

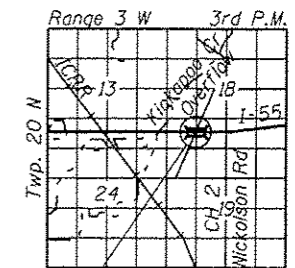
Benchmark: # TEA 28 Chisled Square on NE corner of NW approach wall SN 054-0057, 37' Rt. Sta. 576+11, Elev. 609.61  
 Benchmark: # TEA 27 Chisled Square on NE approach wall SN 054-0058, 79' Lt. Sta. 577+59, Elev. 610.49

Existing Structure: SN 054-0057 & 054-0058, originally built in 1973 as F.A.I. 55, Section 54-4VB-1 at Sta 576+83.14.  
 The superstructure consists of a reinforced concrete deck supported by steel wide flange beams continuous over three spans.  
 The substructure consists of open stub abutments supported by concrete piles and multi-column piers supported by concrete piles.  
 The structure is 149'-6" back to back abutments and is 42'-0" out to out deck. The structure is not skewed. The deck received a microsilica overlay in 1999. The existing deck is to be removed and replaced. Traffic to be maintained under staged construction.

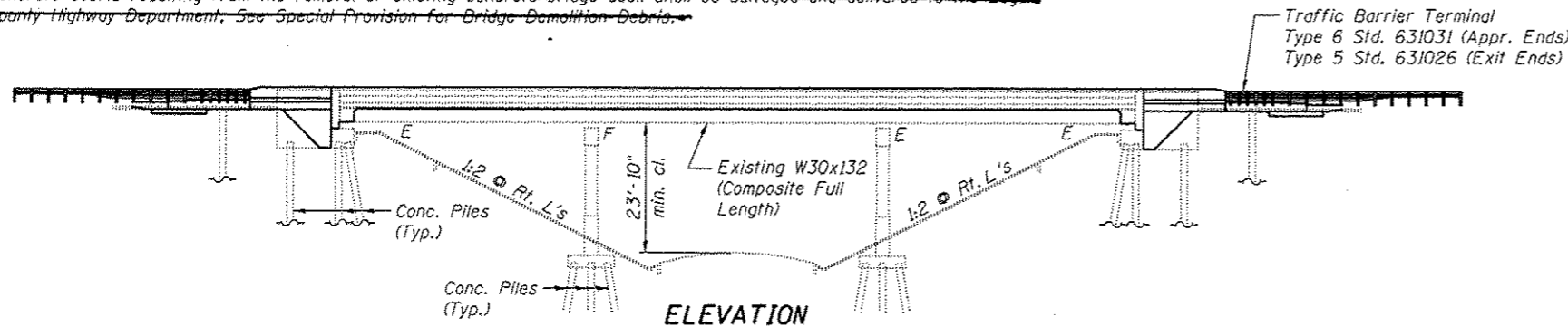
Concrete debris resulting from the removal of existing concrete bridge deck shall be salvaged and delivered to the Logan County Highway Department. See Special Provision for Bridge Demolition Debris.

**SCOPE OF WORK**

1. Remove and replace bridge deck.
2. Remove and replace bearings at abutments.
3. Remove and replace approach pavements.
4. Remove and replace abutment backwalls and wingwalls and make abutments semi-integral.
5. Diamond grind bridge deck and approach slabs.

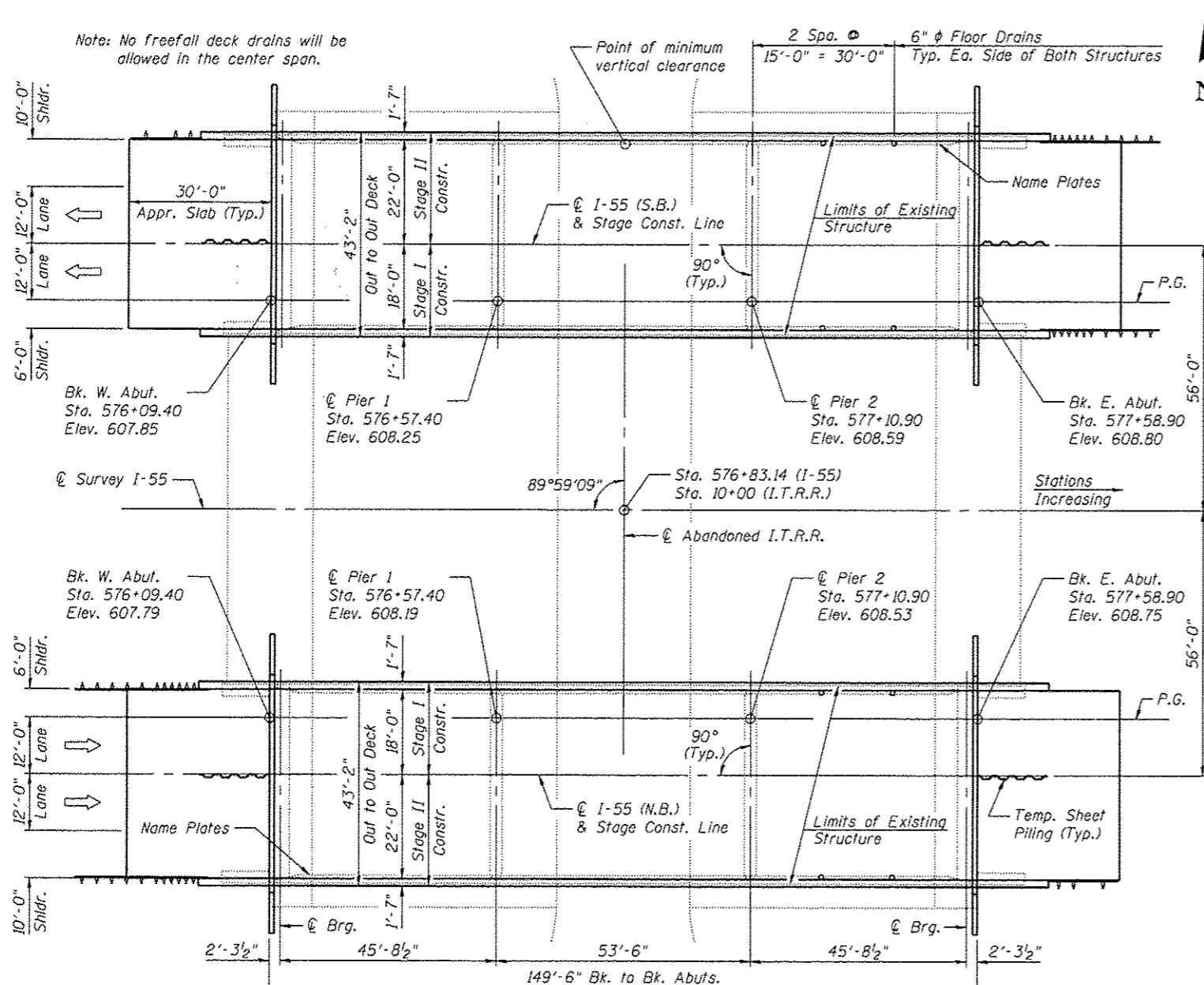


Proposed Rehabilitation  
**LOCATION SKETCH**



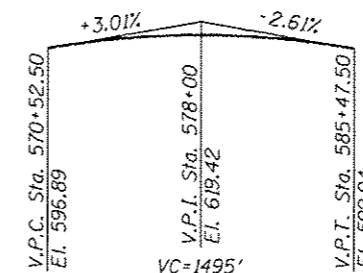
**ELEVATION**

Note: No freefall deck drains will be allowed in the center span.



**PLAN**

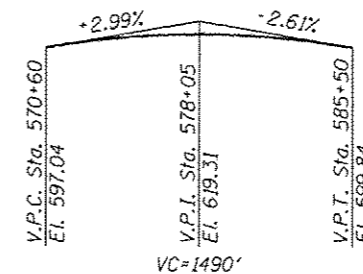
REVISIED SHEET 6-3-13



**PROFILE GRADE**

I-55 S.B. S.N. 054-0058  
Along median edge of pavement

The profile grade depicts the final elevations after grinding. Up to 1/4" will be ground off the bridge deck and approach slab.



**PROFILE GRADE**

I-55 N.B. S.N. 054-0057  
Along median edge of pavement

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.046g  
 Site Coefficient (S) = 2.0

**DESIGN STRESSES**

**FIELD UNITS (New Construction)**

f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)  
 fy = 36,000 psi (Steel)

**FIELD UNITS (Existing Construction)**

fc = 1,200 psi (Deck Slab)  
 fc = 1,400 psi (Curb, Parapet, Substructure)  
 fs = 20,000 psi (Reinforcement & Structural Steel)

**DESIGN SPECIFICATIONS**

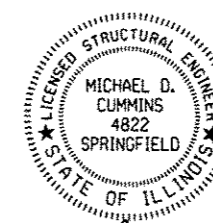
2002 AASHTO Standard Specifications for Highway Bridge (New Construction)  
 2012 AASHTO LRF Bridge Construction Specifications (New Deck)  
 1995 FHWA Seismic Retrofit Manual  
 1969 AASHTO (Existing Construction)

**LOADING HS20-44 & ALT**

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

**APPROVED**  
For Structural Adequacy Only

*D. Carl Perry*  
Engineer of Bridges & Structures JFS



**GENERAL PLAN**  
**I-55 OVER ABANDONED I.T.R.R.**  
**F.A.I. RTE 55**  
**SECTION D6 LOGAN CO BR 2011-1**  
**LOGAN COUNTY**  
**STATION 576+83.14**  
**STRUCTURE NO. 054-0057 (NB)**  
**STRUCTURE NO. 054-0058 (SB)**



JOB • 2276.3  
 FILE • 0540057\_0058-01-GPE.dgn  
 DATE • 5/14/2013

DESIGNED - AAN  
 CHECKED - ENV  
 DRAWN - SJS  
 CHECKED - AAN

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**GENERAL PLAN**  
**STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)**

SHEET NO. 1 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	200

CONTRACT NO. 72E11  
 ILLINOIS FEB. AID PROJECT