

BUILT 2013 BY LEE COUNTY SECTION 08-00303-00-BR STA. 10+00 STR. NO. 052-3413 LOADING HL-93

LETTERING FOR NAME PLATE

SEE STD. 515001-02

LOADING HL-93 ALLOW 25 PSF FOR FUTURE WEARING SURFACE

<u>DESIGN DATA</u>

ADT. = 325

DESIGN SPEED: 40 MPH

DESIGN STRESSES

f'c = 5000 PSI

fy = 60,000 PSI (REINFORCEMENT)

Fy = 50,000 PSI (M270 GRADE 50W)

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"

GENERAL NOTES

* 08-00303-00-BR

188

SEC

ILLINOIS PROJECT BRS-0188(121)

COUNTY

LEE

CONCRETE FROM THE EXISTING STRUCTURE SHALL NOT BE BURIED WITHIN 200 FEET OF THE PROPOSED STRUCTURE.

PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE BY WRITTEN REQUEST FROM THE LEE COUNTY HIGHWAY DEPARTMENT.

THE UTILITIES SHOWN ON THE PLANS ARE SHOWN IN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE EXACT LOCATIONS OF ALL UTILITIES WITHIN THE PROJECT LIMITS BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH AFFECTED UTILITIES AND BY CONTACTING JULLIE. AT 1-800-892-0123. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE UTILITIES PRIOR TO CONSTRUCTION.

FASTENERS SHALL BE HIGH STRENGTH BOLTS, AASHTO M164, TYPE 3. BOLTS 3/4" INCH DIAMETER, OPEN HOLES 13/16 INCH DIAMETER, UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 103,891 POUNDS OF AASHTO M270 GRADE 50W BEAMS, DIAPHRAGMS, SPLICES AND BEARINGS. 386 POUNDS AASHTO M270 GRADE 36 PLATES, ANCHOR BOLTS, & MISC.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.

THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE WIDE FLANGE BEAMS AND ALL SPLICE

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.

BACKFILL SHALL BE PLACED BEHIND THE ABUTMENTS AFTER THE SUPERSTRUCTURE HAS BEEN POURED AND THE FALSEWORK REMOVED. SEE ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL MAKE ALLOWANCE FOR THE DEFLECTION OF FORMS, SHRINKAGE AND SETTLEMENT OF FALSEWORK, IN ADDITION TO ALLOWANCE FOR DEAD LOAD DEFLECTION.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.

THE CONTRACTOR SHALL DRIVE ONE TEST PILE IN A PERMANENT LOCATION AT THE NORTH ABUTMENT, AND ONE TEST PILE AT PIER #1, AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

AASHTO M 270 GRADE 50W STRUCTURAL STEEL SHALL ONLY BE PAINTED, AT THE ENDS OF THE BEAMS, FOR A DISTANCE OF EQUAL TO THE DEPTH OF EMBEDMENT INTO THE CONCRETE CAP PLUS 3 INCHES. THOSE AREAS SHALL BE PRIMED IN THE SHOP WITH AN INORGANIC ZINC RICH PRIMER PER AASHTO MAJOO, TYPE 1. NO FIELD PAINTING SHALL BE REQUIRED. ALL STRUCTURAL STEEL SHALL BE CLEANED AS SPECIFIED IN ARTICLE 506.07.

ALL CONSTRUCTION JOINTS SHALL BE BONDED.

BILL OF MATERIAL ITEM	BRIDGE			
	UNIT	SUPERSTR,	SUBSTR.	TOTAL
REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1
GEOCOMPOSITE WALL DRAIN	SQ. YD.		42	42
STRUCTURE EXCAVATION	CU. YD.		74	74
CONCRETE STRUCTURES	CU. YO.		43.0	43,0
CONCRETE SUPERSTRUCTURES	CU. YD.	162.9		162,9
BRIDGE DECK GROOVING	SQ. YD.	590		590
PROTECTIVE COAT	SQ. YD.	652		652
FURNISHING AND ERECTING STRUCTURAL STEEL	L.SUM	1		1
STUD SHEAR CONNECTORS	EACH	3465		3465
STEEL BRIDGE RAIL, TYPE SM	FOOT	332		332
REINFORCEMENT BARS (EPOXY COATED)	POUND	39,597	11,728	51,325
DRIVING PILES	FOOT		1418	1418
FURNISHING METAL SHELL PILES 14"x0,250"	FOOT		1418	1418
TEST PILE METAL SHELLS	EACH		2	2
STONE DUMPED RIPRAP, CLASS A5	SQ. YD.		541	541
NAME PLATE	EACH		1	1
CONCRETE ENCASEMENT	CU. YO.		38.4	38,4
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT		120	120

PROTECTIVE COAT HAS BEEN INCLUDED FOR THE TOP OF THE DECK AND THE SIDES OF THE DECK TO THE DRIPNOTCH AND THE SIDES OF THE ABUTMENT DIAPHRAGMS

> GENERAL PLAN AND ELEVATION SECTION 08-00303-00-BR F.A.S. 188 (INDIAN HEAD RD.) LEE COUNTY S.N. 052-3413

SCALE: 154

SHEET NO

8

TOTAL SHEETS

22

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SHEET TITLE

GPE

2080334

12/13/2012 SHEET NO.

8 of 22

DESIGNED: DB DRAWN BEH CHECKED: 58 DATE: 12/13/2012

Drainage Area = 290 sq. miles

20

100

500

5764

7810

9660

STA 8+60 15 ELEV. 661.25

Deslan

Base Overtopping

Max Catc.

SEISMIC DATA

Prop. Grade = 661.25

Opening Sq. Ft

1459

197

655,99

1203

152

at Roadway Sta. 10+00

654.28 0.15 0.18 654.43 654.46

657.37 0.22 0.29 657.59 657.66

0,19 0.24 656.18 656.23

Headwater El

Existing Proposes

Seishic Performance Zone (SPZ) = 1_ Design spectral acceleration at 1.0 sec. (Sp1) = 0.0909 DESIGN SPECTRAL ACCELERATION AT 0.2 SEC. (SOS) - 0.1509

PROFILE GRADE

DESIGN SPECIFICATIONS

AASHTO 2010 LRFD SPECIFICATIONS