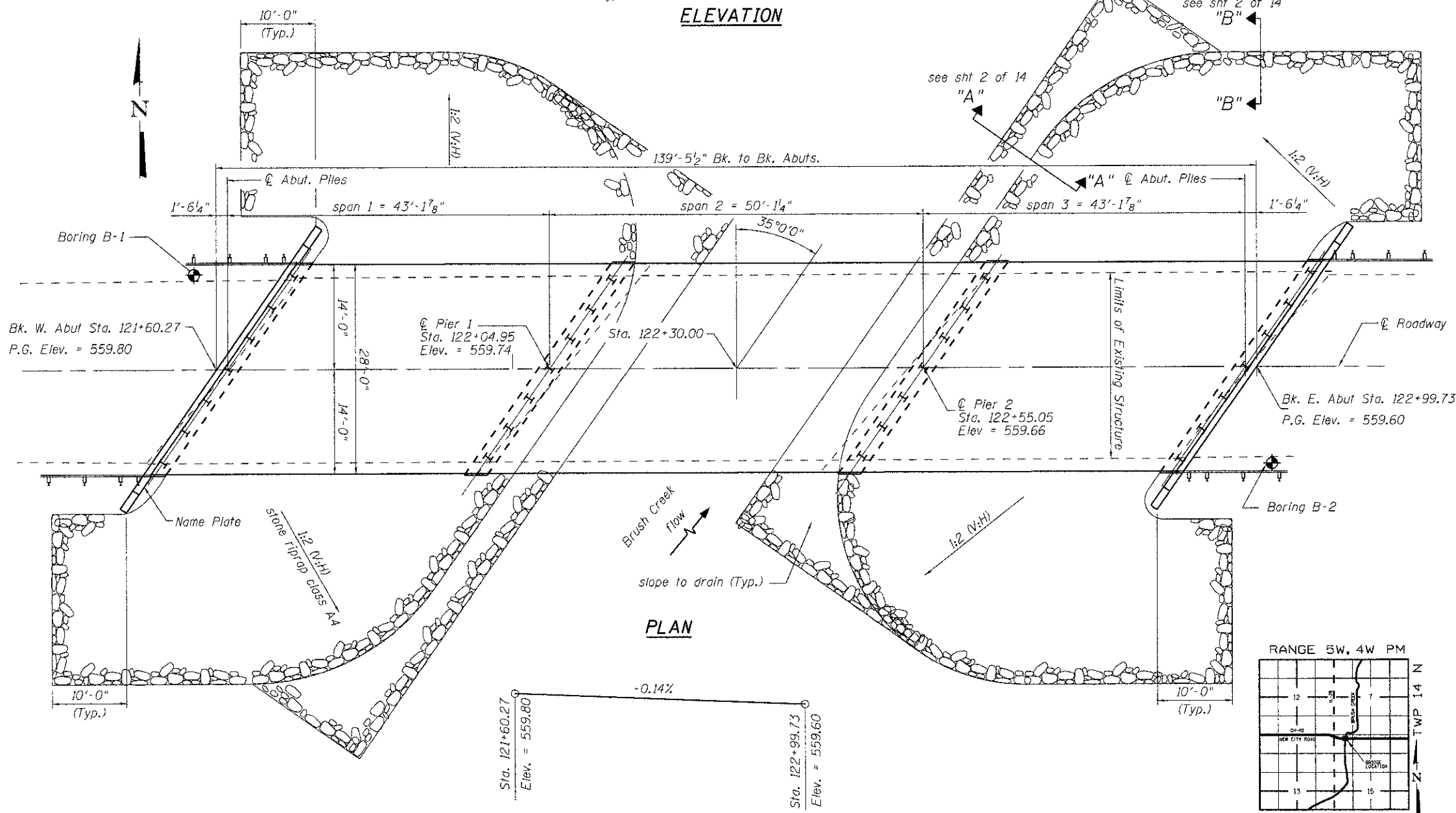
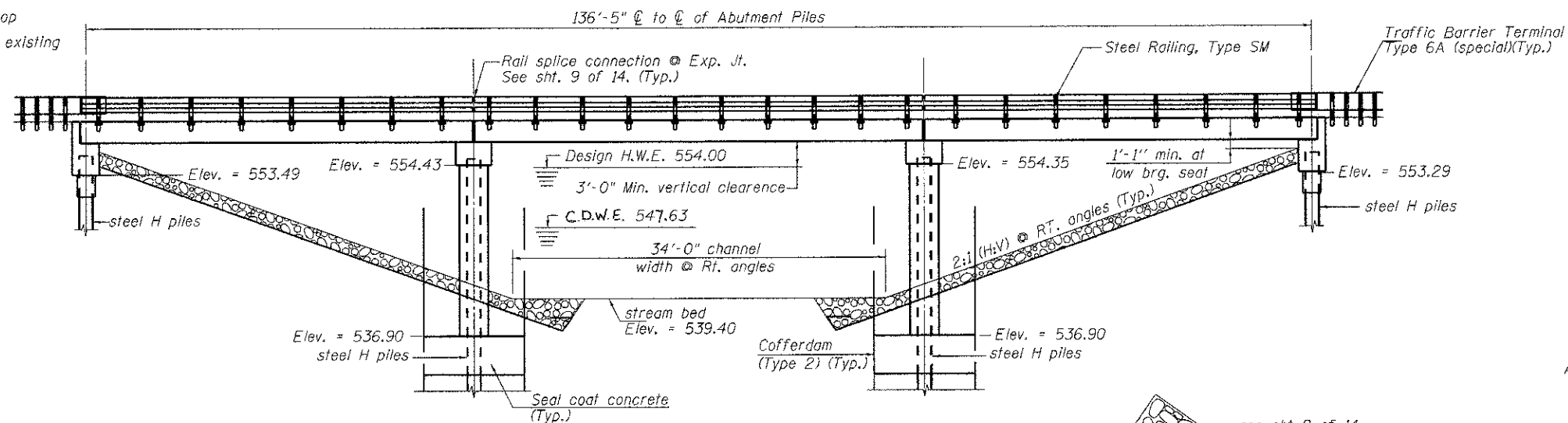


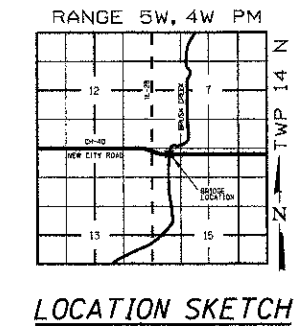
B.M.- Disc stamped S.C.H.D. located on the top of concrete curb at the Northwest corner of existing structure 084-3014. Elevation = 560.14

Existing Structure- S. No.:084-3014  
 Built in 1957 as a three simple span P.P.C. deck beam structure on pile Bent Abutments and open pile bent Piers. The existing structure has a total length 139'-5 1/2" back to back of abutments, 27'-4" out to out deck and 40° skew. The existing Bridge shall be removed and replaced. The road shall be closed to traffic during construction.

Salvage- None



**PROFILE GRADE**  
 Along  $\bar{C}$  Roadway



**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Data
3. Superstructure Spans 1 & 3
4. 27"x48" PPC Deck Beam Details Spans 1 & 3
5. 27"x48" PPC Deck Beam Spans 1 & 3
6. Superstructure Span 2
7. 27"x48" PPC Deck Beam Details Span 2
8. 27"x48" PPC Deck Beam Span 2
9. Steel Railing, Type SM with Hot-Mix Asphalt Wearing Surface
10. West Abutment
11. East Abutment
12. Piers 1 & 2
13. HP Pile details
14. Soil Boring Logs

**LOADING HL-93**

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

**DESIGN SPECIFICATIONS**

2007 AASHTO LRFD Bridge Design Specifications with 2008 Interims

**DESIGN STRESSES**

**PRECAST PRESTRESSED UNITS**

$f'_c = 6,000$  psi  
 $f'_{ci} = 5,000$  psi  
 $f_{pu} = 270,000$  psi (1/2"  $\phi$  low lax strands)  
 $f_{si} = 201,960$  psi (1/2"  $\phi$  low lax strands)  
 $f_y = 60,000$  psi (Reinf.)

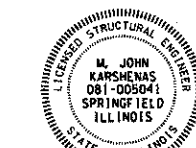
**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinf.)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 2  
 Design Spectral Acceleration at 1.0 sec.(S<sub>D1</sub>)=0.169g  
 Design Spectral Acceleration at 0.2 sec.(S<sub>05</sub>)=0.33g  
 Soil Site Class = D

I certify that 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 "A.A.S.H.T.O." LRFD Bridge Design Specifications.



M. JOHN KARSHENAS *M.J. Karshenas*  
 Licensed Structural Engineer  
 In Illinois No. 081-005041 Date: 8-22-12  
 Licensed Expires: 11/30/2012

**GENERAL PLAN & ELEVATION**  
**FAS 624 (CH-40) NEW CITY ROAD**  
**OVER BRUSH CREEK**  
**SANGAMON COUNTY**  
**STATION 122+30**  
**STRUCTURE NO. 084-3414**

USER NAME =	DESIGNED - KRG	REVISOR		<b>MID-AMERICA ENGINEERING SERVICES</b> SPRINGFIELD ILLINOIS	SHEET NO. 1 OF 14 SHEETS
PLOT SCALE = NONE	CHECKED - MJK	REVISOR			
PLOT DATE =	DRAWN - GSJ	REVISOR			
	CHECKED - MJK	REVISOR			

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
624	08-00085-00-BR	SANGAMON	32	10
STRUCTURE NO. 084-3414		CONTRACT NO. 08-2585		
STA. 122+30		ILLINOIS FED. AID PROJECT		