

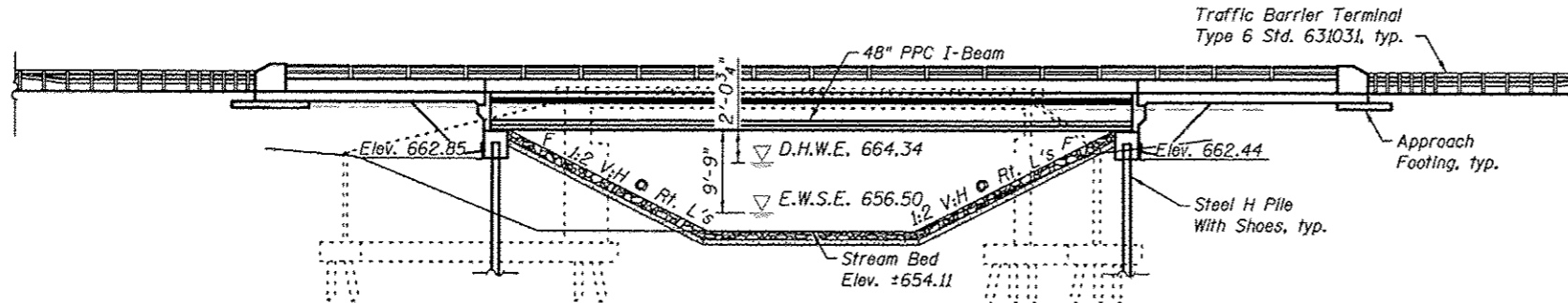
Benchmark: Arrow head bolt on fire hydrant west of driveway to Waterplant on north side of structure. Hydrant is located ±830' west of the  $\phi$  of Structure. Elevation 671.46.

Existing Structure: S.N. 047-0032 built in 1958 as FA Route 192 Section 11-B-1. The structure consists of a single span 36" WF Beams and a 7" Reinforced Concrete deck supported on closed reinforced concrete high wall abutment on steel H Piles. Structure measures 61'-9" bk to bk abutments and 36'-4" out-to-out. Existing Structure is to be removed. Traffic to be maintained using stage construction.

No Salvage.

**GENERAL NOTES**

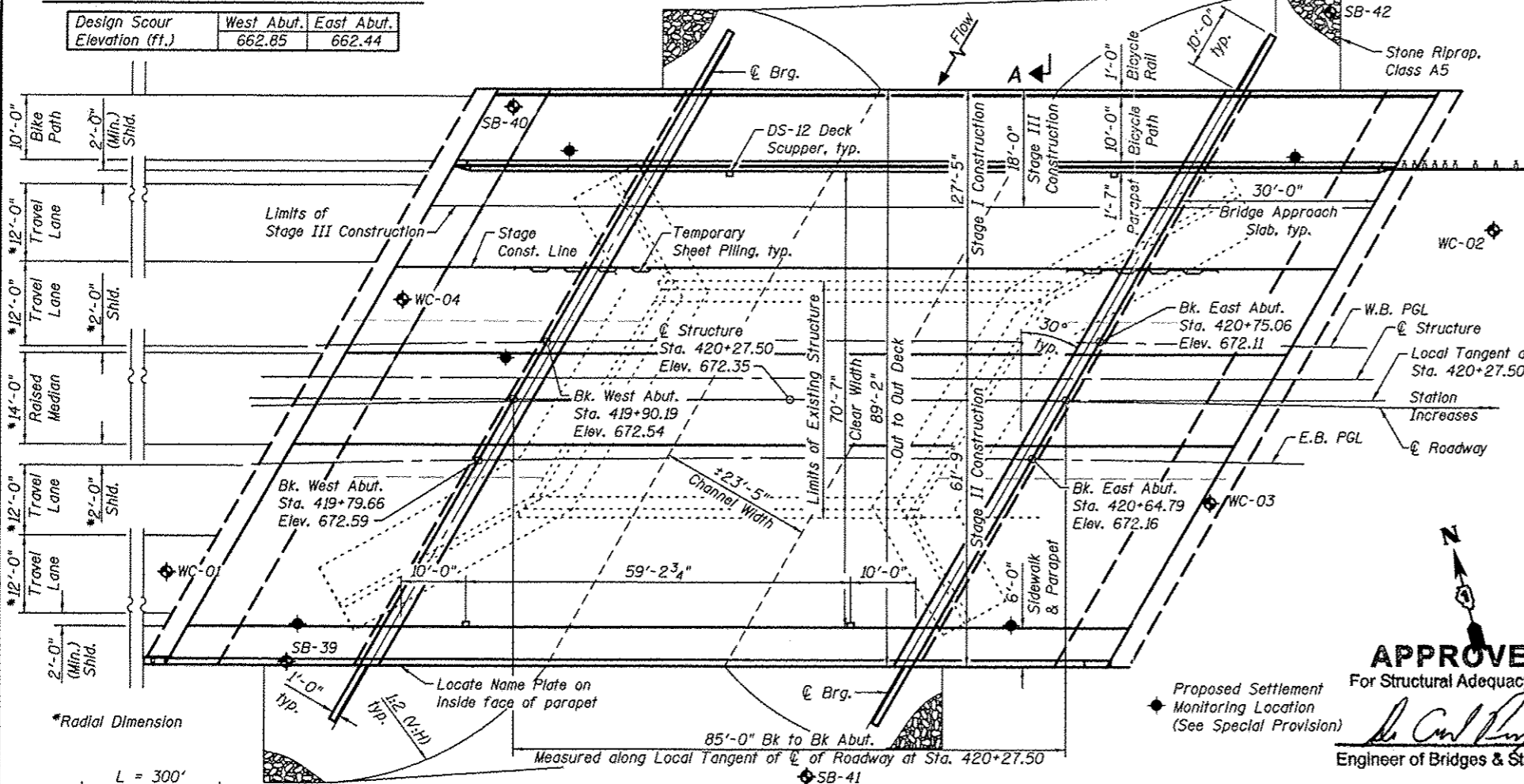
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. Reinforcement bars designated (E) shall be epoxy coated. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments. Slip forming of the parapets is not allowed.



**ELEVATION**  
(South Parapet and Rolling Shown)

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	West Abut.	East Abut.
	662.85	662.44



**PLAN**

**INDEX OF SHEETS**

- 1 General Plan and Elevation
- 2 Total Bill of Materials and General Details
- 3 Temporary Concrete Barrier For Stage Construction
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- 16 Bicycle Railing
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- 21 West Abutment Details
- 22 East Abutment Details
- 23 HP Pile Details
- 24 Bar Splicer and Mechanical Assembly Details
- 25-27 Soil Boring Logs

**LOADING HL-93**

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

**DESIGN SPECIFICATIONS**

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

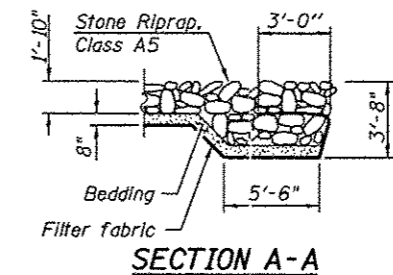
$f'_c = 7,000$  psi  
 $f'_{ci} = 6,000$  psi  
 $f_{pu} = 270,000$  psi (1/2" low lax strands)  
 $f_{pbt} = 201,960$  psi (1/2" low lax. strands)

**SEISMIC DATA**

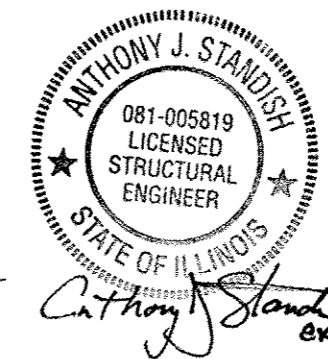
Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.065  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 1.24  
Soil Site Class = C

**CURVE DATA**

$\Delta = 25^\circ 52' 43"$   
 $D = 0^\circ 45' 00"$   
 $T = 1,755.28$   
 $L = 3,450.67$   
 $E = 199.05'$   
 $R = 7,639.86$   
 $S.E. = \text{None}$   
 $P.C. = \text{Sta. } 394+99.55$   
 $P.T. = \text{Sta. } 429+50.23$   
 $P.I. = \text{Sta. } 412+54.83$



**SECTION A-A**



**APPROVED**  
For Structural Adequacy Only

Proposed Settlement Monitoring Location (See Special Provision)  
*De Carl R...*  
Engineer of Bridges & Structures

*Anthony J. Standish*  
exp. 11/2012

STATION 420+27.50  
BUILT 2011 BY  
STATE OF ILLINOIS  
F.A.P. Rte 30 Sec 11 WRS-30  
LOADING HL-93  
STRUCTURE NO. 047-0301

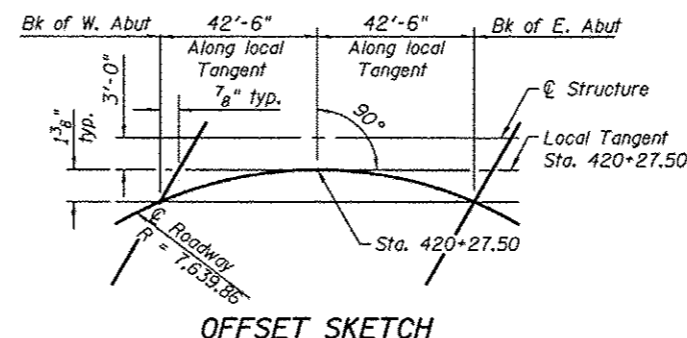
**NAME PLATE**  
See Std. 515001

**WATERWAY INFORMATION**

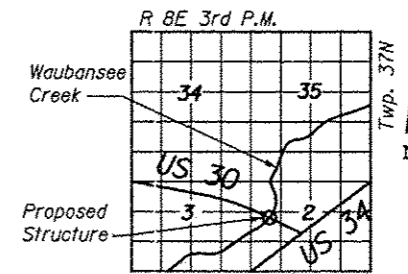
Drainage Area = 18.7 square miles Prop. Overtopping Elev. 668.96 @ Sta. 430+08

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	1170	407.46	445.22	664.34	0.02	0.00	664.36	664.34
Base	100	1447	429.28	477.95	664.82	0.06	0.04	664.88	664.86
Max. Calc.	500	2941	467.60	583.33	666.38	0.70	0.45	667.08	666.83

10-year velocity through existing bridge = 2.16 fps 10 year velocity through proposed bridge = 2.06 fps.

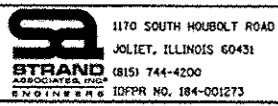


**OFFSET SKETCH**



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**  
F.A.P. 349 (US 30) OVER  
**WAUBANSEE CREEK**  
SECTION 11 WRS-3  
KENDALL COUNTY  
STA. 420+27.50  
S.N. 047-0301



USER NAME = rjend	DESIGNED KDH	REVISED -
PLOT SCALE =	CHECKED AJS	REVISED -
PLOT DATE = 4/25/2012	DRAWN BJF	REVISED -
	CHECKED KDH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 047-0301

SHEET NO. 1 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
349	11 WRS-3	KENDALL	527	289
CONTRACT NO. 60132				
ILLINOIS FED. AID PROJECT				