<u>1.</u>	<u>1. GENERAL</u>			6. REINFORCED CONCRETE		
1.01.	THE STRUCTURE IS DESIGNED AND MEETS THE DESIGN CRITERIA OF THE FOLLOWING CODES AASHTO LRFD BRIDGE DESIGN SPECIFICATION, 8TH EDITION	6:	6.01.	THE GC SHALL SUBMIT ALL CONCRETE N DOCUMENTATION PRIOR TO USE.	MIXES FOR REVIE	W ALONG WITH STANDARD ACI STRENGT
1.02.	ACI 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY C	OF THE CONTRACTOR.	6.02.	CONCRETE REINFORCING SHALL HAVE T CONCRETE POURED ON EARTH O CONCRETE EXPOSED TO DE-ICIN	THE FOLLOWING N )R GROUND G SALTS	MINIMUM PROTECTIVE COVER:
	THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.	THE INTEGRITY OF	6.03.	SLEEVES, CONDUITS, OR PIPES THRO CLOSER THAN THREE DIAMETERS ON CI	UGH SLABS AND ENTER AND THEY	WALLS SHALL BE PLACED SO THAT THEY DO NOT DISPLACE REINFORCING.
<u>2.</u>	MATERIAL STRENGTHS		6.04			
2.01.	CONCRETE (fc @ 28 DAYS)   4,000 PSI     FOOTINGS.   4,000 PSI     SLAB ON GRADE   5,000 PSI     SLAB ON METAL DECK   5,000 PSI     * CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED w/4.6% AIR ENTRAINMENT *	<u>MAX w/c RATIO</u> 0.50 0.40 0.40	0.04.	IN LONGEST CONVENIENT LENGTHS WI CONTACT SPLICED OR SPACED A MINIM SPLICES", AND A MAXIMUM DISTANCE A	TH ADJACENT LAP UM DISTANCE AI	PS STAGGERED 3'-0" MINIMUM. BARS SH PART PER CRSI "REINFORCEMENT ANCH SSER OF, 1/5 THE LAP LENGTH OR 6 INCH
2.02.	REINFORCING STEEL (Fy)		0.05.	BAR DIAMETER, 1-1/2", OR 1-1/3 TIMES TH	IE AGGREGATE S	IZE, WHICHEVER IS GREATER.
	REBAR (ASTM A615) (EPOXY COATED)		6.06.	ALL HOOKS NOT NOTED SHALL BE ACI S	TANDARD HOOKS	
2.03.	STRUCTURAL STEEL (Fy) WF SHAPES (ASTM A992)		6.07.	NO TACK WELDING WILL BE PERMITTED	ON GRADE 40 OR	60 STEEL.
	CHANNELS, ANGLES, PLATES & OTHER SHAPES (ASTM A36).36,000 PSISQUARE & RECTANGULAR HSS (A500 GRADE B).46,000 PSIALL BOLTS U.N.A-325-NANCHOR RODS (ASTM F1554 Gr 36).36,000 PSIWELDING ELECTRODES.E70XX		6.08.	ANCHOR BOLTS SHALL BE SET TO THE A. ELEVATION OF CONCRETE B. ELEVATION TOP OF ANCHO C. OUT OF POSITION OF ANC	FOLLOWING TOL SURFACE PLUS ( OR BOLTS PLUS 1 HOR BOLTS PLUS	ERANCE: OR MINUS 3/8" " TO MINUS 3/8". OR MINUS 1/8".
2.04.	ELASTOMERIC BEARING PADS		6.09.	ALL BARS FOR BRIDGE CONSTRUCTION	SHALL BE EPOXY	COATED U.N.O.
	SHEAR MODULUS		<u>7.</u>	SURFACE PRIMING AND PAINTING NOTE	<u>s</u>	
3.	SUBMITTAL		7.01	PRIMER FOR STEEL SURFACES IS TO BE	INORGANIC ZINC	(2 TO 3 MILS) PER SSPC-PAINT 20.
3.01.	SUBMITTALS AND SHOP DRAWINGS SHALL BE SUBMITTED TO DRYE-MCGLAMERY ENGINEE SUBMITTALS SHALL INCLUDE: STEEL SHOPS, AND CONCRETE REBAR SHOPS.	RING FOR REVIEW.	7.02	INTERMEDIATE COAT FOR STEEL SURFA	CES IS TO BE POL	LYAMINE OR POLYAMIDE EPOXY (3 TO 6 N
3.02.	DRYE-MCGLAMERY ENGINEERING SHALL HAVE 15 DAYS AFTER THE DATE OF RECEIPT OF T REVIEWING AND COMMENTING ON ANY SUBMITTALS.	HE SUBMITTAL FOR	7.03 FINISH COAT FOR STEEL SURFACES IS TO BE ALIFHATIC POLITURETHANE (STO SMILS) PER S			OLYURETHANE (3 TO 5 MILS) PER SSPC-I
3.03.	THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL REVIEW SUBMITTAL PRIOR TO TO DRYE-MCGLAMERY ENGINEERING. HIGHLIGHT, CLOUD, OR OTHERWISE INDICATE ITEMS T THE CONTRACT DOCUMENTS ON THE SUBMITTAL.	SUBMITTING THEM HAT DEVIATE FROM				
<u>4</u> .	FOUNDATION AND SLAB ON GRADE					
4.01. THE FOUNDATION HAS BEEN DESIGNED FOR A PRESUMED ALLOWABLE BEARING PRESSURE OF 3000 PSF AND SHALL BE VERIFIED IN THE FIELD BY THE OWNERS SPECIAL INSPECTOR.			DRYE-MCGLAMERY ENGINEERING STR	RUCTURAL ABBRE	EVIATIONS	
4.02.	WALL FOOTINGS ARE CENTERED ON FOUNDATION WALL UNLESS NOTED OTHERWISE.					
4.03.	WALL FOOTINGS SHALL BEAR ON ORIGINAL, UNDISTURBED SOIL OR COMPACTED FILL, BU THE MINIMUM DEPTH SHOWN ON DRAWINGS.	T NOT HIGHER THAN	ARCH B/ BRG	ARCHITECT BOTTOM OF BEARING	GA. GALV. HORIZ	GAUGE GALVANIZED HORIZONTAL
4.04.	CONTRACTOR TO KEEP EXCAVATIONS DRY AND PROTECTED FROM FROST AT ALL TIMES DU FOUNDATION CONSTRUCTION.	JRING THE	BOTT. C/C	BOTTOM CENTER-TO-CENTER CONTROL JOINT	H.S. IN. INFO	HEADED STUD INCHES
4.05.	FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THE DESC VALUES SHALL BE REPORTED TO THE ARCHITECT AND DRYE-MCGLAMERY ENGINEERING, B CONSTRUCTION IS ATTEMPTED.	CRIBED ASSUMED EFORE FURTHER	CLR. COL. CONC CONN CONN	CLEAR COLUMN . CONCRETE . CONNECTION . CONTINUOUS	INT. K KSI LLH LLV	INTERIOR KIPS KIPS PER SQUARE INCH LONG LEG HORIZONTAL LONG LEG VERTICAL
5.	STRUCTURAL STEEL		COOR CMU	D. COORDINATE CONCRETE MASONRY UNIT	L.W. MANUF.	LONG WAYS MANUFACTURER
5.01.	SET STRUCTURAL STEEL ACCURATELY IN LOCATIONS AND TO ELEVATIONS INDICATED AND SPECIFICATIONS REFERENCED IN THIS SECTION.	ACCORDING TO AISC	D.E. DIM. DIA	DECK EDGE DIMENSION DIAMETER	MAX. MECH. MIN	MAXIMUM MECHANICAL MINIMUM
5.02.	WHERE NOT SHOWN OTHERWISE, PROVIDE 3/8" STIFFENER PLATE EACH SIDE OF BEAMS OVE COLUMNS OVER BEAMS.	ER COLUMNS, OR	DIST. DWGS FI	DISTANCE DRAWINGS FLEVATION	O.H. PL. PSF	OVERHANG PLATE POUNDS PER SQUARE FOOT
5.03.	SPLICING OF STRUCTURAL STEEL MEMBERS WHERE NOT DETAILED ON THE CONTRACT DO PROHIBITED WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCA SPLICE AND CONNECTION TO BE MADE.	CUMENTS IS TION, TYPE OF	E.F. EMBE ENG. E.O.C.	EACH FACE D. EMBEDMENT ENGINEER EDGE OF CONCRETE	PSI QTY REF. REINF.	POUNDS PER SQUARE INCH QUANTITY REFERENCE REINFORCED
5.04.	THE CONTRACTOR SHALL NOTIFY DRYE-MCGLAMERY ENGINEERING, PLLC OF ANY MISFABE STEEL PRIOR TO ERECTION OF SAME.	RICATED STRUCTURAL	E.O.R. EQ. E.S.	ENGINEER OF RECORD EQUAL EACH SIDE	S.E. S.F. STL.	SLAB EDGE STEPPED FOOTING STEEL
5.05.	PENETRATIONS SHALL NOT BE CUT IN STRUCTURAL STEEL MEMBERS UNLESS SO INDICA DRAWINGS OR AS REVIEWED BY THE ENGINEER.	TED IN THE	E.W. EXP. EXT.	EACH WAY EXPANSION EXTERIOR	S.W. T/ TYP.	SHORT WAYS TOP OF TYPICAL
5.06.	BEAMS SHALL BE CAMBERED UPWARD WHERE SHOWN ON THE CONTRACT DOCUMENTS. CAMBER IS INDICATED, ANY MILL CAMBER SHALL BE DETAILED UPWARD IN THE BEAMS.	WHERE NO UPWARD	FABR. F.F. FFE FTG. FV	FABRICATOR FINISHED FLOOR FINISHED FLOOR ELEVATION FOOTING FIELD VERIFY	U.N.O. VCJ VIF VMCJ W/ WWF	UNLESS NOTED OTHERWISE VERTICAL CONTROL JOINT VERIFY IN FIELD VERTICAL MASONRY CONTROL JOINT WITH WELDED WIRE FABRIC

THEY ARE NOT

ASS "B" LAP SPLICED S SHALL BE ANCHORAGES AND INCHES.

E A MINIMUM OF 1-1/2

TO 6 MILS) PER SSPC-PAINT 42.

SSPC-PAINT 39.

## DESIGN DATA

- 1. ALL CONSTRUCTION SHALL COMPLY AS APPROPRIATE WITH THE FOLLOWING CODES AND/OR SPEFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION AISC STEEL CONSTRUCTION MANUAL, 15TH EDITION ACI 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND OTHER APPLICABLE CRITERIA, REFERENCE TO OTHER STANDARD SPECS. OR CODES SHALL MEAN THE LATEST VERSION.
- 2. DESIGN LOADS:
  - A. LIVE LOADS: BRIDGE DECK LIVE LOAD:
  - WIND LOAD: В. BASIC WIND SPEED (3-SEC GUST) EXPOSURE IMPORTANCE FACTOR, I DIRECTIONALITY FACTOR, kd
  - SEISMIC LOAD: C. SOIL SITE CLASS IMPORTANCE FACTOR, I 0.2 SECOND Ss 1.0 SECOND S1 0.2 SECOND Sds 1.0 SECOND Sd1 SEISMIC DESIGN CATEGORY
- 3. FOUNDATION DESIGN DATA:

SAFE BEARING PRESSURE:

## BRIDGE INSPECTIONS DURING CONSTRUCTION

\*ALL INSPECTIONS DURING CONSTRUCTION SHALL BE PROVIDED PER NCDOT AND /OR AASHTO GUIDELINES.





GENERAL	NOTES

DME PROJEC	T #:	2020093
DRAWN BY	LCH	
CHECKED BY	HWD	

# ISSUED FOR CONSTRUCTION

NESVILLE CEMENT

No.	Description	Date
1	ISSUED FOR REVIEW	2020-07-10
2	ISSUED FOR CONSTRUCTION	2020-09-24

No.	Description	Date
1	ISSUED FOR REVIEW	2020-07-10
2	ISSUED FOR CONSTRUCTION	2020-09-24

3000 PSF (ASSUMED)

HL-93 OR ALTERNATIVE LOAD

1.00 0.85

D 0.341g 0.176g С







SEAL

04079

09-24-2020



Doyle's Garage & Wrecker Services

anch

GhelseaRd

Chelsea Rd

onelse

ning Branch

Brown

Nathan's Automotive 24/7 Towing with...



BRIDGE VICINITY MAP

S-002

DME PROJECT #: 2020093 DRAWN BY CJH CHECKED BY HWD

ENENT

TOWN BRIDGI CHFI S

ISSUED FOR CONSTRUCTION

DRYE ENGI PO B

, NC	
MERY i, PLLC	
27619	

		I
No.	Description	Date
1	ISSUED FOR REVIEW	2020-07-10
2	ISSUED FOR CONSTRUCTION	2020-09-24









16" THICK WALL PER BRIDGE DETAILS

- DIRECTION OF TRAFFIC FLOW

ABUTMENT AND WING -WALL FOUNDATION PER

16" THICK WALL PER BRIDGE DETAILS

1 BRIDGE FOUNDATION PLAN 3/8" = 1'-0"

# **FOUNDATION PLAN NOTES**

- 1.
- 2.
- 3.



REFERENCED T/BRIDGE DECK ELEVATION WILL BE 0'-0".

TOP OF ABUTMENT WALL FOOTINGS TO BE -2'-0" BELOW B/STREAMBED ELEVATION TYP. U.N.O.

ABUTMENT WALL AND FOUNDATIONS REINFORCEMENT PER BRIDGE DETAILS TYP. U.N.O.



FOUNDATION PLAN

S-100

DME PROJECT #: 2020093 DRAWN BY LCH CHECKED BY HWD

ISSUED FOR CONSTRUCTION

TOWN OF WAYNESVILLE BRIDGE REPLACEMENT CHELSEA ROAD WAYNESVILLE, NC

AMERY IG, PLL DRYE ENGIN PO BC RALEI

No.	Description	Date
1	ISSUED FOR REVIEW	2020-07-10
2	ISSUED FOR CONSTRUCTION	2020-09-24







## BRIDGE FRAMING PLAN NOTES

- BRIDGE GIRDERS SHALL BE EQUALLY SPACED NOT TO EXCEED 6'-0" C/C TYPICAL UNLESS NOTED OTHERWISE. 1.
- BRIDGE DECK SHALL BE 7-1/2" NORMAL WEIGHT CONCRETE SLAB ON 1-1/2 INCH 18 GA TYPE 'C' METAL DECK (TOTAL CONCRETE THICKNESS = 9"). REINFORCE SLAB WITH EPOXY COATED #4 BARS AT 12" C/C MAX SPACING EA. WAY PER BRIDGE DETAILS. FASTEN 2. METAL DECK TO INTERIOR AND PERIMETER SUPPORTS w/ 5/8"Ø PUDDLE WELDS AT 12" C/C AND FASTEN AT SIDELAPS w/ (3) #10 TEK SCREWS EQUALLY SPACED BETWEEN SUPPORTS.
- REFERENCED T/BRIDGE DECK ELEVATION WILL BE 0'-0"... 3.
- 4. TOP OF STEEL ELEVATION TO BE -0'-9" U.N.O.
- BRIDGE GIRDER MEMBERS ARE DESIGNED AS "COMPOSITE". (X) INDICATES NUMBER OF STUDS FOR WIDE FLANGE BEAM. STUDS 5. SHALL BE PLACED AT 1'-0" C/C MAX SPACING ALONG SPAN OF BEAM TYP. PLACE STUDS ALONG CENTERLINE OF BEAM IN (1) ROW. ALL STUDS SHALL BE 3/4" DIA. HEADED STUDS 6" LONG TYP.
- 6. ALL FRAMING AND MISC. STEEL SHALL BE PAINTED PER REQUIREMENTS WITHIN GENERAL NOTES.



BRIDGE FRAMING PLAN S-101

ISSUED FOR

CONSTRUCTION

DME PROJECT #: 2020093

DRAWN BY LCH CHECKED BY HWD

TOWN OF WAYNESVILLE BRIDGE REPLACEMENT CHELSEA ROAD WAYNESVILLE, NC

AMERY JG, PLL

	Bridge Framing Schedule				
Туре	TypeLengthNumber of studsCountTonnage				
/21X44 21' - 10" (20) 5 2.40 Tons					
Grand total: 5 2.40 Tons					

No.	Description	Date
	ISSUED FOR REVIEW	2020-07-10
2	ISSUED FOR CONSTRUCTION	2020-09-24









# **GUARDRAIL PLAN NOTES**

- 1. BRIDGE GUARDRAILS SHALL BE PLACED PARALLEL TO SPAN OF BRIDGE TYP.
- 2. REFER TO BRIDGE GUARDRAIL DETAILS FOR TYPICAL GUARDRAIL ASSEMBLY.
- 3. GUARDRAIL SHALL COVER ENTIRE LENGTH OF BRIDGE.



S-102

GAURDRAIL PLAN

DME PROJECT #: 2020093 DRAWN BY LCH CHECKED BY HWD

TOWN OF WAYNESVILLE BRIDGE REPLACEMENT CHELSEA ROAD WAYNESVILLE, NC

> ISSUED FOR CONSTRUCTION

DRYE-MCGLAMERY ENGINEERING, PLLC PO BOX 19558 RALEIGH, NC 27619

	REVIEW	
2	ISSUED FOR	2020-09-24
	CONSTRUCTION	

No. Description

1 ISSUED FOR

Date

2020-07-10







# 1) COMPOSITE BEAM SECTION 1/2" = 1'-0"











 $\bigcirc 1 \quad \frac{\text{GUARDRAIL ELEVATION DETAIL}}{3/4" = 1'-0"}$ 







SECTION A-A

# <u>SLEEVE</u>





2" DIA x 3/4" DEEP COUNTERBORE TYP

8 POST SECTION D-D AND E-E 1 1/2" = 1'-0"

FURNISH STEEL FOR RAIL POSTS, BASE PLATES, SHIMS, SPLICE SLEEVES, AND ANCHOR ASSEMBLY PLATES CONFORMING TO ASTM A36. FURNISH STRUCTURAL TUBING FOR RAILS CONFORMING TO ASTM A500, GRADE B. PAINT ALL METAL COMPONENTS OF THE BRIDGE RAIL EXCEPT POST BASE SHIMS, ANCHOR ASSEMBLIES, AND RAIL SPLICE SLEEVES. GALVANIZE POST BASE SHIMS, ANCHOR ASSEMBLIES, AND RAIL SPLICE SLEEVES. FURNISH HEX BOLTS CONFORMING TO ASTM A325. FURNISH HEX COUPLING NUTS WITH A CENTER STOP CONFORMING TO ASTM A563, GRADE C, D, OR DH. FOR ALL OTHER FASTENERS CONFORM TO ASTM A307.

CONNECT EACH HSS4x4x1/4 TO AT LEAST THREE POSTS BETWEEN SPLICES.



**GUARDRAIL DETAILS** 

S-501



5 1/8"

—2 1/2"

CL 1/4" x 2 1/2" x 9" PLATE -



1 ANCHOR ASSEMBLY 3" = 1'-0"



3/8"

CL POST AND -BASE PLATE

CL 1" x 1 1/2" ---SLOTTED HOLES TYP





No.	Description		Date
1	ISSUED FOR REVIEW		2020-07-10
2	ISSUED FOR	ISSUED FOR	
	CONSTRUC		
TOWN OF WAYNESVILLE BRIDGE REPLACEMENT CHELSEA ROAD WAYNESVILLE, NC		DRYE-MCGLAMERY	D ENGINEERING, PLLC PO BOX 19558 RALEIGH, NC 27619
CONSTRUCTION			
DME F	PROJECT #:	202	20093
DRAWN BY CJH			
CHECKED BY HWD			
GAURDRAIL DETAILS			

S-502

**ELEVATION** 

HEX COUPLING NUT
WITH CENTER STOP
FOR 7/8" DIA BOLTS TYP



ERY



