BENCH MARK:
TBM-3 cut □ on Northeastly concrete headwall Glenwood Road Bridge over Thorn Creek, Elev. 613.20 (NAVD 88)

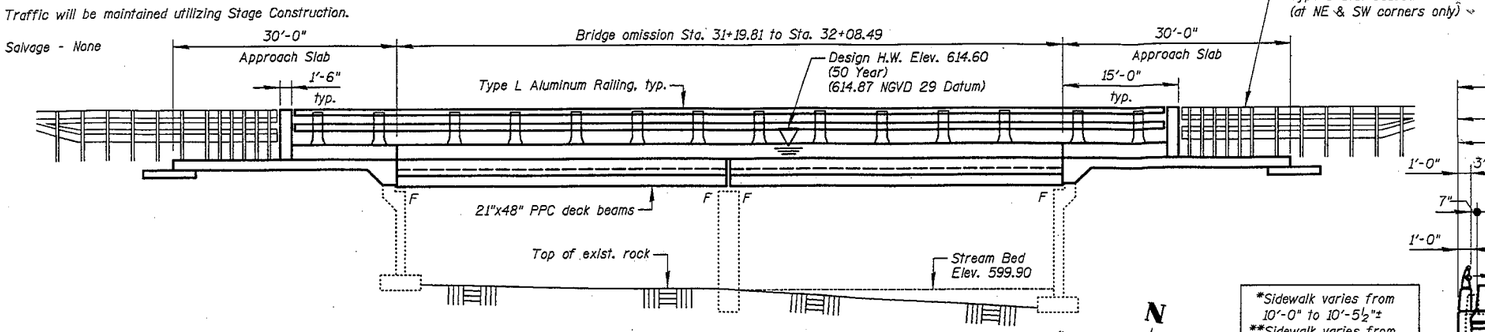
Existing Structure: S.N. 016-2417 carrying Chicago Heights-Glenwood Road over Thorn Creek was built in 1982 under Contract No. 37999 as a Construction Route F.A.U. 3603, Section 1977-330-N. The structure consists of two simple spans with Precast Prestressed Concrete (PPC) Deck Beams. Length is 88'-5⅝" back to back of abutments, each span is measured at 42'-11¼". Out to out width is 60'-10". The structure is supported on Reinforced Concrete Closed Abutments founded on spread footing and a reinforced concrete solid wall pier that is embedded a minimum of 3'-0" into solid bedrock.

Traffic will be maintained utilizing Stage Construction.

Salvage - None

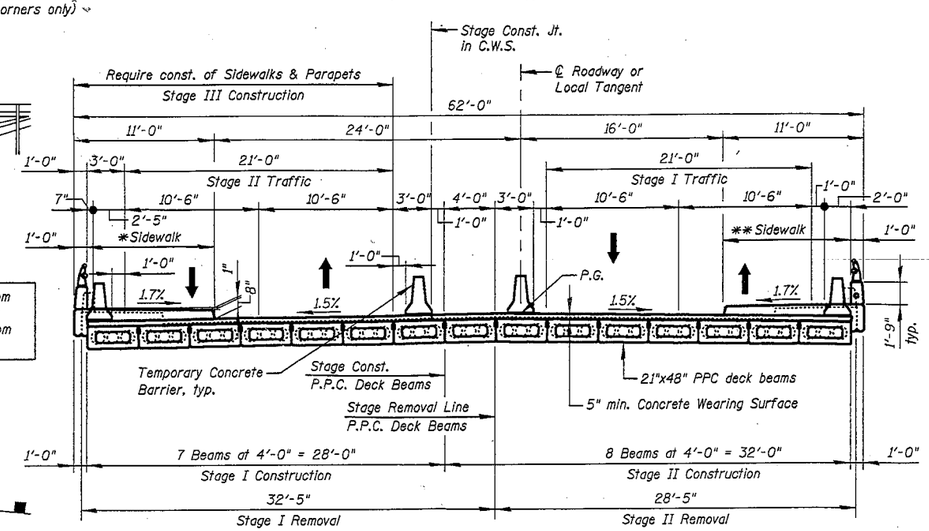
SCOPE OF WORK:

1. Remove existing 3" Bituminous Overlay & existing 21"x48" Precast Prestressed Concrete (PPC) Deck Beams.
2. Install new 21"x48" Precast Prestressed Concrete (PPC) Deck Beams.
3. Install 5" Concrete Wearing Surface.
4. Install sidewalks & parapets on North & South side of structure.
5. Perform repairs to both Abutments & the Pier.
6. Remove and replace West & East Approach Slabs.



ELEVATION

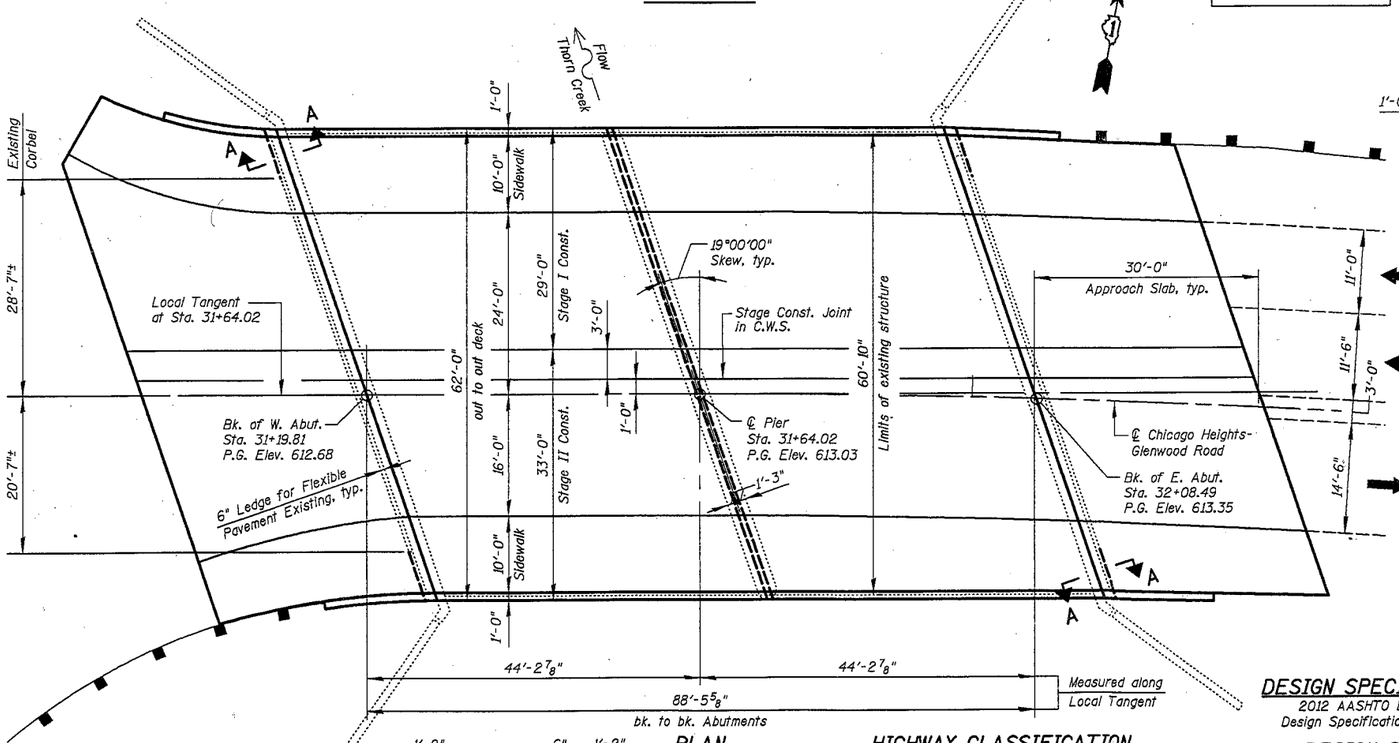
*Sidewalk varies from 10'-0" to 10'-5½"±
**Sidewalk varies from 10'-0" to 9'-1¼"±



DECK CROSS SECTION
(Looking East)

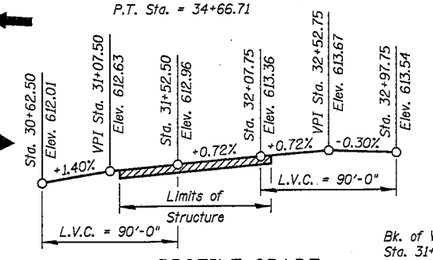
PRE-STAGE FOR STAGE I TRAFFIC

Remove existing sidewalk & parapet on south side of structure and place 3" Hot-Mix Asphalt and temporary concrete barrier. Cost included with Removal of Existing Superstructure

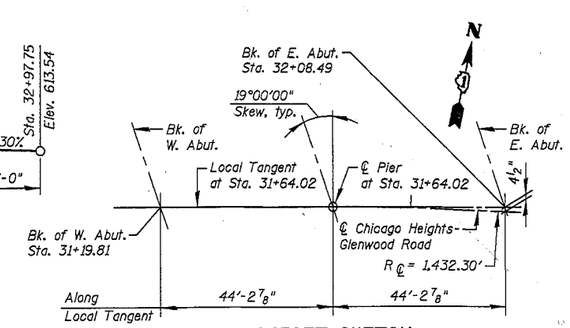


PLAN

CURVE DATA
P.I. Sta. = 33+15.60
Δ = 12° 08' 04" Rt.
D = 4° 00' 00"
R = 1,432.39'
T = 152.25'
L = 303.36'
E = 8.07'
P.C. Sta. = 31+63.35
P.T. Sta. = 34+66.71



PROFILE GRADE
(along ℄ Roadway)

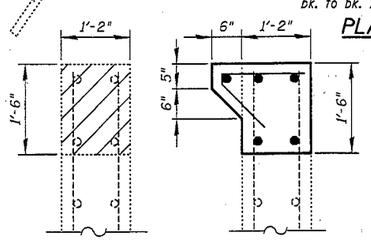


OFFSET SKETCH

APPROVED

APR 22 2013

AS A BASIS FOR
PREPARATION OF DETAILED PLANS



EXISTING PROPOSED

SECTION A-A

HIGHWAY CLASSIFICATION

F.A.U. Rte. 3603
Functional Class: Minor Arterial (Urban)
ADT: 6,100 (2006); 13,635 (2021)
ADTT: 732 (2006)
DHV: 1,636 (2021)
Design Speed: 30 m.p.h.
Posted Speed: 25 m.p.h.
2-Way Traffic (3 lanes)
Directional Distribution: 50:25:25

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.07g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.12g
Soil Site Class = C

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

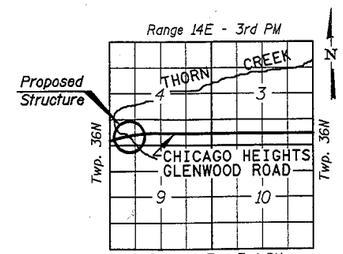
FIELD UNITS (NEW CONSTRUCTION)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

FIELD UNITS (EXISTING CONSTRUCTION)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED DECK BEAMS
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi, (½"φ low lax strands)
fpbt = 201,960 psi, (½"φ low lax strands)

LOADING HL-93

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



LOCATION SKETCH

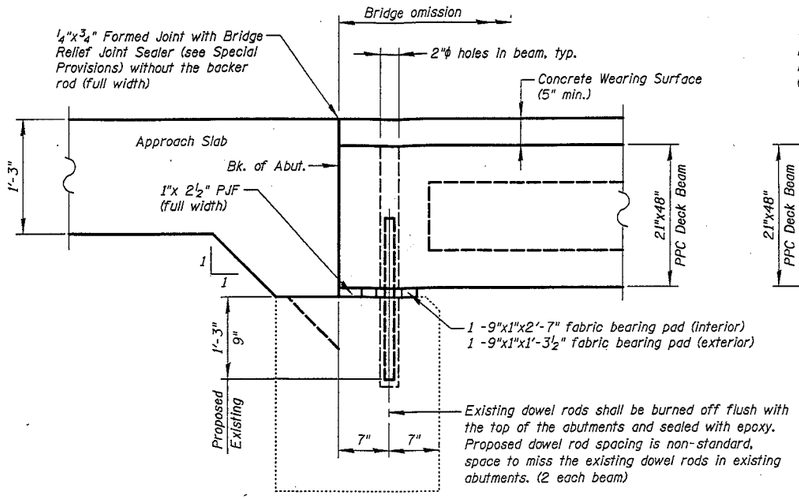
GENERAL PLAN
CHICAGO HEIGHTS-GLENWOOD ROAD OVER THORN CREEK
F.A.U. RTE. 3603
SEC. 2010-141-B
COOK COUNTY
STATION 31+64.02
STRUCTURE NO. 016-2417

FILE NAME = I:\103104_Chicago Heights-Glenwood Road Over Thorn Creek\Structural\T-S-L\GPE.dgn

CHRISTIAN-ROGE & ASSOCIATES, INC.	USER NAME = IDOT	DESIGNED - H.S.J./B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
		CHECKED - B.N.S./H.S.J.	REVISED -		
	PLOT SCALE = 50.0001 ' / IN.	DRAWN - F.M.	REVISED -		
	PLOT DATE = 4/4/2013	DATE - APRIL, 2013	REVISED -		

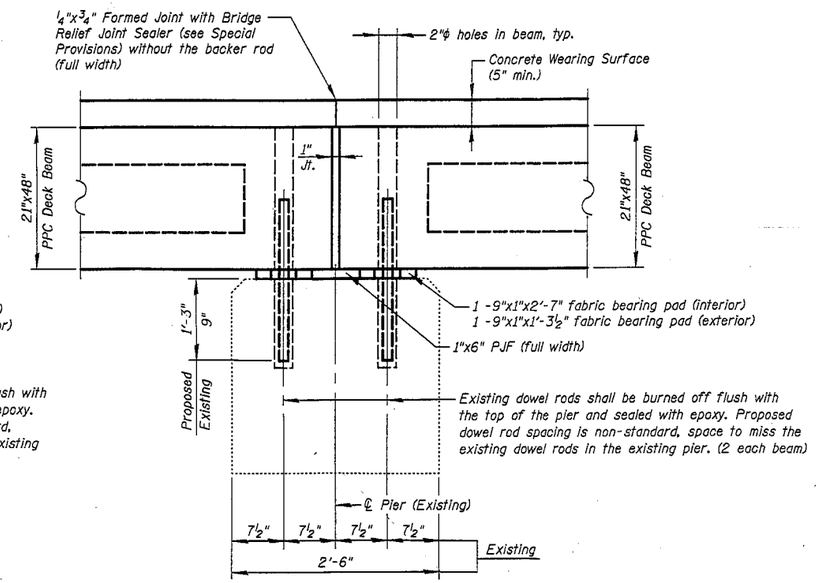
SHEET NO. S1 OF S2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3603	2010-141-B	COOK	2	1
		CONTRACT NO. 60N21		
		ILLINOIS FED. AID PROJECT		



SECTION THRU EXISTING ABUTMENT

(Dimensions are at Rt. L's)



SECTION THRU EXISTING PIER

(Dimensions are at Rt. L's)

APPROVED

APR 22 2013

AS A BASIS FOR
PREPARATION OF DETAILED PLANS

FILE NAME = I:\103104_Chicago Heights-Glenwood Road Over Thorn Creek\Structural\T-S-L\abut_pier sections.dgn

CHRISTIAN-ROGE & ASSOCIATES, INC.	USER NAME = IDOT	DESIGNED - H.S.J./B.N.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT & PIER SECTIONS STRUCTURE NO. 016-2417	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		CHECKED - B.N.S./H.S.J.	REVISED -			3603	2010-141-B	COOK	2 / 2
	PLOT SCALE = 50.0001 '/ IN.	DRAWN - F.M.	REVISED -					CONTRACT NO. 60N21	
	PLOT DATE = 4/4/2013	DATE - APRIL, 2013	REVISED -		SHEET NO. S2 OF S2 SHEETS		ILLINOIS FED. AID PROJECT		