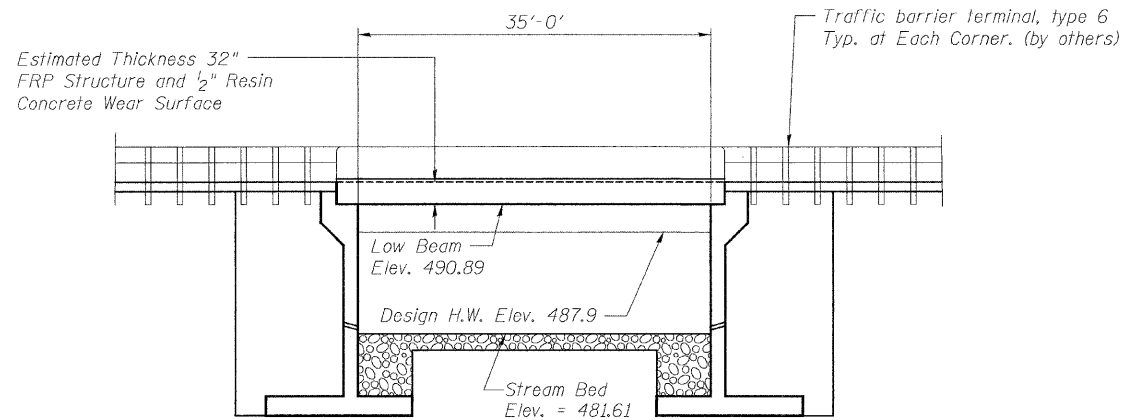


Existing Structure: SN 082-4018 to be removed. Originally built in 1958 as Route FAU 9149 Section 06-00034-00-BR. Two 16.3'x9.3'x60' long multi-plate arches. No Salvage.

Benchmark: Chiseled "L" at Southwest Corner of Concrete Vault at Sta. 160+87.83, 52.66 RT Elev. = 493.19

LEGEND

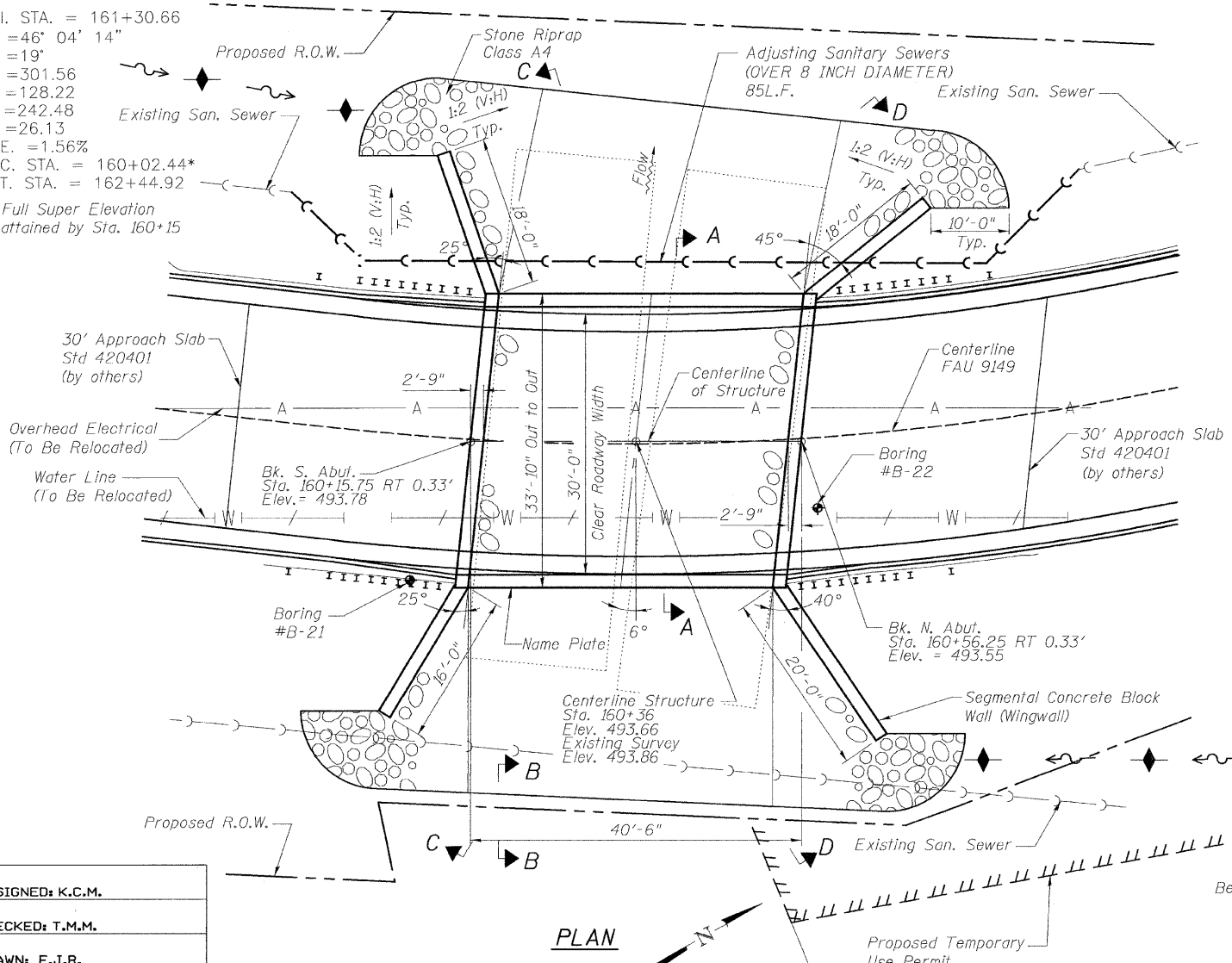
- ◆ AGGREGATE (EROSION CONTROL)
DITCH CHECKS: HEIGHT = 2'-0", AGGREGATE B3
- Existing Sanitary Sewer
- Adjusted Sanitary Sewer



ELEVATION

CURVE DATA

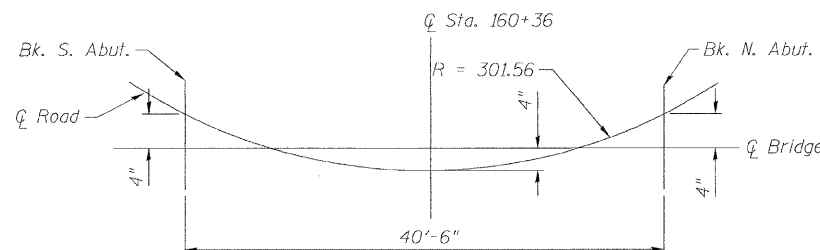
P.I. STA. = 161+30.66
 $\Delta = 46^\circ 04' 14''$
 $D = 19'$
 $R = 301.56$
 $T = 128.22$
 $L = 242.48$
 $E = 26.13$
 $S.E. = 1.56\%$
 P.C. STA. = 160+02.44*
 P.T. STA. = 162+44.92
 * Full Super Elevation attained by Sta. 160+15



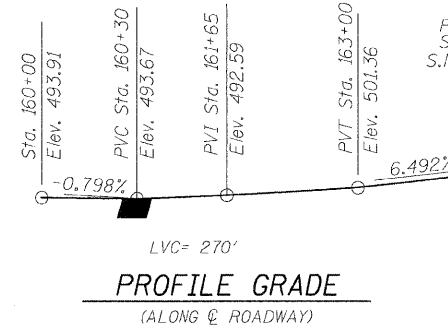
PLAN

DESIGNED: K.C.M.
CHECKED: T.M.M.
DRAWN: E.J.R.
CHECKED: K.C.M.

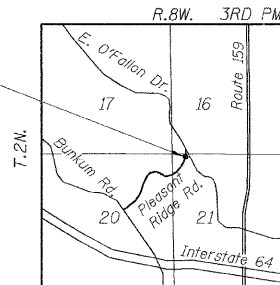
Note:
 See Sheet 4/10 for Section A-A.
 See Sheet 8/10 for Section C-C & D-D.



OFFSET SKETCH



PROFILE GRADE
(ALONG Q ROADWAY)



LOCATION MAP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 9149	06-00034-01-BR	ST. CLAIR	10	3

Contract #97350

GENERAL NOTES

- Structure Depth, Attachment Details, Expansion Joint Requirements, Railings, etc. will be coordinated with FRP Manufacturer During Shop Drawing Review Phase.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the engineer.
- The width between the guardrails shall be the width between the bridge rails or parapets which may require approach shoulder widening.
- Steel Railing, Type WT shall be adapted and attached to FRP Structure in Conformance with MWRSF Report dated October 21, 2005.
- The Contractor Shall Use the same Material for PGE (Special) and Wingwall Backfill.

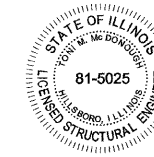
WATERWAY INFORMATION

Drainage Area = 2.53 Sq. Miles		Existing Low Grade Elev. - 491.71 ft @ STA. 161+50		
		Proposed Low Grade Elev. - 493.55 ft @ STA. 160+56		
Flood	Year	Discharge C.F.S.	Natural Head - Ft.	Headwater EL.
Design	30	1800	91	220
Base	100	2300	105	263

Roadway survey is based on 1988 datum. Hydraulic data survey and hydraulic computations (HEC-RAS) are based on FEMA benchmark using 1929 datum. Hydraulic data is converted to 1988 datum for this table: 1988 datum = 1929 datum - 0.39 ft

Design Scour Information (feet)	N. Abutment	S. Abutment
	*	*

* Footings Socketed into Rock



LIC. EXP: 11/30/08

Signature: *[Signature]*

Date: 9-04-08

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 CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

LOADING HL-93

With L/800 Deflection Limit For Design Truck Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

2007 LRFD AASHTO

DESIGN STRESSES

FIELD UNITS

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

PRECAST UNITS

$f'_c = 3,000$ psi (min.)

FRP Deck (Composite Material)

$f_t = 60,000$ psi
 $E = 3.0 \times 10^6$ psi (Longitudinal)
 $G = 0.5 \times 10^6$ psi

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Bedrock Acceleration Coefficient (A) = 0.12g
 Site Coefficient (S) = 1.0



Expires: 11/30/08

Signature: *[Signature]*

Date: 9/3/08

REVIEWED AND APPROVED FOR STRUCTURAL ADEQUACY

STATION 160+36
 BUILT 200 BY
 STATE OF ILLINOIS
 F.A.U. 9149 SEC. 06-00034-01-BR
 LOADING HL-93
 STR. NO. 082-6513

NAME PLATE

See Std. 515001

GENERAL PLAN AND ELEVATION
F.A.U. 9149 (PLEASANT RIDGE ROAD)
OVER LITTLE CANTEEN CREEK
SECTION 06-00034-01-BR
STATION 160+36
FAIRVIEW HEIGHTS
STRUCTURE NO. 082-6513

McDonough-Whitlow, P.C.
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 Phone: 217.532.9233
 Fax: 217.532.6300
 PROFESSIONAL DESIGN NO. 184-002754