBR-1



PLAN

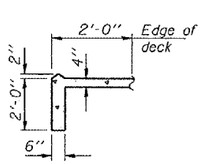
Notes:
The profile grade shows the final elevations after grinding.
Up to ¼" will be ground off the bridge slab and the bridge approach pavement.

Note A: Additional post required adjacent to back of abutment. See Roadway Plans.

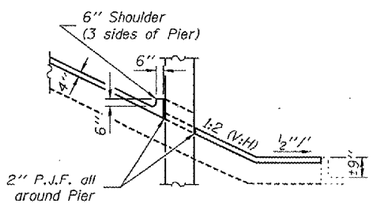


PROFILE GRADE U.S. ROUTE 45
(along ℄ roadway)

PROFILE GRADE U.S. ROUTE 36
(along ℄ roadway)



SECTION A-A



SECTION B-B

DESIGNED	Stephen M. Ryan
CHECKED	Philip S. Stoffel
DRAWN	BECKY M. LEACH
CHECKED	SMR/PRL

August 4, 2006
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS RALPH E. ANDERSON 081-004625 LICENSED STRUCTURAL ENGINEER SPRINGFIELD

EXPIRES 11-30-2006

INDEX OF SHEETS

1. General Plan & Elevation
2. SM Railing
3.-4. Top of Slab Elevations
5. Superstructure
6. Superstructure Details
7. Beam Details, Spans 1 & 3
8. Beam Details, Span 2
9. South Abutment
10. North Abutment
11. Abutment Details
12. Piers
13. Bar Splicers
14. Boring Logs

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.

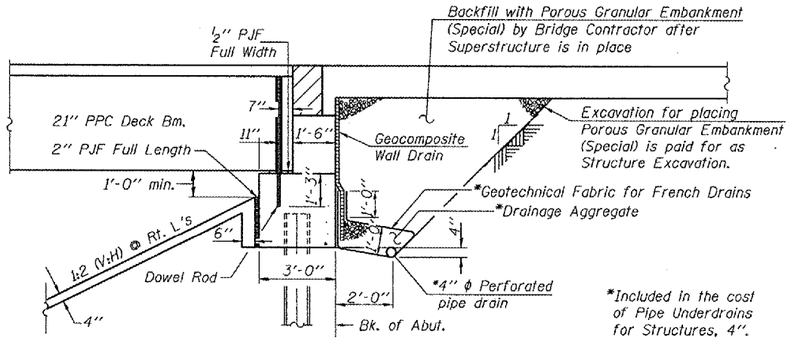
Concrete sealer shall be applied to exterior vertical face of each fascia beam.

The Contractor shall drive four steel HP12x53 test piles in a permanent location, one at each substructure unit, as directed by the Engineer before ordering remainder of piles.

All construction joints shall be bonded.

The Contractor is advised that the existing PPC deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing procedures for removal of the existing structure. Before starting work, the Contractor shall submit a demolition procedure for the removal of the existing structure to the Engineer for approval. The demolition procedure is to be prepared by and Illinois Licensed Structural Engineer. Cost included with Removal of Existing Structures, No. 1.

Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.



*Included in the cost of Pipe Underdrains for Structures, 4".

SECTION THRU ABUTMENT

(Horiz. dim. at Rt. L's)

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

STATION 1130+72.93
BUILT 200 BY
STATE OF ILLINOIS
FAS ROUTE 1671 - SEC 144SBR-2
LOADING HS20
STR. NO. 021-0062

NAME PLATE

See Std. 515001

LOADING HS20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi (substructure)
f_y = 60,000 psi (reinforcement)
f'_c = 5,000 psi (concrete wearing surface)

PRECAST PRESTRESSED UNITS

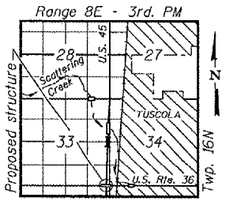
f'_c = 5,000 psi
f_{ci} = 4,000 psi
f'_s = 270,000 psi (½" low relax. strands)
f_{si} = 201,960 psi (½" low relax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.97%g
Site Coefficient (S) = 1.0

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 1	Each	1		1
Structure Excavation	Cu. Yd.		221	221
Concrete Structures	Cu. Yd.		141.4	141.4
Diamond Grinding (Bridge Section)	Sq. Yd.	606.2		606.2
Concrete Wearing Surface	Sq. Yd.	403.9		403.9
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3629.5		3629.5
Reinforcement Bars, Epoxy Coated	Pound	5370	12430	17800
Furnishing Steel Piles HP12x53	Foot		585	585
Driving Steel Piles	Foot		585	585
Test Pile Steel HP12x53	Each		4	4
Name Plates	Each	1		1
Slopewall, 4"	Sq. Yd.		359	359
Steel Bridge Rail, Type SM	Foot	205		205
Pipe Underdrains for Structures, 4"	Foot		126	126
Geocomposite Wall Drain	Sq. Yd.		47	47
Concrete Sealer	Sq. Yd.	39.3		39.3
Porous Granular Embankment (Special)	Cu. Yd.		74	74
Bar Splicers	Each		72	72
Bridge Deck Grooving	Sq. Yd.	380		380



LOCATION SKETCH

GENERAL PLAN & ELEVATION
U.S. ROUTE 45 OVER
U.S. ROUTE 36
F.A.S. ROUTE 1671 - SECTION 144SBR-2
DOUGLAS COUNTY
STATION 1130+72.93
STRUCTURE NO. 021-0062

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