

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

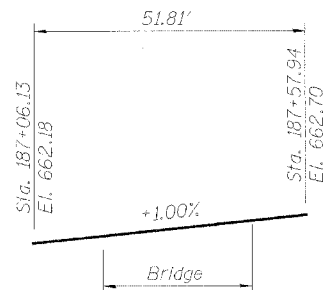
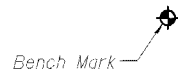
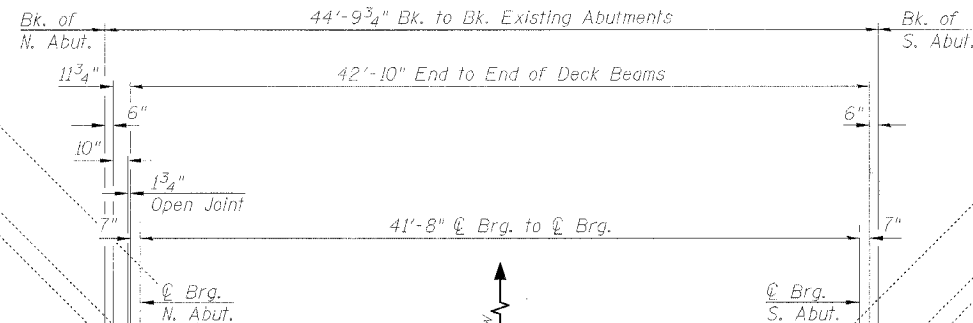
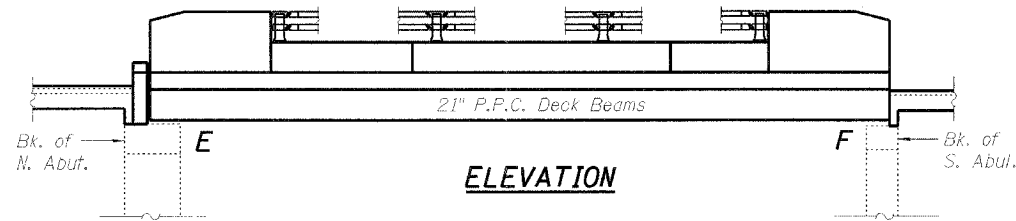
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3887	AR-B	KANE	43	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		16 SHEETS

Contract #60C23

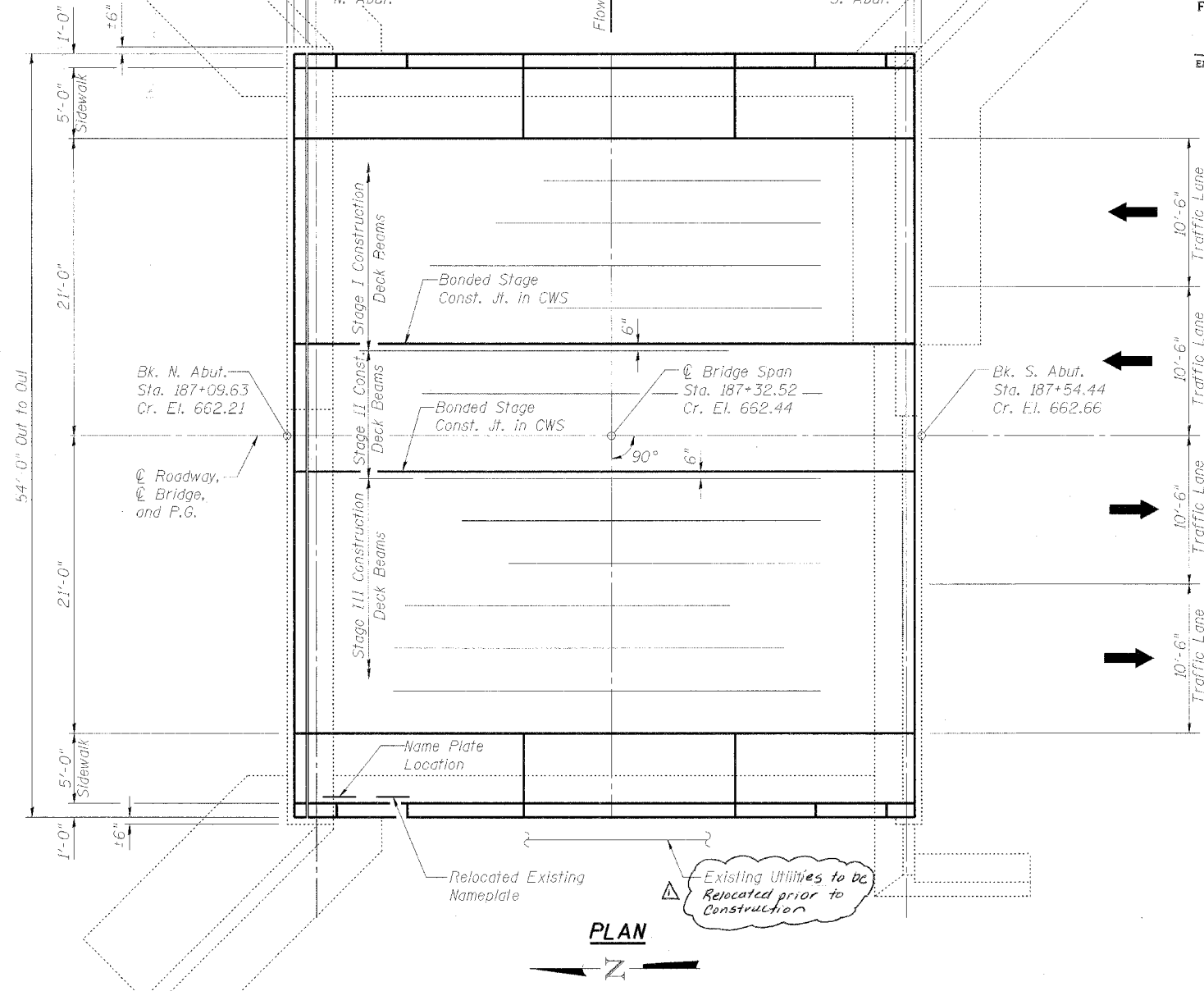
Benchmark:
Existing benchmark could not be found on N.E. wingwall. Top of N.E. wingwall was assumed at El. 661.84 (original benchmark elevation). Elevation was transferred to temporary benchmark which is railroad spike in west side of power pole, El. 662.23.

Existing Structure:
Original Bridge S.N. 045-0020 was built as R.C. Deck Girder with Closed Abutments next to thru steel girder Railroad Bridge in early 1900's. Railroad Bridge was removed and Highway Bridge was widened in kind, abutments modified, in 1935. This structure was rebuilt in 1978. Superstructure was removed and replaced with PPC Deck Beams. Abutments were modified for deck beams and repaired as required. The existing PPC Deck Beams, Sidewalk, and Parapets shall be removed and replaced utilizing stage construction. Existing brass name plate has SN 025-0020 imprinted rather than SN 045-0020.

Salvage:
Remove and re-erect existing aluminum railing. Relocate existing name plate.



PROFILE GRADE
at @ Roadway
(For Bridge Only)



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

INDEX OF SHEETS

1. General Plan & Elevation
2. General Notes and Total Bill of Material
3. Stage I Construction
4. Stage II Construction
5. Stage III Construction
6. Temporary Concrete Barrier
7. Superstructure Details
8. Sections and Bearing Details
9. Strip Seal Joint Details
10. Concrete Wearing Surface
11. Sidewalk & Parapet Details
12. Parapet Details
13. Bar Splicer Assembly Details
14. Re-erected Aluminum Railing
15. North Abutment Details
16. Substructure Repairs

LOADING HS20-44

No Allowance for future wearing surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

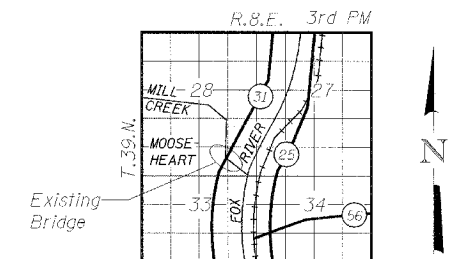
DESIGN STRESSES

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" ϕ low lax strands)
 $f'_{si} = 201,960$ psi (1/2" ϕ low lax strands)



LOCATION SKETCH

GENERAL PLAN & ELEVATION

F.A.U. 3887 (IL 31)

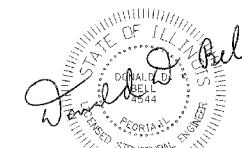
OVER MILL CREEK

SECTION AR-B

KANE COUNTY STA. 187+31.80

STRUCTURE NO. 045-0020

DESIGNED	LLV
CHECKED	DDB
DRAWN	MGM
CHECKED	LLV



License Expires: 11/30/08
Date Signed: 11-2-07

Rev. 1-8-08

STS CONSULTANTS
111 NE Jefferson Ave.
Peoria, Illinois 61602
Ph(309)676-8464
FAX(309)676-5445
IL Design Firm Reg. No. 184-00158

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL	SHEET NO. 2 16 SHEETS
3887	AR-B	KANE	43	18	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #60C23

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.
- Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
- The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
- No instream work will be allowed on this project.
- Repair of the abutments shall be completed prior to placement of the new deck beams.
- 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.
- If the Contractor's procedure for existing beam removal or placement of new beams involves placement of heavy equipment on the new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Superstructure.

~~9. Four utility pipes and/or conduits are supported on the west side of the bridge. Contractor shall temporarily support utilities during stage construction. Reattach with existing hangers and new hardware as required. Cost included in Removal of Existing Superstructures.~~

STATION 187+31.80
REBUILT 200_ BY
STATE OF ILLINOIS
F.A.U. R1E. 3887
LOADING HS20
STR. NO. 045-0020

NAME PLATE

See Std. 515001

Relocate existing name plate next to rebuilt name plate, cost included in Name Plates.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Superstructure	Cu. Yd.	26.5		26.5
Bridge Deck Grooving	Sq. Yd.	190		190
Protective Coat	Sq. Yd.	295		295
Concrete Wearing Surface, 5"	Sq. Yd.	257		257
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	2,313		2,313
Reinforcement Bars, Epoxy Coated	Pound	6230		6230
Bar Splicers	Each	98		98
Removing and Re-erecting Existing Railing	Foot	59		59
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	55		55
Epoxy Crack Injection	Foot		26	26
Structural Repair of Concrete (Depth Greater Than 5")	Sq. Ft.		50	50
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.		2	2
Asbestos Bearing Pad Removal	Each		38	38

DESIGNED	LLV
CHECKED	DDB
DRAWN	MGM
CHECKED	LLV

**GENERAL NOTES AND
TOTAL BILL OF MATERIAL
F.A.U. 3887 (IL 31)
OVER MILL CREEK
SECTION AR-B
KANE COUNTY STA. 187+31.80
STRUCTURE NO. 045-0020**

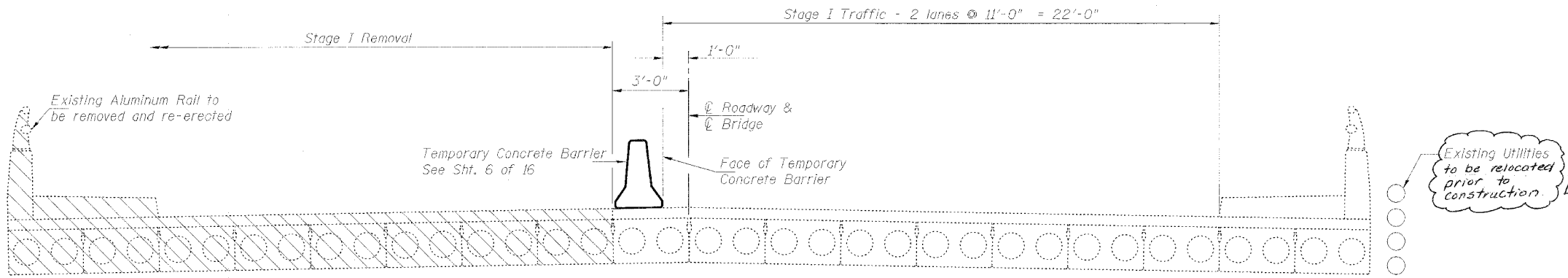
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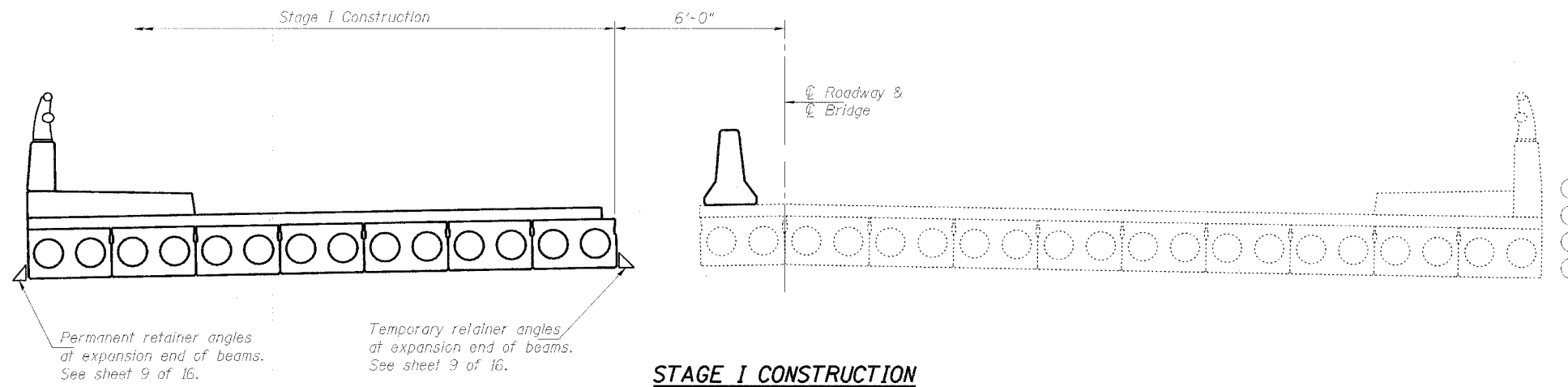
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3887	AR-B	KANE	43	19	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #60C23



Notes:
 All staging cross sections are looking south.
 For quantity of Temporary Concrete Barrier see roadway plans.
 Hatched area indicates Removal of Existing Superstructures.

STAGE I REMOVAL



STAGE I CONSTRUCTION

DESIGNED	LLV
CHECKED	DDG
DRAWN	MGM
CHECKED	LLV

STAGE I CONSTRUCTION
F.A.U. 3887 (IL 31)
OVER MILL CREEK
SECTION AR-B
KANE COUNTY STA. 187+31.80
STRUCTURE NO. 045-0020

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