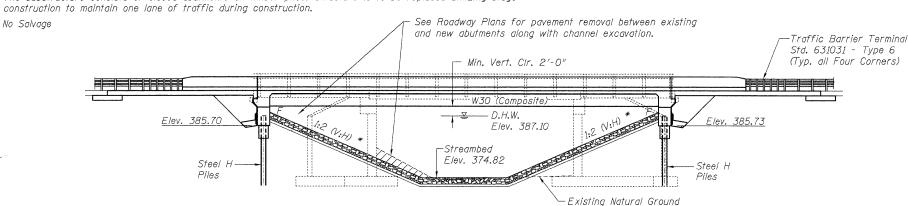
Bench Mark: Chiseled "" on southeast wingwall of S.N. 097-0037 Elev. 390.48.

No Salvage

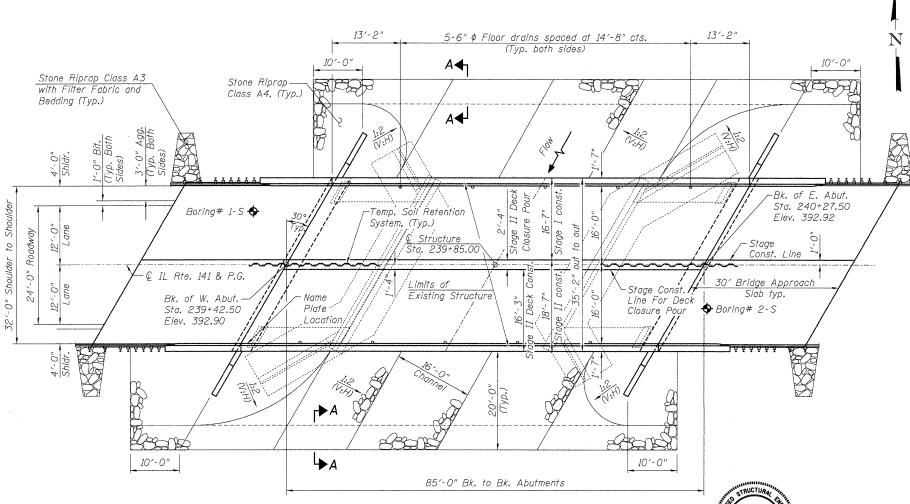
#### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

Existing Structure: S.N. 097-0037 was built in 1933 as part of SB1 141 Section 101 at Sta. 239+85. In 1974 the bridge was widened and the superstructure was replaced with PPC deck beams. The structure is  $32^{7}-6$ " wide between railings and spans  $43^{7}-5$ " back to back abutments with a 30° skew, The substructure consists of closed abutments on timber piles. Structure is to be replaced utilizing stage



# **ELEVATION**

\* at RT L's



## DESIGN SCOUR ELEVATION TABLE

Abut. W. Abu Desian Scou

#### **APPROVED** FOR STRUCTURAL ADEQUACY ONLY

PLAN

Ralph & anderson (TOP) ENGINEER OF BRIDGES AND STRUCTURE

## Michael J. Halen

Michael T. Haley Licensed Structural Engineer State of Illinois No. 81-5991 Expires 11/30/2010

7/24/09

#### INDEX OF SHEETS

- 1. General Plan
- 2. General Notes & Details
- 3. Stage Construction Details
- 4. Temporary Concrete Barrier
- 5. Deck Elevations
- 6. Approach Slab Elevations
- Superstructure
- 8. Superstructure Details 9. Bridge Approach Slab Details-1
- 10. Bridge Approach Slab Details-2
- 11. Concrete End Diaphragms
- 12. Framing Plan & Steel Details
- 13. West Abutment
- 14. East Abutment
- 15. Bar Splicer Assembly Details
- 16. Steel Pile Details
- 17. Soil Borings

#### DESIGN STRESSES

FIELD UNITS

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

fy = 50,000 psi (Structural Steel, M270 Grade 50W)

### LOADING HL-93

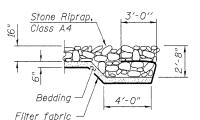
Allow 50#/sq. ft. for future wearing surface.

#### DESIGN SPECIFICATIONS

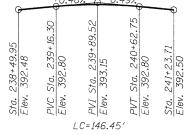
2007 AASHTO LRFD Bridge Design Specifications, with 2008 Interim

#### SEISMIC DATA

Seismic Performance Zone (SPZ) = 2 Design Spectral Acceleration at 1.0 sec.  $(S_{D1}) = 0.230g$ Design Spectral Acceleration at 0.2 sec. (Sps) = 0.635g Soil Site Class = C



SECTION A-A

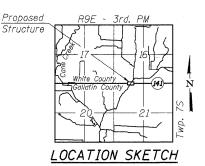


#### PROFILE GRADE (along & IL Rte. 141)

#### WATERWAY INFORMATION

Existing Low Grade Elev. 391.67 🔘 Sta. 236+00									S+00
Drainage Area = 4.59 sq. mi. Proposed Low Grade Elev. 391.67 © Sta. 236+00									
Flood	Freq.	Q	Opening Sq. Ft.		Nat.	Head - Ft.		Headwater El.	
	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
	10	1711	261	323	384.2	0.2	0.1	384.4	384.3
Design	50	2835	363	489	387.1	0.4	0.2	387.5	387.3
Base	100	3346	396	550	388.0	0.5	0.2	388.5	388.2
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	4686	425	574	388.8	0.9	0.3	389.7	389.1

10 Year Velocity through Existing Bridge = 6.6 fps 10 Year Velocity through Proposed Bridge = 5.3 fps



GENERAL PLAN IL RTE. 141 OVER TRIBUTARY TO CANE CREEK F.A.P. RTE. 877 - SEC. 101B-1 WHITE COUNTY STATION 239+85.00 STRUCTURE NO. 097-0073

