

**EXISTING STRUCTURE:**

Existing structure is a 306'± wide combination railroad and intermodal yard grade separation structure over 159th Street (U.S. 6). The structure consists of 4 cast-in-place reinforced concrete slab spans supported by gravity abutments, and three reinforced concrete piers. This structure will be replaced by two separate railroad bridges and two bridges for intermodal truck traffic. The existing Structure No. 1s 016-0385 and was built in 1925.

Rail traffic will be temporarily shifted to the east on the existing bridge while the new bridge is constructed. The roadway below will be closed during construction.

Limited portion of existing south abutment will be kept. Remainder of existing structure to be removed. See Structure No. 016-2820 plans for removal detail.

**BENCHMARK:**

B.M. #53 - "X" cut on the Southeastly corner of the Railroad bridge pier in the centerline of 159th Street at the east face of the bridge approximately 98 feet West of Center Street. Elev. 603.25.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CN  
BUILT 2009 BY  
STATE OF ILLINOIS  
F.A.P. RT. 351 SEC. 3277R  
STA. 93+69.01 LOADING COOPER E-90  
STR. NO. 016-2819

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 351	2008-001VB	COOK	579	386
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1  
25 SHEETS

CONTRACT NO. 60E10

**NAME PLATE**  
(See Std. 515001)

**CN RAILROAD**

CLASS: RAILROAD  
CN Gateway Lead Track

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coeff. (A) = 0.04g  
Site Coefficient (S) = 1.0

**DESIGN SPECIFICATIONS**

American Railway Engineering & Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, 2004. CN Guidelines (June 2003)

**LOADING**

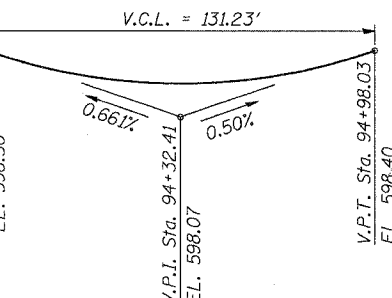
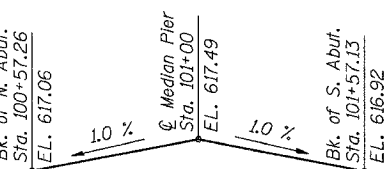
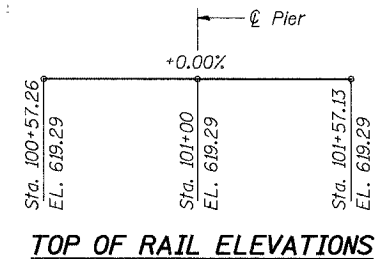
Superstructure-Cooper E80 Live Load plus Impact for equipment with hammer blow.  
Substructure-Cooper E-90 Loading without impact as stipulated by AREMA. Service Load Design

Allow for future addition of 12" ballast.

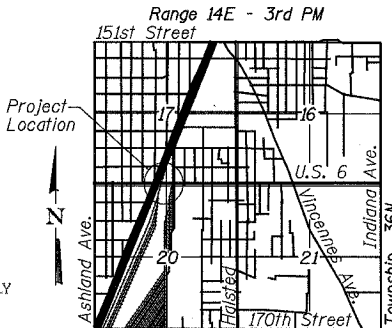
**DESIGN STRESSES**

FIELD UNITS:  
f'c = 3,500 p.s.i. For Substructure  
f'c = 5,000 p.s.i. For Concrete Deck  
fy = 60,000 p.s.i. (Reinforcement)  
fy = 50,000 p.s.i. (Struct.) (ASTM A709 Grade 50)  
fy = 36,000 p.s.i. (Struct.) (ASTM A709 Grade 36)

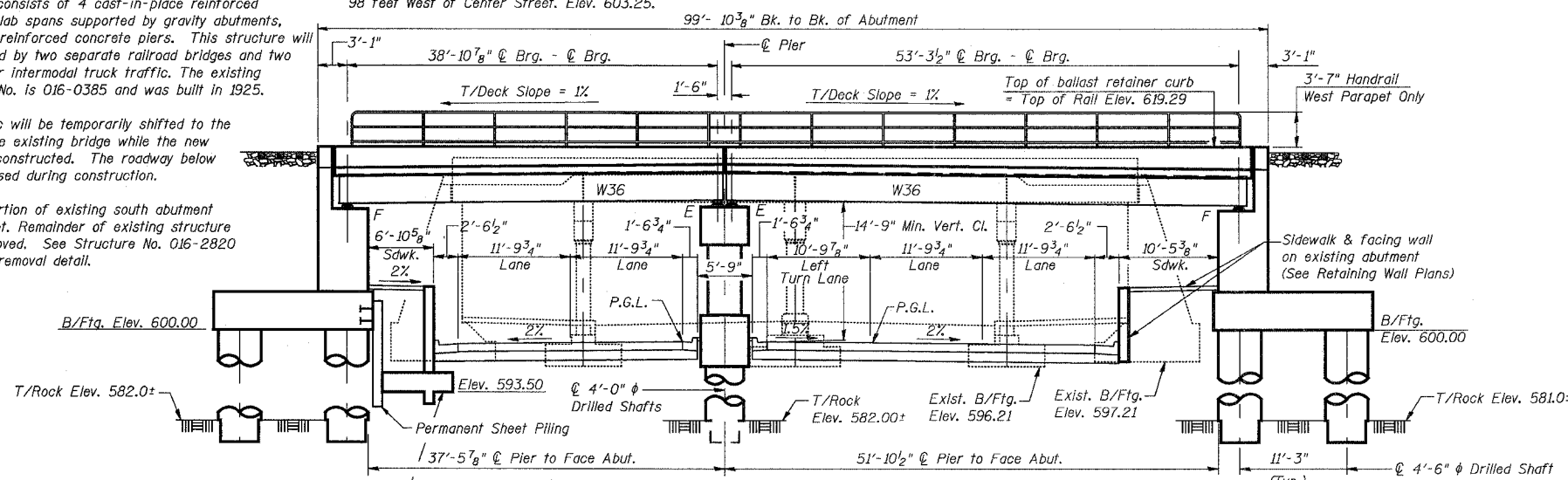
- ① See Abutment removal details Drawing (Sheet 10 of 24) for General Configuration of sloped back of existing Abutments and Footing.
- ② Removal of existing concrete retaining wall. Cost included in Removal of existing Structures No.2.



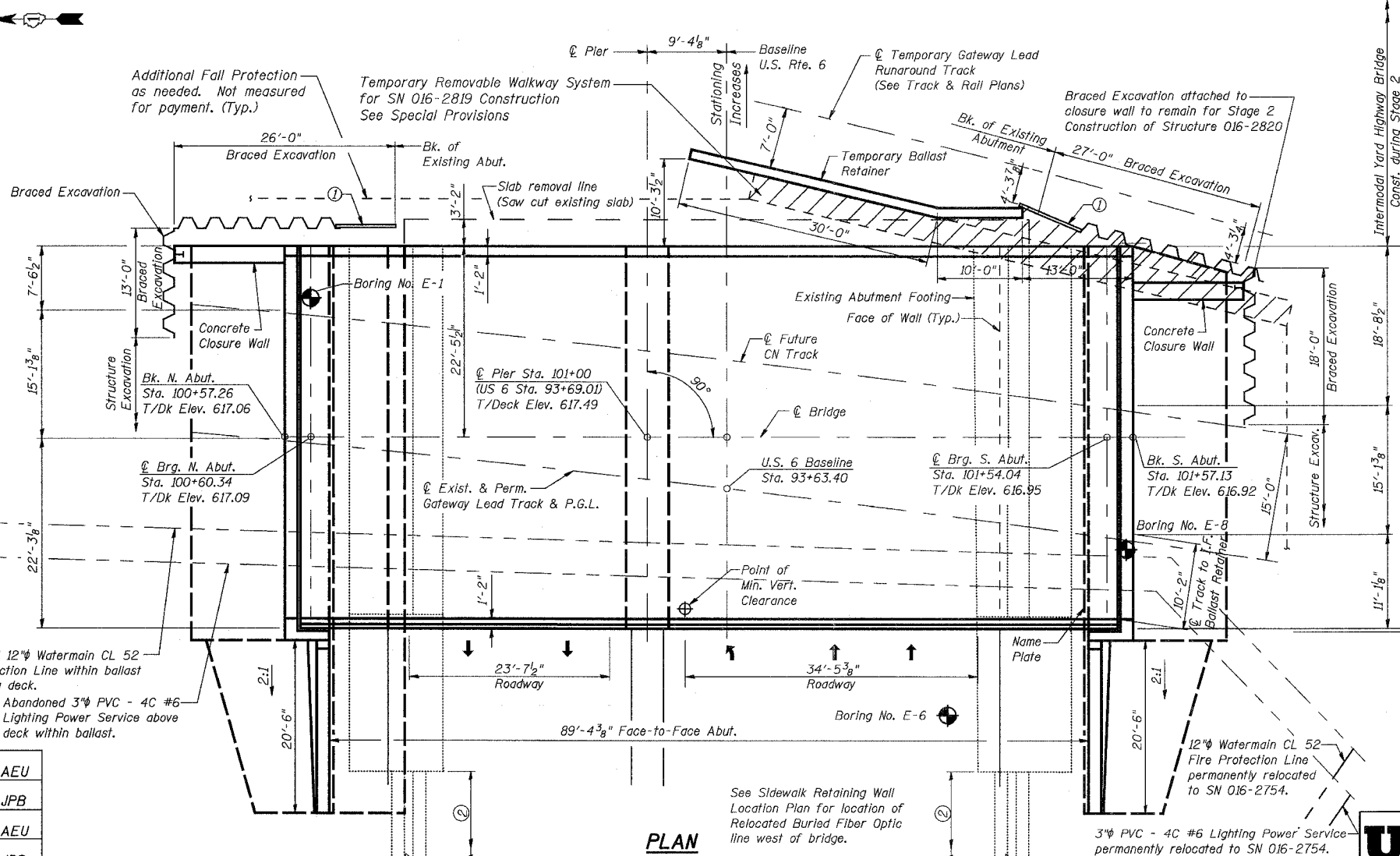
**PROFILE GRADE U.S. RTE. 6**  
(Proposed)



**LOCATION SKETCH**



**ELEVATION**  
(Looking East)



**PLAN**

3/13/2008 11:31:03 AM  
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DESIGNED	AEU
CHECKED	JPB
DRAWN	AEU
CHECKED	JPB



JEFFREY P. BUCHOLTZ, SE  
LICENSE NO. 081-005605  
EXPIRES: 11/30/2008  
DATE: 03-14-2008

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
*Replew E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
US RTE 6 FROM I-294 TO IL RTE 1  
**GENERAL PLAN & ELEVATION**

CN GATEWAY LEAD TRACK  
BRIDGE 20.6E OVER U.S. RTE. 6 (159TH STREET)  
STATION 93+69.01 STRUCTURE NO. 016-2819  
SCALE: 1/8" = 1'-0" DATE: 2/21/2008

**URS**  
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