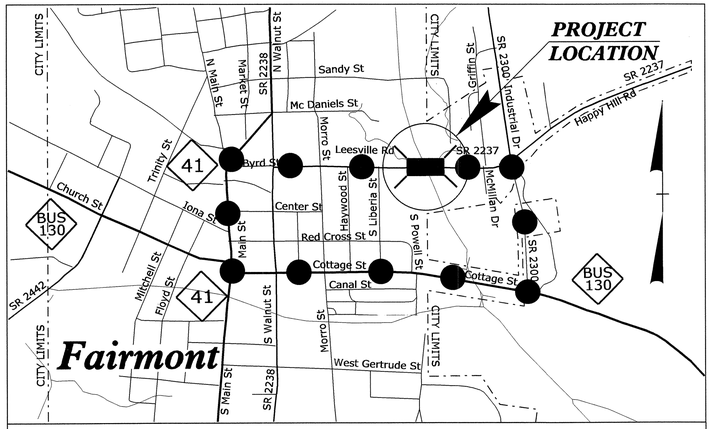
09/08/99

TIP PROJECT: B-4251

CONTRACT: C203407

See Sheet 1-A For Index of Sheets



VICINITY MAP

OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

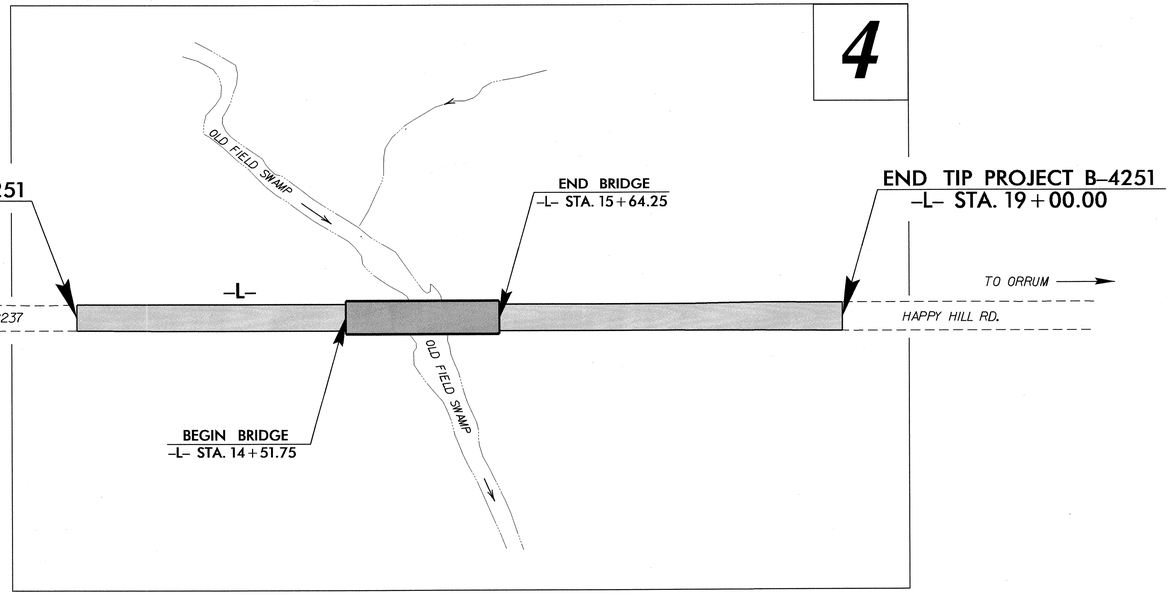
ROBESON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4251	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33593.1.1	BRZ-2237 (1)	PE
33593.2.1	BRZ-2237 (1)	R/W & UTIL
33593.3.FD1	BRZ-2237 (1)	CONSTR.

LOCATION: BRIDGE NO. 94 OVER OLD FIELD SWAMP ON SR 2237 (LEESVILLE ST./HAPPY HILL RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE



NAD 83

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2014 = 4970
ADT 2033 = 7614
DHV = 10 %
D = 60 %
T = 3 % *
V = 40 MPH
* TTST =1% DUAL =2%
FUNC CLASS =
MINOR COLLECTOR
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4251 = 0.112 MILE

LENGTH STRUCTURE TIP PROJECT B-4251 = 0.021 MILE

TOTAL LENGTH TIP PROJECT B-4251 = 0.133 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MAY 16, 2011

LETTING DATE: JULY 15, 2014

REKHA PATEL, PE
PROJECT ENGINEER

SAM ST. CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 15693 ENGINEER JERRY L. LINDSEY

SIGNATURE: 4-15-14

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16378 ENGINEER REKHA V. PATEL P.E.

4/15/14

SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

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8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4251	1-A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16378 ENGINEER REKHA V. PATEL

4-5/14

Rekha V Patel

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, WEDGING DETAIL, AND DETAIL FOR SPECIAL SHOULDER BERM CURB
2-A	DETAIL FOR STRUCTURE ANCHOR UNITS
2-B	DETAIL FOR MODIFIED CONCRETE FLUME
3-A	SUMMARIES OF EARTHWORK, GUARDRAIL, DRAINAGE, PAVEMENT REMOVAL, SHOULDER BERM GUTTER, CONCRETE PAVED DITCH, AND SPECIAL SHOULDER BERM CURB
4	PLAN/PROFILE SHEET
TMP-1 THRU TMP-3	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLAN
EC-1 THRU EC-5	EROSION CONTROL PLANS
SIGN-1	SIGNING PLAN
UC-1 THRU UC-4	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-0	CROSS-SECTION SUMMARY
X-1 THRU X-4	CROSS-SECTIONS
S-1 THRU S-20	STRUCTURE PLANS

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE TOWN OF FAIRMONT (WATER & SEWER),

DUKE ENERGY PROGRESS (POWER), AT&T (TELEPHONE) AND TIME WARNER CABLE (CABLE).

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation

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04/16/11

PROJECT REFERENCE NO.	SHEET NO.
B-4251	1-B

Note: Not to Scale

****S.U.E. = Subsurface Utility Engineering***

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Known Soil Contamination: Area or Site
- Potential Soil Contamination: Area or Site

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- Recorded U/G Power Line — P
- Designated U/G Power Line (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Booth
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- Recorded U/G Telephone Cable — T
- Designated U/G Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Recorded U/G Fiber Optics Cable — T FO
- Designated U/G Fiber Optics Cable (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- Recorded U/G Water Line — W
- Designated U/G Water Line (S.U.E.*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Satellite Dish
- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- Recorded U/G TV Cable — TV
- Designated U/G TV Cable (S.U.E.*) — TV
- Recorded U/G Fiber Optic Cable — TV FO
- Designated U/G Fiber Optic Cable (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- Recorded U/G Gas Line — G
- Designated U/G Gas Line (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4251	1C
Location and Surveys	

SURVEY CONTROL SHEET B-4251

NC GRID
NAD 83

BL

POINT	DESC.		NORTH	EAST	ELEVATION	L STATION	OFFSET
1		1	272195.1530	1967566.6090	104.20	OUTSIDE PROJECT LIMITS	
2		2	272186.7210	1967906.0880	98.83	12+41.70	18.87 RT
3		3	272185.9960	1968226.7750	98.16	15+62.32	12.37 RT
4		4	272171.9580	1968504.6370	96.57	18+40.43	20.14 RT
5		5	272168.2670	1968878.7290	102.10	OUTSIDE PROJECT LIMITS	

80 ELEVATION = 98.16
N 272249 E 1967790
L STATION 11+24.00 41 LEFT

81 ELEVATION = 98.09
N 272154 E 1968572
L STATION 10+00.00
S 86°23'53.37" E DIST 908.46

FINAL ROW MARKER IRON PIN AND CAP-E

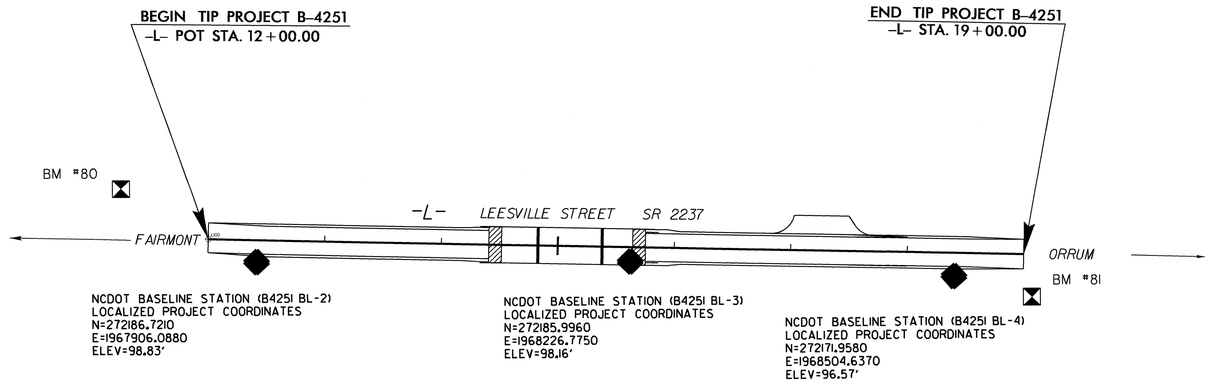
ALIGN	STATION	OFFSET	NORTH	EAST
L	12+00.00	24.51	272182.0257	1967864.2736
L	12+00.00	30.00	272176.5326	1967864.1497
L	14+10.00	30.00	272171.7992	1968074.0977
L	14+10.00	40.00	272161.8016	1968073.8727
L	16+05.00	30.00	272167.4039	1968269.0464
L	16+05.00	40.00	272157.4064	1968268.8210
L	17+60.00	24.89	272169.0157	1968424.1226
L	17+60.00	30.00	272163.9102	1968424.0075
L	12+00.00	-30.00	272236.5174	1967865.5021
L	12+00.00	-25.49	272232.0128	1967865.4006
L	14+10.00	-40.00	272241.7818	1968075.6727
L	14+10.00	-30.00	272231.7840	1968075.4477
L	16+05.00	-40.00	272237.3861	1968270.6250
L	16+05.00	-30.21	272227.6023	1968270.4044

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	272211.0330	1967664.8768
POT	20+00.00	272198.4930	1968664.6227

FINAL ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+37.00	30.00	272175.6986	1967901.1403
L	12+89.00	56.00	272148.5332	1967952.5411
L	12+95.00	72.00	272132.6274	1967948.1815
L	13+05.00	77.00	272127.1779	1967968.0637
L	13+09.00	61.00	272143.0036	1967972.4233
L	16+69.00	61.00	272134.9692	1968332.3318
L	16+74.00	77.00	272118.9806	1968336.9699
L	16+94.00	72.00	272123.4085	1968357.0776
L	16+89.00	55.00	272140.5169	1968352.4620
L	17+29.00	30.00	272164.6090	1968393.0153
L	11+92.00	-25.50	272232.1986	1967857.4027
L	11+97.00	-42.00	272248.5819	1967862.7734
L	11+77.00	-48.00	272255.0312	1967842.9137
L	11+70.00	-25.52	272232.7097	1967835.4087
L	18+04.00	-48.00	272240.8986	1968469.7544
L	17+82.00	-30.09	272223.4906	1968447.3563
L	18+15.00	-30.07	272222.7240	1968480.3474
L	16+61.94	-53.00	272249.0495	1968327.8400
L	17+00.00	-30.15	272225.3955	1968365.3784
L	16+61.98	-30.17	272226.2787	1968327.3673



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "CURRIE" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 270821.4399(ft) EASTING: 1967105.9017(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .999959000
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CURRIE" TO -L- STATION 12+00.00 IS N 28° 43' 10.14" E 1579.3754'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

NOTE: DRAWING NOT TO SCALE

NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/

THE FILES TO BE FOUND ARE AS FOLLOWS:
B4251_LS_CONTROL.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

◎ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION
SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

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6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4251	2

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 16378 ENGINEER REKHA V. PATIL

4-15-14

PAVEMENT DESIGN ENGINEER

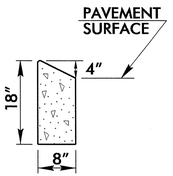
NORTH CAROLINA PROFESSIONAL SEAL 22856 ENGINEER CLARK S. MORRISON

4/16/14

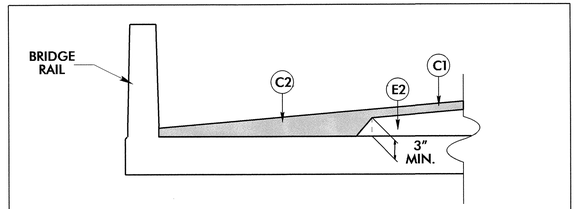
PAVEMENT SCHEDULE

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT GREATER THAN 5½" IN DEPTH OR LESS THAN 3" IN DEPTH.
R1	SPECIAL SHOULDER BERM CURB (SEE DETAIL ON THIS SHEET).
R2	SHOULDER BERM GUTTER.
T	EARTH MATERIAL.
W	VAR. DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).

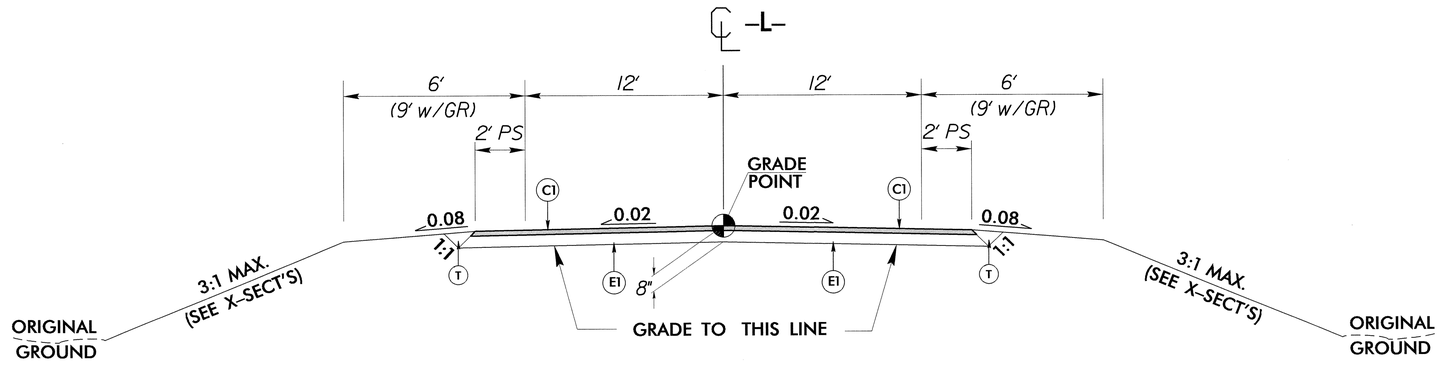
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



DETAIL FOR SPECIAL SHOULDER BERM CURB (SBC)



WEDGING DETAIL FOR WEARING SURFACE ON STRUCTURE

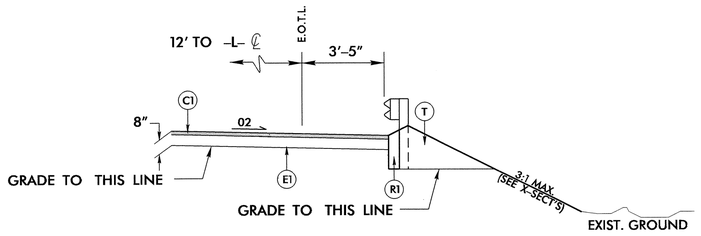


TYPICAL SECTION NO. 1

FROM -L- STA 12+00.00 TO STA. 14+51.75 (BEGIN BRIDGE)
FROM -L- STA. 15+64.25 (END BRIDGE) TO STA. 19+00.00

NOTE: TRANSITION FROM EXISTING WIDTH TO TYPICAL SECTION NO. 1
-L- STA. 12+00.00 TO -L- STA. 12+50.00

NOTE: TRANSITION FROM TYPICAL SECTION NO. 1 TO EXISTING WIDTH
-L- STA. 18+50.00 TO -L- STA. 19+00.00

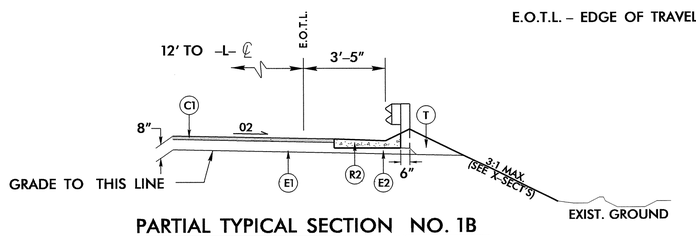


PARTIAL TYPICAL SECTION NO. 1A

USE PARTIAL TYPICAL SECTION NO. 1A
IN CONJUCTION WITH TYPICAL SECTION NO. 1
AS FOLLOWS:

-L- STA. 14+35.25 RT. TO -L- STA. 14+40.75 RT.
-L- STA. 14+35.25 LT. TO -L- STA. 14+40.75 LT. (REVERSE)

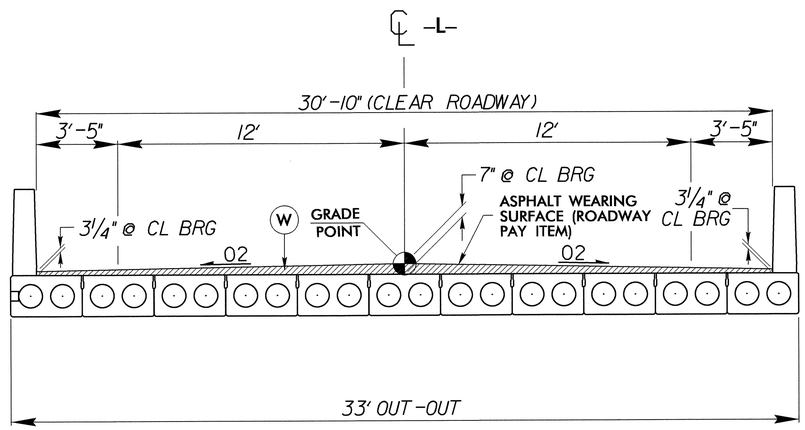
E.O.T.L. - EDGE OF TRAVEL LANE



PARTIAL TYPICAL SECTION NO. 1B

USE PARTIAL TYPICAL SECTION NO. 1B
IN CONJUCTION WITH TYPICAL SECTION NO. 1
AS FOLLOWS:

-L- STA. 15+75.25 RT. TO -L- STA. 15+82.50 RT.
-L- STA. 15+75.25 LT. TO -L- STA. 15+82.50 LT. (REVERSE)



TYPICAL SECTION ON STRUCTURE

-L- STA. 14+51.75 (BEGIN BRIDGE) TO STA. 15+64.25 (END BRIDGE)

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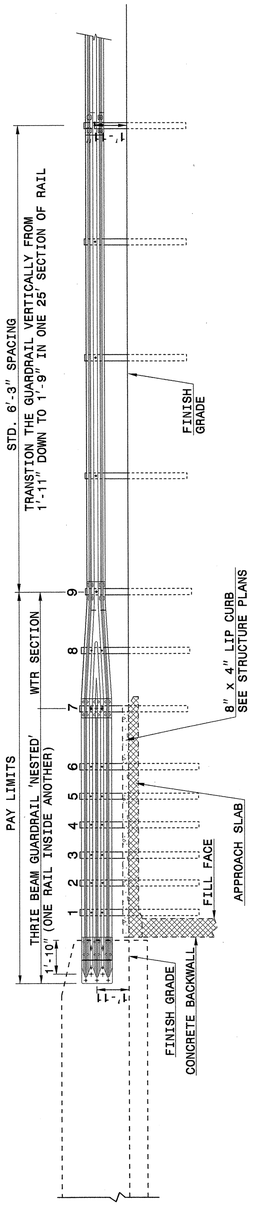
PROJECT REFERENCE NO.	SHEET NO.
B-4251	2-A

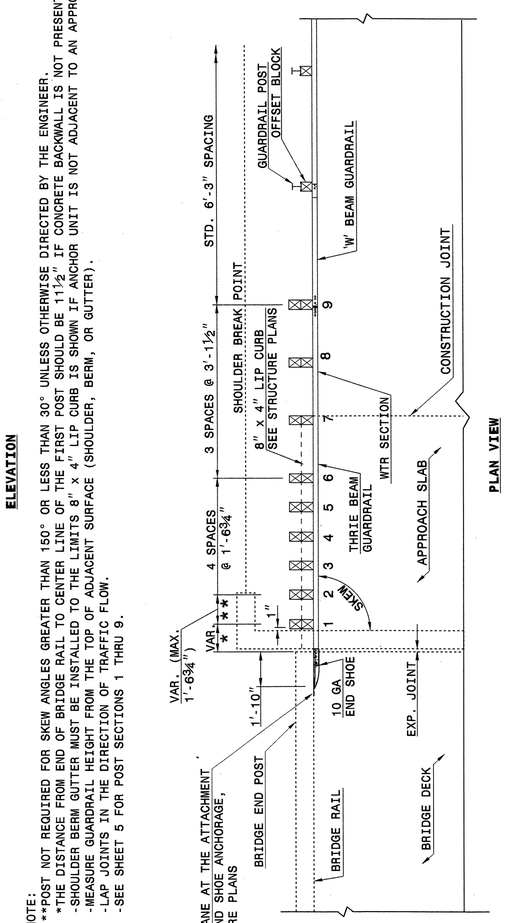
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862d03



ELEVATION



PLAN VIEW

NOTE:
**POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 1'-11½" IF CONCRETE BACKWALL IS NOT PRESENT.
-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
-SEE SHEET 5 FOR POST SECTIONS 1 THRU 9.

GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

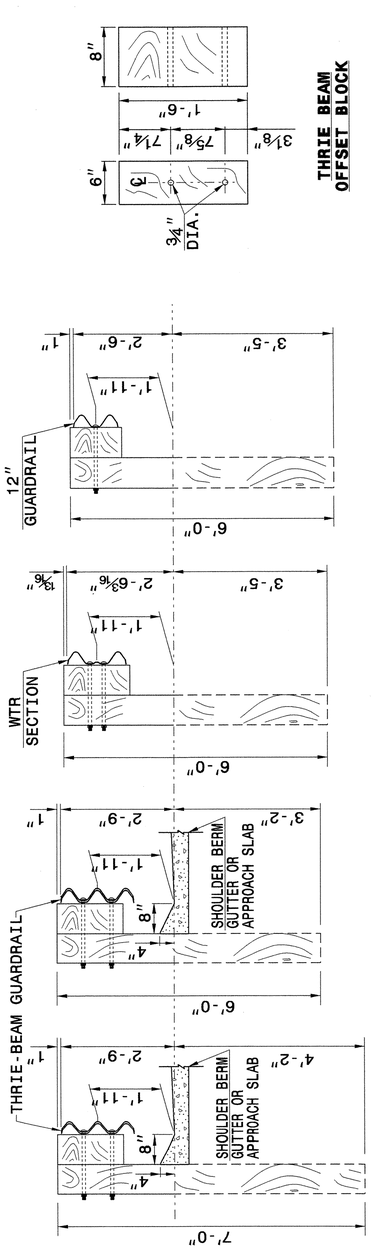
ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862d03

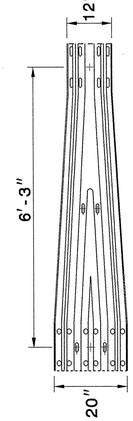
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III

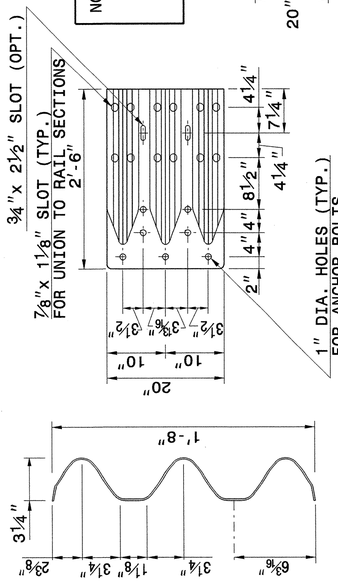
SHEET 3 OF 7
862d03



NOTE: THE MID POST AND OFFSET BLOCK OF THE WTR SECTION WILL REQUIRE SPECIAL BOLT HOLE DRILLING IN THE THRIE BEAM OFFSET BLOCK AND LINE POST.

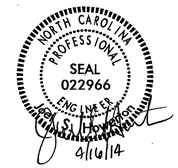


WTR SECTION
ELEVATION VIEW



END SHOE

THRIE-BEAM SECTION



CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J HOWERTON DATE: 06-22-12
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

$$$$SYSTIME$$$$
$$$$SYSTIME$$$$
$$$$USERNAME$$$$
$$$$USERNAME$$$$

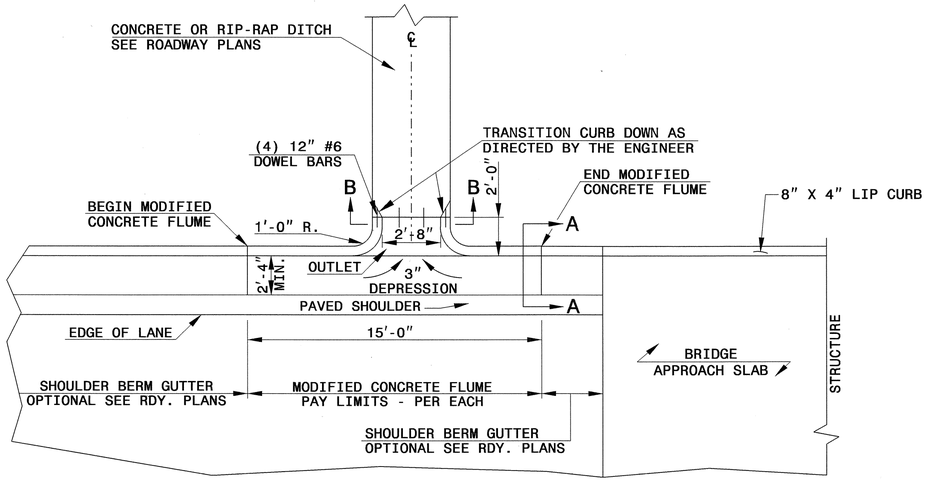
PROJECT REFERENCE NO.	SHEET NO.
B-4251	2-B

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

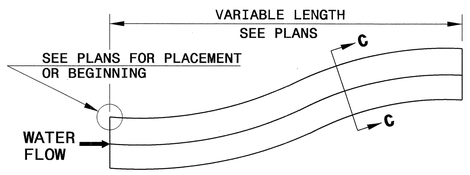
ENGLISH DETAIL DRAWING FOR

MODIFIED CONCRETE FLUME

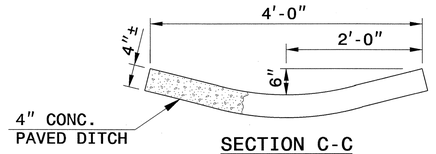
WITH CONCRETE OR RIP-RAP DITCH



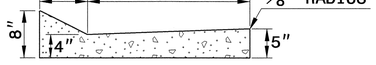
PLAN VIEW



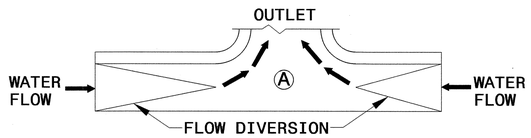
DOWNGRADE OR SAG



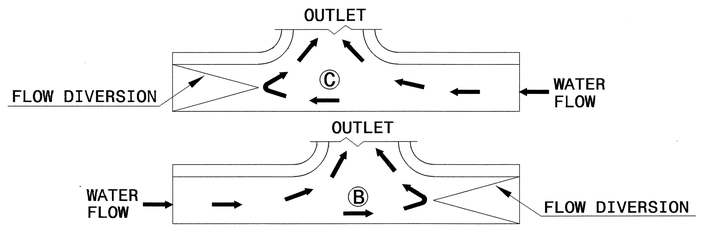
SECTION C-C



SECTION A-A

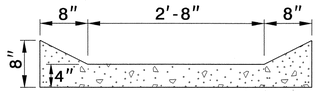


SAG

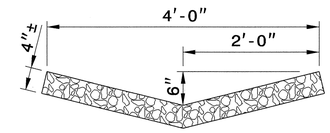


DOWN GRADE

FLOW DIVERSION EXAMPLES



SECTION B-B



RIP-RAP LINED DITCH

NOTES:

- CONSTRUCT MODIFIED CONCRETE FLUME AND SHOULDER BERM GUTTER IN ACCORDANCE WITH THIS DETAIL.
- CONSTRUCT CONCRETE DITCH IN ACCORDANCE WITH STD. DWG. NO. 850.01.
- CONSTRUCT RIP RAP LINED DITCH IN ACCORDANCE WITH THIS DETAIL, IF CALLED FOR IN PLANS.
- CONCRETE OR RIP RAP LINED DITCH SHALL BE THE TYPE AND LENGTH SPECIFIED BY THE ROADWAY PLANS. THE DITCH SHALL TERMINATE AS SHOWN ON THE PLANS. IF NO TERMINATION IS INDICATED PLACE RIP-RAP AT THE END OF THE DITCH AS INDICATED BY STD. DWG. 876.02 FOR AN 18" PIPE. TRANSITIONS FROM THE DITCH TO TERMINATION SHALL BE AS DIRECTED BY THE ENGINEER.
- MODIFICATIONS SHALL BE AS DICTATED BY SITE CONDITIONS AND DIRECTED BY THE ENGINEER.

SHEET 1 OF 1

MODFLMDTCH

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

MODIFIED CONCRETE FLUME

WITH CONCRETE OR RIP-RAP DITCH

SHEET 1 OF 1

MODFLMDTCH

CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY:	E.E. Ward	DATE:	Apr. 2002
MODIFIED BY:	E.E. Ward	DATE:	July 2004
CHECKED BY:		DATE:	
FILE SPEC.:			

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER E. E. WARD 4/10/14

12/06/07

COMPUTED BY: J. D. ELLIOTT DATE: 2/17/14
CHECKED BY: SS DATE: 3/31/14

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-4251	3-A

SUMMARY OF EARTHWORK

(IN CUBIC YARDS)

STATION	STATION	UNCL ★ EXCAV.	EMBANK. +%	BORROW	WASTE
-L- 12+00.00	-L- 14+51.75 (BB)	97	48	0	49
-L- 15+64.25 (EB)	-L- 19+00.00	171	30	0	141
SUBTOTALS:		268	78	0	190
TOTALS:		268	78	0	190
PROJECT TOTALS:					
GRAND TOTALS:		268	78	0	190
SAY:		280			

CONTIGENCY ITEMS PER GEOTECH RECOMMENDATIONS:
EST. SELECT GRANULAR MATERIAL = 400 CY
EST. UNDERCUT EXCAVATION = 300 CY

★ Note: Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing and Removal of Existing Asphalt Pavement will be paid for at the contract lump sum price for "Grading".

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

PAVEMENT REMOVAL SUMMARY ★

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD²
-L-	12+00	14+79.39	CL	779.36
-L-	15+53.28	19+00	CL	936.58
			TOTAL:	1715.94
			SAY:	1720.00

4" CONCRETE PAVED DITCH SUMMARY

SURVEY LINE	STATION	AREA	AREA (SY)
-L- LT	15+90	4.4' X 4'	1.96
-L- RT	15+90	6.3' X 4'	2.80
		TOTAL:	4.76
		SAY:	5.00

SHOULDER BERM GUTTER SUMMARY

SURVEY LINE	STATION	STATION	LENGTH (FEET)
-L- LT	15+75.25	15+82.50	7.25
-L- RT	15+75.25	15+82.50	7.25
		TOTAL:	14.50
		SAY:	15.00

SPECIAL SHOULDER BERM CURB SUMMARY

SURVEY LINE	STATION	STATION	LENGTH (FEET)
-L- LT	14+35.25	14+40.75	5.50
-L- RT	14+35.25	14+40.75	5.50
		TOTAL:	11.00
		SAY:	11.00

4/04/06

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

SUB-REGIONAL & REGIONAL LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

STATION	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE SIZE	R.C. PIPE (CLASS III) SIZE	R.C. PIPE (CLASS IV) SIZE	15" R. C. PIPE (CLASS V)	*** R. C. PIPE CULVERTS, CONTRACTOR DESIGN (CLASS V)	*** R. C. PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	ENDWALLS CU. YDS. C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. B') LIN. *FT. PER EACH (0' THRU 5.0')	LIN. *FT. 5.0' THRU 10.0' A	LIN. *FT. 10.0' AND ABOVE B	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION CATCH BASIN	DROP INLET	G.D.I. FRAME WITH TWO GRATES STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. FRAME WITH GRATE STD. 840.22	G.D.I. FRAME WITH GRATE STD. 840.24	G.D.I. (N-S.) FRAME WITH TWO GRATES STD. 840.29	G.D.I. (N-S.) FRAME WITH TWO GRATES STD. 840.24	MODIFIED CONCRETE FLUME (SEE DETAIL SHEET 2-B)	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD. 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
15+90	LT	1																																							W/CONC. PAVED DITCH
15+90	RT	2																																							W/CONC. PAVED DITCH
TOTAL																																									

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I. (N.S.)	GRATED DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS XI MOD	XI	GRAU 350 TL-3	M-350	TYPE III	CAT-1	VI MOD	BIC	AT-1	IMPACT ATTENUATOR TYPE 350 EA	G	NG	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	12+70.50	14+51.75	RT	181.25			14+51.75		3.42'	9'	162.5'		3.25'				1		1											SEE DETAIL SHEET 2-A
-L-	13+20.50	14+51.75	LT	131.25				14+51.75	3.42'	9'		112.5'		2.25'			1		1											SEE DETAIL SHEET 2-A
-L-	15+64.25	16+83.00	LT	118.75			15+64.25		3.42'	9'	81.25'		1.63'				1		1											SEE DETAIL SHEET 2-A
-L-	15+64.25	17+08.00	RT	143.75				15+64.25	3.42'	9'		106.25'		2.13'			1		1											SEE DETAIL SHEET 2-A
SUB-TOTAL				575.00													4		4											
		LESS-ANCHORS:																												
		TYPE III (4@18.75)		75																										
		GRAU 350 (4@50)		200																										
		TOTAL DEDUCTION		275																										
			TOTAL	300.00													4		4											
			SAY	312.50			EST. ADDITIONAL GUARDRAIL POST = 5 EA.																									

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8/17/99

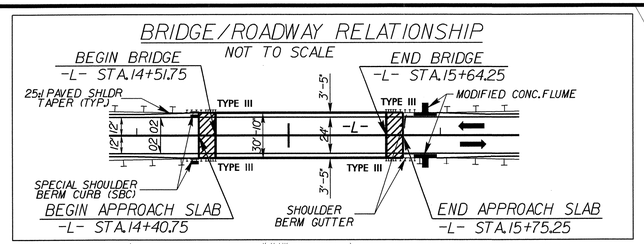
PROJECT REFERENCE NO.	SHEET NO.
B-4251	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 16378 ENGINEER TARHA V. PATEL
4-15-14

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 25253 ENGINEER STEVE LINDLEY
4-15-14

BRIDGE/ROADWAY RELATIONSHIP

NOT TO SCALE



MCF – MODIFIED CONCRETE FLUME (SEE DTL SHT 2-B)

SHOULDER BERM GUTTER NEEDED FROM:
-L- STA. 15+75.25 TO STA. 15+82.50 RT. & LT.

SPECIAL SBC NEEDED FROM:
-L- STA. 14+35.25 TO STA. 14+40.75 RT. & LT.

SEE SHEETS S-1 THRU S-20 FOR STRUCTURE PLANS

DECK DRAINS ON 6' CENTERS NEEDED FROM:
STA. 14+64 TO STA. 14+76 RT. & LT.
STA. 15+44 TO STA. 15+56 RT. & LT.

NAD 83

BEGIN TIP PROJECT B-4251
-L- STA. 12+00.00

END TIP PROJECT B-4251
-L- STA. 19+00.00

-L- POT Sta. 10+00.00

-L- POT Sta. 20+00.00

SAINT JOHN AFRICAN METHODIST

BRICK CHURCH

HTR

GRAVEL

CONC

SOIL

TO FAIRMONT

LEESVILLE ST (SR2237) 25' BST

HAPPY HILL RD 25' BST

EXISTING R/W

(D.A.T.U.R.)

TOWN OF FAIRMONT (2)

VOMINA CHAVIS (1)

MARGIE BETHEA (3)

LATISKA CHAVIS (4)

F.W. FLOYD INC. (5)

CHRISTOPHER McKEE (6)

ROBESON COUNTY (7)

SALLY K PITTMAN (8)

TERETHA ADAMS

WILLIS G. THOMPSON

HEIRS OF DOCKERY MOODY

JESSE THOMPSON

VINSON RENFROW

JOHNNY RENFROW

VINSON RENFRO

MARY RENFRO

TOMMY F. BASS

F.W. FLOYD INC.

ISFD

ISBLKD

ABAND.

WOODS

POND

OLD FIELD SWAMP

BEGIN BRIDGE
-L- STA. 14+51.75

END BRIDGE
-L- STA. 15+64.25

TIE TO EXIST. DRIVE

CL.II RIP RAP W/ CL."B" ON TOP (STRUCTURE PAY ITEM)

SHOULDER BERM GUTTER

SPECIAL SHOULDER BERM CURB

MCF 1

MCF 2

BM #80

BM #81

BL-1

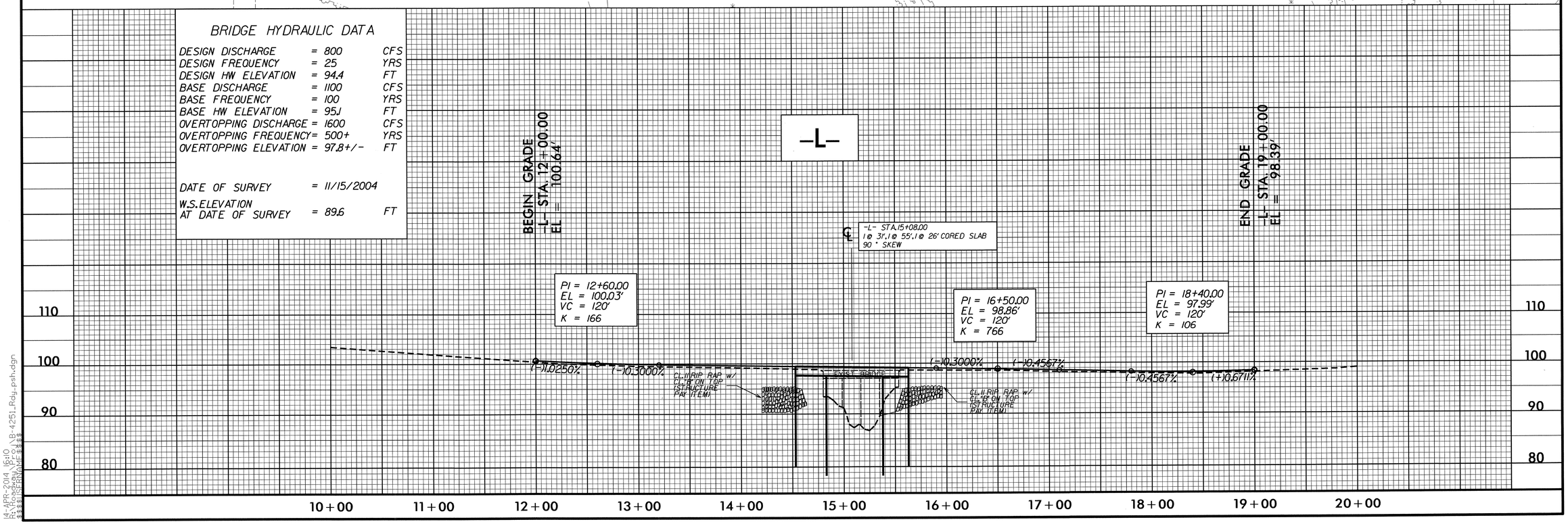
BL-2

BL-3

BL-4

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 800	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 94.4	FT
BASE DISCHARGE	= 1100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 95.1	FT
OVERTOPPING DISCHARGE	= 1600	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 97.8+/-	FT
DATE OF SURVEY	= 11/15/2004	
W.S. ELEVATION AT DATE OF SURVEY	= 89.6	FT



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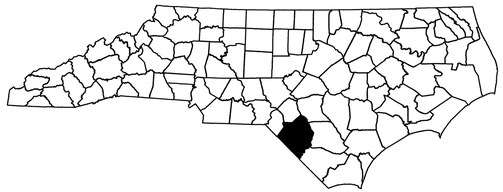
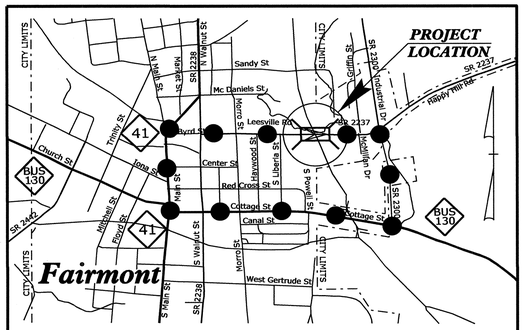
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROBESON COUNTY





VICINITY MAP

OFF-SITE DETOUR ROUTE

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	SPECIAL SIGN DESIGN(S)
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING AND DETAIL

SHEET NO.
TMP-1

B-4251

TIP PROJECT:

LOCATION: ***REPLACEMENT OF BRIDGE No.94 OVER OLD FIELD SWAMP ON SR 2237 (LEESVILLE ST./HAPPY HILL RD.)***

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — *STATE TRAFFIC MANAGEMENT ENGINEER*
J. S. KITE, P.E. — *TRAFFIC CONTROL PROJECT ENGINEER*
DON PARKER — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
SHEENA GREEN — *TRAFFIC CONTROL DESIGN ENGINEER*

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

APPROVED: John S. Kite
DATE: March 20, 2014

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022104 JOHN S. KITE, III

19-MAR-2014 10:01
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sngreen AT TE2581

PROJ. REFERENCE NO.	SHEET NO.
B-4251	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

EXIST. PVMT.

NORTH ARROW

PROPOSED PVMT.

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

TEMPORARY SIGNING

STATIONARY SIGN

TEMPORARY PAVEMENT MARKING

N/A

APPROVED: DATE: 3/20/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE JR.

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS & LEGEND

19-MAR-2014 10:01
\\dot\dfsr001\Groups\TIPProjects-B\B4251\Traffic\TrafficControl\TCP\B4251_TC_TMP_01.dgn
sngreen
AT TE26387

PROJ. REFERENCE NO.	SHEET NO.
B-4251	TMP-1B

TRANSPORTATION OPERATIONS

CONSTRUCTION

REMOVE AND REPLACE EXISTING BRIDGE ALONG THE EXISTING ROADWAY ALIGNMENT AS SHOWN IN THE CONSTRUCTION PLANS.

TMP DESIGN PARAMETERS

TRAFFIC WILL BE DETOURED OFFSITE DURING THE CONSTRUCTION PERIOD.

THE OFFSITE DETOUR WILL INCLUDE SR 2300, BUS 130, NC 41. (SEE SHEET TMP-3).

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OF REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

A) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

B) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

C) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

E) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R-11-2 ATTACHED OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

F) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

APPROVED: [signature] DATE: 3/20/14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

19-MAR-2014 10:02
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sngreen AT TE26587

PROJ. REFERENCE NO.	SHEET NO.
B-4251	TMP-2

SIGN NUMBER: SP14017
TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 3′-6″
HEIGHT: 2′-0″
TOTAL AREA: 1584.0 Sq.Ft.

BORDER TYPE: INSET
RECESS: 0.38″
WIDTH: 0.63″
RADII: 1.5″

NO. Z BARS:
LENGTH:

BACKG COLOR: Fluorescent Orange
COPY COLOR: White

SYMBOL	X	Y	WID	HT

MAT'L: 0.080″ ALUMINUM
0.079″ COMPOSITE

USE NOTES: 1,2

1. Legend and border shall be direct applied black non-reflective sheeting.
2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

DESIGN BY: EEW
PROJECT ID: B-4251

CHECKED BY:
DIV: 6

DATE: Feb 07, 2014

BORDER
R=1.5″
TH=0.63″
IN=0.38″

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

																										Series/Size Text Length
		L	E	E	S	V	I	L	L	E																C 2000
	173.8	3.3	3.4	3.2	3.3	3.8	1.8	3.3	3.3	2.6	93.4															27.7
		S	T	R	E	E	T																			C 2000
	178.1	3.2	3.3	3.7	3.4	3	2.6	97.7																		19.1

FILENAME: B-4251 Guidsign

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: [signature] DATE: 3/19/14

SEAL

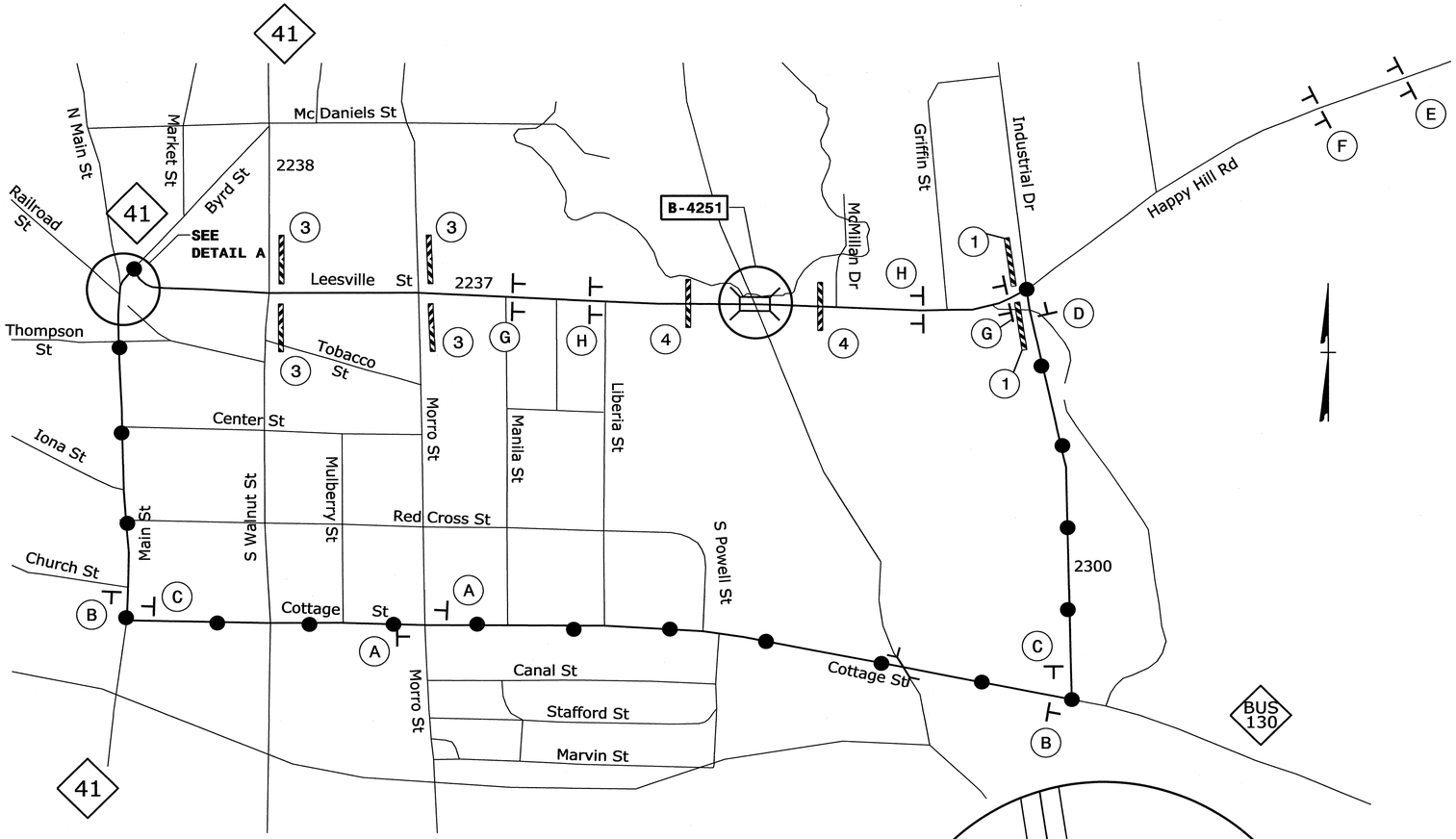
NORTH CAROLINA PROFESSIONAL SEAL 028387 ENGINEER AYMAN I. ALQUDWAH

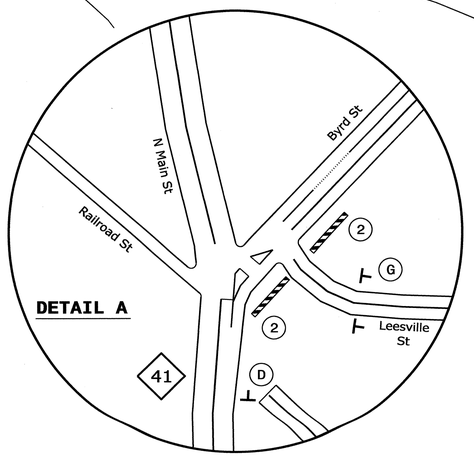
DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

SPECIAL SIGN DESIGN

19-MAR-2014 10:02
\\dot\dfs\ro\Div\proj\TIPProjects-B\B425\Traffic\TrafficControl\TCP\B425i_TC_TMP_02.dgn
sngreen AT TE26387

PROJ. REFERENCE NO.	SHEET NO.
B-4251	TMP-3





PHASING

STEP 1: - INSTALL OFF-SITE DETOUR ROUTE SIGNS AND ASSEMBLIES FOR THE CLOSING OF SR 2237 (LEESVILLE ST., -L-).

- USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9, CLOSE SR 2237 (LEESVILLE ST., -L-) TO THRU TRAFFIC.

STEP 2: - REMOVE THE EXISTING BRIDGE AND CONSTRUCT THE PROPOSED BRIDGE AND ROADWAY UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE AND PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON SR 2237 (LEESVILLE ST., -L-) FROM STATION 12+00 +/- -L- TO STATION 19+00 +/- -L-. (SEE CONSTRUCTION PLANS AND PAVEMENT MARKING PLAN).

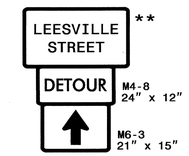
STEP 3: - REMOVE ALL TRAFFIC CONTROL DEVICES, SIGNING AND DETOUR ROUTE SIGNING.

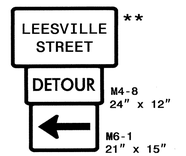
- OPEN TO FINAL TRAFFIC PATTERN.

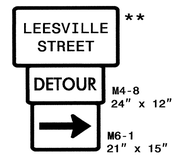
NOTES:

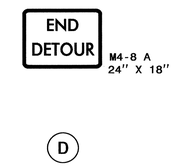
- ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE.
- ALL DETOUR SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE NOTED.

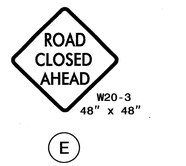
** SEE TMP-2 FOR SIGN DESIGN.

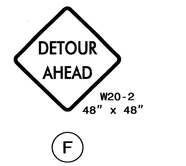


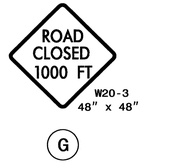


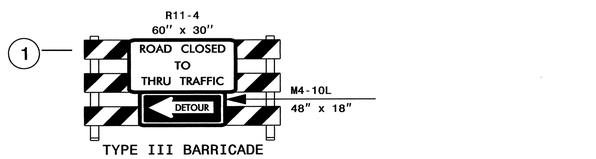


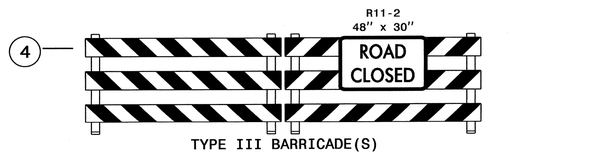












APPROVED: DATE: 3/20/14

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022104 JOHN S. KITE JR.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TEMPORARY TRAFFIC CONTROL PHASING AND DETOUR

20-MAR-2014 11:36
V:\Projects\B-4251\prod\TIPProjects-B\B425I\TrafficTrafficControl\TCP\B425I_TC_TMP_03.dgn
sngreen
AI TE26587

T.I.P.: B-4251

CONTRACT: C203407

TIP NO.	SHEET NO.
B-4251	PMP-1

APPROVED: [signature]

DATE: 4-14-14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 028387 ENGINEER AYMAN I. ALQUDWAH

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN

ROBESON COUNTY

LOCATION: BRIDGE NO.94 OVER OLD FIELD SWAMP ON SR 2237 (LEESVILLE ST/HAPPY HILL RD)

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - TEMPORARY AND PERMANENT
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
	THERMOPLASTIC(4", 120 MILS)
TI	YELLOW DOUBLE CENTER
	THERMOPLASTIC(4", 90 MILS)
TA	WHITE EDGELINE
	MARKERS
	PERMANENT RAISED PAVEMENT MARKERS
MA	YELLOW & YELLOW

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL	THERMOPLASTIC	RAISED

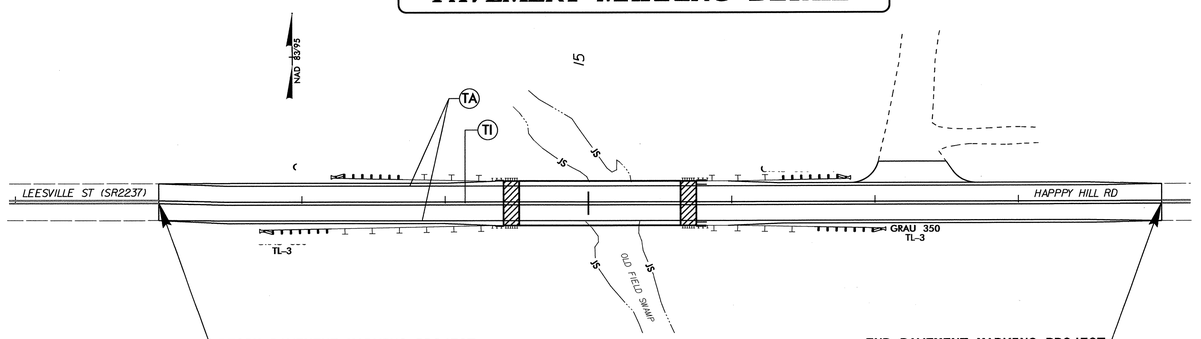
B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

E) MARKERS ARE TO BE PLACED ACCORDING TO THE ROADWAY STANDARD DRAWINGS.

PAVEMENT MARKING DETAIL



PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

AYMAN ALQUDWAH, P.E.	SIGNING & DELINEATION REGIONAL ENGINEER
ERIC E WARD	SIGNING & DELINEATION PROJECT DESIGN ENGINEER

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE,SCHEDULE SHEET AND PAVEMENT MARKING DETAIL

14-APR-2014 12:54
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ericward AT TE27491

PROJECT: B-4251

TIP No.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4251	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

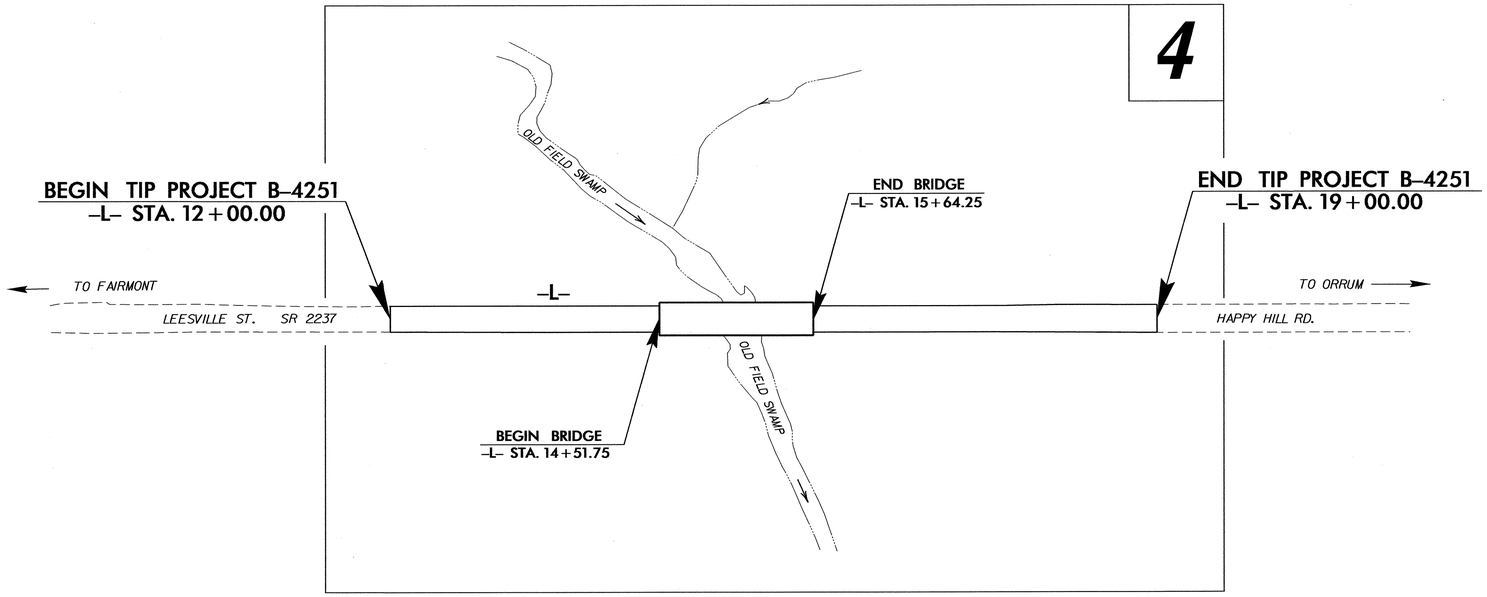
PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

ROBESON COUNTY

LOCATION: BRIDGE NO. 94 OVER OLD FIELD SWAMP
ON SR 2237 (LEESVILLE ST./HAPPY HILL RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

NAD 83



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	EW CFW
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALE

0
PLANS
0
PROFILE (HORIZONTAL)
0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2012 STANDARD SPECIFICATIONS

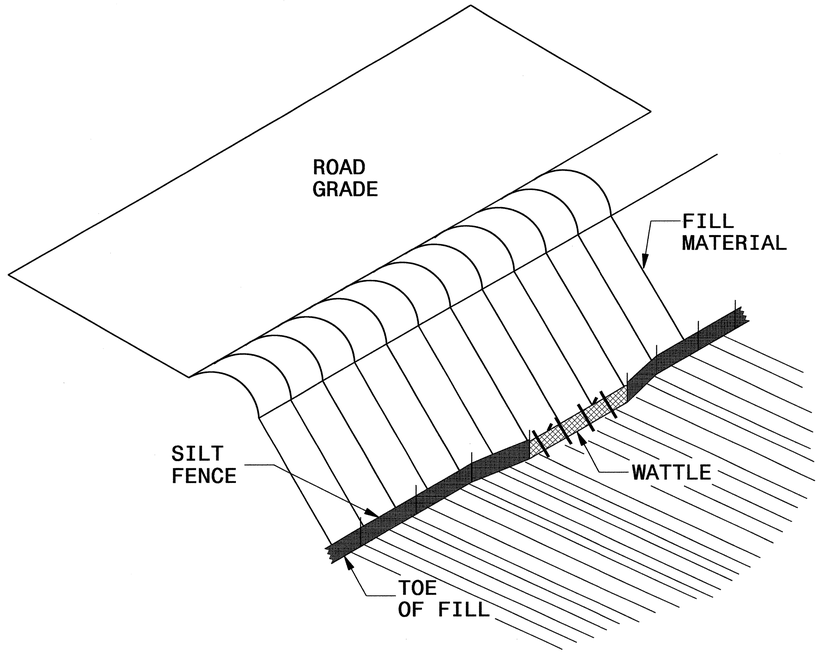
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

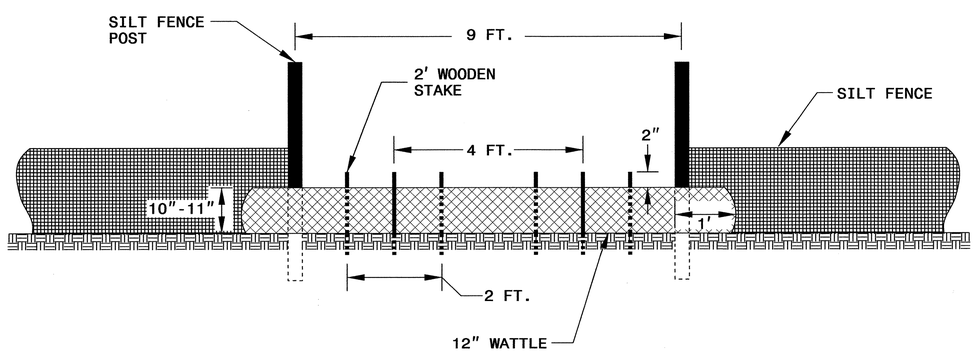
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO.	SHEET NO.
B-4251	EC-2
R/W SHEET NO.	
~~NCDOT HIGHWAY DESIGN ENGINEER~~	~~HYDRAULICS ENGINEER~~



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

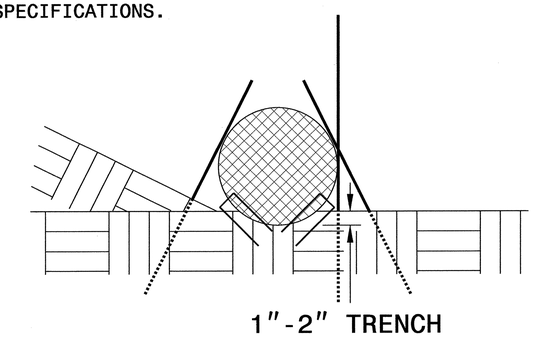
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

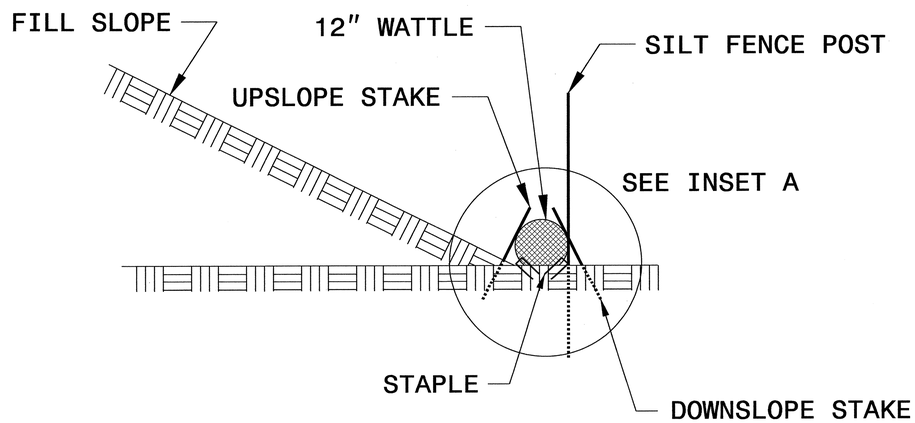
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A





SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4251	EC-3
[redacted] ENGINEER	[redacted] ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	*STABILIZATION TIME*	*TIMEFRAME EXCEPTIONS*
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

8/17/99

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

DECK DRAINS ON 6' CENTERS NEEDED FROM:
STA. 14+64 TO STA. 14+76 RT. & LT.
STA. 15+44 TO STA. 15+56 RT. & LT.

SHOULDER BERM GUTTER NEEDED FROM:
–L– STA. 15+75.25 TO STA. 15+82.44 RT. & LT.

MCF – MODIFIED CONCRETE FLUME (SEE DTL SHT 2–B)

PROJECT REFERENCE NO.	SHEET NO.
B-4251	EC-4/CONST.4

R/W SHEET NO.

~~ROADWAY DESIGN ENGINEER~~ ~~HYDRAULICS ENGINEER~~

NAD 83

BEGIN TIP PROJECT B-4251
–L– STA. 12+00.00

END TIP PROJECT B-4251
–L– STA. 19+00.00

BEGIN BRIDGE
–L– STA. 14+51.75

END BRIDGE
–L– STA. 15+64.25

–L– POT Sta. 10+00.00

–L– POT Sta. 20+00.00

SAINT JOHN AFRICAN METHODIST

BRICK CHURCH

HTR

GRAVEL

CONC

SOIL

TO FAIRMONT

LEESVILLE ST (SR2237) 25' BST

S 88°42'30.4" E HAPPY HILL RD 25' BST

(D.A.T.U.R.)

48" RCP

EXISTING R/W

2 PS

CFW

PUE

SPECIAL SHOULDER BERM CURB

SHOULDER BERM GUTTER

OLD OLD SHAMP

OLD SHAMP

OLD BRIDGE CONC. SEAT'S

TYPE DI

TYPE MI

GRAU 350

ISMTL BLDG

WOODS

ISFD

ISBLKD

ABAND.

POND

LIFT STATION

12" CMP SSEW

TIE TO EXIST. DRIVE

R=20'

50' TAPER RT & LT

50' TAPER LT & RT

EX. SSE

EX. SSW

12" RCP

18" RCP

24" RCP

CONC

GRAVEL

ABANDONED ROAD

OLD MOUNTAIN DR

OLD SHAMP

OLD BRICK WALL

1 VOMINA CHAVIS

2 TOWN OF FAIRMONT

3 MARGIE BETHEA

4 LATISKA CHAVIS

5 F.W. FLOYD INC.

6 CHRISTOPHER McKEE

7 ROBESON COUNTY

8 SALLY K PITTMAN

SALLY K PITTMAN

*WILLIS G. THOMPSON

HEIRS OF DOCKERY MOODY

JESSE THOMPSON

TERETHA ADAMS

VINSON RENFROW

JOHNNY RENFROW

MARY RENFRO

TOMMY F. BASS

F.W. FLOYD INC.

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 800	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 94.4	FT
BASE DISCHARGE	= 1100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 95.1	FT
OVERTOPPING DISCHARGE	= 1600	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 97.8+/–	FT

DATE OF SURVEY = 11/15/2004

W.S. ELEVATION AT DATE OF SURVEY = 89.6 FT

BEGIN GRADE
–L– STA. 12+00.00
EL = 100.64'

END GRADE
–L– STA. 19+00.00
EL = 98.39'

–L– STA. 15+08.00
1 @ 37.1' @ 55.7' @ 26' CORED SLAB
90° SKEW

EXIST. BRIDGE

CL II RIP RAP w/ GEOTEXTILE FOR (STRUCTURE PAY ITEM)

CL II RIP RAP w/ GEOTEXTILE FOR (STRUCTURE PAY ITEM)

27-MAR-2014 07:29 D:\projects\B-4251_EC_psh.dgn
R:\Environmental\Groups\Hydraulics\Projects\B-4251_EC_psh.dgn
(jwalker) (ENV_2003)

PROJECT REFERENCE NO.	SHEET NO.
B-4251	EC-5/CONST.4
R/W SHEET NO.	
~~RIGHT OF WAY ENGINEER~~	~~HYDRAULICS ENGINEER~~

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

DECK DRAINS ON 6' CENTERS NEEDED FROM:
STA. 14+64 TO STA. 14+76 RT. & LT.
STA. 15+44 TO STA. 15+56 RT. & LT.

SHOULDER BERM GUTTER NEEDED FROM:
-L- STA. 15+75.25 TO STA. 15+82.44 RT. & LT.

MCF – MODIFIED CONCRETE FLUME (SEE DTL SHT 2-B)

NAD 83

BEGIN TIP PROJECT B-4251
-L- STA. 12+00.00

END TIP PROJECT B-4251
-L- STA. 19+00.00

BEGIN BRIDGE
-L- STA. 14+51.75

END BRIDGE
-L- STA. 15+64.25

-L- POT Sta. 10+00.00

-L- POT Sta. 20+00.00

SAINT JOHN AFRICAN METHODIST

BRICK CHURCH

HTR

TO FAIRMONT

LEESVILLE ST (SR2237) 25' BST

HAPPY HILL RD 25' BST

1 VOMINA CHAVIS

2 TOWN OF FAIRMONT

3 MARGIE BETHEA

4 LATISKA CHAVIS

5 F.W. FLOYD INC.

6 CHRISTOPHER McKEE

7 ROBESON COUNTY

8 SALLY K PITTMAN

SALLY K PITTMAN

WILLIS G. THOMPSON

HEIRS OF DOCKERY MOODY

JESSE THOMPSON

TERETHA ADAMS

VINSON RENFROW

JOHNNY RENFROW

MARY RENFRO

TOMMY F. BASS

ISMTL BLDG

TIE TO EXIST. DRIVE

SPECIAL SHOULDER BERM CURB

SHOULDER BERM GUTTER

OLD FIELD SWAMP

ROBERSON ROAD

DEW FORD MONUMENT DR

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 800	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 94.4	FT
BASE DISCHARGE	= 1100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 95.1	FT
OVERTOPPING DISCHARGE	= 1600	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 97.8+/-	FT
DATE OF SURVEY	= 11/15/2004	
W.S. ELEVATION AT DATE OF SURVEY	= 89.6	FT

BEGIN GRADE
-L- STA. 12+00.00
EL = 100.64'

END GRADE
-L- STA. 19+00.00
EL = 98.39'

-L- STA. 15+08.00
1 @ 31'-0" & 1 @ 55'-1" @ 26" CORED SLAB
30° SKEW

EXIST. BRIDGE

CL. II RIP RAP w/ GEOTEXTILE ON TOP STRUCTURE PAY ITEM

CL. II RIP RAP w/ GEOTEXTILE ON TOP STRUCTURE PAY ITEM

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User: cmeyer
Dataset: RENV25969

T.I.P.: B-4251

CONTRACT: C203407

TIP NO.	SHEET NO.
B-4251	SIGN-1

APPROVED: Ayman Alqudwah

DATE: 4-14-14

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 028387 ENGINEER AYMAN I. ALQUDWAH

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
ROBESON COUNTY
LOCATION: BRIDGE NO.94 OVER OLD FIELD SWAMP ON SR 2237 (LEESVILLE ST/HAPPY HILL RD)

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	4	EA.
4158000000	907	DISPOSAL OF SIGN SYSTEM, WOOD	2	EA.

PROJECT NOTES

1	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
2	DISPOSAL OF SIGN SYSTEM, WOOD

GENERAL NOTES

. SIGNS FURNISHED BY STATE

. ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.

. SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING. SEE TRAFFIC CONTROL PLANS

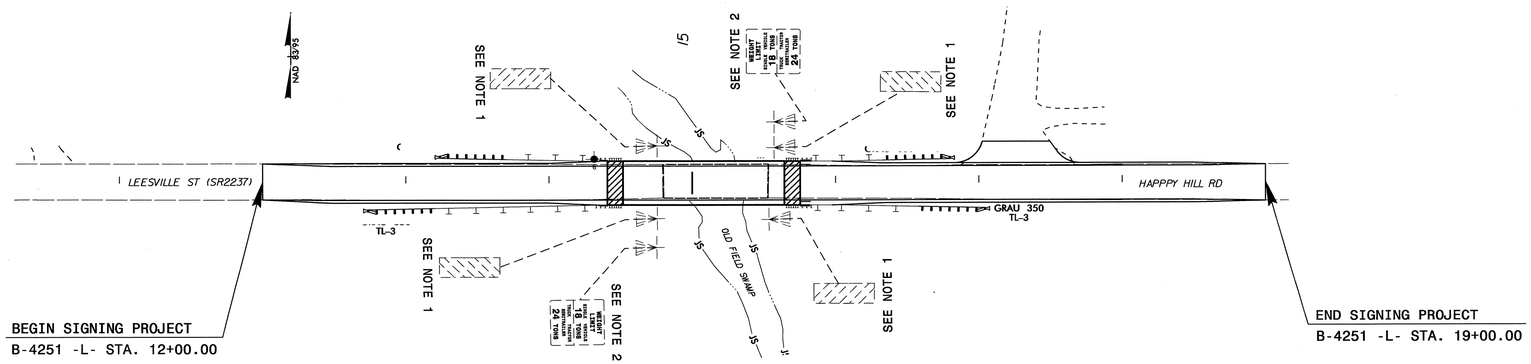
. WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER

. ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.

. THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

. SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

SIGN DETAIL



PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

AYMAN ALQUDWAH, P.E.	SIGNING & DELINEATION REGIONAL ENGINEER
ERIC E WARD	SIGNING & DELINEATION PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET, SIGN DESIGN, NOTES

14-APR-2014 10:32
P:\TIPProjects\B4251\Traffic\Signing\CADD\Signing Layout Plans\B4251_base_sgn.dgn
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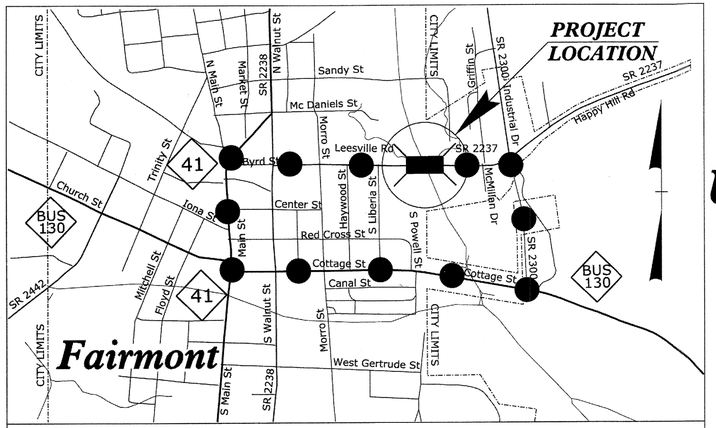
AT 1E27491

09/08/99

TIP PROJECT: B-4251

CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4251	UC-1	7

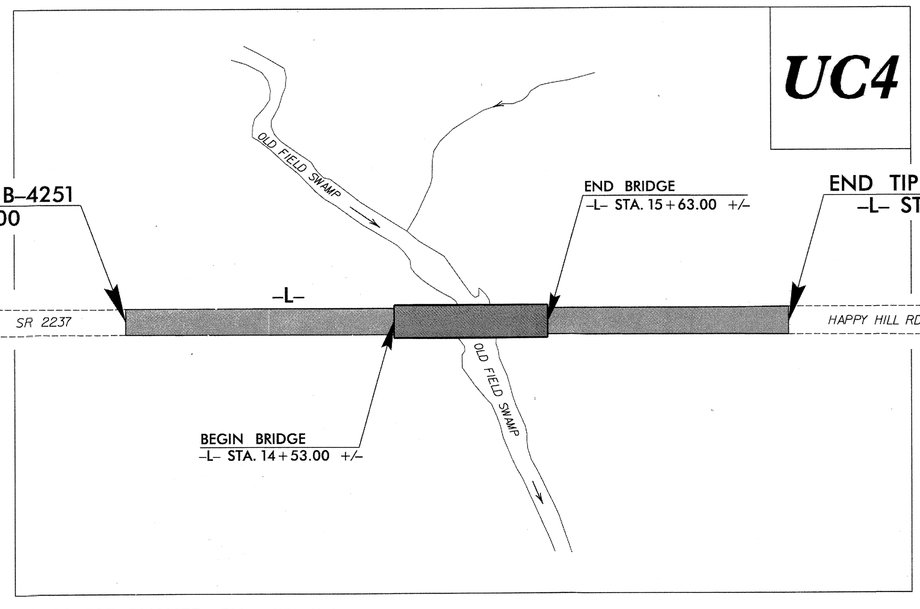
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33593.1.1	BRZ-2237 (1)	PE
33593.2.1	BRZ-2237 (1)	R/W & UTIL

ROBESON COUNTY
UTILITY CONSTRUCTION PLANS

LOCATION: BRIDGE NO. 94 OVER OLD FIELD SWAMP AND APPROACHES ON SR 2237 (LEESVILLE ST./HAPPY HILL RD.)

TYPE OF WORK: WATER AND SANITARY SEWER LINE RELOCATION

NAD 83



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF FAIRMONT.

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2013 = 4831
ADT 2033 = 7614
DHV = 10 %
D = 60 %
T = 3 % *
V = 40 MPH
* TTST = 1% DUAL = 2%
FUNC CLASS = MINOR COLLECTOR
SUBREGIONAL TIER

INDEX OF SHEETS

UC-1	TITLE SHEET
UC-2	SYMBOL SHEET
UC-3	PROJECT NOTES
UC-3a	DETAIL SHEET
UC-3b	DETAIL SHEET
UC-3c	DETAIL SHEET
UC-4	PLAN & PROFILE SHEET

UTILITY OWNER

TOWN OF FAIRMONT	6" WATER LINE
TOWN OF FAIRMONT	4" SEWER FORCEMAIN & 8" GRAVITY SEWER

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MAY 16, 2011

LETTING DATE: JULY 15, 2014

REKHA PATEL, PE
PROJECT ENGINEER

SAM ST. CLAIR
PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

PLANS PREPARED BY:

RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE, SUITE 350
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO. F-0112
1-888-521-4455 OR 919-878-9560

NORTH CAROLINA PROFESSIONAL SEAL 32634 ENGINEER BRYAN M. BAILEY

3/27/14

SIGNATURE P.E.

UTILITY DESIGN ENGINEER

3/27/2014
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bbadey

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4251	UC-2

NORTH CAROLINA PROFESSIONAL SEAL 32634 ENGINEER BRYAN M. BADEL 3/20/14

UTILITY CONSTRUCTION PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

- Water Line (Sized as Shown) — 12" WL
- 11¼ Degree Bend
- 22½ Degree Bend
- 45 Degree Bend
- 90 Degree Bend
- Plug
- Tee
- Cross
- Reducer
- Gate Valve — GV
- Butterfly Valve — BV
- Tapping Valve — TGV
- Line Stop — LS
- Line Stop with Bypass — LS/BP
- Blow Off — BO
- Fire Hydrant — PFH
- Relocate Fire Hydrant — REH
- Remove Fire Hydrant — REM FH
- Water Meter — PWM
- Relocate Water Meter — RWM
- Remove Water Meter — REM WM
- Water Pump Station — PS(W)
- RPZ Backflow Preventer — PRPZ
- DCV Backflow Preventer — PBFP
- Relocate RPZ Backflow Preventer — RRPZ
- Relocate DCV Backflow Preventer — RBFP

PROPOSED SEWER SYMBOLS

- Gravity Sewer Line (Sized as Shown) — 12" SS
- Force Main Sewer Line (Sized as Shown) — 12" FSS
- Manhole (Sized per Note)
- Sewer Pump Station — PS(SS)

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

- Power Pole
- Telephone Pole
- Joint Use Pole
- Telephone Pedestal — TEL PED
- Utility Line by Others (Type as Shown) — PROP O/H POW LINES
- Trenchless Installation — 12" TL INSTALL
- Encasement by Open Cut — 24" ENCAS BY OC
- Encasement — 24" ENCASEMENT
- Thrust Block
- Air Release Valve — AR
- Utility Vault — UV
- Concrete Pier — CP
- Steel Pier — SP
- Plan Note — NOTE
- Pay Item Note — PAY ITEM

EXISTING UTILITIES SYMBOLS

- Power Pole
- Telephone Pole
- Joint Use Pole
- Utility Pole
- Utility Pole with Base
- H-Frame Pole
- Power Transmission Line Tower
- Water Manhole
- Power Manhole
- Telephone Manhole
- Sanitary Sewer Manhole
- Hand Hole for Cable — HH
- Power Transformer — PT
- Telephone Pedestal — T
- CATV Pedestal — C
- Gas Valve
- Gas Meter
- Located Miscellaneous Utility Object
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

- *Underground Power Line — P
- *Underground Telephone Cable — T
- *Underground Telephone Conduit — TC
- *Underground Fiber Optics Telephone Cable — T FO
- *Underground TV Cable — TV
- *Underground Fiber Optics TV Cable — TV FO
- *Underground Gas Pipeline — G
- Aboveground Gas Pipeline — A/G Gas
- *Underground Water Line — W
- Aboveground Water Line — A/G Water
- *Underground Gravity Sanitary Sewer Line — SS
- Aboveground Gravity Sanitary Sewer Line — A/G Sanitary Sewer
- *Underground SS Forced Main Line — FSS
- Underground Unknown Utility Line — ?UTL
- SUE Test Hole
- Water Meter
- Water Valve
- Fire Hydrant
- Sanitary Sewer Cleanout

*For Existing Utilities

- Utility Line Drawn from Record (Type as Shown) — W
- Designated Utility Line (Type as Shown) — W

PLANS PREPARED BY :

RK&K

RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

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PROJECT REFERENCE NO.	SHEET NO.
B-4251	UC-3

NORTH CAROLINA PROFESSIONAL SEAL 32637 ENGINEER BRYAN M. BADEN 3/20/14

UTILITY CONSTRUCTION PLANS

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2012.

2. THE EXISTING UTILITIES BELONG TO THE TOWN OF FAIRMONT.

3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, DIVISION OF ENVIRONMENTAL HEALTH. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER QUALITY. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.

4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.

5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITONAL COST TO THE DEPARTMENT.

7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.

8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.

9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

PROJECT SPECIFIC NOTES:

1. PROPOSED WATER LINE SHALL BE PVC SDR 21 OR HDPE DR-9 200 PSI.

2. PROPOSED GRAVITY SEWER LINE SHALL BE PVC SDR 35.

3. VALVES ON WATER MAINS 6 INCHES IN DIAMETER OR LARGER SHALL BE GATE VALVES, UNLESS OTHERWISE NOTED ON THE UTILITY CONSTRUCTION PLANS.

4. CONTRACTOR SHALL CONNECT ALL WATER LINES AND SERVICE CONNECTIONS USING NECESSARY FITTINGS.

5. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE PATH DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.

6. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL. IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.

PLANS PREPARED BY :
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900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

3/10/2014
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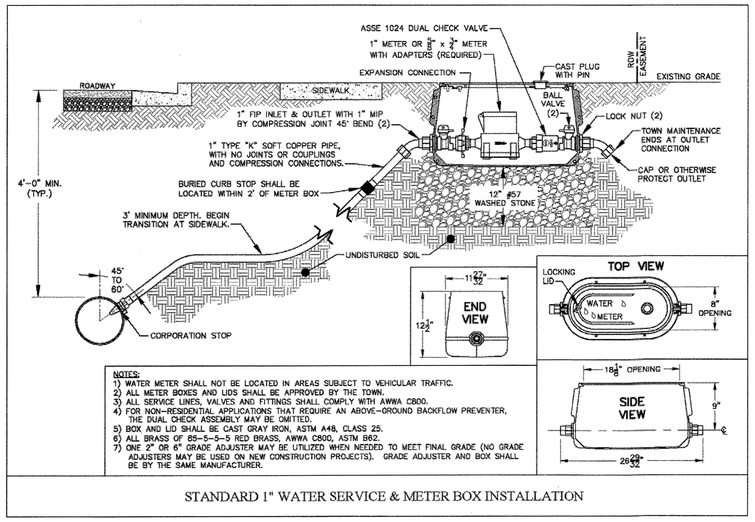
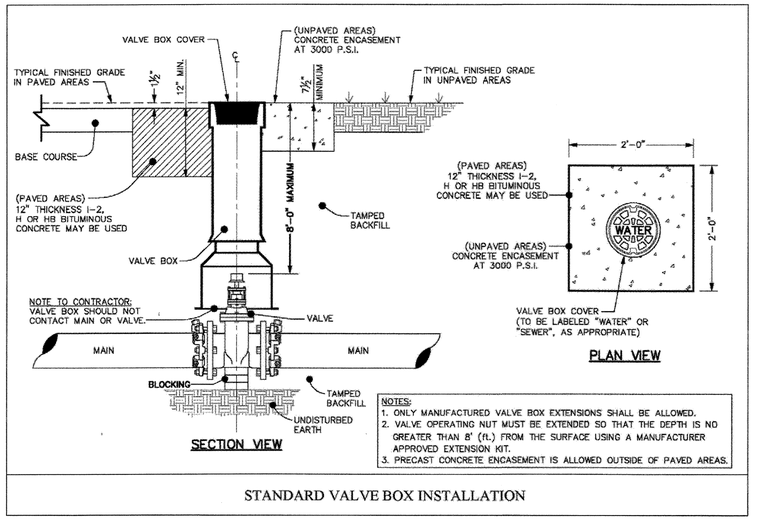
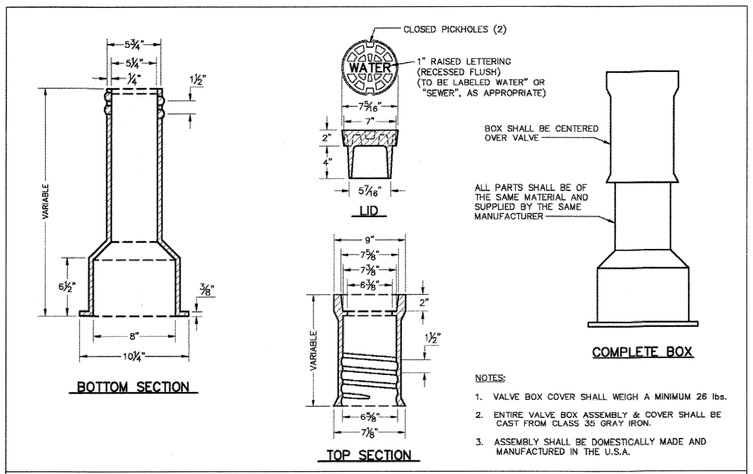
UTILITY CONSTRUCTION PLANS



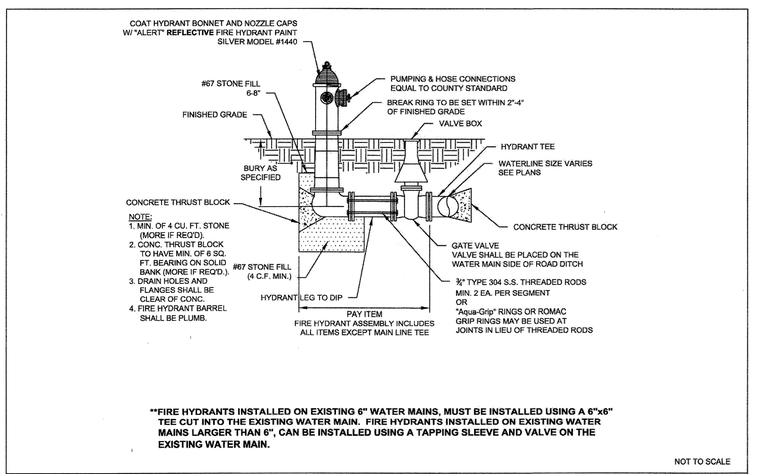
STANDARD 1" WATER SERVICE & METER BOX INSTALLATION



STANDARD VALVE BOX INSTALLATION



STANDARD VALVE BOX INSTALLATION



****FIRE HYDRANTS INSTALLED ON EXISTING 6" WATER MAINS, MUST BE INSTALLED USING A 6"x6" TEE CUT INTO THE EXISTING WATER MAIN. FIRE HYDRANTS INSTALLED ON EXISTING WATER MAINS LARGER THAN 6", CAN BE INSTALLED USING A TAPPING SLEEVE AND VALVE ON THE EXISTING WATER MAIN.**

NOT TO SCALE

FIRE HYDRANT ASSEMBLY

PLANS PREPARED BY :

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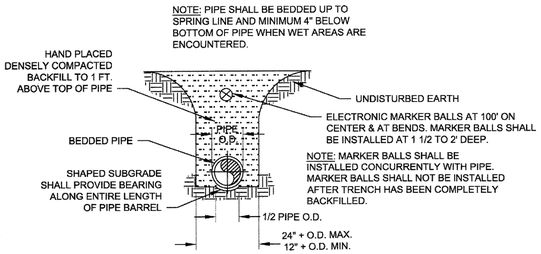
5/14/99

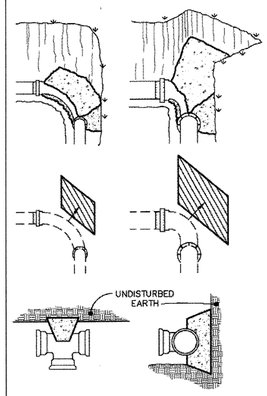
PROJECT REFERENCE NO.	SHEET NO.
B-4251	UC-3B

NORTH CAROLINA PROFESSIONAL SEAL 32634 ENGINEER BRYAN M. BADDY 5/21/14

UTILITY CONSTRUCTION PLANS



BEDDING FOR WATER PIPE



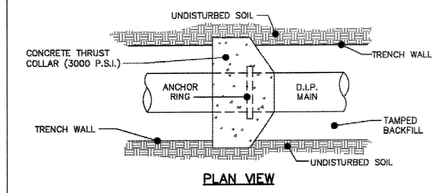
MINIMUM CONCRETE BLOCKING (C.Y.) *					
NOMINAL PIPE DIAMETER INCHES	TEES & DEAD ENDS	90° BEND	45° BEND	22½° BEND	11¼° BEND
4	⅓	⅓	⅓	⅓	⅓
6	⅓	⅓	⅓	⅓	⅓
8	⅓	½	⅓	⅓	⅓
10	⅔	¾	½	⅓	⅓
12	¾	1.0	⅔	⅓	⅓
14	1.0	1½	¾	½	⅓
16	1⅓	2.0	1.0	½	⅓
18	1⅔	2⅓	1⅓	⅔	⅓
20	2.0	3.0	1⅔	¾	½
24	3.0	4⅓	2⅓	1⅓	⅔

NOTES:

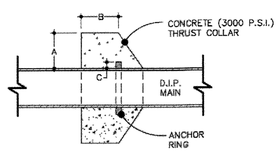
1) FITTING SHALL BE WRAPPED WITH A MINIMUM 4 MIL PLASTIC.
2) NO CONCRETE SHALL COVER BOLTS OR GLANDS.

* CONCRETE SHALL BE 3000 P.S.I. MIX.

STANDARD REACTION BLOCKING

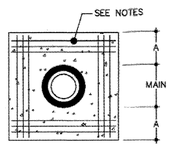


PLAN VIEW



SECTION VIEW

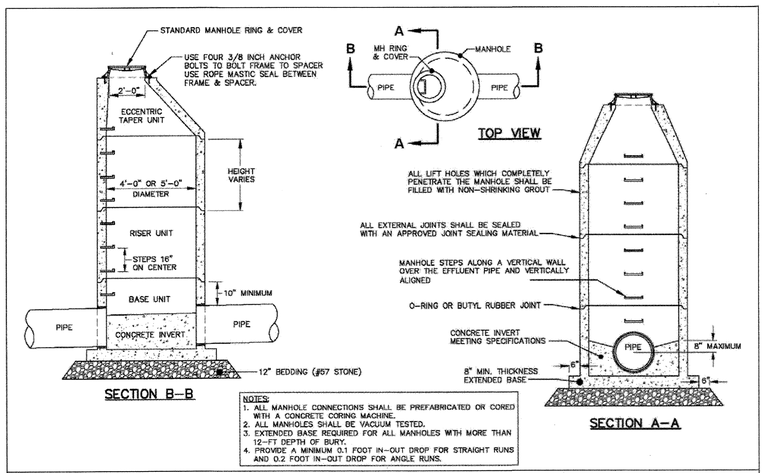
SCHEDULE				
PIPE DIAMETER	CONCRETE THRUST COLLAR		ANCHOR RING	RINGS REQUIRED
	A	B	C	
6", 8", 12"	1'-0"	1'-0"	2"	ONE
16"	1'-4"	1'-0"	2"	ONE
20"	1'-4"	1'-0"	3"	ONE
24"	1'-4"	1'-0"	3"	TWO
30"	1'-4"	1'-2"	4"	TWO
36"	1'-4"	1'-4"	4"	TWO



REINFORCING CROSS SECTION

NOTES:
6" TO 16" MAINS = 12-NO. 7 BARS
20" TO 36" MAINS = 12-NO. 8 BARS
BARS PLACED AS SHOWN

STANDARD THRUST COLLAR INSTALLATION



NOTES:
1. ALL MANHOLE CONNECTIONS SHALL BE PREFABRICATED OR CORED WITH A CONCRETE CORING MACHINE.
2. ALL MANHOLES SHALL BE VACUUM TESTED.
3. EXTENDED BASE REQUIRED FOR ALL MANHOLES WITH MORE THAN 12-FT DEPTH OF BURY.
4. PROVIDE A MINIMUM 0.1 FOOT IN-OUT DROP FOR STRAIGHT RUNS AND 0.2 FOOT IN-OUT DROP FOR ANGLE RUNS.

STANDARD PRECAST CONCRETE MANHOLE

PLANS PREPARED BY :

RK&K

RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

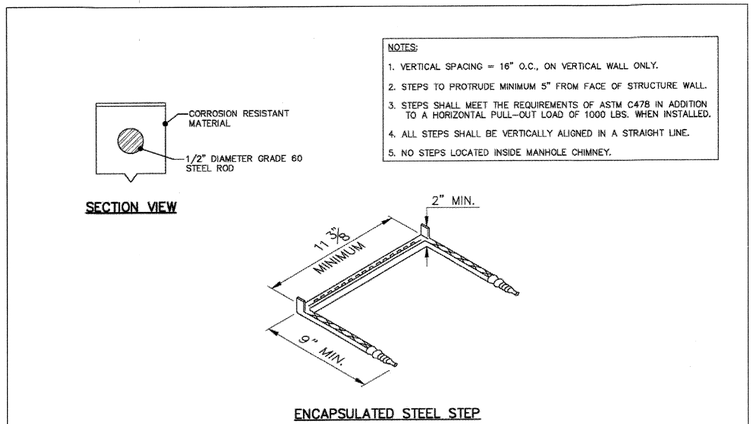
3/10/2014
\Utilities\Rdu_Utl\P-o\B-4251_ut_dtl_UC3b_psh.dgn
bbaggett

5/14/99

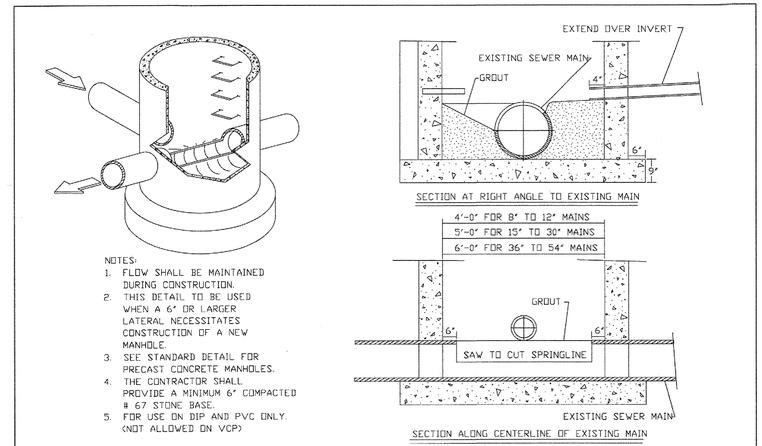
PROJECT REFERENCE NO.	SHEET NO.
B-4251	UC-3C

NORTH CAROLINA PROFESSIONAL SEAL 32634 ENGINEER BRYAN M. BADER 3/21/14

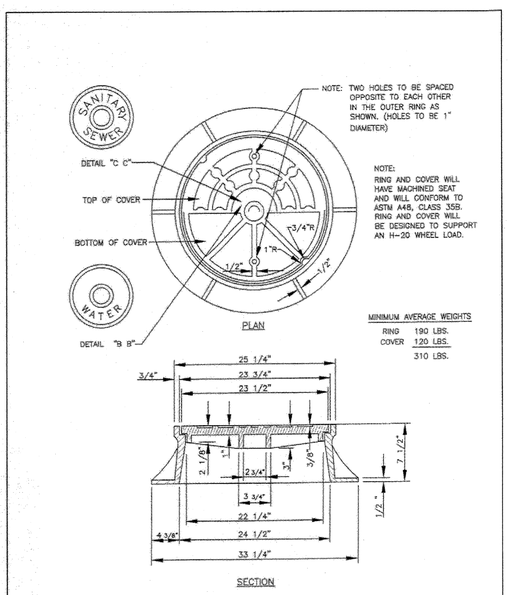
UTILITY CONSTRUCTION PLANS



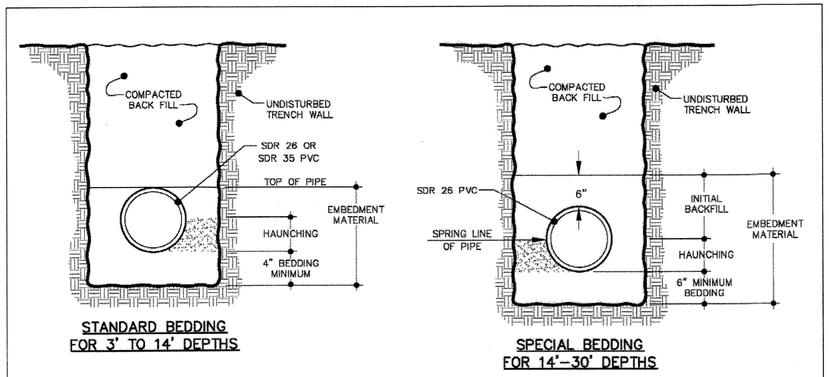
MANHOLE STEPS



MANHOLE INSTALLATION OVER EXISTING SEWER MAIN



MANHOLE RING & COVER



BEDDING FOR PVC SANITARY SEWER PIPE

PLANS PREPARED BY :

RK&K

RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

PROJECT REFERENCE NO.	SHEET NO.
B-4251	UC-4
R/W SHEET NO.	

NORTH CAROLINA PROFESSIONAL SEAL 32634 ENGINEER BRYAN M. BAILEY 4/16/2014

UTILITY CONSTRUCTION PLANS

BRIDGE/ROADWAY RELATIONSHIP

NOT TO SCALE

BEGIN BRIDGE
-L- STA. 14+53.00 +/-

END BRIDGE
-L- STA. 15+63.00 +/-

25d PAVED SHLDR TAPER (TYP.)

TYPE III

3'-5'

12'

10'2

30'-10"

24'

BEGIN APPROACH SLAB
-L- STA. 14+42.00 +/-

END APPROACH SLAB
-L- STA. 15+74.00 +/-

NOTE:

1. CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF EXISTING SEWER FORCE MAIN PRIOR TO PLACEMENT OF RIP RAP

NAD 83

300' OF TRENCHLESS INSTALLATION OF 8" HDPE DR-9 PIPE -W1- LINE

PLUG EXISTING MANHOLE INLET

154' OF 6" WATER PIPE PVC SDR 21 -W1-

ABANDON UTILITY MANHOLE

ABANDON 77' OF 8" UTILITY PIPE

56' OF 8" SANITARY GRAVITY SEWER PVC SDR 35 -S1-

BEGIN TIP PROJECT B-4251
-L- STA. 12+00.00

END TIP PROJECT B-4251
-L- STA. 19+00.00

TIE TO EXISTING WATER LINE USING 1 - 6" DI 22 1/2° BEND WITH THRUST COLLAR. ROTATE FITTING AS NECESSARY.
STA. 10+00 BEGIN -W1- LINE
STA. 12+15 -L- LINE RT. 15'

BEGIN BRIDGE
-L- STA. 14+51.75

END BRIDGE
-L- STA. 15+64.25

2.1 FEET OF UTILITY MANHOLE WALL, 4' DIA

4' DIA. UTILITY MANHOLE 'A'

RECONNECT WATER METER

96' OF 6" WATER PIPE PVC SDR 21 -W1-

TIE TO EXISTING WATER LINE USING 1 - 6" DI 22 1/2° BEND WITH THRUST COLLAR. ROTATE FITTING AS NECESSARY.
STA. 15+50 END -W1- LINE
STA. 17+60 -L- LINE RT. 15'

1 - 6" DI 22 1/2° BEND

1-6" DI 22 1/2° BEND

1- 6" VALVE
STA. 10+39 -W1- LINE

BEGIN DIRECTIONAL BORE
STA. 11+54 -W1- LINE

END DIRECTIONAL BORE
STA. 14+54 -W1- LINE

1- 6" VALVE
STA. 15+05 -W1- LINE

FIRE HYDRANT

REMOVE HYDRANT

2 - 6" DI 22 1/2° BEND

SAINT JOHN AFRICAN METHODIST EPISCOPAL CHURCH
DB 1200 PG 370

TOWN OF FAIRMONT
DB 1408 PG 203

CHRISTOPHER McKEE
DB 1806 PG 503

WILLIS C. THOMPSON
DB 131 PG 66
PB 4 PG 151

HEIRS OF DOCKERY WOODY
DB 106 PG 240
PB 4 PG 151

SALLY K PITTMAN
DB 440 PG 268

JESSE THOMPSON
DB 141 PG 226
PB 4 PG 151

VOMINA CHAVIS
DB 455 PG 83

MARGIE BELL CHEEK
DB 1026 PG 534

LATISKA CHAVIS
DB 1460 PG 672

F.W. FLOYD INC.
DB 1709 PG 110

TOMMY F. BASS
DB 1391 PG 263

F.W. FLOYD INC.
DB 800 PG 83

VINSON RENFROW
DB 172 PG 239
PB 6 PG 75

JOHNNY RENFROW
DB 181 PG 38
PB 6 PG 75

MARY RENFROW
DB 625 PG 233
PB 6 PG 75

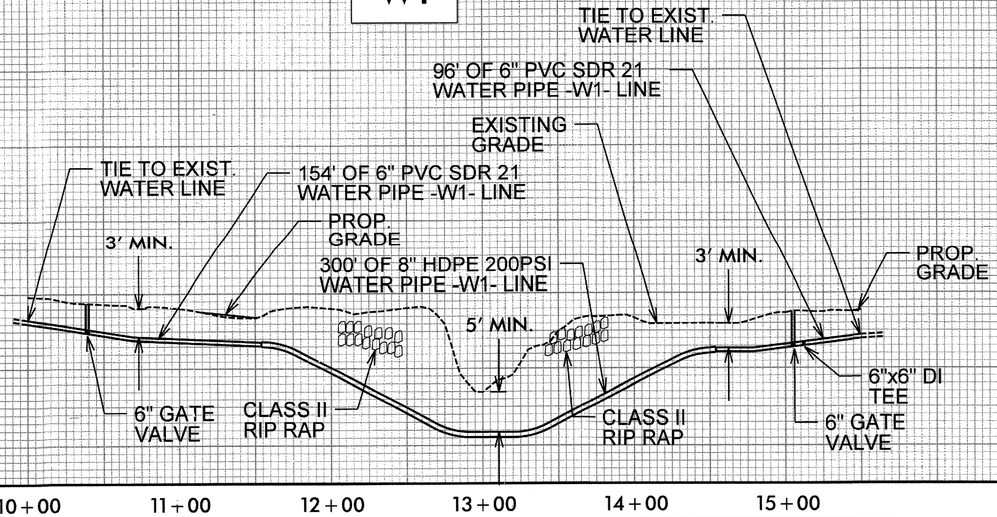
ISMTL BLDG

LEESVILLE ST (SR2237) 25' BST

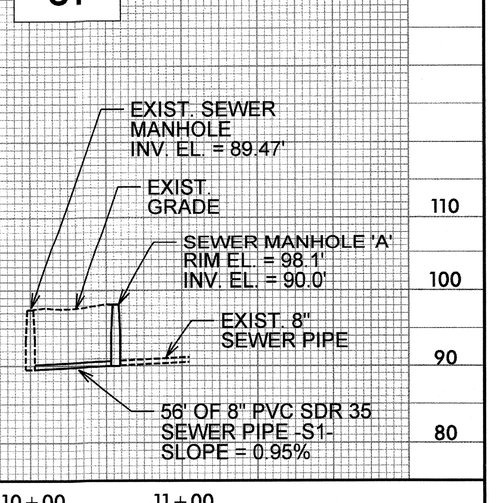
HAPPY HILL RD 25' BST

LIBERIA ST

-W1-



-S1-



REVISIONS

8/17/99

4/16/2014
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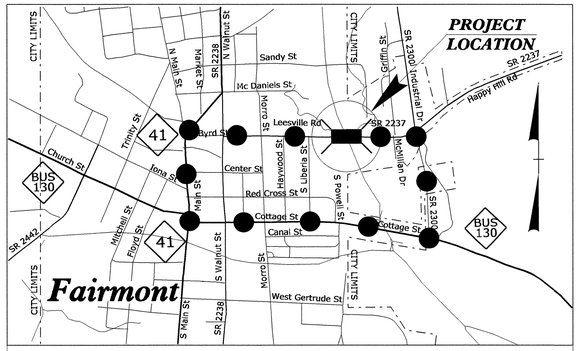
bbadell

09/08/99

TIP PROJECT: B-4251

T.I.P. NO.	SHEET NO.
B-4251	UO-1



VICINITY MAP

OFFSITE DETOUR

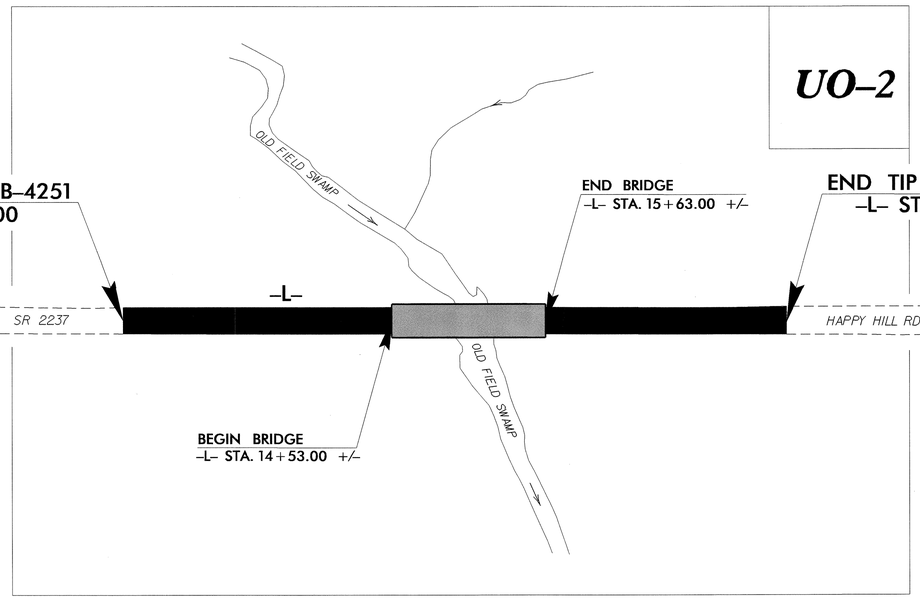
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES BY OTHERS PLANS
ROBERSON COUNTY

LOCATION: BRIDGE NO.94 OVER OLD FIELD SWAMP AND APPROACHED ON SR 2237 (LEESVILLE ST./HAPPY MILL RD.)

TYPE OF WORK: UTILITIES RELOCATION

NAD 83



GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITY BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT

(A) Power : Duke Energy Progress
(B) Telephone : AT&T
(C) Cable : Time Warner Cable

PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING
1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Ron.B.Wilkins, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Jong-Tae Yoon, P.E. UTILITIES PROJECT DESIGNER

PROJECT REFERENCE NO.	SHEET NO.
B-4251	U0-2

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

NAD 83

DIRECTIONAL BORE

TEMPORARY POLE

-L- POT Sta. 10+00.00

-T- POT Sta. 20+00.00

LEESVILLE ST (SR2237) 25' BST

TO FAIRMONT

S 88° 42' 30.4" E

HAPPY HILL RD

JS NORMAT

OLD FIELD SWAMP

OLD BRIDGE CONC. SEAT'S

72' CHL 35BW SS LIFT STATION

UBERIA ST

LYNNON ST

POND

WOODS

GRAVEL

CONC

SOIL

PUE

REM

GRAV 350 TL-3

PROP U/G TEL CABLES

PROP O/H POW & CATV LINES

TEMP O/H POW LINES

TYPE III

12" RCP

48" RCP

36" CHLK

PROJ. REFERENCE NO.	SHEET NO.
B-4251	X-0

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Approximate quantities only. Unclassified excavation, fine grading, clearing and grubbing, and removal of existing Asphalt pavement will be paid for at the lump sum price for "Grading".

CROSS-SECTION SUMMARY

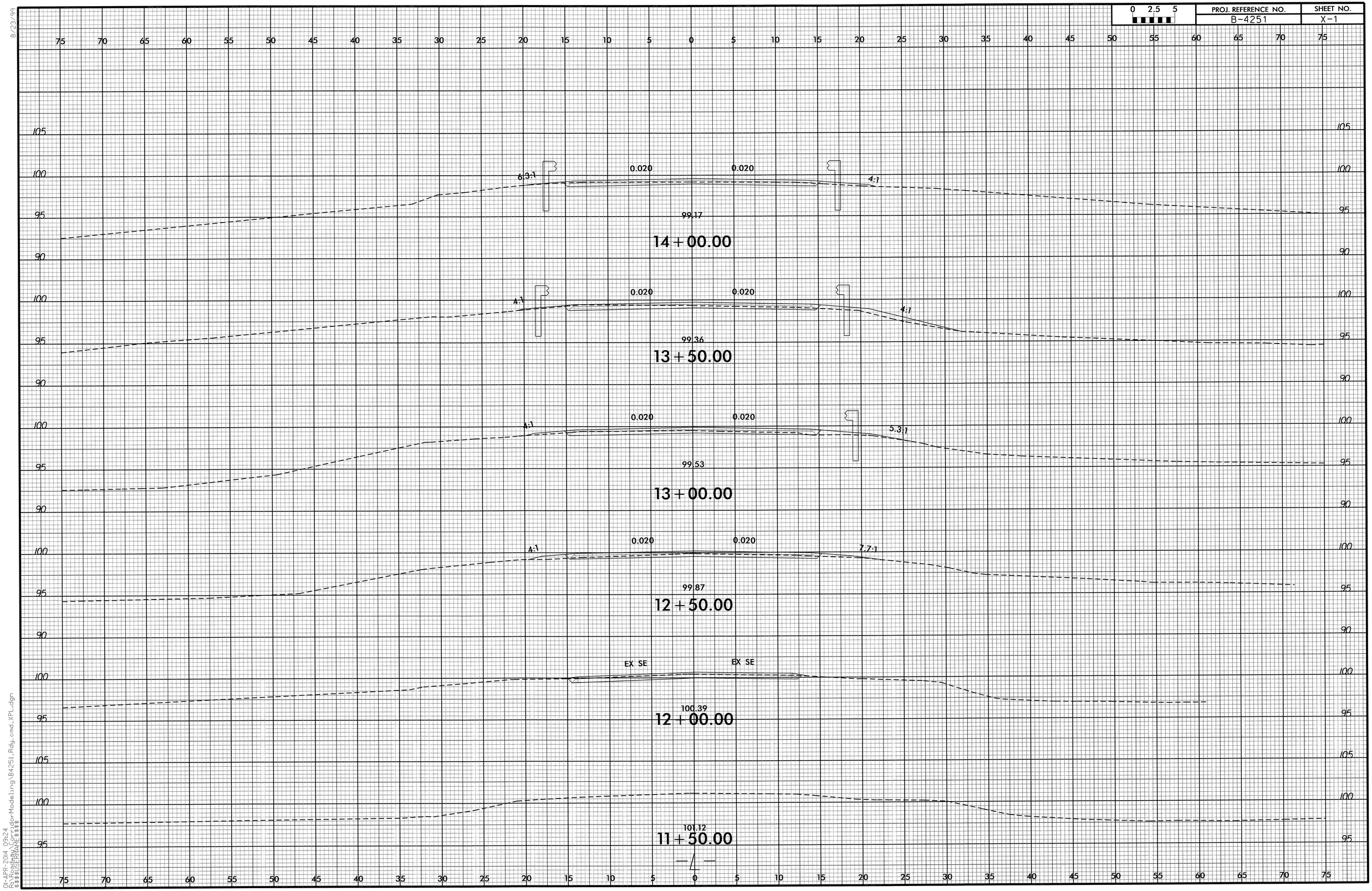
NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
12+00.00	0	0
12+50.00	11	2
13+00.00	21	6
13+50.00	23	10
14+00.00	24	8
14+51.75	18	12

Station L	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
15+64.25	0	0
16+00.00	17	5
16+50.00	34	2
17+00.00	35	2
17+50.00	33	1
18+00.00	24	6
18+50.00	18	6
19+00.00	10	2

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4251	X-1



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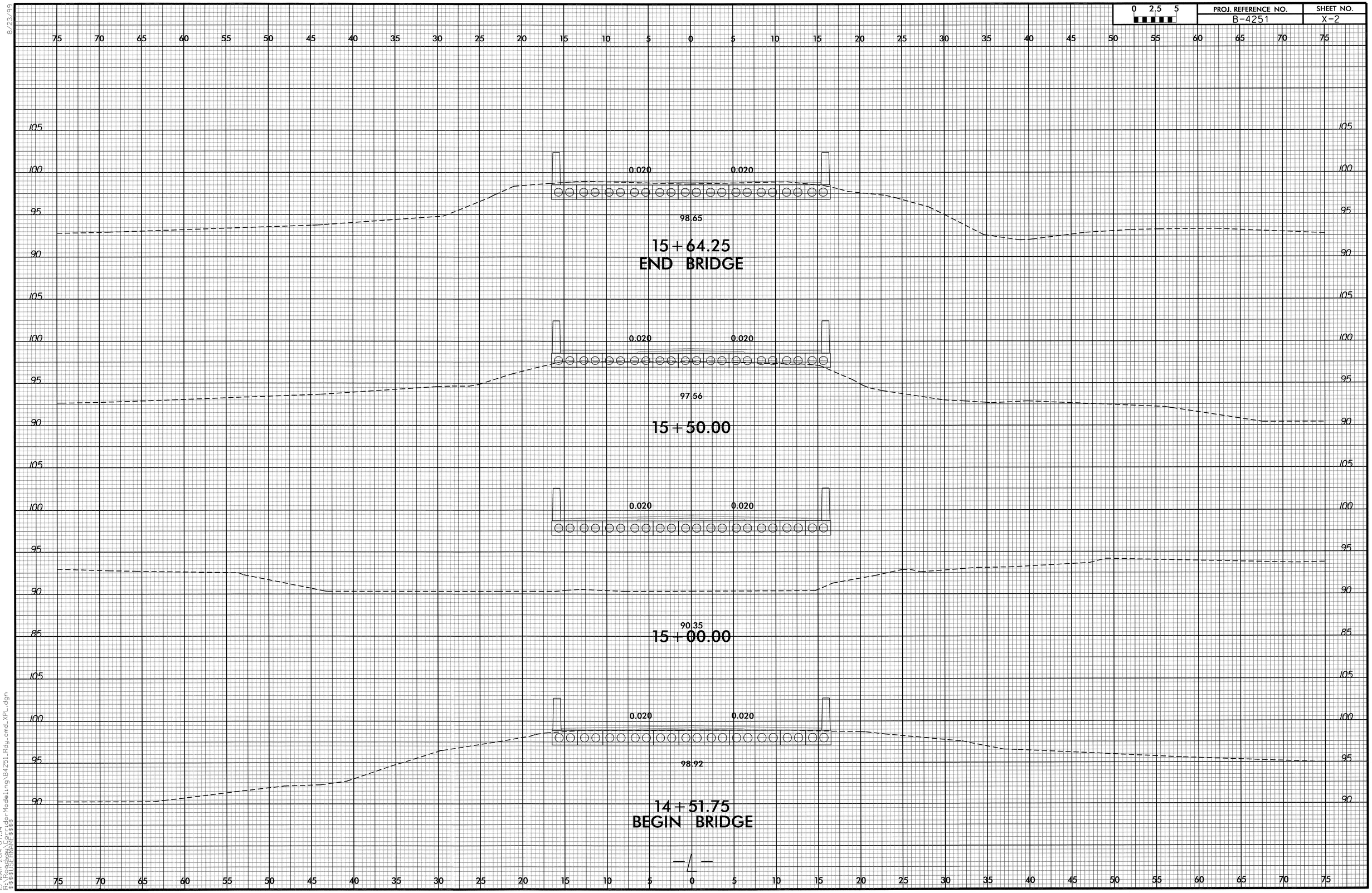
	B-4251	X-2



8/23/99

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8/23/99

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	B-4251	X-3

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97.81
18+50.00

5:1 | 0.020 | 0.020 | 12.5:1

97.92
18+00.00

DRIVE | 0.020 | 0.020 | 12.5:1

98.08
17+50.00

DRIVE | 0.020 | 0.020 | 12.5:1

98.31
17+00.00

12.5:1 | 0.020 | 0.020 | 7.1:1

98.55
16+50.00

12.5:1 | 0.020 | 0.020 | 6.2:1

98.60
16+00.00

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8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4251	X-4

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

100
95
90

98.48
19+50.00

EX SE EX SE

100
95
90

98.14
19+00.00

13-MAR-2014 07:54
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