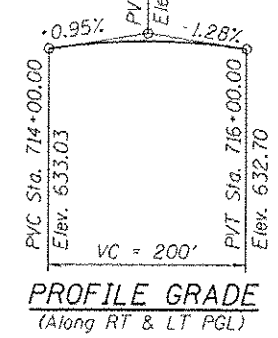
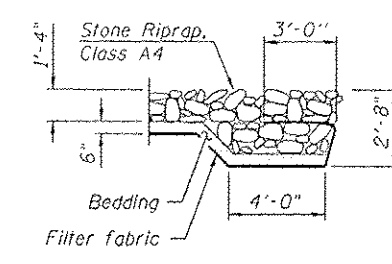
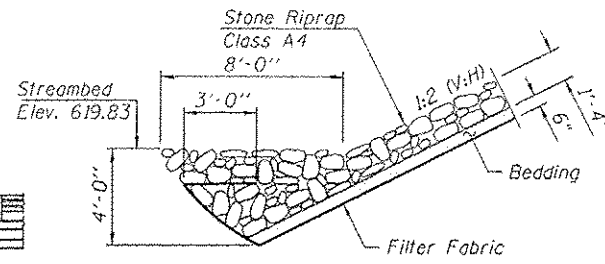
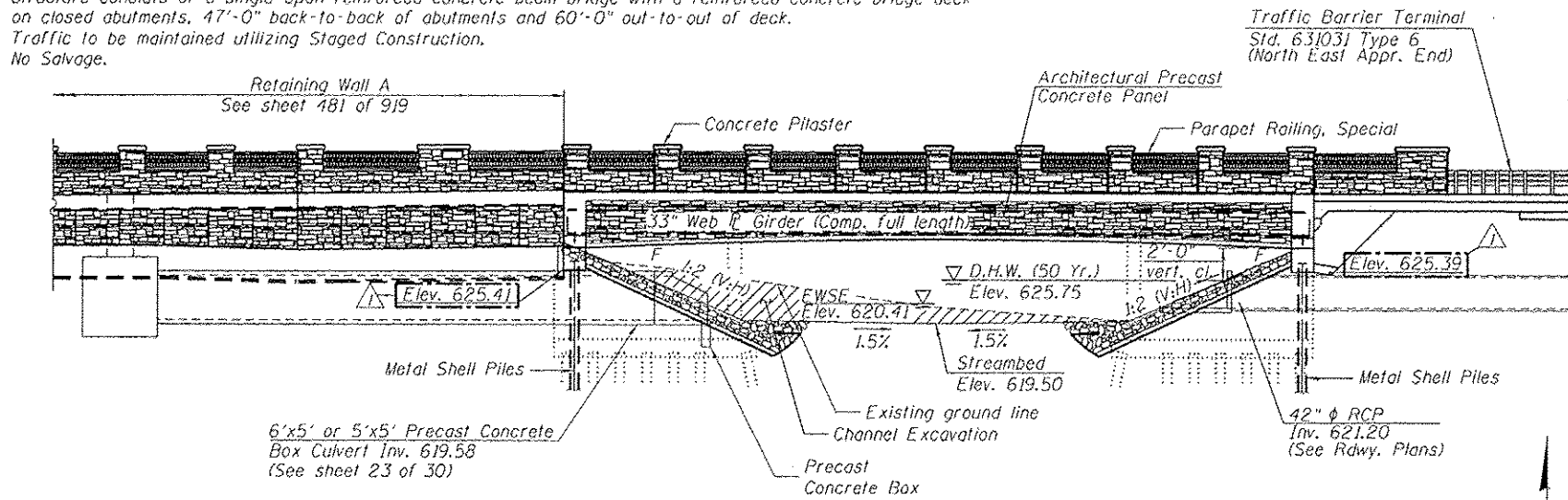


Bench Mark: Square cut on SE corner of handrail at NE corner of bridge over Middle Fork of the North Branch of the Chicago River at Willow Road. Elev. 633.16
 Existing Structure: S.N. 016-0535, built in 1941 on S.A. Route 110, Section 110-1922.4-MFT. The existing structure consists of a single-span reinforced concrete beam bridge with a reinforced concrete bridge deck on closed abutments, 47'-0" back-to-back of abutments and 60'-0" out-to-out of deck.
 Traffic to be maintained utilizing Staged Construction.
 No Salvage.



WATERWAY INFORMATION

Drainage Area = 24.1 sq. mi. Low Grade Elev. 630.44 at Sta. 707+00 (Exist.)
 Low Grade Elev. 629.25 at Sta. 709+50 (Prop.)

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	430	120	202	624.18	0.04	0.00	624.22	623.90
Base	100	943	186	300	625.75	0.08	0.00	625.83	625.61
Max. Calc.	500	1388	210	330	626.23	0.10	0.00	626.33	626.12

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)		
	W. Abut.	E. Abut.
0100	625.41	625.39
0500	625.41	625.39

STATION 714+87.44
 BUILT 20__ BY
 STATE OF ILLINOIS
 F.A.P. RT. 0305
 SEC. (1920.01.1518,
 2022&1922.4B)R
 LOADING HL-93
 STR. NO. 016-2844

NAME PLATE

LOADING HL-93

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

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

PRECAST UNITS

$f'_c = 4,500$ psi (Precast Panel)
 $f'_c = 5,000$ psi (Precast Culvert)
 $f_y = 65,000$ psi (Welded Wire Fabric, Precast Culvert)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.058g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.102g
 Soil Site Class = C

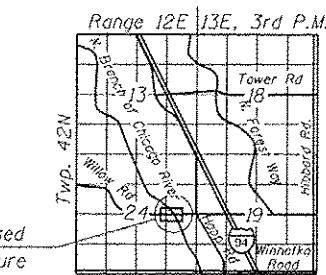
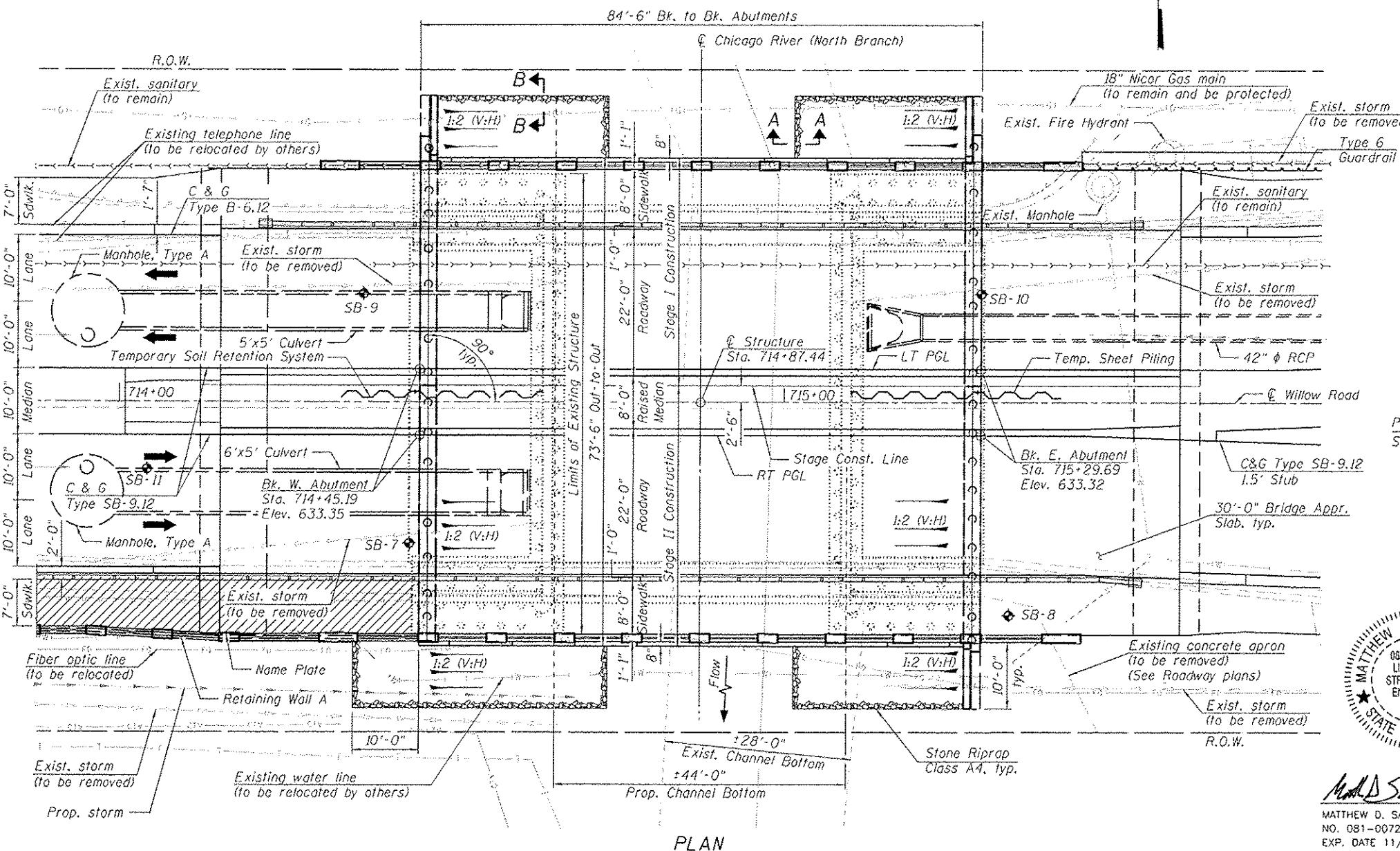
GENERAL PLAN AND ELEVATION

WILLOW ROAD OVER MIDDLE FORK OF NORTH BRANCH OF THE CHICAGO RIVER

F.A.P. RTE. 0305
 SEC. (1920.01.1518,2022&1922.4B)R

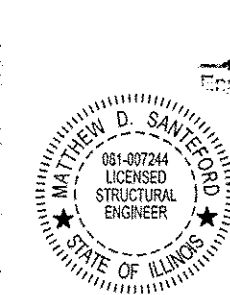
COOK COUNTY
 STATION 714+87.44

STRUCTURE NO. 016-2844



APPROVED

For Structural Adequacy Only



Matthew D. Santeford
 MATTHEW D. SANTEFORD, P.E., S.E. 12-20-2012
 NO. 081-007244
 EXP. DATE 11/30/2014



USER NAME: jrmickov	DESIGNED: JRM	REVISED: 12/19/2012 JRM
CHECKED: MDS	REVISIONS:	
DRAWN: DMG	REVISIONS:	
CHECKED: MDS	REVISIONS:	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0305	(1920.01.1518,2022&1922.4B)R	COOK	919	451

CONTRACT NO. 60T35
 ILLINOIS FED. AID PROJECT