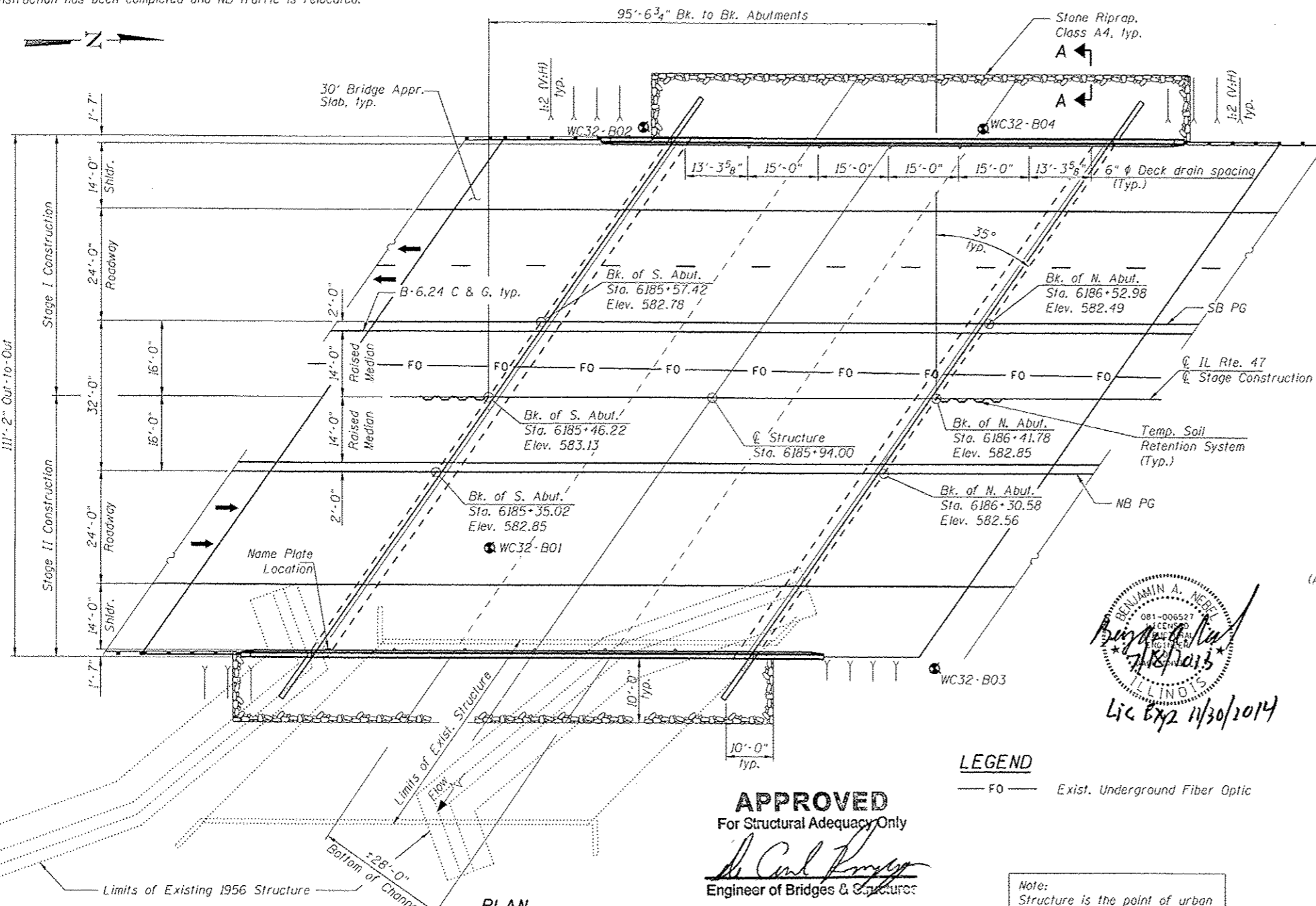
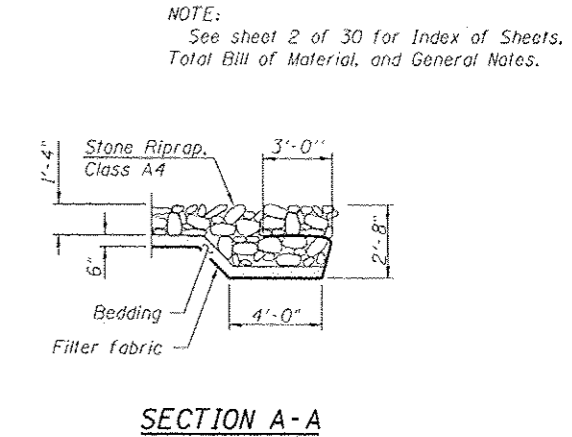
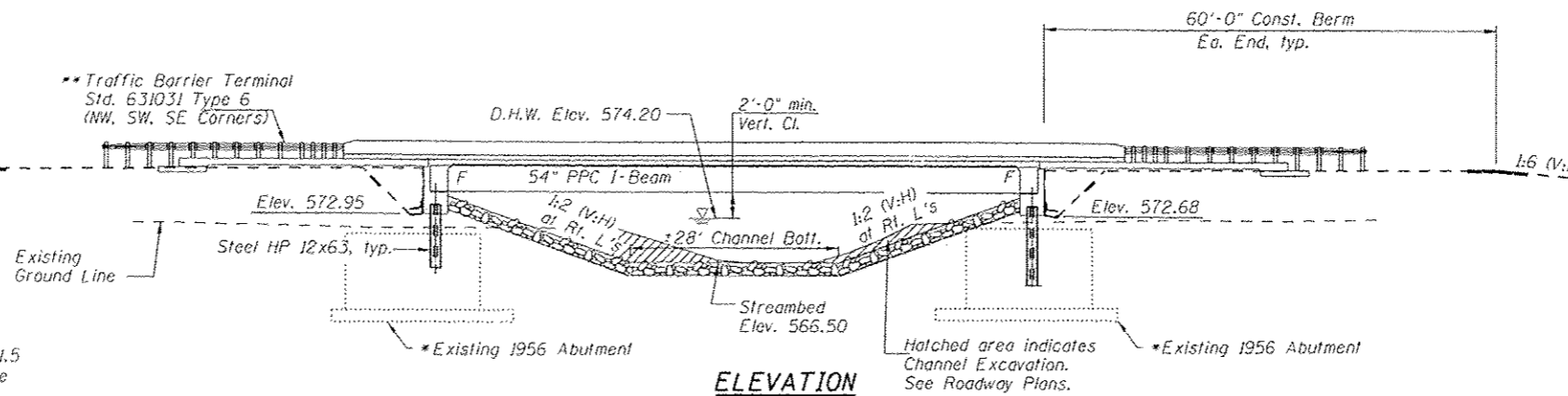


Bench Mark: Found PSM, 45.5' North of the Intersection of Joliet Road and Quarry Road, near the Westerly right-of-way of IL Rte. 47. Elev. 636.44

Existing Structure: S.M. 032-0088, built in 1988 as F.A. Rte. 100, Section 110BR-1, at Station 203+54.75. Existing Structure consists of a Single Span Prestressed Concrete Bridge 86'-6" Bk. to Bk. Abutments, 39'-2" out-to-out deck. Structure to be removed and replaced. Traffic to be maintained utilizing Stage Construction.

No salvage.

- * The existing 1956 structure consisted of closed abutments with 2'-0" thick footings, with #7 bars at 12" cls. on top, and #6 bars at 12" cls. on bottom. Bottom of footing elevation is +561.5
- * Traffic Barrier Terminal Std. 631601 Type 6 shall be utilized on the SW corner during Stage II Construction, but shall be removed once construction has been completed and NB traffic is relocated.



WATERWAY INFORMATION

Drainage Area = 8.63 mi² Low Grade Elev. 580.94 at Sta. 6186+53 (Exist.)
 Low Grade Elev. 581.60 at Sta. 6190+00 (Prop.)

Flood	Freq. Yr.	0 C.F.S.	Opening Sq. Ft.	Nat. Exist.	Prop.	Head - Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	10	716	166	228	573.3	0.4	0.0	573.7	573.3
Base	50	1070	213	279	574.2	0.5	0.1	574.7	574.3
Max. Calc.	500	1551	266	339	575.2	0.7	0.2	575.9	575.4

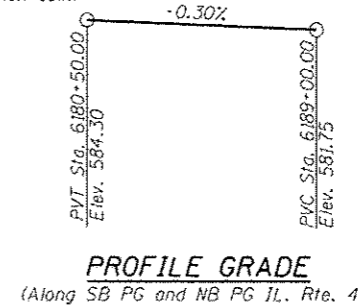
LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.
DESIGN SPECIFICATIONS
 2012 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS
 $f_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

PRECAST PRESTRESSED UNITS
 $f_c = 7,000$ psi
 $f_{ci} = 6,000$ psi
 $f_{pu} = 270,000$ psi ($1/2$ " ϕ low relax strands)
 $f_{ps} = 201,960$ psi ($1/2$ " ϕ low relax strands)

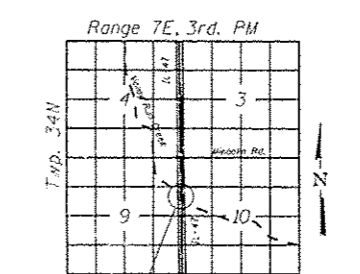
SEISMIC DATA
 Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{d1}) = 0.069g
 Design Spectral Acceleration at 0.2 sec. (S_{d5}) = 0.128g
 Soil Site Class = C



PROFILE GRADE
 (Along SB PG and NB PG IL. Rte. 47)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)		
	S. Abut.	N. Abut.
0100	572.95	572.68
0500	572.95	572.68



LOCATION SKETCH

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

LEGEND
 — FO — Exist. Underground Fiber Optic

Note: Structure is the point of urban to rural transition.

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