

Benchmark #100: Chisled square in top NW corner of NW approach parapet of bridge SN 084-0150 NAVD88, Elev. 571.65.
 Benchmark #101: Chisled square in top SE corner of SE approach parapet of bridge SN 084-0150, NAVD88, Elev. 571.22.
 Existing Structure: S.N. 084-0150 built in 1974 under section 84-10-1HB is a 2 span continuous welded plate girder structure with CIP concrete deck, supported by vaulted abutments supported on steel piles and a trapezoidal 5-column pier supported on steel piles. The existing structure is 195'-1" back to back existing abutments with 27'-7" vaulted approach spans at each end. The bridge deck is 8" thick with a 1/2" overlay, 68'-0" out to out with an 18'-0" median. In 1995, the overlay was replaced.
 Bridge to be reconstructed using stage construction. One lane of Traffic to be maintained at all times. No Salvage.

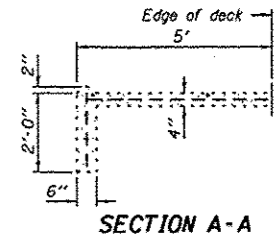
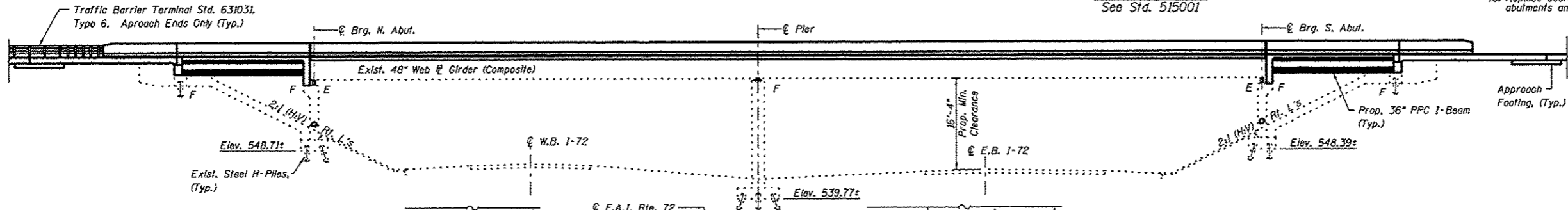
STATION 48+76.46
 REBUILT 20... BY
 STATE OF ILLINOIS
 F.A.I. RTE. 72
 SEC. (84-10-1,2) RS-3
 LOADING HS-20
 STRUCTURE NO. 084-0150

Existing Name Plate shall be cleaned and relocated next to New Name Plate, Cost Included with Name Plate.

SCOPE OF WORK

1. Remove and replace deck.
2. Remove and replace approach span.
3. Remove and replace abutment back walls.
4. Remove and replace wingwalls.
5. Install approach slab.
6. Replace the damaged stopewall sections.
7. Replace end diaphragm with channel diaphragm.
8. Install Shear Studs in Negative Moment region of Deck.
9. Jack and remove existing bearings at abutments and pier and raise profile elevation 6" while deck is off.
10. Replace bearings with new elastomeric bearings at abutments and fixed bearings at pier.

NAME PLATE
 See Std. 515001



LOADING HS20-44
 Allow 50#/sq. ft. For future wearing surface.

DESIGN SPECIFICATIONS

(New Construction)
 2002 AASHTO "Standard Specifications for Highway Bridges"

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.065g
 Design Spectral Acceleration at 2.0 sec. (SD2) = 0.179g
 Soil Site Class = B

DESIGN STRESSES

PRECAST PRESTRESSED UNITS (Exst.)
 f'c = 5,000 psi
 f'ci = 4,000 psi
 f'st = 173,600 psi (1/8" stress relieved strands)
 f's = 248,000 psi (1/8" stress relieved strands)

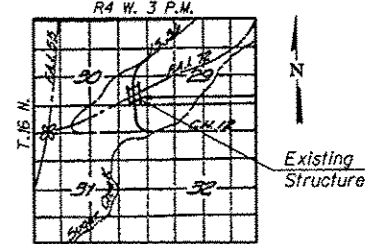
PRECAST PRESTRESSED UNITS (Prop.)
 f'c = 6,000 psi
 f'ci = 5,000 psi
 fpbt = 201,960 psi (1/2" low lax strands)
 fpu = 270,000 psi (1/2" low lax strands)

FIELD UNITS (Exst. Constr.)

fc = 1,400 psi (Substructure)
 fc = 1,200 psi (Slab)
 fs = 20,000 psi (Steel)
 fs = 20,000 psi (Reinforcement)

FIELD UNITS (New Const.)

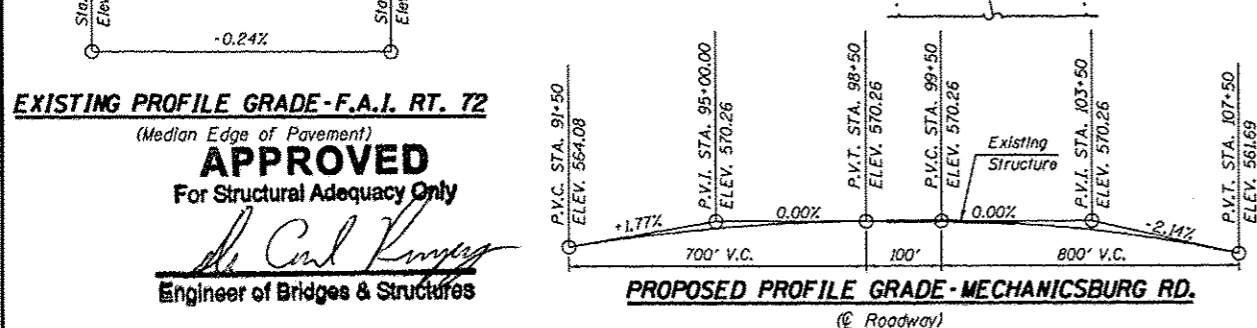
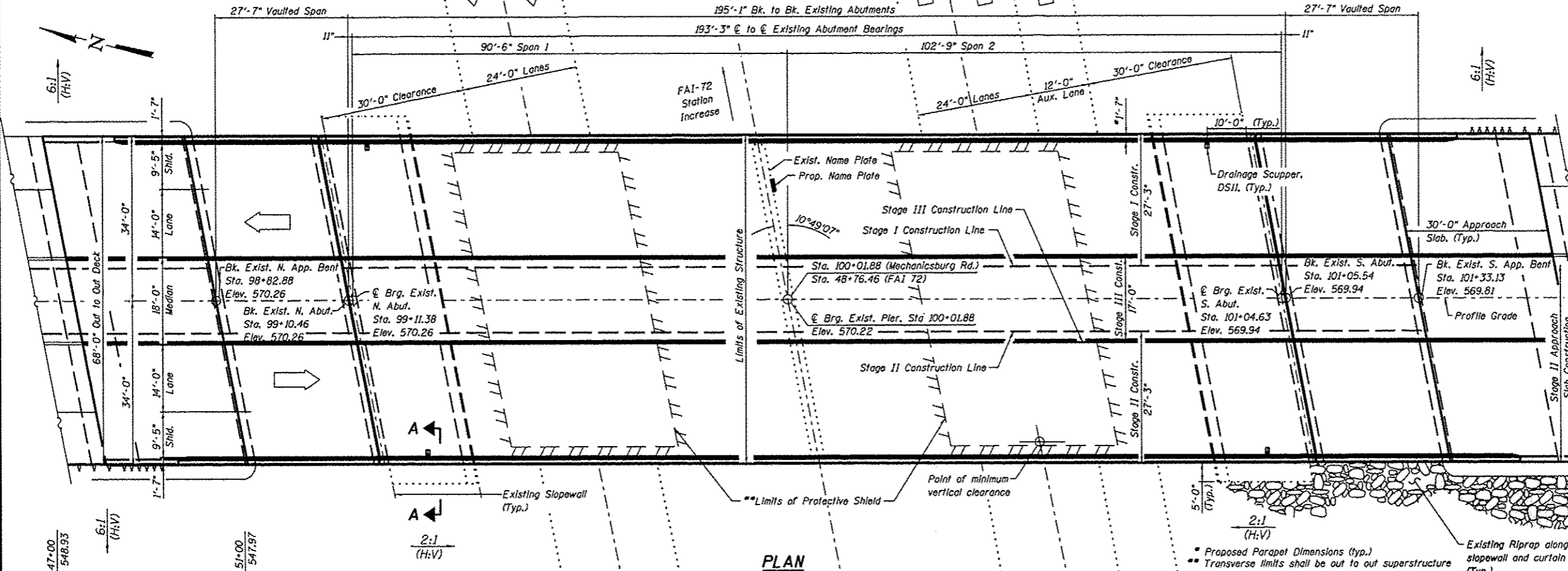
f'c = 3,500 psi
 fy = 60,000 psi (Reinforcement)
 fy = 36,000 psi (Steel)



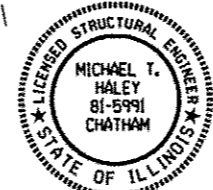
LOCATION SKETCH

GENERAL PLAN & ELEVATION
MECHANICSBURG ROAD OVER

F.A.I. RTE. 72
SECTION (84-10-1,2) RS-3
SANGAMON COUNTY
STRUCTURE NO. 084-0150
STA. 48+76.46



APPROVED
 For Structural Adequacy Only
 [Signature]
 Engineer of Bridges & Structures



Michael T. Haley
 Licensed Structural Engineer
 State of Illinois No. 81-5991
 Expires 11/30/2014
 Date: 9-18-2013

- INDEX OF SHEETS**
- | | |
|--|---|
| 1. General Plan and Elevation | 15. Bridge Approach Slab Details (2 of 2) |
| 2. General Data | 16. Preformed Joint Strip Seal |
| 3. Temporary Concrete Barrier | 17. Framing Plan and Beam Details |
| 4. Top of Slab Elevations (1 of 3) | 18. Abutment Bearing Details |
| 5. Top of Slab Elevations (2 of 3) | 19. Pier Bearing Details |
| 6. Top of Slab Elevations (3 of 3) | 20. Concrete Removal, Abutments |
| 7. Top of Approach Slab Elevations | 21. Concrete Removal, Appr. Bents |
| 8. Superstructure | 22. Abutments |
| 9. Superstructure Details | 23. Approach Bents |
| 10. Vaulted Abutment Approach Span | 24. Concrete Repair Details |
| 11. Vaulted Abutment Approach Span Details | 25. Stopewall Repair Details |
| 12. 36" PPC I-Beam | 26. Bar Splicer Assembly and Mechanical Splicer Details |
| 13. 36" PPC I-Beam Details | 27. Drainage Scupper, DS-11 |

FILE NAME = CH12 over FAI-72.dgn	USER NAME *	DESIGNED - SAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION MECHANICSBURG ROAD OVER F.A.I.-72 - S.N. 084-0150 SHEET NO. 1 OF 27 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - MTH	REVISED -			72	(84-10-1,2) RS-3	SANGAMON	194	113	
		DRAWN - TJW	REVISED -			CONTRACT NO. 72C90					
		CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					