

Bench Mark: Chiseled Square on top of Northeast wingwall.  
Station 743+48.16. Elevation 751.771

Existing Structure: The existing structure is a three-span PPC deck beam bridge built in 1926 as ILL 18, Section 28VBR. The existing structure was rebuilt in 1965 and 1980. The structure number is 053-0061, Sta 742+85.76. The back to back abutment length is 125'-9" and out to out bridge width is 36'-0". The existing superstructure is to be removed and replaced. Traffic to be detoured.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAP 653	28 VBR	LIVINGSTON	28	12	9 SHEETS
FED. AID DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

### GENERAL NOTES

Contract # 66609

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.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

All Construction joints shall be bonded.

The existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name Plates. If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of beams. The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

### LOADING HS20-44

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

### DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th ed.

### DESIGN STRESSES

NEW & EXISTING CONSTRUCTION

FIELD UNITS

$f'_c = 3,500$  psi

$f_y = 60,000$  psi (reinforcement)

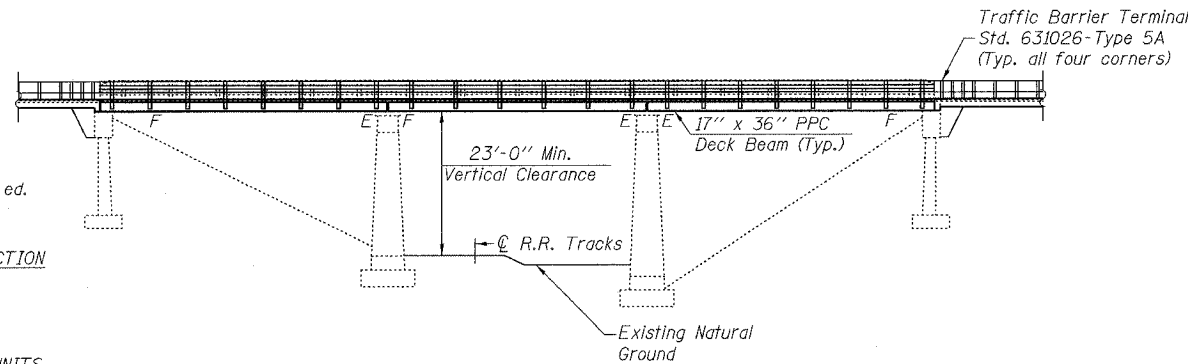
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$  psi

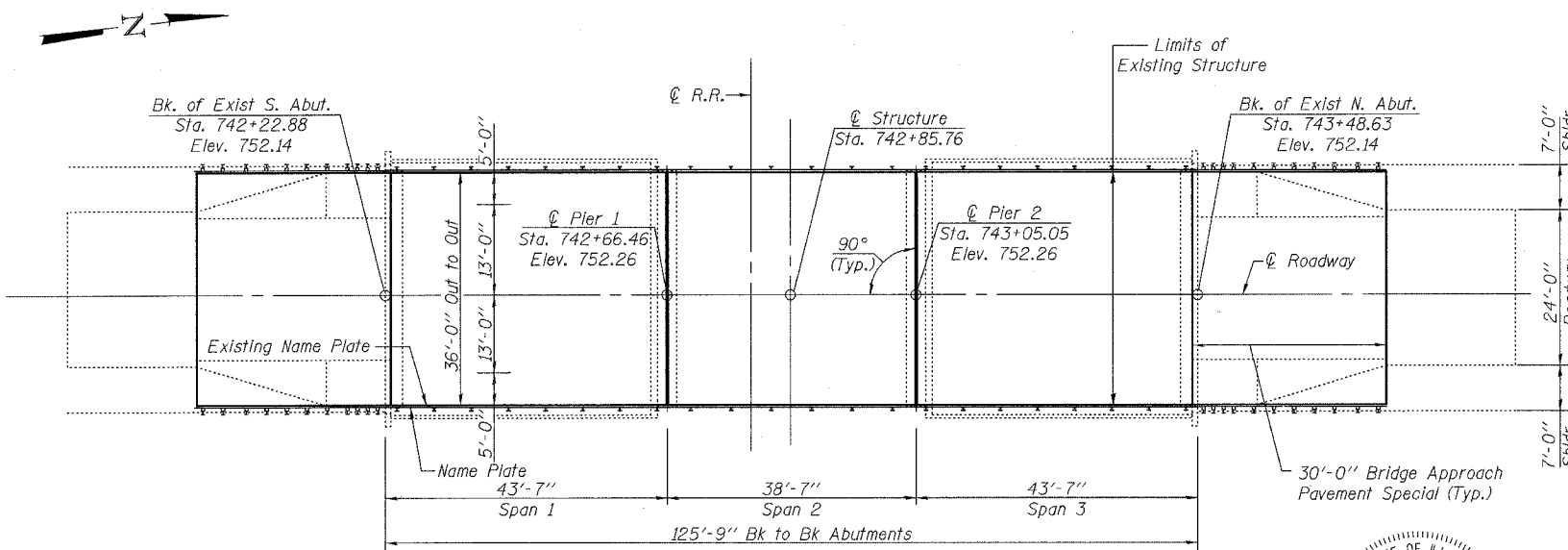
$f'_{ci} = 4,000$  psi

$f'_s = 270,000$  psi (1/2"  $\phi$  low relax strands)

$f_{sl} = 201,960$  psi (1/2"  $\phi$  low relax strands)



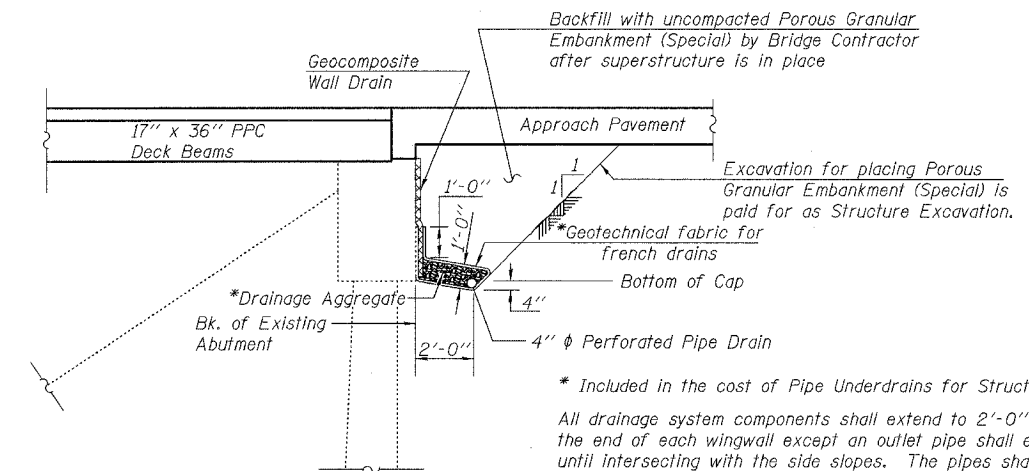
ELEVATION



PLAN

### TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	4457		4457
Reinforcement Bars, Epoxy Coated	Pound	6580		6580
Concrete Wearing Surface, 5"	Sq. Yd.	495.2		495.2
Bridge Deck Grooving	Sq. Yd.	493		493
Protective Coat	Sq. Yd.	496		496
Steel Bridge Rail, Type SM	Foot	248		248
Name Plates	Each	1		1
Structure Excavation	Cu. Yd.		61.0	61.0
Porous Granular Embankment (Special)	Cu. Yd.		61.0	61.0
Preformed Joint Strip Seal, 1"	Foot	72.0		72.0
Pipe Underdrains for Structures, 4"	Foot		112	112
Geocomposite Wall Drain	Sq. Yd.		38	38



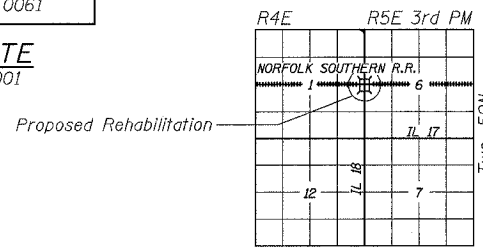
SECTION THRU ABUTMENTS

(@ Rt. L's)  
Approach Pavement shall be poured after superstructure wearing surface has been placed.

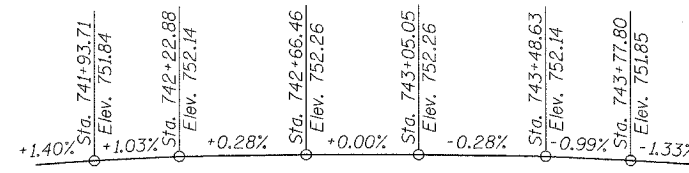
STATION 742+85.76  
REBUILT 200 BY  
STATE OF ILLINOIS  
F.A.P. RT. 653 SEC. 28 VBR  
LOADING HS20  
STR. NO. 053-0061

### NAME PLATE

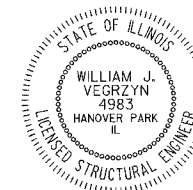
See Std. 515001



LOCATION SKETCH



PROFILE GRADE



William J. Vegrzyn 3-15-06  
Expires 11-30-06

### INDEX OF SHEETS

1. General Plan
2. Type SM Steel Bridge Rail Side Mounted
3. Superstructure
4. Superstructure Details
5. Superstructure Details Spans 1 & 3
6. Superstructure Details Span 2
7. Bridge Joint System - Expansion (Alternate Strip Seal)
8. Abutments
9. Piers

<p>Excellence through Ownership</p> <p>200 West Front Street Wheaton, IL 60187</p>	<p>ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p>GENERAL PLAN IL-18 OVER NORFOLK SOUTHERN R.R. FAP RTE 653-SECTION 28 VBR LIVINGSTON COUNTY STATION 742+85.76 STRUCTURE NO. 053-0061</p>
	<p>DATE: 3-15-2006</p> <p>DRAWN BY JMT CHECKED BY WJV</p>