

Benchmarks:

- Chiseled square on the northeast corner of handhole located at the northeast corner of Stoneridge Drive and Spring Creek Road.
Elevation = 723.45 (NAVD88)
- Northeast bolt on top flange of hydrant located on the north side of Stoneridge Drive and at the southwest corner of the asphalt driveway for 2310 Stoneridge Drive.
Elevation = 768.36 (NAVD88)

Existing Structure:

This existing structure SN 101-6021 was built in 1937 as a single-span reinforced concrete slab supported on integral abutments. The design loading used is unknown. Structure to be removed and replaced. Road to be closed during construction. Traffic to be maintained with temporary detour route during construction.

Salvage:

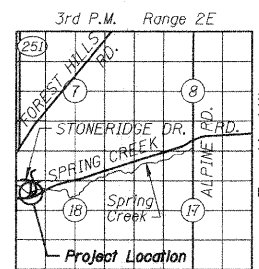
No salvage

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	716.45	716.96

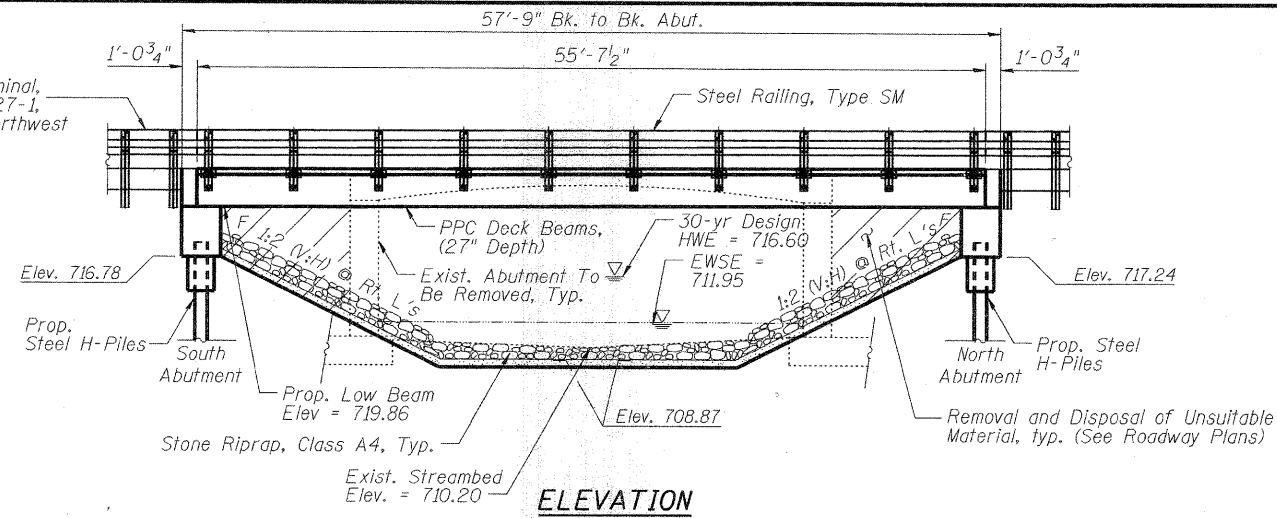
LEGEND

- ⊕ Soil Boring Location
- A — Existing Aerial Utilities (remaining in place)
- E — Existing Electrical (remaining in place)
- T — Existing Telephone (remaining in place)
- S — Existing Storm Sewer (to be removed and replaced as noted)
- P — Proposed Storm Sewer

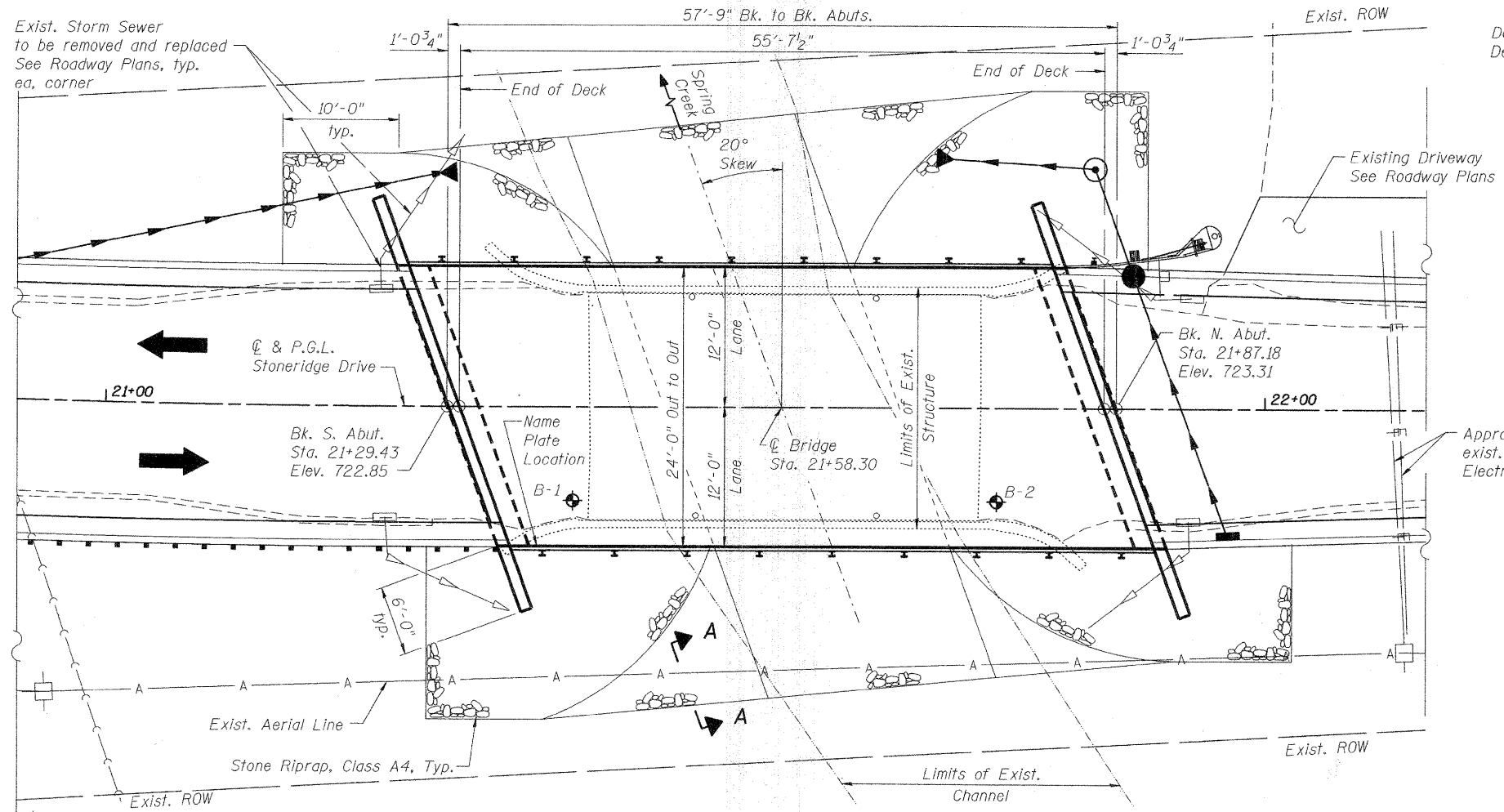


LOCATION SKETCH

Traffic Barrier Terminal, Type 5A Std. BLR 27-1, typ. Southeast and Northwest corners only.



ELEVATION



PLAN

WATERWAY INFORMATION

Drainage Area = 4.8 sq. mi. Low Grade Elev. 722.51 @ Sta. 21+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.F.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	30	1000	103	122	716.1	0.1	0.0	716.2	716.1
	100	1560	155	195	716.6	0.2	0.0	716.8	716.6
Base	500	2050	190	230	718.2	0.5	0.0	718.7	718.2
Overtopping	>100				719.4	0.9	0.0	720.3	719.4

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'ci = 5,000 psi
f'c = 6,000 psi
fpu = 270,000 psi (1/2" φ low lax strands)
fpbt = 201,960 psi (1/2" φ low lax strands)

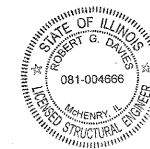
LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.077
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.128
Soil Site Class = D

To the best of my knowledge, information and belief, this bridge 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 LRFD Bridge Design Specifications".



Robert G. Davis
Structural Engineer Expires: 11/30/2010
SEC Group Inc.
An HR Green Company

COMPANY NAME: SEC GROUP, INC.
PROJECT CONTACT: Kevin Arft
CLIENT: City of Rockford
DATE PLOTTED: 12/16/2010 8:51:35 AM
FILE NAME: 86100020-ape-01.dgn
PLOT DRIVER: PLOT.DWT
STANDARD: TRANSIT



USER NAME = whoad	DESIGNED - JMW	REVISED -
PLOT SCALE = N.T.S.	CHECKED - RGD	REVISED -
PLOT DATE = 12/16/2010	DRAWN - RCB	REVISED -
	CHECKED - 12/16/10	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
STONERIDGE DRIVE - S.N. 101-6011**

SHEET NO. S-1 OF S-12 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00559-00-BR	WINNEBAGO	21	8
			CONTRACT NO.	85528
ILLINOIS FED. AID PROJECT				