Steel Plate Beam Guard Rail

136'-8" bk. bk. of Abuts.
45'-9½ | 45'-1" | 45'-9½

Steel Railing Type N

Fix | Exp. | Fix | Fix | Exp | Fix

Fill

Elev. 100.6

3'-0" | 6" | Slope Wall | 2:1

Creosoted piles

H.W. Elev. 96.07

0.86 min. cl.

Channel Excavation

Elev. 95.9

8'x1.0" Anchor bolt

Streambed Elev. 89.1

2 Precast conc piles

Precast conc piles

44'-6½ c.c. piles | 45'-1" c.c. piles | 44'-6½ c.c. piles

1:3 | 1:3

West Abut. | Pier 1 | Pier 2 | East Abut.

ELEVATION

Equation of Elev.
Elev. (100.00 KCD) =
Elev. (0.62 USGSD)

CHANNEL EXCAVATION

The channel shall be excavated 86 feet wide at elevation 89.1 with 2:1 side slopes within the limits of the right of way then taper to the existing channel in a distance of 50 feet or as directed by the Engineer. Excavated material to be wasted as directed by the Engineer.
Estimated quantity = 1090 cu yds.

WATERWAY DATA

Drainage Area	28,000 Acres
Required Opening (20 yr.)	700 Sq. Ft.
Present Opening	250 Sq. Ft.
Proposed Opening	670 Sq. Ft.

N

86' Channel Bottom

19'-10"

12'-3'0"

122 sq. yd. slope wall

2:1

20'-0"

B.L. West Abut.
Sta. 164+07.61
C-L El. 104.06

℄ Pier 1
Sta. 164+53.46
Cr. El 102.05

℄ Channel
Sta 164+80.27

℄ Pier 2
Sta. 164+98.54
Cr. El. 100.35

℄ Roadway

℄ Bridge
Sta. 164+76.00
Cr. El 101.16

Bk. East Abut.
Sta. 165+44.33
Cr. El. 98.91

Flow Line

B2 | B1

14'-0" | 7'-0" | 20'-0" | 26'-8" | 2'-10" | 2'-7" | 13'-3"

16'-1" | 12'-3" | 3" | 12'-3'0" | 17'-10"

125 sq yds. slope wall | Slope to drain

PLAN

Section C-C

GENERAL NOTES

Class X Concrete shall be used in the pier caps and abutments.

The Contractor shall drive two (2) test piles before ordering the remainder of the piles. One timber test pile shall be driven near the east abutment. One precast concrete test pile shall be driven in a permanent location in pier #1.

Boring data is shown only as a guide to bidders in estimating soil conditions which may be encountered during construction.

Layout of slope wall may be varied to suit ground conditions in the field as directed by the Engineer.

Excavation required for the construction of the slope walls and abutments shall be considered incidental to the contract.

STATION 164+76
BLACKBERRY CREEK
SEC 104B-TR BUILT 19
SUGAR GROVE ROAD DIST.
KANE COUNTY
LOADING H S20

LETTERING FOR NAME PLATE
See Std. 211301.

RTE | RBE

24 | 19

25 | 30

738N

Proposed Bridge

LOCATION SKETCH

N = standard penetration test - blows per foot for 1 3/8" I.D. split spoon sampler 12" w/ 140# hammer falling 30"
Qu Unconfined compressive strength - t/s.f.
w Water content - percentage of oven dry weight - %
B. Bulge failure S. Shear failure

N Qu w | 100 w Qu N

Very stiff brown SILTY CLAY

Stiff brown SILTY CLAY LOAM Trace of fibers

Dense medium grained sandy GRAVEL

Dense brown SAND

Dense medium to coarse grained sandy GRAVEL

Dense fine to coarse grained pebbly gray SAND

Medium dense very fine grained gray SAND

GRAVEL and CLAY (Fill)

Stiff dark brown SILTY CLAY LOAM

Medium dense sandy GRAVEL

Dense sandy GRAVEL

Medium dense medium grained GRAVEL

Dense med. grained sandy GRAVEL

Med. dense, med. to coarse grained sandy GRAVEL

V. dense coarse grained GRAVEL

Very dense fine to medium grained gray SANDY LOAM

BORING 1
Vic. Lt. of
Sta. 163+97

BORING 2
8' Rt. of
Sta. 164+92

BORING DATA

B

#4 bars @ 12 cts. both directions

2:1

6" Slope wall

Wing Extension

SECTION A-A

Welded wire fabric 6"x6" mesh No. 4 wires w.t. 58#/100 s.f.

2:1

6

Varies

#6

SECTION B-B

TOTAL BILL OF MATERIAL

ITEM		SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams Sq. Ft.		3,645		3,645
Class X Concrete	Cu. Yds.		33.2	33.2
Reinforcement Bars	Lbs.		2,960	2,960
Steel Railing Type N	Lin. Ft.	272		272
Name Plates	Each.	1		1
Removal of Existing Structures	Each.	1		1
Precast Concrete Piles, 14"	Lin. Ft.		385	385
Test Piles (Concrete)	Each		1	1
Creosoted Piles	Lin. Ft.		264	264
Test Piles (Timber)	Each		1	1
Slope Wall	Sq. Yds		247	247
Bituminous Materials (Prime Coat)	Gal.	55		55
Bituminous Mixture Complete	Tons	52		52
Channel Excavation	Cu. Yds.		1,090	1,090
EARTH EXCAVATION	CU. YDS.		1,246	1,246
PIPE CULVERTS TYPE 1-12" (CMP)	LIN. FT.		60	60
AGGREGATE SURFACE COURSE, TYPE B (SPECIAL)	TONS		462	462
TREE REMOVAL (OVER 15" DIA)	IN. DIA.		35	35

DESIGN STRESSES

f_c = 2,000 p.s.i. (super)
f_c = 1,400 p.s.i. (sub)
f_s = 20,000 p.s.i. (reinf.)
f_s = 173,600 p.s.i. (prestress cables)
n = 10 (sub)
Loading H S20-44

Marcus J. Rice
Illinois Structural No. 2134

GENERAL PLAN & ELEVATION
BARNES BRIDGE
SEC. 104B-TR SUGAR GROVE RD. DIST.
KANE COUNTY
STATION 164+76

COLLINS AND RICE
CONSULTING ENGINEERS

M.J.R. | M.J.R. | DESIGNED KFG | DRAWN MJR | CHECKED MJR | DATE 10-26-64 | SCALE 1" = 30'

FOR INFORMATION ONLY

RS&H IMPROVING YOUR WORLD

DESIGNED - LM	REVISED -		
CHECKED - GG	REVISED -		
DRAWN - LM	REVISED -		
CHECKED - DSB	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS (1 OF 5)
STRUCTURE NO. 045-3094
SHEET NO. 13 OF 17 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3895	08-15104-01-BR	KANE	38	26
		CONTRACT NO. 63661		
		ILLINOIS FED. AID PROJECT		

PLOT DATE = 1/3/2012
FILE NAME = X:\1013-2245-000 Pearune Street\CADD\S\Sheets\Pearune 13 - Existing Plans 1.dgn
USER NAME = marcusl