

Benchmark 1:  
Northeast bolt on fire hydrant in the southwest quadrant of Stolp Avenue and Downer Place. Approximately Sta. 111+60 ±34' Rt. southwest of centerline of Downer Place and ±37' of the centerline of Stolp Avenue. Elevation: 638.31 (NAVD 88)

Benchmark 2:  
Bolt on top flange of fire hydrant labeled "Bury" located in front of the "Grand Army of the Republic" (G.A.R.) building at the southwest quadrant of the intersection of Downer Place and the Fox River on the East side of the Island. Approximately Sta. 114+84, ±36' Rt. of the centerline of Downer Place. Elevation: 638.09 (NAVD 88)

Existing Structure:  
SN 045-6005 constructed circa 1910 as a three span cast-in-place concrete closed spandrel arch with an out-to-out width of 63'-11 1/2" and a total length of 171'-1 1/2". The existing arch is to be removed and replaced with a PPC Deck beam superstructure on built up piers and abutments. The existing foundations will be re-used.

Salvage lightpoles adjacent to curb and deliver to City Electric Yard.

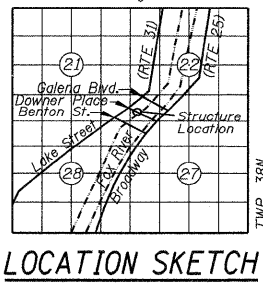
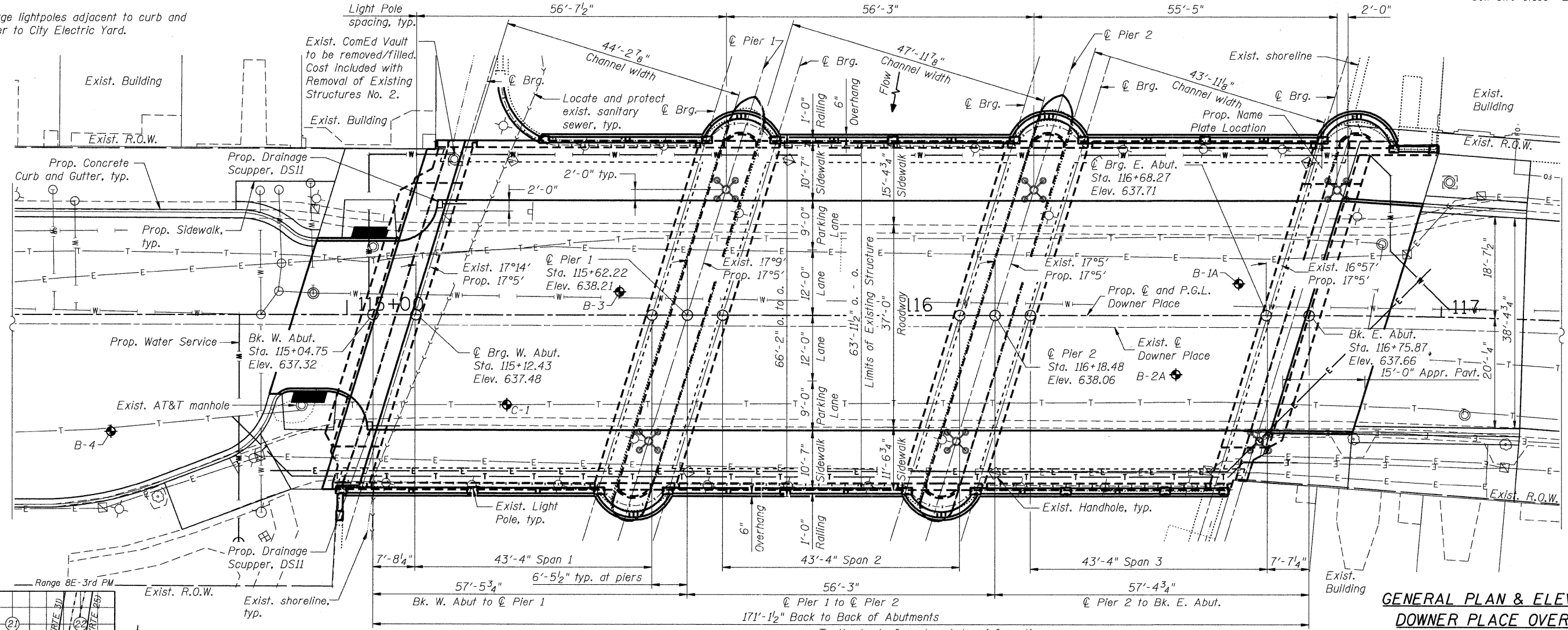
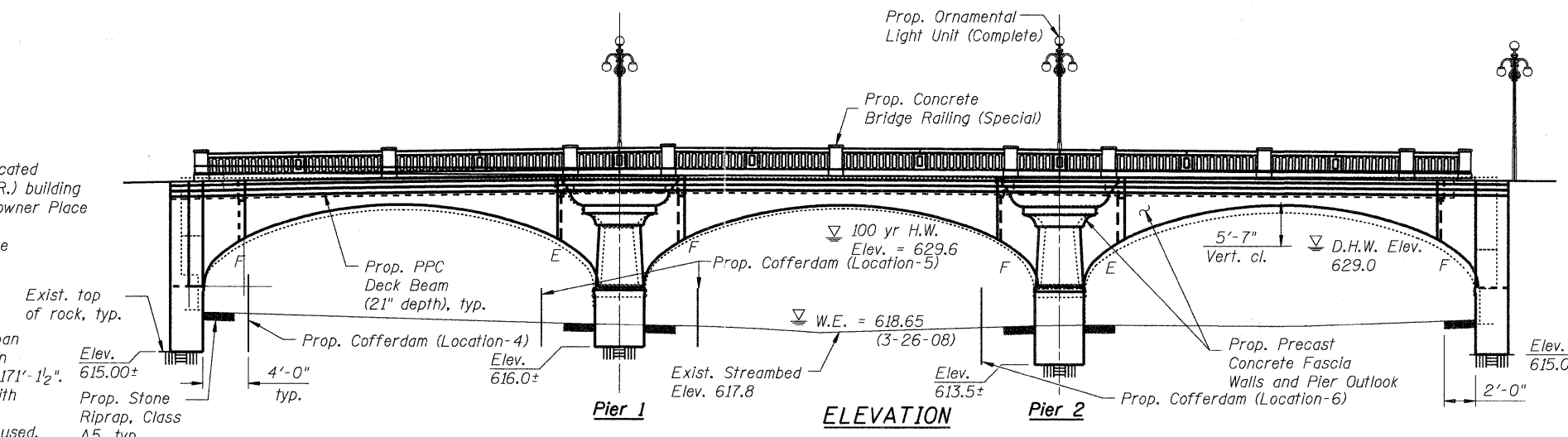
**DESIGN STRESSES**  
**FIELD UNITS**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**  
f'c = 6,000 psi  
f'ci = 5,000 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.

**DESIGN SPECIFICATIONS**  
2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

**SEISMIC DATA**  
Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = .038g  
Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = .103g  
Soil Site Class = B



**PLAN**  
See SE-3 for utility legend.

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 Stas* 7/1/2011  
Structural Engineer Date  
HR Green Inc.



**GENERAL PLAN & ELEVATION**  
**DOWNER PLACE OVER THE**  
**EAST BRANCH OF THE FOX RIVER**  
**PUBLIC WATER**  
**SECTION NO. 07-00264-00-BR**  
**KANE COUNTY**  
**STATION 115+90.31**  
**STRUCTURE NO. 045-6005**

COMPANY NAME: HRGreen  
PROJECT CONTACT: Michael G. Harding  
CLIENT: City of Aurora  
DATE PLOTTED: 7/1/2011 10:30:09 AM  
FILE NAME: 86090472-E-09e01.dgn  
PLOT DRIVER: pdf-dit  
PEN TABLE: Struct\_22x34.tbl

HRGreen  
USER NAME = whood  
DESIGNED - MGH  
CHECKED - RGD  
DRAWN - WJH  
CHECKED -  
PLOT SCALE = N.T.S.  
PLOT DATE = 7/1/2011

DESIGNED - MGH	REVISOR -
CHECKED - RGD	REVISOR -
DRAWN - WJH	REVISOR -
CHECKED -	REVISOR -

**CITY OF AURORA**  
**DOWNER PLACE OVER THE EAST BRANCH**  
**OF THE FOX RIVER**

SHEET NO. SE-1 OF SE-45 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	07-00264-00-BR	KANE	164	101
CONTRACT NO. 63620			ILLINOIS FED. AID PROJECT	