

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.P. 776	(116BR-3)B-1	HAMILTON	140	66	21 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

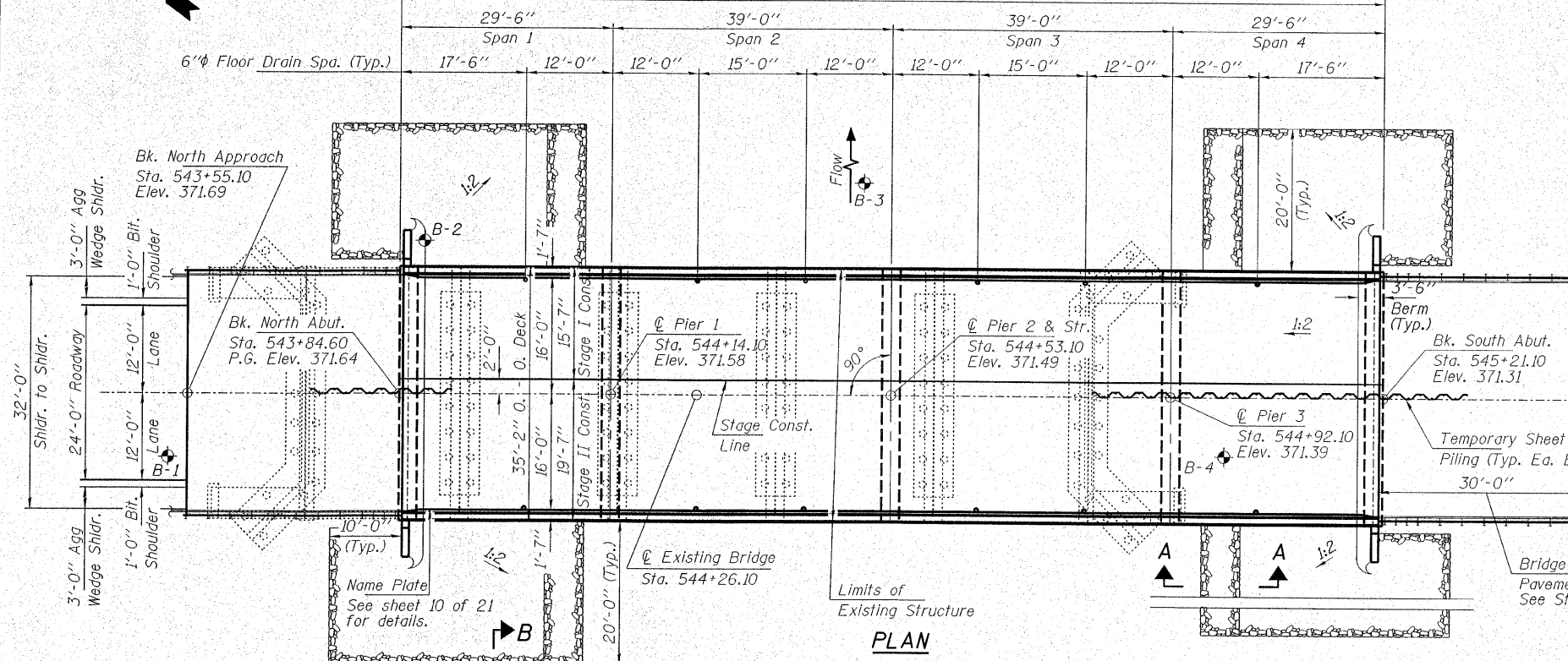
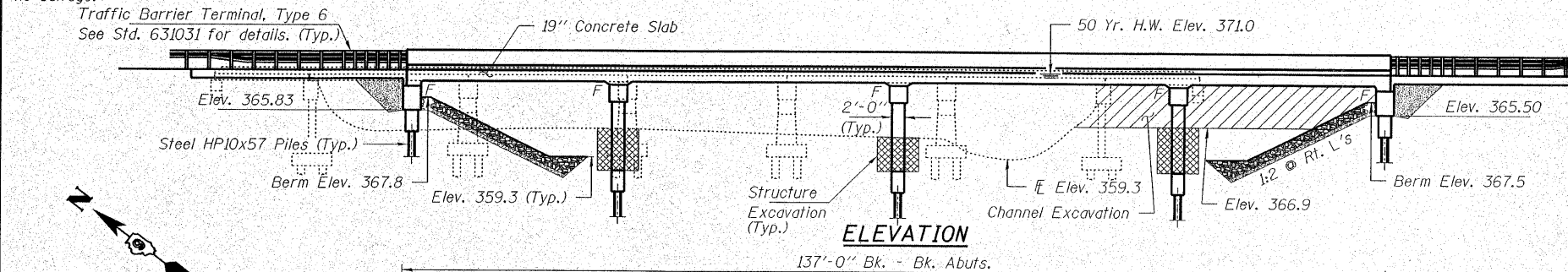
GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions. Reinforcement bars designated (E) shall be epoxy coated. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The contractor shall drive 2 steel test piles to 110% of the nominal required bearing specified in production locations: one HP10x57 at the South Abutment and one HP10x57 at Pier 2, as approved by the Engineer before ordering the remainder of piles. The contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach pavement. 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 construction procedures for removal and replacement of the superstructure. Slipforming of the parapets is not allowed.

BENCHMARK: Chiseled square on top of NE hubguard of Bridge 033-0022, 17.0' Lt.: Elev. 371.36.

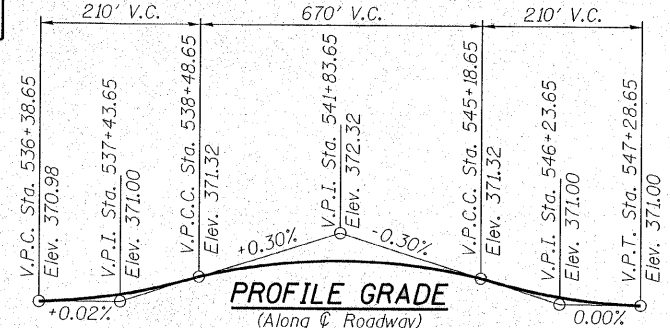
EXISTING STRUCTURE: SN 033-0022 was originally built in 1928. The superstructure was replaced and the substructure widened in 1976. The structure consists of 5 spans of PPC deck beams on cantilevered closed abutments and solid shaft piers, supported on untreated timber piles. The structure has no skew. The approach shoulders are supported with Precast Concrete Beams. The bridge is 110'-0" bk.-bk. abuts. and 34'-8" o.-o. deck. Existing structure is to be removed and replaced. One lane of traffic will be maintained utilizing stage construction.

No salvage.



STATION 544+53.10
BUILT 200_ BY
STATE OF ILLINOIS
FAP RTE 776 SEC (116BR-3)B-1
LOADING HS20
STRUCTURE NO. 033-0052

NAME PLATE
See Std. 515001



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.			60
Stone Riprap, Class A4	Sq. Yd.		560	560
Filter Fabric	Sq. Yd.		560	560
Removal of Existing Structures No. 3	Each			1
Structure Excavation	Cu. Yd.	191		191
Floor Drains	Each	12		12
Concrete Structures	Cu. Yd.		123.9	123.9
Concrete Superstructure	Cu. Yd.	320.8		320.8
Bridge Deck Grooving	Sq. Yd.	484		484
Concrete Encasement	Cu. Yd.		12.0	12.0
Protective Coat	Sq. Yd.	607		607
Stud Shear Connectors	Each		280	280
Reinforcement Bars, Epoxy Coated	Pound	54,690	14,720	69,410
Bar Splicers	Each	239	96	335
Furnishing Steel Piles HP10x57	Foot		1,980	1,980
Driving Piles	Foot		1,980	1,980
Test Pile Superstructure	Each		2	2
Temporary Sheet Piling	Sq. Ft.		1,025	1,025
Name Plates	Each		1	1
Geocomposite Wall Drain	Sq. Yd.		38	38
Pipe Underdrains for Structures 4"	Foot			120
Underwater Structure Excavation Protection Location 6	Each		1	1
Underwater Structure Excavation Protection Location 7	Each		1	1
Underwater Structure Excavation Protection Location 8	Each		1	1
Mechanical Splice	Each		126	126

WATERWAY INFORMATION

Drainage Area = 58 Sq. Mi. Exist. Low Grade Elev. = 370.9 Ft. @ Sta. 526+15
Prop. Low Grade Elev. = 370.9 Ft. @ Sta. 526+15

Flood Frequency	Q cfs		Opening Sq. Ft.		Nat. Head-Ft.		Headwater El.			
	Exist.	Prop.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.	
10 Yr	SN 033-0050	3971	3971	876	896	369.8	0.2	0.1	370.0	369.9
	SN 033-0051	466	511	381	409	366.4	0.1	0.1	366.5	366.5
	SN 033-0052	527	482	387	414	366.4	0.1	0.1	366.5	366.5
	Total	4964	4964	1644	1719					
Design 50 Yr	SN 033-0050	4635	4635	901	925	371.2	0.3	0.2	371.5	371.4
	SN 033-0051	1242	1267	684	709	371.0	0.1	0.1	371.1	371.1
	SN 033-0052	1253	1228	684	718	371.0	0.1	0.1	371.1	371.1
	Total	7130	7130	2269	2352					
Base 100 Yr	SN 033-0050	5245	5298	901	925	371.9	0.6	0.6	372.5	372.5
	SN 033-0051	1386	1368	684	709	371.7	0.1	0.0	371.8	371.7
	SN 033-0052	1399	1344	684	718	371.7	0.1	0.0	371.8	371.7
	Total	8030	8030	2269	2352					
Overtopping 50 Yr	SN 033-0050	4635	4635	901	925	371.2	0.3	0.2	371.5	371.4
	SN 033-0051	1242	1267	684	709	371.0	0.1	0.1	371.1	371.1
	SN 033-0052	1253	1228	684	718	371.0	0.1	0.1	371.1	371.1
	Total	7130	7130	2269	2352					
Max Calc 500 Yr	SN 033-0050	4903	4988	901	925	372.1	0.5	0.5	372.6	372.6
	SN 033-0051	2594	2605	684	709	372.4	0.2	0.2	372.6	372.6
	SN 033-0052	2619	2523	684	718	372.4	0.2	0.2	372.6	372.6
	Total	10116	10116	2269	2352					

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 0.10g
Site Coefficient (S) = 2.0

LOADING HS20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO & all applicable interims.

DESIGN STRESSES

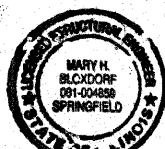
FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (reinforcement)

DESIGN SCOUR ELEVATIONS

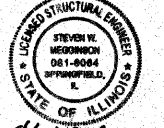
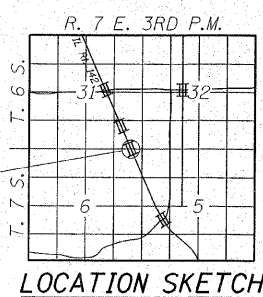
North Abutment	365.5
Pier 1	358.0
Pier 2	358.0
Pier 3	358.0
South Abutment	365.5

APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Steven W. Maguire 10/20/07
ILLINOIS STRUCTURAL NO. 081-6084



Expires 11-30-08

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-41-0021-1 DATE: 10/25/07
DESIGNED: R.J.P. CHECKED: S.W.M. DRAWN: D.A.B.

GENERAL PLAN AND ELEVATION
IL RTE. 142 OVER CONTRARY CREEK (SOUTH OVERTFLOW)
F.A.P. ROUTE 776 - SECTION (116BR-3)B-1
HAMILTON COUNTY
STRUCTURE NO. 033-0052 / STATION 544+53.10

PLOT DATE: 10/26/2007 FILE NAME: 0330052-78005-41021br.dwg 0052.dgn