

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2508	02-00039-00-PV	KENDALL	146	101
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
S-01		87333		

Bench Mark #1:
Southeast flange bolt on first fire hydrant north of the existing bridge over Waubensee Creek on the east side of Douglas Road.
Elevation = 658.89

Bench Mark #2:
Rim on water valve vault at the northeast corner of Douglas Road and Farmington Lakes Drive which is approximately 250 feet south of Waubensee Creek.
Elevation = 661.22

Existing Structure, S.N. 047-3070 is a single span 39'-0" BK to BK, of Abutments, 43'-2" O. to O. Steel I-Beam bridge on closed abutments. The contractor shall remove the existing structure and replace it with a Three Sided Precast Concrete Structure. The road shall be kept open to two lanes of traffic at all times by utilizing staged construction. Existing bridge foundation unknown.

No Salvage.

DATE	BY	REVISION

DATE	BY	REVISION

WATERWAY INFORMATION

Drainage Area = 19.8 mi ²		Low Grade Elev. 661.01 ft (exist.) 661.99 (prop) @ Sta. 49+39				
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head-Ft. Exst. Prop.	Headwater El. Exst. Prop.
10	780	199	209	657.12*	0.10 0.10	657.22 657.22
Design	30	1,049	224	657.82*	0.16 0.14	657.98 657.96
Base	100	1,459	228	659.36**	0.31 0.40	659.67 659.76
Max. Calc.	100**	1,459	228	659.36**	0.31 0.40	659.67 659.76

* - All Elevations are in Highway (NAVD 88) Datum; to convert to FIS (NGVD29) Datum Subtract 0.68 feet.
** - 100 yr is the maximum flood frequency available.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.045 g
Site Coefficient (S) = 1.2

DESIGN SPECIFICATIONS
2002 AASHTO

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

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement Bars)

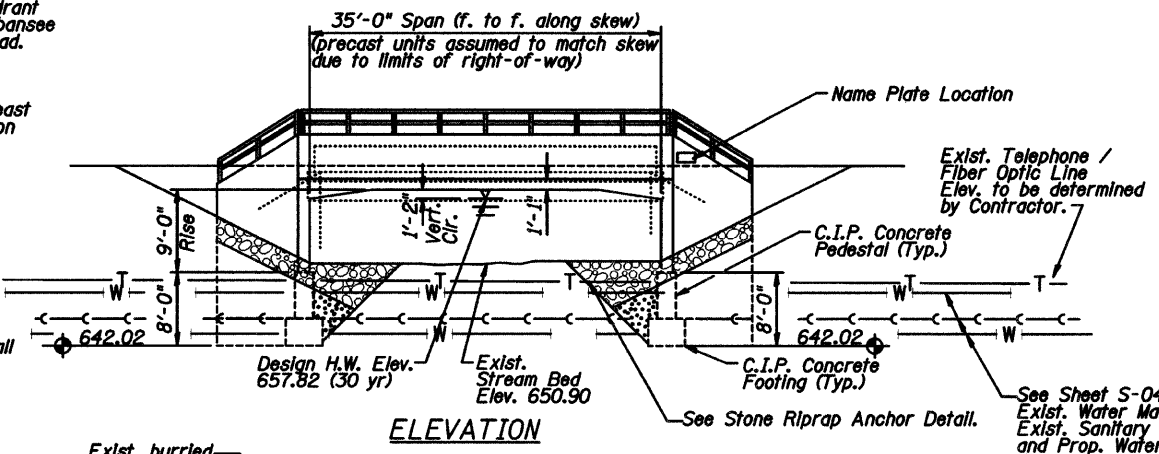
PRECAST UNITS
f_c = 4,000 psi
f_y = 60,000 psi (Reinforcement Bars)

INDEX OF SHEETS

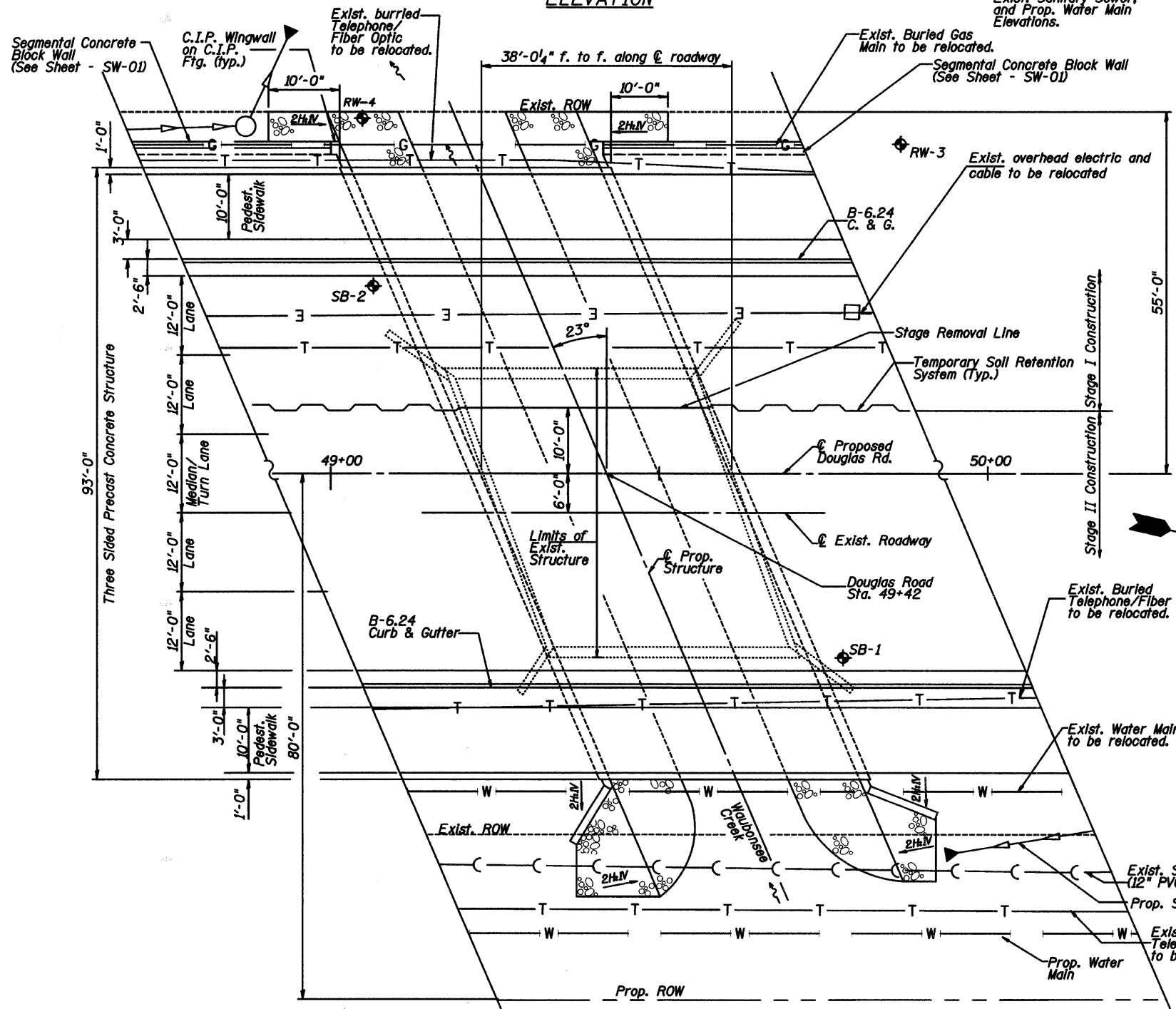
- S-01 General Plan
- S-02 General Notes and Total Bill of Materials
- S-03 Foundation Layout Plan
- S-04 Stage Construction Details
- S-05 Foundation Details
- S-06 Wing Wall Details
- S-07 Wing Wall Details
- S-08 Bridge Railing Details
- S-09 Bridge Railing Details
- S-10 Bar Splicer Details
- S-11 Temporary Concrete Barrier
- S-12 Soil Boring Logs
- S-13 Soil Boring Logs

WAUBONSEE CREEK
BUILT 2007 BY
VILLAGE OF OSWEGO
SECTION 02-00039-00-PV
STATION 49+42
STR. NO. 047-6306
LOADING HS20

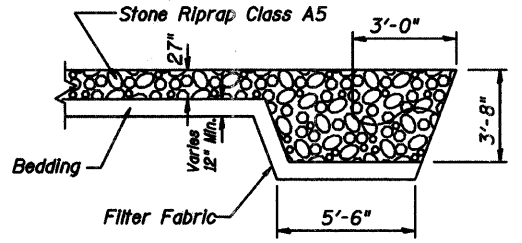
NAME PLATE
See Std. 515001-02



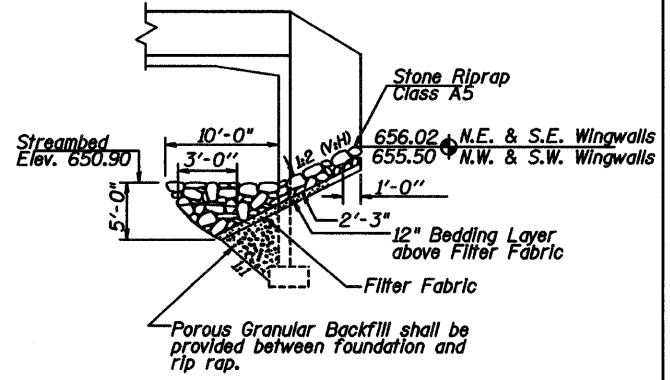
ELEVATION



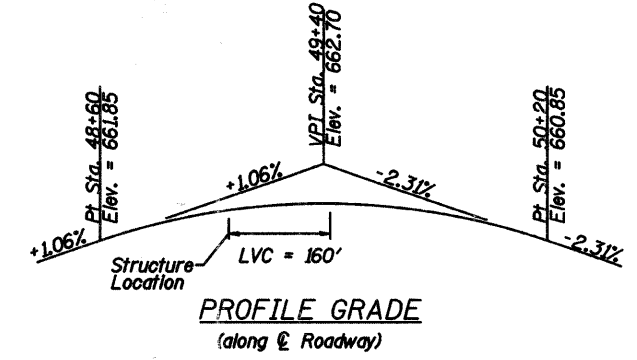
PLAN



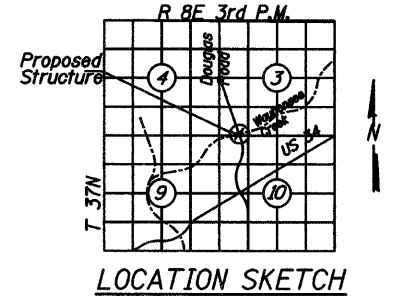
FLANK STONE RIPRAP TREATMENT DETAIL



STONE RIP RAP ANCHOR DETAIL



PROFILE GRADE
(along Centerline Roadway)



LOCATION SKETCH



I certify that to the best of my knowledge, information and belief, this bridge substructure design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges. The Supplier is responsible for the design of the Three Sided Precast Concrete Structure.

Robert G. Davis
Illinois Structural No. 4666

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. 2508 - DOUGLAS ROAD
(U.S. RTE 34 TO U.S. RTE 30)
GENERAL PLAN
DOUGLAS ROAD OVER WAUBONSEE CREEK
SECTION 02-00039-00-PV, STA. 49+42
SN 047-6306, KENDALL COUNTY

Illinois Professional Design Firm # 184-000108
SEC GROUP, INC.
Smith Engineering Consultants • SEC Automation • SEC Planning
4500 Prime Pkwy, McHenry, IL 60050-2136
t. 815.385.1778 f. 815.385.1781
www.secgroupinc.com engineering@secgroupinc.com

SCALE: VERT. DATE
HORIZ. DATE
DRAWN BY
CHECKED BY