

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. is 016-0385 and was built in 1925.

Staged construction will be used to maintain rail traffic & utility service. The roadway below will be closed during construction.

Limited portion of existing south abutment will be kept. Remainder of existing structure to be removed.

BENCHMARK:

B.M. #53 - "X" cut on the Southeastery corner of the Railroad bridge pier in the centerline of 159th Street at the east face of the bridge approximately 98'-5" West of Center Street. Elev. 603.25.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CLASSIFICATION

CN on Bridge - Intermodal Yard Lead
for Class I Railroad

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)

CURVE DATA

(Temporary Run-around Track)

Curve 2
P.I. Sta. 799+00.49
Δ = 2° 10' 31" (LT)
D = 9° 00' 00"
T = 12.10'
R = 637.27'
L = 24.17'
E = 0.11'
S.E. = 1'5"
S.L. = 10'
T.S. Sta. 797+87.39
S.C. Sta. 798+88.39
C.S. Sta. 799+12.56
S.T. Sta. 800+13.56

APPROVED

FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

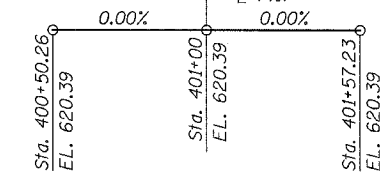


Jeffrey P. Bucholtz
JEFFREY P. BUCHOLTZ, SE
LICENSE NO. 081-005605
EXPIRES 11/30/2008
DATE: 03-14-2008

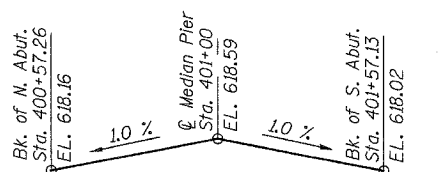
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 351	2008-001VB	COOK	579	465

SHEET NO. 1
26 SHEETS

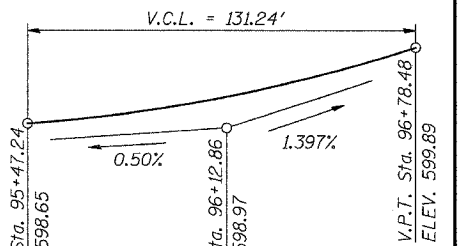
CONTRACT NO. 60E10



TOP RAIL ELEVATIONS



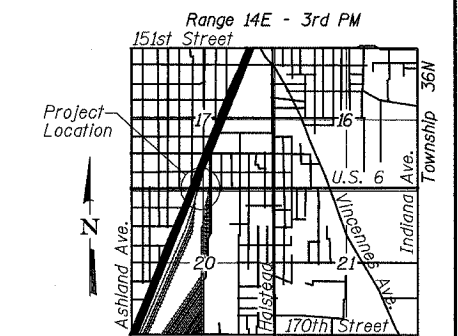
TOP OF BRIDGE DECK ELEVATIONS



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

CN
BUILT 2009 BY
STATE OF ILLINOIS
F.A.P. RT. 351 SEC. 327TR
STA. 96+36.66 LOADING COOPER E-90
STR. NO. 016-2822

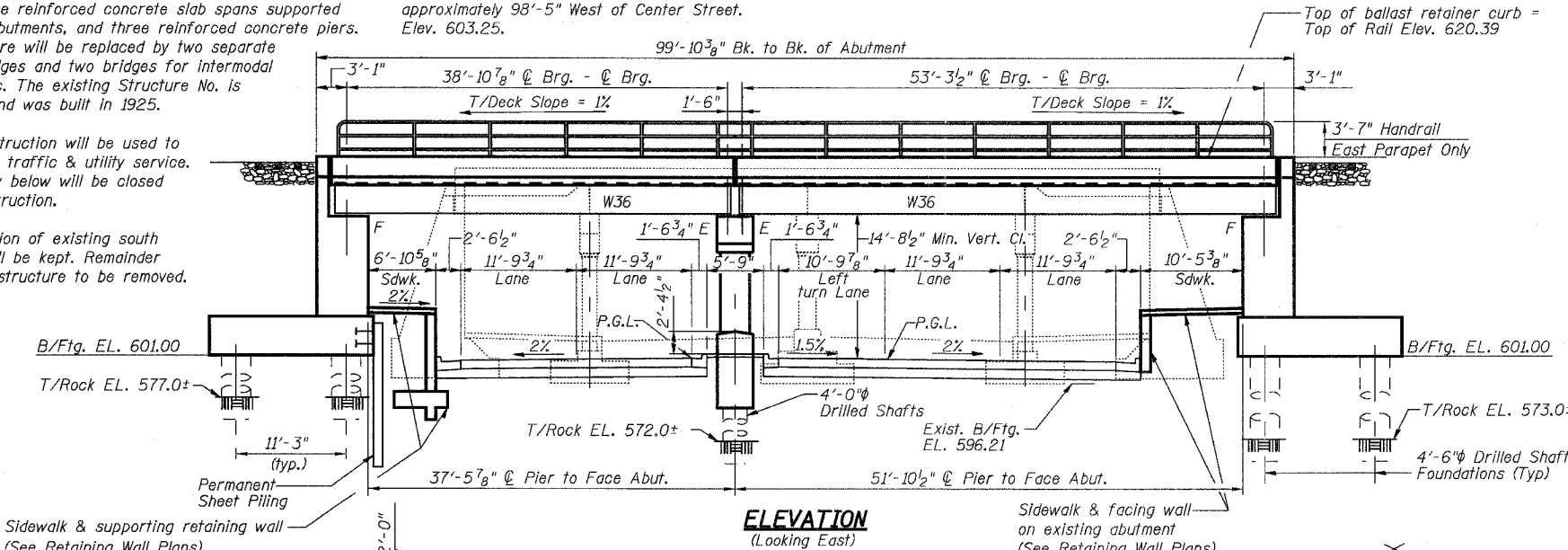
NAME PLATE
(See Std. 515001)



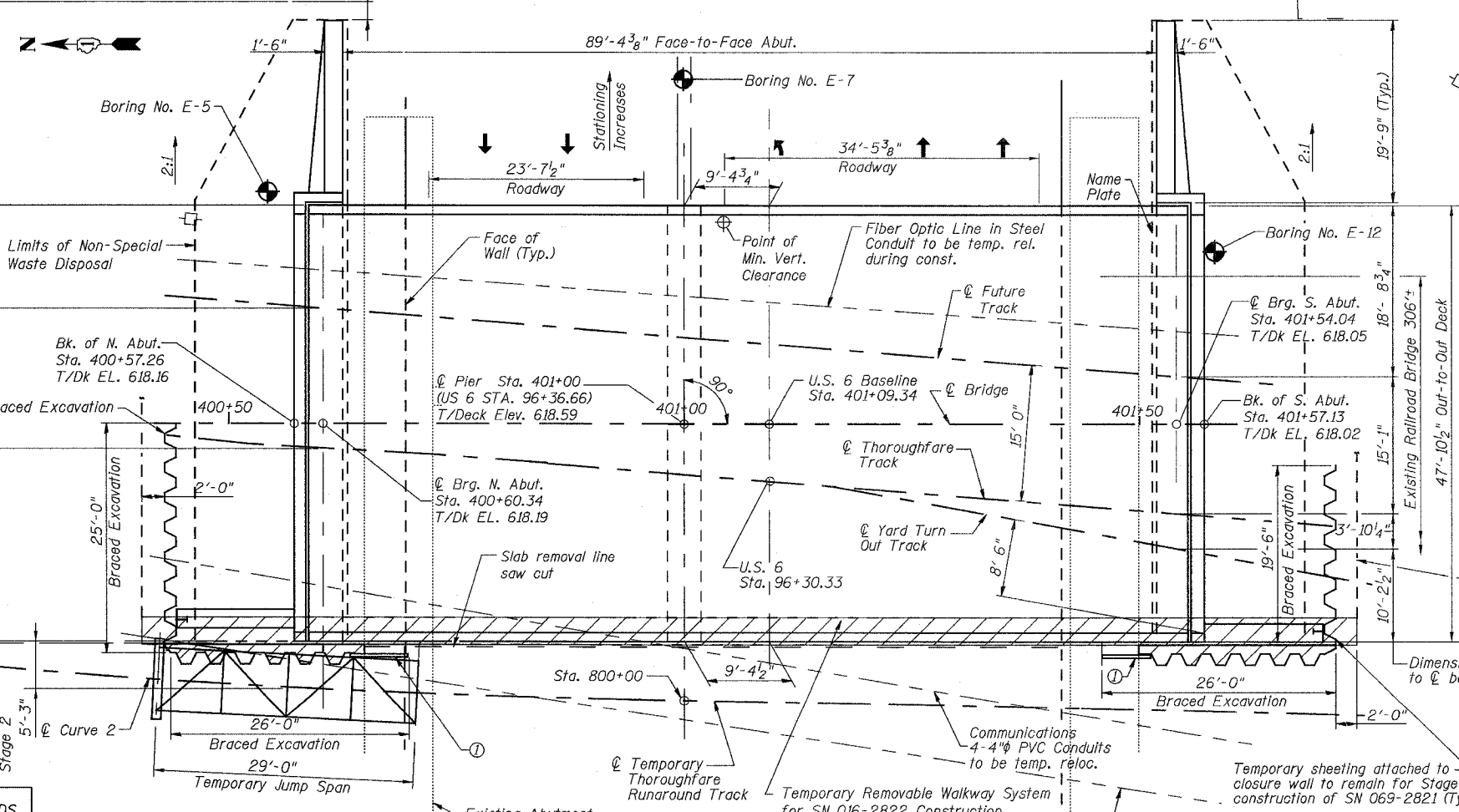
LOCATION SKETCH

3/13/2008 1:55:27 PM

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ELEVATION
(Looking East)



PLAN

DESIGNED	MDS
CHECKED	JPB
DRAWN	MDS
CHECKED	JPB

① See Abutment removal details Drawing (Sheet 12 of 26) for General Configuration of sloped back of existing Abutments and Footing.

Note: No deck drains will be permitted on the bridge, slope the 1/2" deck 1% from @ pier to abutments and drain behind backwall.

URS
100 South Wacker Drive,
Suite 500
Chicago, IL 60606
(312) 939-1000

REVISIONS	
NAME	DATE

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

CN THOROUGHFARE TRACK
BRIDGE 20.6E OVER U.S. RTE. 6 (159TH STREET)
STATION 96+36.66 STRUCTURE NO. 016-2822
SCALE: 1/8"=1'-0" DATE: 2/21/2008