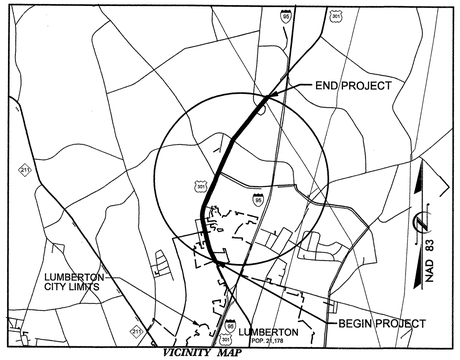
09/08/99

TIP PROJECT: R-5019

CONTRACT: C201803 TIP PROJECT: R-5019

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5019	1	130

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
37984		P.E., R /W, UTIL.
41522.3.1		CONSTRUCTION

LOCATION: US 301 FROM EXISTING THREE–LANE SECTION 0.09 MI SOUTHEAST OF SIMMONS DRIVE TO 0.22 MI NORTHEAST OF SR 1765 (ROZIER CHURCH ROAD)

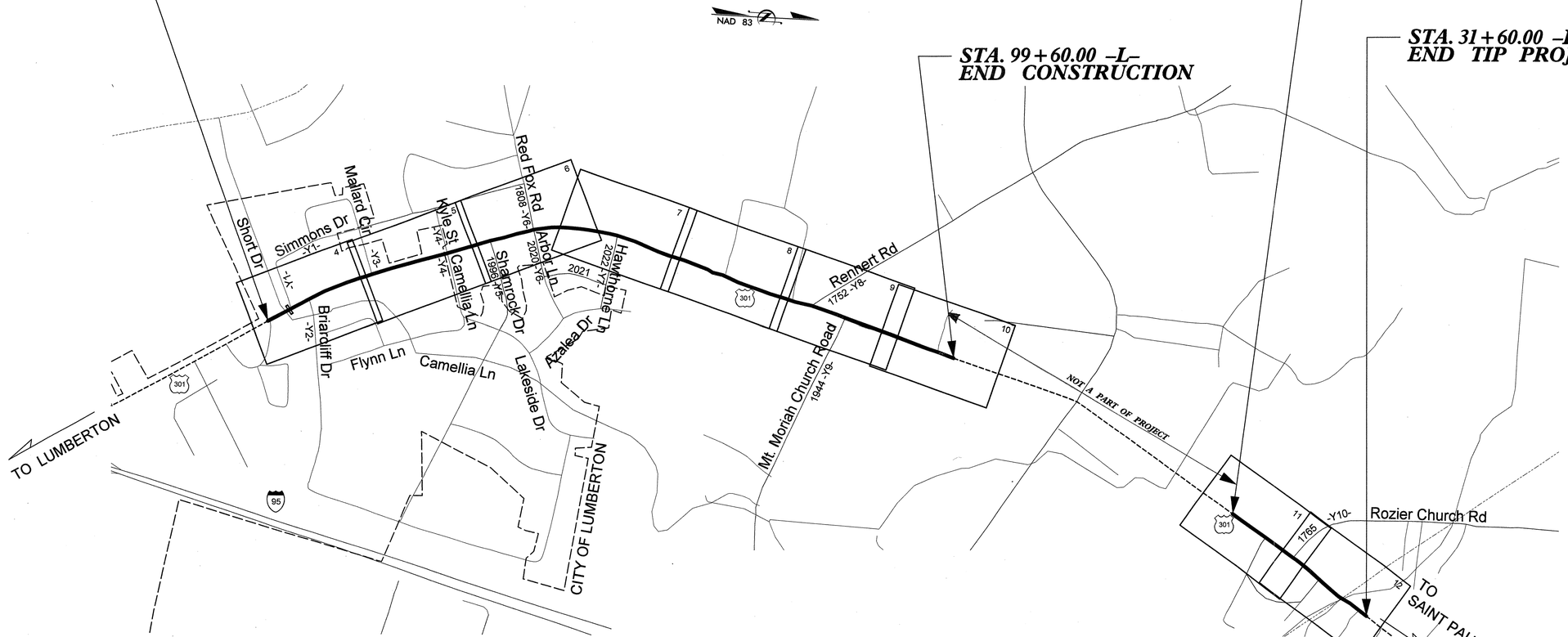
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND CULVERT EXTENSION.

STA. 9+00.00 –L–
BEGIN TIP PROJECT R–5019

STA. 11+40.00 –L1–
BEGIN CONSTRUCTION

STA. 99+60.00 –L–
END CONSTRUCTION

STA. 31+60.00 –L1–
END TIP PROJECT R–5019



GRAPHIC SCALES

50 25 0 50 100
PLANS

5 2.5 0 5 10
HORIZ. & VERT. X–SECTIONS

DESIGN DATA

ADT 2005 = 11,000
V = 60 mph

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT R–5019 = 2.098 MI.
TOTAL LENGTH TIP PROJECT R–5019 = 2.098 MI.

Prepared By:
HDR Engineering, Inc.
of the Carolinas
128 S. Tryon Street, Suite 1400 • Charlotte, N.C. 28202

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
10–20–06

LETTING DATE:
5–20–08

LISA M. PODESZWA, PE
PROJECT ENGINEER

DAVID H. KERNS, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESZWA

SIGNATURE: P.E. 12/26/07

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

12/27/2007
3:47:41 PM
C:\PW\workingV\TPA\dms\6823\US301_Title_Final.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-5019	I-A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESTA 12/27/07

PROJECT: R-5019
ROBESON COUNTY

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
2	PAVEMENT SCHEDULE, WEDGING DETAIL, AND TYPICAL SECTIONS
2-A	ANCHORAGE FOR FRAMES
3	SUMMARY OF QUANTITIES
3-A THRU 3-C	DRAINAGE SUMMARY
3-D	EARTHWORK AND GUARDRAIL SUMMARIES
3-E	PARCEL INDEX SHEET
4 THRU 12	PLAN SHEETS
TCP-1 THRU TCP-7	TRAFFIC CONTROL PLANS
PM-1 THRU PM-10	PAVEMENT MARKING PLANS
EC-1 THRU EC-10	EROSION CONTROL PLANS
UC-1 THRU UC-12	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-9	UTILITIES BY OTHERS PLANS
C-1 THRU C-4	CULVERT PLANS
SN	STRUCTURE GENERAL NOTES
X-1 THRU X-56	CROSS SECTIONS

GENERAL NOTES: 2006 SPECIFICATIONS

EFFECTIVE: 07-18-06
REVISED:

RESURFACING AND WIDENING:

THE GRADE SHOWN ON THE CROSS-SECTIONS DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED 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 POINT SHOWN ON THE TYPICAL SECTION.

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.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

SHORING:

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

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.

SUBSURFACE PLANS:

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

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE ROBESON COUNTY , CITY OF LUMBERTON,AT and T, TIME WARNER CABLE, PROGRESS ENERGY, PIEDMONT NATURAL GAS , SCHOOLLINK, ITC/DELTACOM

RELOCATE ALL EXISTING WATER METERS OUT OF PROPOSED DITCH AS DIRECTED BY THE ENGINEER.

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.

2006 ROADWAY STANDARD DRAWINGS — EFF. 07-18-06

The following Roadway Standards as appear in"Roadway Standard Drawings" Highway Design Branch -N. C. Department of Transportation -Raleigh, N. C.,Dated July 18, 2006 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
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation - Method 'A'
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.80	Precast Concrete Endwall - for single 12" thru 72" Pipe - 90 degree skew
840.00	Concrete Base Pad For Drainage Structures
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for Use with Std. Dwg 840.14 and 840.15
840.34	Traffic Bearing Junction Box - for Use with pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.72	Pipe Collar
848.03	Driveway Turnout
852.01	Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.01	RIP RAP IN CHANNELS
876.02	Guide for Rip Rap at Pipe Outlets

PROJECT REFERENCE NO.	SHEET NO.
R-5019	I-B

5/28/99

*S.U.E = SUBSURFACE UTILITY ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

ROADS & RELATED ITEMS

- Edge of Pavement
- Curb
- Prop. Slope Stakes Cut — C
- Prop. Slope Stakes Fill — F
- Prop. Woven Wire Fence
- Prop. Chain Link Fence
- Prop. Barbed Wire Fence
- Prop. Wheelchair Ramp — WCR
- Curb Cut for Future Wheelchair Ramp — CCFR
- Exist. Guardrail
- Prop. Guardrail
- Equality Symbol
- Pavement Removal

RIGHT OF WAY

- Baseline Control Point
- Existing Right of Way Marker
- Exist. Right of Way Line w/Marker
- Prop. Right of Way Line with Proposed R/W Marker (Iron Pin & Cap)
- Prop. Right of Way Line with Proposed (Concrete or Granite) R/W Marker
- Exist. Control of Access Line — C/A
- Prop. Control of Access Line — C/A
- Exist. Easement Line — E
- Prop. Temp. Construction Easement Line — E
- Prop. Temp. Drainage Easement Line — TDE
- Prop. Perm. Drainage Easement Line — PDE

HYDROLOGY

- Stream or Body of Water
- River Basin Buffer — BZ
- Flow Arrow
- Disappearing Stream
- Spring
- Swamp Marsh
- Shoreline
- Falls, Rapids
- Prop Lateral, Tail, Head Ditches — FLOW

STRUCTURES

MAJOR

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

MINOR

- Head & End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Boxes — CB
- Paved Ditch Gutter

UTILITIES

- Exist. Pole
- Exist. Power Pole
- Prop. Power Pole
- Exist. Telephone Pole
- Prop. Telephone Pole
- Exist. Joint Use Pole
- Prop. Joint Use Pole
- Telephone Pedestal — T
- U/G Telephone Cable Hand Hold — H
- Cable TV Pedestal — C
- U/G TV Cable Hand Hold — H
- U/G Power Cable Hand Hold — H
- Hydrant
- Satellite Dish
- Exist. Water Valve
- Sewer Clean Out
- Power Manhole — P
- Telephone Booth
- Cellular Telephone Tower
- Water Manhole — W
- Light Pole
- H-Frame Pole
- Power Line Tower
- Pole with Base
- Gas Valve
- Gas Meter
- Telephone Manhole — T
- Power Transformer
- Sanitary Sewer Manhole
- Storm Sewer Manhole — S
- Tank; Water, Gas, Oil
- Water Tank With Legs
- Traffic Signal Junction Box — S
- Fiber Optic Splice Box — F
- Television or Radio Tower
- Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement — TS
- Recorded Water Line — W
- Designated Water Line (S.U.E.*) — W
- Sanitary Sewer — SS
- Recorded Sanitary Sewer Force Main — FSS
- Designated Sanitary Sewer Force Main(S.U.E.*) — FSS
- Recorded Gas Line — G
- Designated Gas Line (S.U.E.*) — G
- Storm Sewer — S
- Recorded Power Line — P
- Designated Power Line (S.U.E.*) — P
- Recorded Telephone Cable — T
- Designated Telephone Cable (S.U.E.*) — T
- Recorded U/G Telephone Conduit — TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC
- Unknown Utility (S.U.E.*) — ?UTL
- Recorded Television Cable — TV
- Designated Television Cable (S.U.E.*) — TV
- Recorded Fiber Optics Cable — FO
- Designated Fiber Optics Cable (S.U.E.*) — FO
- Exist. Water Meter
- U/G Test Hole (S.U.E.*)
- Abandoned According to U/G Record — ATTUR
- End of Information — E.O.I.

BOUNDARIES & PROPERTIES

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Property Line Symbol — PL
- Exist. Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Property Number — 123
- Parcel Number — 6
- Fence Line
- Existing Wetland Boundaries — WW & ISBW / WLB
- High Quality Wetland Boundary — HQ WLB
- Medium Quality Wetland Boundaries — MQ WLB
- Low Quality Wetland Boundaries — LQ WLB
- Proposed Wetland Boundaries — WLB
- Existing Endangered Animal Boundaries — EAB
- Existing Endangered Plant Boundaries — EPB

BUILDINGS & OTHER CULTURE

- Buildings
- Foundations
- Area Outline
- Gate
- Gas Pump Vent or U/G Tank Cap
- Church
- School
- Park
- Cemetery
- Dam
- Sign — S
- Well — W
- Small Mine
- Swimming Pool

TOPOGRAPHY

- Loose Surface
- Hard Surface
- Change in Road Surface
- Curb
- Right of Way Symbol — R/W
- Guard Post — GP
- Paved Walk
- Bridge
- Box Culvert or Tunnel
- Ferry
- Culvert
- Footbridge
- Trail, Footpath
- Light House

VEGETATION

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

RAILROADS

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

revised 02/02/00

12/6/2007
11:28 PM

PROJECT REFERENCE NO.	SHEET NO.
R-5019	2

ROADWAY DESIGN ENGINEER

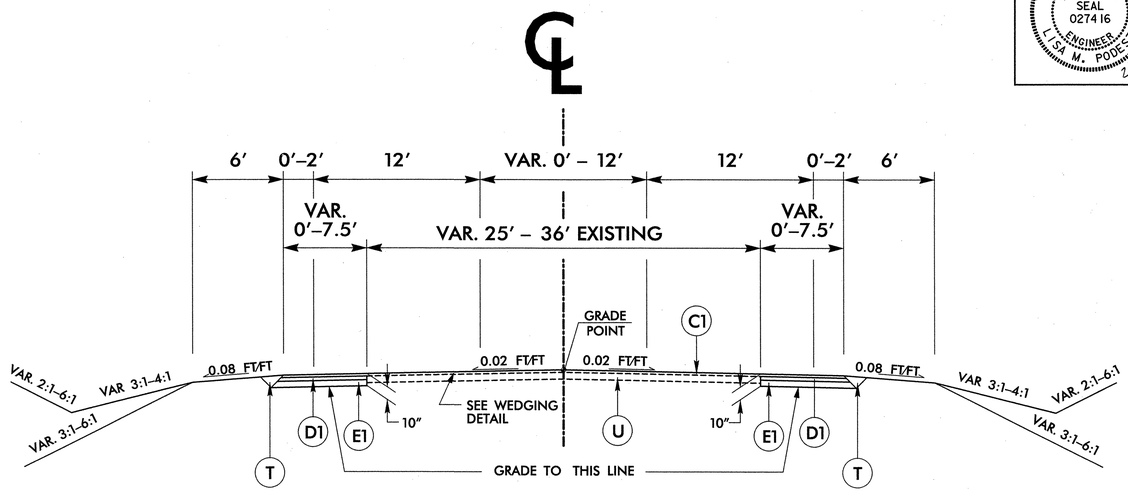
NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODE-SZWA 2/26/09

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 22896 ENGINEER CLARK S. MORRISON 3/9/09

C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
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 LESS THAN 1½" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" 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 LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

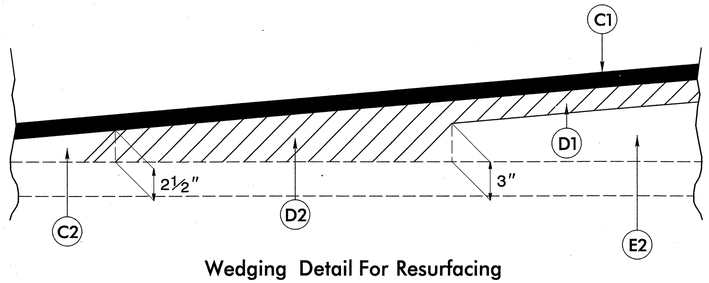
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE SHOWN



TYPICAL SECTION NO. 1

USE FROM – L – STA. 10+00.00 TO 99+60.00
– L1 – STA. 11+40.00 TO 31+60.00

NOTE:
WIDEN VAR. 0′–2′ EACH SIDE TO ACCOMODATE 100′ TAPER FOR 2′ PAVED SHOULDER FROM – L – STA. 9+00.00 TO 10+00.00



Wedging Detail For Resurfacing

PROJECT REFERENCE NO.	SHEET NO.
R-5019	2-A

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

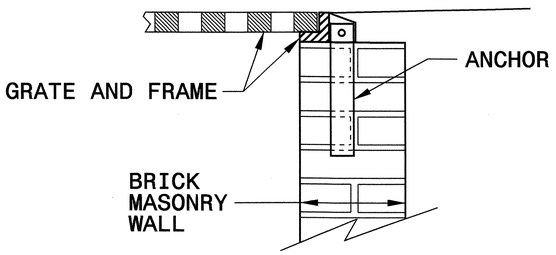
ENGLISH DETAIL DRAWING FOR

ANCHORAGE FOR FRAMES

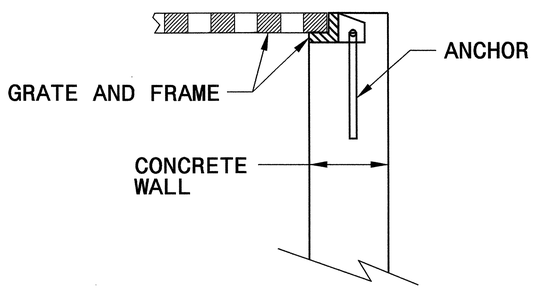
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1

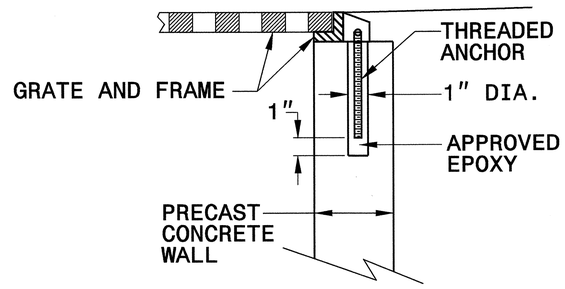
840D25



BRICK MASONRY CONSTRUCTION



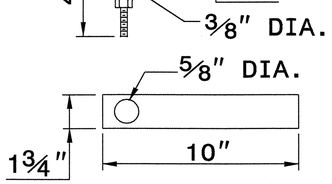
CONCRETE CONSTRUCTION



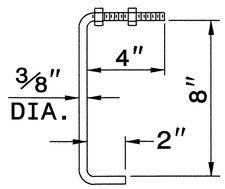
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

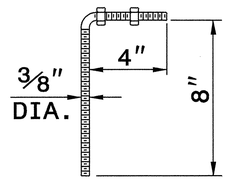
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



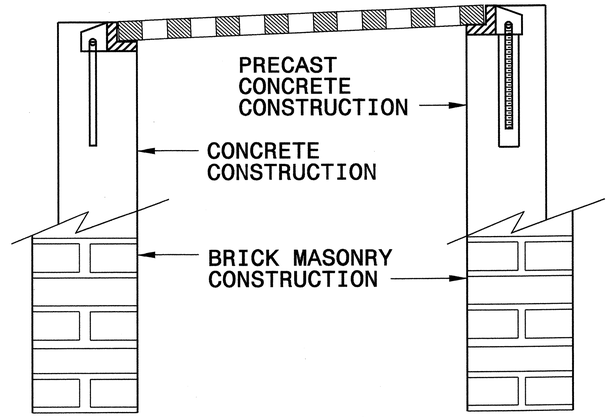
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

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

ENGLISH DETAIL DRAWING FOR

ANCHORAGE FOR FRAMES

BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1

840D25

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER JOHN S. HOWERTON
2/14/07

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
MODIFIED BY: E.E. WARD DATE: 9/25/06
CHECKED BY: DATE:
FILE SPEC.:

01-MAR-2007 09:04
s:\contracts\contracts\special details\erickward\stds\06' stds to special details\84025 anchorage for frames.dgn
jhowerton AT PS212260

PROJECT REFERENCE NO.	SHEET NO.
R-5019	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201803

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0001000000-E	200	Lump Sum		CLEARING & GRUBBING .. ACRE(S)
0008000000-E	200	2	ACR	SUPPLEMENTARY CLEARING & GRUB-BING
0022000000-E	225	8,500	CY	UNCLASSIFIED EXCAVATION
0036000000-E	225	450	CY	UNDERCUT EXCAVATION
0080000000-E	SP	1,100	TON	CLASS IV SUBGRADE STABILIZA-TION
0106000000-E	230	7,600	CY	BORROW EXCAVATION
0196000000-E	270	1,350	SY	FABRIC FOR SOIL STABILIZATION
0318000000-E	300	1,480	TON	FOUNDATION CONDITIONING MATE-RIAL, MINOR STRS
0343000000-E	310	76	LF	15" SIDE DRAIN PIPE
0344000000-E	310	1,100	LF	18" SIDE DRAIN PIPE
0345000000-E	310	84	LF	24" SIDE DRAIN PIPE
0372000000-E	310	452	LF	18" RC PIPE CULVERTS, CLASS III
0378000000-E	310	488	LF	24" RC PIPE CULVERTS, CLASS III
0390000000-E	310	72	LF	36" RC PIPE CULVERTS, CLASS III
0396000000-E	310	160	LF	42" RC PIPE CULVERTS, CLASS III
0402000000-E	310	80	LF	48" RC PIPE CULVERTS, CLASS III
0995000000-E	340	1,465	LF	PIPE REMOVAL
1011000000-N	500	Lump Sum		FINE GRADING
1110000000-E	510	400	TON	STABILIZER AGGREGATE
1220000000-E	545	700	TON	INCIDENTAL STONE BASE
1330000000-E	607	1,600	SY	INCIDENTAL MILLING
1489000000-E	610	6,315	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1498000000-E	610	3,990	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
1519000000-E	610	7,530	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1560000000-E	620	911	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
1693000000-E	654	560	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
2209000000-E	838	36.8	CY	ENDWALLS
2253000000-E	840	6.8	CY	PIPE COLLARS
2286000000-N	840	5	EA	MASONRY DRAINAGE STRUCTURES
2364000000-N	840	4	EA	FRAME WITH TWO GRATES, STD 840.16
2396000000-N	840	1	EA	FRAME WITH COVER, STD 840.54
2535000000-E	846	45	LF	**"X **" CONCRETE CURB (8" X 12")
2612000000-E	848	740	SY	6" CONCRETE DRIVEWAY
2647000000-E	852	50	SY	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)
2830000000-N	858	14	EA	ADJUSTMENT OF MANHOLES
3030000000-E	862	87.5	LF	STEEL BM GUARDRAIL
3045000000-E	862	50	LF	STEEL BM GUARDRAIL, SHOP CURVED
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3195000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE AT-1
3210000000-N	862	2	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1
3270000000-N	SP	1	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3435000000-N	SP	1	EA	GENERIC GUARDRAIL ITEM 25' CLEAR SPAN GUARDRAIL SECTION
3628000000-E	876	100	TON	RIP RAP, CLASS I
3649000000-E	876	105	TON	RIP RAP, CLASS B
3656000000-E	876	500	SY	FILTER FABRIC FOR DRAINAGE
4400000000-E	1110	376	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	320	SF	WORK ZONE SIGNS (PORTABLE)
4430000000-N	1130	350	EA	DRUMS
4435000000-N	1135	200	EA	CONES
4445000000-E	1145	864	LF	BARRICADES (TYPE III)
4450000000-N	1150	2,800	HR	FLAGGER
4465000000-N	1160	4	EA	TEMPORARY CRASH CUSHIONS
4470000000-N	1160	4	EA	RESET TEMPORARY CRASH CUSHIONS
4490000000-E	1170	270	LF	PORTABLE CONCRETE BARRIER (ANCHORED)
4495000000-E	1170	270	LF	PORTABLE CONCRETE BARRIER (DRAINAGE)
4505000000-E	1170	250	LF	RESET PORTABLE CONCRETE BAR-RIER (ANCHORED)
4506000000-E	1170	250	LF	RESET PORTABLE CONCRETE BAR-RIER (DRAINAGE)
4650000000-N	1251	362	EA	TEMPORARY RAISED PAVEMENT MARKERS
4685000000-E	1205	20,339	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
4686000000-E	1205	26,588	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
4695000000-E	1205	168	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)
4710000000-E	1205	72	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
4721000000-E	1205	12	EA	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)
4725000000-E	1205	78	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
4810000000-E	1205	93,854	LF	PAINT PAVEMENT MARKING LINES (4")
4820000000-E	1205	336	LF	PAINT PAVEMENT MARKING LINES (8")
4835000000-E	1205	72	LF	PAINT PAVEMENT MARKING LINES (24")
4840000000-N	1205	12	EA	PAINT PAVEMENT MARKING CHARAC-TER
4845000000-N	1205	78	EA	PAINT PAVEMENT MARKING SYMBOL
4900000000-N	1251	362	EA	PERMANENT RAISED PAVEMENT MARKERS
5325600000-E	1510	125	LF	6" WATER LINE
5325800000-E	1510	3,860	LF	8" WATER LINE
5326200000-E	1510	6,950	LF	12" WATER LINE
5540000000-E	1515	8	EA	6" VALVE
5546000000-E	1515	10	EA	8" VALVE
5558000000-E	1515	7	EA	12" VALVE
5648000000-N	1515	24	EA	RELOCATE WATER METER
5666000000-E	1515	8	EA	FIRE HYDRANT
5801000000-E	1530	3,860	LF	ABANDON 8" UTILITY PIPE
5804000000-E	1530	6,920	LF	ABANDON 12" UTILITY PIPE
5815500000-N	1530	8	EA	REMOVE FIRE HYDRANT
5882000000-N	SP	1	~~EA~~ LS	GENERIC UTILITY ITEM 12" WATER METER ASSEMBLY & NEW METER VAULT
6000000000-E	1605	5,100	LF	TEMPORARY SILT FENCE
6006000000-E	1610	120	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	1,350	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	135	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	13.4	ACR	TEMPORARY MULCHING
6018000000-E	1620	670	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	2.7	TON	FERTILIZER FOR TEMPORARY SEED-ING
6029000000-E	SP	1,000	LF	SAFETY FENCE
6030000000-E	1630	900	CY	SILT EXCAVATION
6033000000-E	1631	650	SY	SYNTHETIC ROVING
6036000000-E	1631	650	SY	MATTING FOR EROSION CONTROL
6042000000-E	1632	200	LF	1/4" HARDWARE CLOTH
6045000000-E	SP	400	LF	**" TEMPORARY PIPE (36")
6070000000-N	SP	2	EA	SPECIAL STILLING BASINS
6084000000-E	1660	13.4	ACR	SEEDING & MULCHING
6087000000-E	1660	13.4	ACR	MOWING
6090000000-E	1661	250	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	1.2	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	200	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	3.4	TON	FERTILIZER TOPDRESSING
6111000000-E	SP	230	LF	IMPERVIOUS DIKE
6117000000-N	SP	20	EA	RESPONSE FOR EROSION CONTROL
8126000000-N	414	Lump Sum		CULVERT EXCAVATION, STA ****** (13+03.07)
8133000000-E	414	26	TON	FOUNDATION CONDITIONING MATER-IAL, BOX CULVERT
8196000000-E	420	61.1	CY	CLASS A CONCRETE (CULVERT)
8245000000-E	425	7,879	LB	REINFORCING STEEL (CULVERT)
******* BEGIN SCHEDULE AA ******* ******* (3 ALTERNATES) *******				
0384000000-E AA1	310	472	LF	30" RC PIPE CULVERTS, CLASS III
*** OR ***				
0384000000-E AA2	310	296	LF	30" RC PIPE CULVERTS, CLASS III
0536000000-E AA2	SP	176	LF	***" HDPE PIPE CULVERTS (30")
*** OR ***				
0384000000-E AA3	310	296	LF	30" RC PIPE CULVERTS, CLASS III
0540000000-E AA3	SP	176	LF	***" ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, ****" THICK (30", 0.079")
******* END SCHEDULE AA *******				

6/21/00

COMPUTED BY: DHK (HDR ENGR.) DATE: 07/12/06
CHECKED BY: LMP (HDR ENGR.) DATE: 07/17/06

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-5019	3-A

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 | CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) SIZE 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHRWISE) SIZE 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | CLASS III R.C. PIPE OR C.S. PIPE, TYPE IR ALUMINIZED OR HDPE PIPE, TYPE S OR D SIZE 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS STD. 838.01 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P. | C.S.P. | QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0') | * TOTAL L.F. FOR PAY (QUANTITY SHALL BE COL. "A" + (1.3 X COL."B") LIN. *FT. 5.0' THRU 10.0' A | B 10.0' AND ABOVE | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME & GRATE STD. 840.16 | M.D.I. TYPE "A" STD. 840.17 OR 840.26 | M.D.I. TYPE "B" STD. 840.18 OR 840.27 | M.D.I. TYPE "D" STD. 840.19 OR 840.28 | M.D.I. FRAME WITH GRATE STD. 840.22 | M.D.I. FRAME WITH TWO GRATES STD. 840.22 | M.D.I. (N.S.) FRAME WITH GRATE STD. 840.24 | M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24 | J.B. STD. 840.31 OR 840.32 | T.B.J.B. STD. 840.34 | M.H. FRAME & COVER STD. 840.54 | 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 |
|---|---|---

6/21/00

COMPUTED BY: DHK (HDR ENGR.) DATE: 07/12/06
CHECKED BY: LMP (HDR ENGR.) DATE: 07/17/06

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-5019	3-B

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 | CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHRWISE) 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | CLASS III R.C. PIPE OR C.S. PIPE, TYPE IR ALUMINIZED OR HDPE PIPE, TYPE S OR D 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS STD. 838.01 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P. | 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. A | LIN. FT. B | PER EACH (0' THRU 5.0') | 5.0' THRU 10.0' | 10.0' AND ABOVE | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME & GRATE STD. 840.16 | M.D.I. TYPE "A" STD. 840.17 OR 840.26 | M.D.I. TYPE "B" STD. 840.18 OR 840.27 | M.D.I. TYPE "D" STD. 840.19 OR 840.28 | M.D.I. FRAME WITH GRATE STD. 840.22 | M.D.I. FRAME WITH TWO GRATES STD. 840.22 | M.D.I. (N.S.) FRAME WITH GRATE STD. 840.24 | M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24 | J.B. STD. 840.31 OR 840.32 | T.B.J.B. STD. 840.34 | M.H. FRAME & COVER STD. 840.54 | 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 |
|---|---|---

6/21/00

COMPUTED BY: DHK (HDR ENGR.) DATE: 07/12/06
CHECKED BY: LMP (HDR ENGR.) DATE: 07/17/06

PROJECT REFERENCE NO.	SHEET NO.
R-5019	3-C

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) 12"	15"	18"	24"	30"	36"	42"	48"	BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHRWISE) 12" .064	15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	CLASS III R.C. PIPE OR C.S. PIPE, TYPE IR ALUMINIZED OR HDPE PIPE, TYPE S OR D 12"	15"	18"	24"	30"	36"	42"	48"	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	* LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME & GRATE STD. 840.16	M.D.I. TYPE "A" STD. 840.17 OR 840.26	M.D.I. TYPE "B" STD. 840.18 OR 840.27	M.D.I. TYPE "D" STD. 840.19 OR 840.28	M.D.I. FRAME WITH GRATE STD. 840.22	M.D.I. FRAME WITH TWO GRATES STD. 840.22	M.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	T.B.J.B. STD. 840.34	M.H. FRAME & COVER STD. 840.54	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
SHEET 12																																																								
23+40	LT	64A																																																					18	
23+74	RT	64								8																																											0.4465			
24+01	CL	65			146.70	146.60				68																																														
24+02	RT	66		149.08																																	1														1	1					
24+17	RT	67			146.60	146.40																											24																						32	
27+33	RT	68																															32																						25	
28+68	CL	69			143.03	142.82						24																																									1.3120			EXTEND EXISTING PIPE – 16' LT, 8' RT
29+84	RT	70																																28																					20	
31+42	LT	71																															36																							
SHEET TOTALS									0	76	0	24	0	0	0													0				0	92	28	0					0	0									1	1		1.7585		95	
PROJECT TOTALS									0	452	488	296	72	160	80													176				76	1,100	84	36.8		5			4	4									1	1		6.8353		1,465	

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
M.D.I.	MEDIAN DROP INLET
M.D.I. (N.S.)	MEDIAN 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 JUCTION BOX

* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B')

12/7/2007 9:21:30 AM

5/28/99

COMPUTED BY: L. PODESZWA DATE: 01/03/07
CHECKED BY: J. WILSON DATE: 01/03/07

PROJECT REFERENCE NO.	SHEET NO.
R-5019	3-D

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
9+50 -L- TO 39+50 -L-	2,606		4,878	2,272	
40+00 -L- TO 70+00 -L-	2,767		5,125	2,358	
70+50 -L- TO 99+50 -L-	2,273		3,916	1,643	
11+50 -L1- TO 31+50 -L1-	1,247		1,736	489	
LOSS DUE TO CLEARING AND GRUBBING	-450			450	
SUBTOTAL	8,443		15,655	7,212	
EST. FOR REPL. TOPSOIL ON BORROW PITS				361	
PROJECT TOTAL	8,443			7,573	
SAY	8,500			7,600	
ESTIMATED UNDERCUT EXCAVATION		450			

"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			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350			SINGLE FACED CONCRETE BARRIERS	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	AT-1	EA	G	NG				
-L-	12+79.63	13+48.31	LT	37.5	50		13+09.58	12+96.26	8	11										1			1							ANCHOR GUARDRAIL TO BOX CULVERT AS SHOWN ON SHEET C-3A
-L-	11+40.35	13+59.10	RT	218.75			12+96.52	13+10.15	8	11							1			1										USE STANDARD DRAWING NO. 862.01 (SHEET 9 OF 11) FOR PLACEMENT AT CULVERT
	SUBTOTAL			256	50												1			2			1							
	LESS DEDUCTIONS																													
		LESS 1-25' CLEAR SPAN @ 100' =		100																										
	LESS ANCHOR DEDUCTIONS																													
	GRAU 350		1 @ 50.0' =	50																										
	CAT-1		2 @ 6.25' =	12.5																										
	AT-1		1 @ 6.25' =	6.25																										
	TOTAL			87.5	50												1			2			1							
	(5 ADDITIONAL GUARDRAIL POSTS)																													

PROJECT REFERENCE NO.	SHEET NO.
R-5019	3-E

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL NO.	PLAN SHEET NO.	PROPERTY OWNERS NAME
1	4	HOME BUILDERS SERVICE CORP.
2	4	GARDEN'S OF FAITH CEMETERY
3	7	NORTH CAROLINA CANCER INSTITUTE, INC.
4	7	DOUGLAS M. THORNHILL GLORIA B. THORNHILL
5	7	ELEANOR L. SCHMITZ
6	7 – 9	DAVID T STEPHENSON DEBORAH STEPHENSON
7	9	GARY LOCKLEAR
8	9	MOUNT MORIAH MISSIONARY BAPTIST CHURCH
9	9	ROEBUCK AND COMPANY
13	9	TIMOTHY BELL AND WIFE KITTY BELL
13A	9 & 10	GENE BENNETT
14	9 & 10	DAVID EARL THOMAS
15	9	HARRY DEAN CANADY MARGARET ANN CANADY
15A	10	EVA THOMAS
15B	10	JAMES THOMAS
15C	10	THOMAS SUPPLY INC.
16	10	ARCHIE C. PREVATTE
17	10	JAMES H. PEDEN WILLIAM D. PEDEN
18	11	K.M. BIGGS, INC.
19	11	GLINDA REVELS
20	11 & 12	FRANKLIN D. EPPS
21	11 & 12	ROBESON COUNTY BOARD OF EDUCATION
22	12	DOROTHY B. HARDIN
23	12	MARY E. BREWER
24	12	STEPHEN HAROLD BELL MATIE FAYE BELL
25	12	ANTHONY EDEN BLANKS TONNIE BLANKS
26	12	LESLIE HOWARD BLANKS, ETAL
28	12	STEPHEN HAROLD BELL AND WIFE MARY BELL
29	12	LESLIE HOWARD BLANKS

PARCEL NO.	PLAN SHEET NO.	PROPERTY OWNERS NAME

PARCEL NO.	PLAN SHEET NO.	PROPERTY OWNERS NAME

PARCEL NO.	PLAN SHEET NO.	PROPERTY OWNERS NAME

10/26/98

12/7/2007 11:59 AM

PROJECT REFERENCE NO.	SHEET NO.
R-5019	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027416 LISA M. PODESTA ENGINEER 3/4/08

REVISIONS 8/17/99

HYDRAULIC DATA

DRAINAGE AREA.....2.60 SQ MI
DESIGN DISCHARGE.....600 CFS
DESIGN FREQUENCY.....50 YEAR
DESIGN HIGH WATER ELEV.....130.3 FEET
BASE DISCHARGE.....800 CFS
BASE FREQUENCY .....100 YEAR
BASE HIGH WATER ELEV.....130.7 FEET
OVERTOPPING DISCHARGE.....650 CFS
OVERTOPPING FREQUENCY .....50 YEAR
OVERTOPPING ELEVATION.....130.5 FEET

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY McKIM & CREED,PA FOR MONUMENT "BL-6" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 336897.220(ft) EASTING: 1996865.176(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999918037 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-6" TO -L- STATION IS

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NAD 83

N22°57'07"W 478.84'

-L- POT Sta. 10+00.00 N 337467.6960 E 1996553.5730

-L- Sta. 9+00.00 BEGIN CONSTRUCTION BEGIN STATE PROJECT R-5019 N 337383.5408 E 1996607.5855

N 32° 41' 34.5" W

-L- PC Sta. 10+27.13 N 337490.5303 E 1996534.9116

-Y1- POT Sta. 10+00.00 N 337684.2480 E 337684.2480

N 67° 22' 33.9" E

-L- POC Sta. 13+55.80 -Y1- POT Sta. 12+18.49 N 337768.2975 E 1996363.2315

N 31° 42' 13.7" W

-L- PT Sta. 14+54.86 N 337852.4719 E 1996311.0029

-L- PC Sta. 16+43.21 N 338012.7108 E 1996212.0205

-L- POT Sta. 16+17.61 -Y2- POT Sta. 10+00.00 N 337990.9360 E 1996225.4712

-Y2- POT Sta. 12+21.45 N 338024.4030 E 1996444.3790

-L- PT Sta. 22+49.28 N 338596.0929 E 1995937.2643

MATCHLINE STA.23+00.00 - L -

N 18° 28' 28.2" E

N 32° 41' 34.5" W

S 22° 16' 53" E 190.22'

S 22° 16' 53" E 140.00'

S 22° 36' 55" E 140.00'

N 22° 36' 55" W 140.00'

S 22° 36' 55" E 140.00'

N 18° 29' 33" W 22.35'

N 18° 44' 09" W 234.42'

N 16° 06' 51" W 193.96'

N 31° 27' 38" W 199.95'

S 31° 36' 36" E 120.68'

S 31° 25' 47" E 100.00'

S 31° 40' 37" E 100.00'

S 31° 40' 37" E 51.49'

N 58° 53' 22" W 30.00'

S 58° 19' 23" W 30.30'

S 58° 27' 22" W 303.65'

S 58° 27' 22" W 317.31'

S 27° 55' 49" W 202.18'

N 27° 55' 49" E 202.18'

N 27° 48' 45" E 273.14'

N 27° 48' 45" E 273.14'

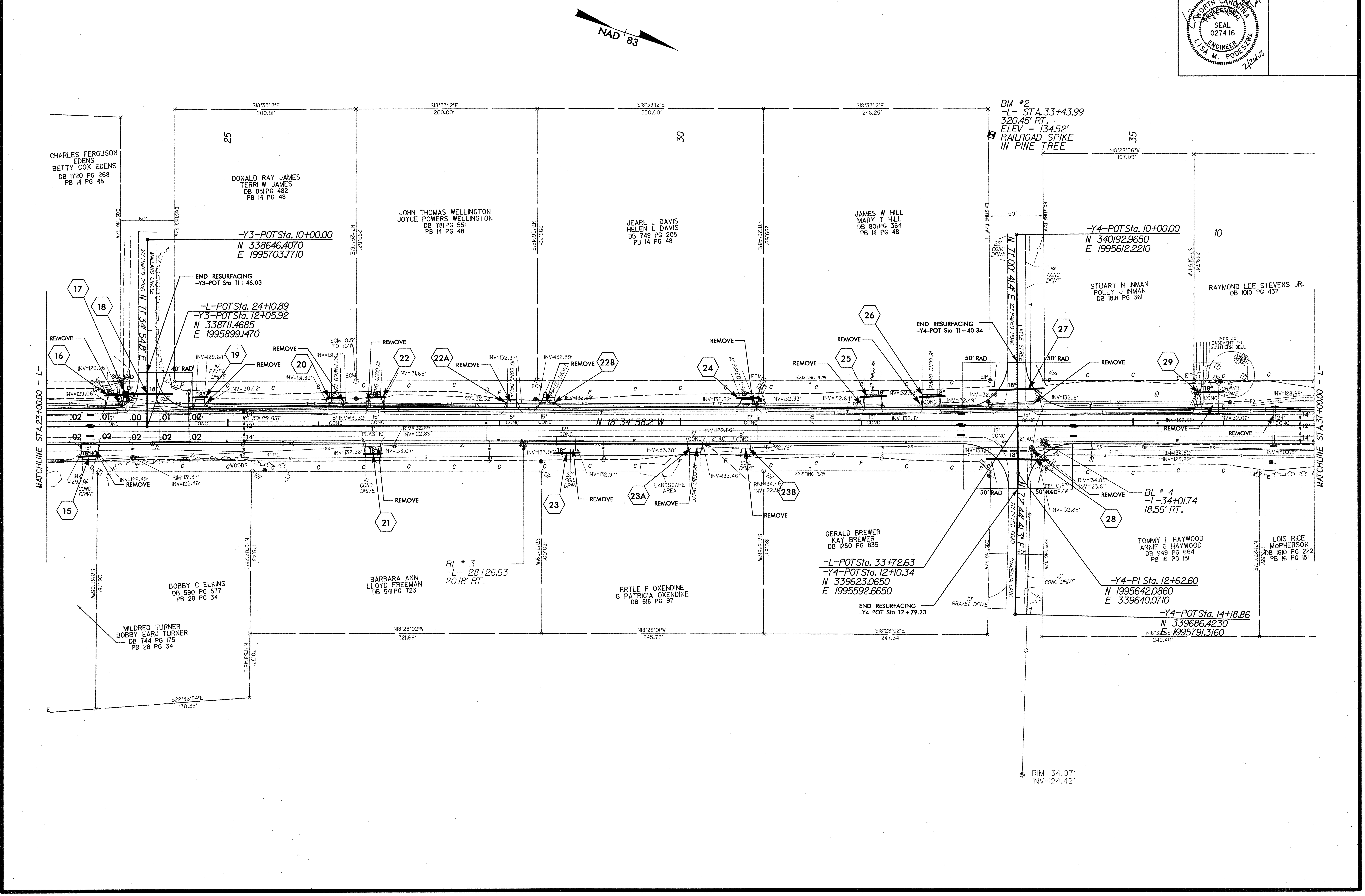
N 27° 48' 45" E 273.14

PROJECT REFERENCE NO.	SHEET NO.
R-5019	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESZWA 2/26/08

REVISIONS

8/17/99



NAD 83
BM *2
-L- STA.33+43.99
320.45' RT.
ELEV = 134.52'
RAILROAD SPIKE
IN PINE TREE
CHARLES FERGUSON EDENS
BETTY COX EDENS
DB 1720 PG 268
PB 14 PG 48
DONALD RAY JAMES
TERRI W JAMES
DB 831 PG 482
PB 14 PG 48
JOHN THOMAS WELLINGTON
JOYCE POWERS WELLINGTON
DB 781 PG 551
PB 14 PG 48
JEARL L DAVIS
HELEN L DAVIS
DB 749 PG 205
PB 14 PG 48
JAMES W HILL
MARY T HILL
DB 801 PG 364
PB 14 PG 48
STUART N INMAN
POLLY J INMAN
DB 1818 PG 361
RAYMOND LEE STEVENS JR.
DB 1010 PG 457
-Y3-POT Sta. 10+00.00
N 338646.4070
E 1995703.7710
END RESURFACING
-Y3-POT Sta 11+46.03
-L-POT Sta. 24+10.89
-Y3-POT Sta. 12+05.92
N 338711.4685
E 1995899.1470
-Y4-POT Sta. 10+00.00
N 340192.9650
E 1995612.2210
END RESURFACING
-Y4-POT Sta 11+40.34
N 18° 34' 58.2" W
MATCHLINE STA.23+00.00 -L-
MATCHLINE STA.37+00.00 -L-
BL * 3
-L- 28+26.63
20.18' RT.
BL * 4
-L- 34+01.74
18.56' RT.
BOBBY C ELKINS
DB 590 PG 577
PB 28 PG 34
MILDRED TURNER
BOBBY EARJ TURNER
DB 744 PG 175
PB 28 PG 34
BARBARA ANN
LLOYD FREEMAN
DB 541 PG 723
ERTLE F OXENDINE
G PATRICIA OXENDINE
DB 618 PG 97
GERALD BREWER
KAY BREWER
DB 1250 PG 835
-L-POT Sta. 33+72.63
-Y4-POT Sta. 12+10.34
N 339623.0650
E 1995592.6650
END RESURFACING
-Y4-POT Sta 12+79.23
TOMMY L HAYWOOD
ANNIE G HAYWOOD
DB 949 PG 664
PB 16 PG 151
LOIS RICE
McPHERSON
DB 1610 PG 222
PB 16 PG 151
-Y4-PI Sta. 12+62.60
N 1995642.0860
E 339640.0710
-Y4-POT Sta. 14+18.86
N 339686.4230
E 1995791.3160
RIM=134.07'
INV=124.49'
MALLARD CIRCLE
KYLE STREET
CAMELLIA LANE
REMOVE
15
16
17
18
19
20
21
22
22A
22B
23
23A
23B
24
25
26
27
28
29

2/26/2008

PROJECT REFERENCE NO.	SHEET NO.
R-5019	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESTA

REVISIONS

8/17/99

NAD 83

N18°28'06"W 565.16'

N17°40'06"W 152.80'

N17°40'06"W 152.28'

S10°21'51"E 208.10'

S17°31'54"W 246.19'

S15°20'50"W 239.22'

60'

EXISTING R/W

RAYMOND LEE STEVENS JR.
DB 1010 PG 457

WAYNE L RABON
JOAN F RABON
DB 733 PG 148

DAVID EDGE
NATHAN A STEWART
DB 471 PG 329

FREEMAN FAMILY PROPERTIES, LLC.
DB 1271 PG 839

NORTH CAROLINA CANCER INSTITUTE
DB 1287 PG 386 INC.

MATCHLINE STA 37+00.00 - L -

MATCHLINE STA 50+00.00 - L -

-Y6-POT Sta. 10+00.00
N 340591.6220
E 1995061.8630

END RESURFACING
-Y6-POT Sta 11+32.18

-L-POC Sta. 44+43.71
-Y6-POT Sta. 12+01.67
N 340640.2298
E 1995257.5832

N 73° 30' 03" E

PLACE 8 TONS CLASS B RIP RAP AND 21 SY OF FILTER FABRIC

PLACE 11 TONS CLASS B RIP RAP AND 28 SY OF FILTER FABRIC

CONSTRUCT ENDWALL

REMOVE

150' FULL

50' RAD

30

33

34

BL * 5
-L- 44+72.22
19.77' LT

N 18° 34' 58.2" W

N 11° 40' 03.0" W

EIP 0.75' TO R/C

EXISTING R/W

WD RAIL FENCE

GRADE TO DRAIN

WOODS

31

32

35

36

37

38

49

18" CONC

15" CONC

14' CONC DRIVE

18' CONC DRIVE

BRICK WALLS

INV=132.70'

INV=132.92'

INV=132.79'

INV=131.16'

INV=131.14'

INV=131.00'

INV=131.34'

INV=130.64'

INV=130.25'

INV=131.35'

INV=126.04'

RIM=134.79'

RIM=134.92'

INV=125.11'

RIM=127.04'

INV=127.04'

4" PE

12" RC

4" CONC

LANDSCAPE AREA

240' BAY TAPER

WD RAIL FENCE

FULL OF DEBRIS PIPE SIZE AND INVS UNKNOWN

CONSTRUCT ENDWALL

END RESURFACING
-Y6-POT Sta 12+74.01

-L-PCS Sta. 45+70.27
N 340724.4982
E 1995238.0180

-Y6-PI Sta. 12+76.32
N 340658.2230
E 1995330.0330

-Y6-POT Sta. 14+05.98
N 340695.7110
E 1995454.1580

-L-PCS Sta. 42+76.54
N 340479.8554
E 1995304.6090

-Y5-POT Sta. 12+00.16
N 340192.9650
E 1995612.2210

-L-POT Sta. 39+04.24
-Y5-POT Sta. 10+00.00
N 340126.9587
E 1995423.2543

LOIS RICE McPHERSON
DB 1610 PG 222
PB 16 PG 151

ADONNIE McMILLAN
BETTY J McMILLAN
DB 684 PG 256

JOSEPH THOMAS HODGE
SHELBY C HODGE
DB 485 PG 311

CHARLES EARL CAGLE
LELA H CAGLE
DB 1712 PG 191

JACKIE HAMMONDS
DB 1075 PG 429

EARNEST J BOTTOMS
BRENDA R BOTTOMS
DB 1262 PG 321

GERALD LEGGETT
LINDA SUE LEGGETT
DB 554 PG 157

N 70° 44' 44.3" E

S18°32'55"W 237.76'

END RESURFACING
-Y5-POT Sta 10+70.17

S18°28'42"E 89.00'

S18°28'41"E 145.18'

N71°31'18"E 40.00'

S18°29'11"E 228.21'

250.37'

PI Sta 44+03.51
Δ = 6° 47' 55.2" (RT)
D = 2° 40' 49.6"
L = 253.64'
T = 126.97'
R = 2,137.56'
e = 0.052
RUNOFF = 172.6'

PI Sta 50+14.25
Δ = 28° 24' 38.2" (RT)
D = 2° 59' 58.5"
L = 947.15'
T = 483.52'
R = 1,910.13'
e = 0.055
RUNOFF = 182.6'

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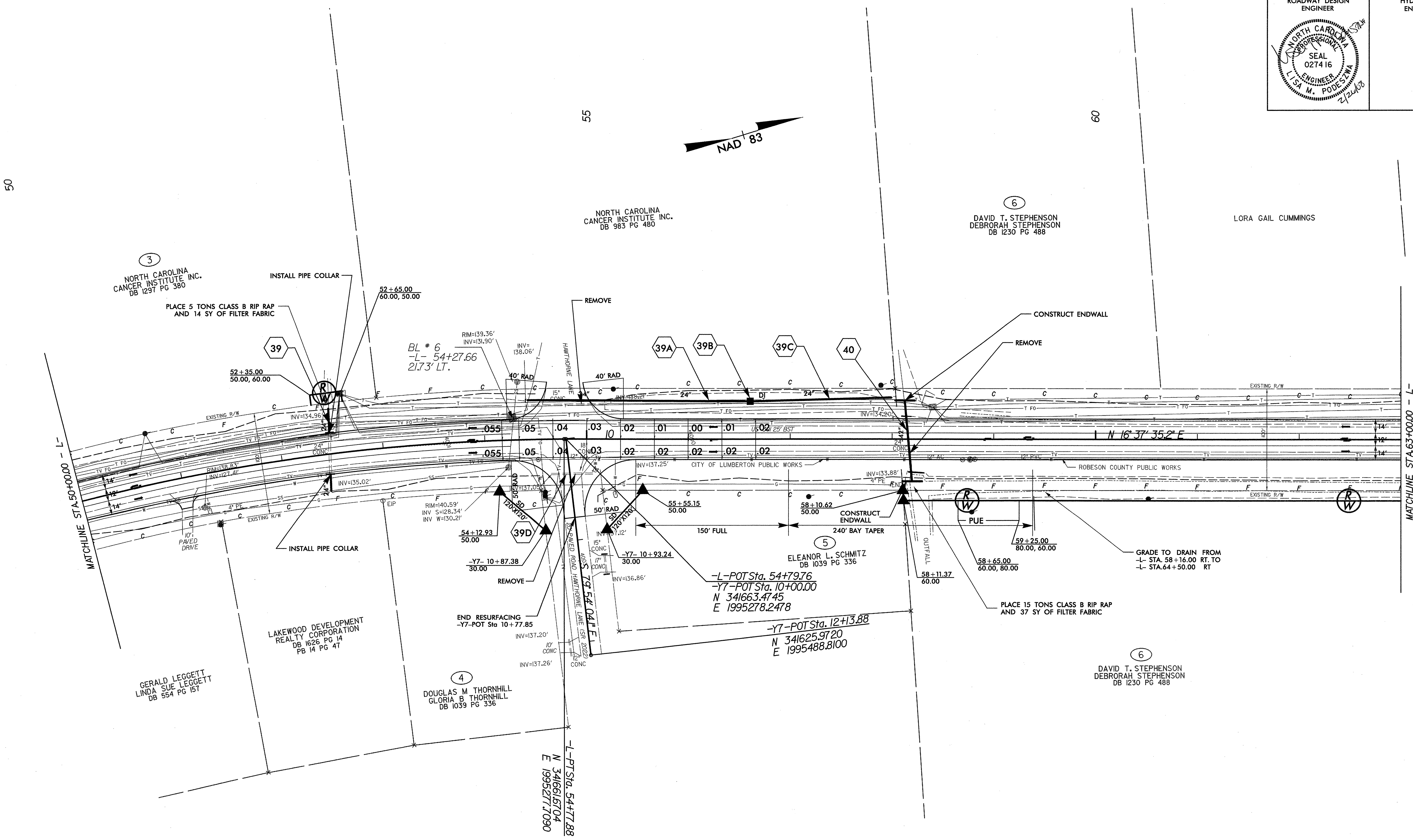
PROJECT REFERENCE NO.	SHEET NO.
R-5019	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESZWA 2/26/08



50
55
60
NAD 83
3
NORTH CAROLINA CANCER INSTITUTE INC. DB 1297 PG 380
NORTH CAROLINA CANCER INSTITUTE INC. DB 983 PG 480
6
DAVID T. STEPHENSON DEBORAH STEPHENSON DB 1230 PG 488
LORA GAIL CUMMINGS
INSTALL PIPE COLLAR
PLACE 5 TONS CLASS B RIP RAP AND 14 SY OF FILTER FABRIC
52+65.00 60.00, 50.00
52+35.00 50.00, 60.00
39
39A
39B
39C
39D
40
REMOVE
CONSTRUCT ENDWALL
BL * 6 -L- 54+27.66 21.73' LT.
RIM=139.36' INV=131.90'
INV= 138.06'
40' RAD
HAWTHORNE LANE
INV=134.96'
24" CONC
RIM=138.83' INV=127.41'
INV=135.02'
EXISTING R/W
10' PAVED DRIVE
INSTALL PIPE COLLAR
N 16° 37' 35.2" E
CITY OF LUMBERTON PUBLIC WORKS
ROBESON COUNTY PUBLIC WORKS
INV=133.88'
INV=134.20'
RIM=140.59' INV S=128.34' INV W=130.21'
54+12.93 50.00
-Y7- 10+87.38 30.00
-Y7- 10+93.24 30.00
55+55.15 50.00
58+10.62 50.00
CONSTRUCT ENDWALL
150' FULL
240' BAY TAPER
5
ELEANOR L. SCHMITZ DB 1039 PG 336
59+25.00 80.00, 60.00
58+65.00 60.00, 80.00
58+11.37 60.00
PUE
OUTFALL
GRADE TO DRAIN FROM -L- STA. 58+16.00 RT. TO -L- STA.64+50.00 RT
PLACE 15 TONS CLASS B RIP RAP AND 37 SY OF FILTER FABRIC
REMOVE
END RESURFACING -Y7-POT Sta 10+77.85
-L-POT Sta. 54+79.76
-Y7-POT Sta. 10+00.00
N 341663.4745
E 1995278.2478
-Y7-POT Sta. 12+13.88
N 341625.9720
E 1995488.8100
S 79° 54' 04" E
PAVED ROAD HAWTHORNE LANE (SR 2022)
INV=137.20'
INV=137.26'
INV=136.86'
10' CONC
LAKEWOOD DEVELOPMENT REALTY CORPORATION DB 1626 PG 14 PB 14 PG 47
GERALD LEGGETT LINDA SUE LEGGETT DB 554 PG 157
4
DOUGLAS M THORNHILL GLORIA B THORNHILL DB 1039 PG 336
-L-PT Sta. 54+77.88
N 341616.1704
E 1995277.7090
6
DAVID T. STEPHENSON DEBORAH STEPHENSON DB 1230 PG 488
MATCHLINE STA.50+00.00 -L-
MATCHLINE STA.63+00.00 -L-

PI Sta 50+14.25
Δ = 28° 24' 38.2" (RT)
D = 2° 59' 58.5"
L = 947.15'
T = 483.52'
R = 1,910.13'
e = 0.055
RUNOFF = 182.6'

REVISIONS

8/17/99

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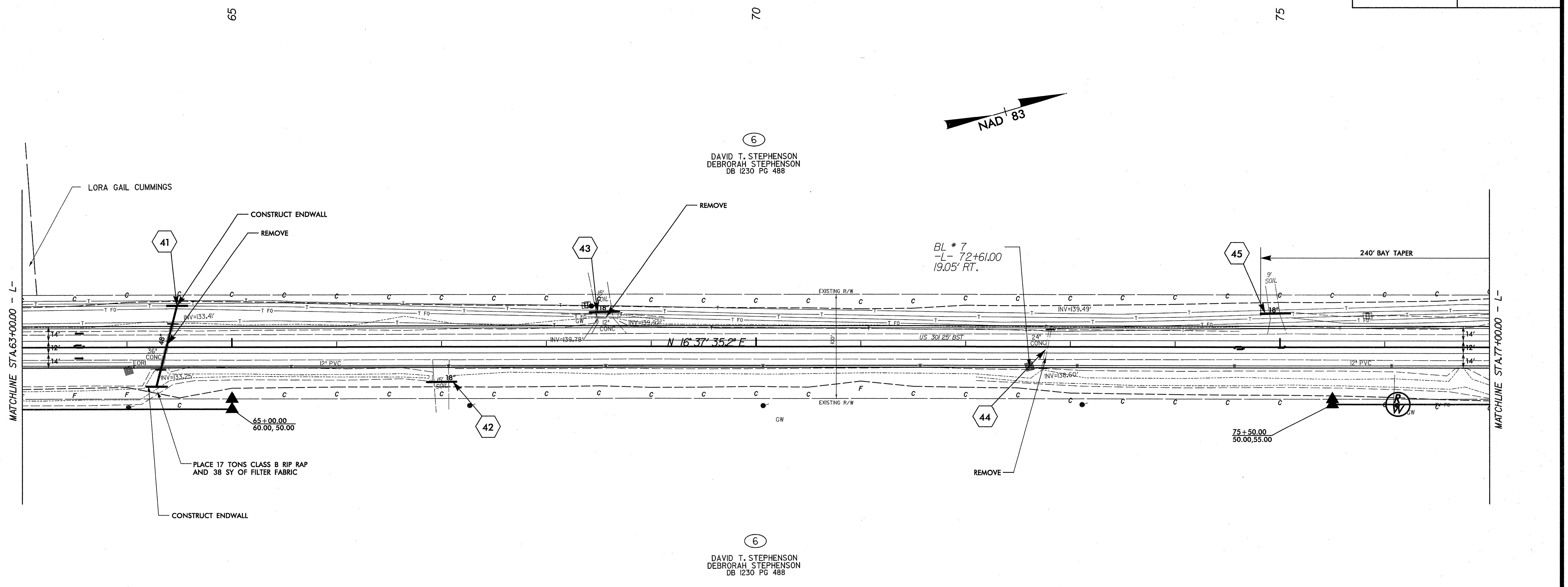
PROJECT REFERENCE NO.	SHEET NO.
R-5019	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESZWA

REVISIONS



65
70
75
NAD 83
6
DAVID T. STEPHENSON
DEBRORAH STEPHENSON
DB 1230 PG 488
LORA GAIL CUMMINGS
CONSTRUCT ENDWALL
REMOVE
41
43
42
44
45
BL # 7
-L- 72+61.00
19.05' RT.
240' BAY TAPER
EXISTING R/W
N 16° 37' 35.2" E
US 301 25' BST
INV=133.41'
INV=139.78'
INV=139.92'
INV=139.49'
INV=138.60'
INV=133.25'
12" PVC
MATCHLINE STA.63+00.00 -L-
MATCHLINE STA.77+00.00 -L-
65+00.00
60.00, 50.00
75+50.00
50.00,55.00
PLACE 17 TONS CLASS B RIP RAP
AND 38 SY OF FILTER FABRIC
CONSTRUCT ENDWALL
REMOVE
6
DAVID T. STEPHENSON
DEBRORAH STEPHENSON
DB 1230 PG 488

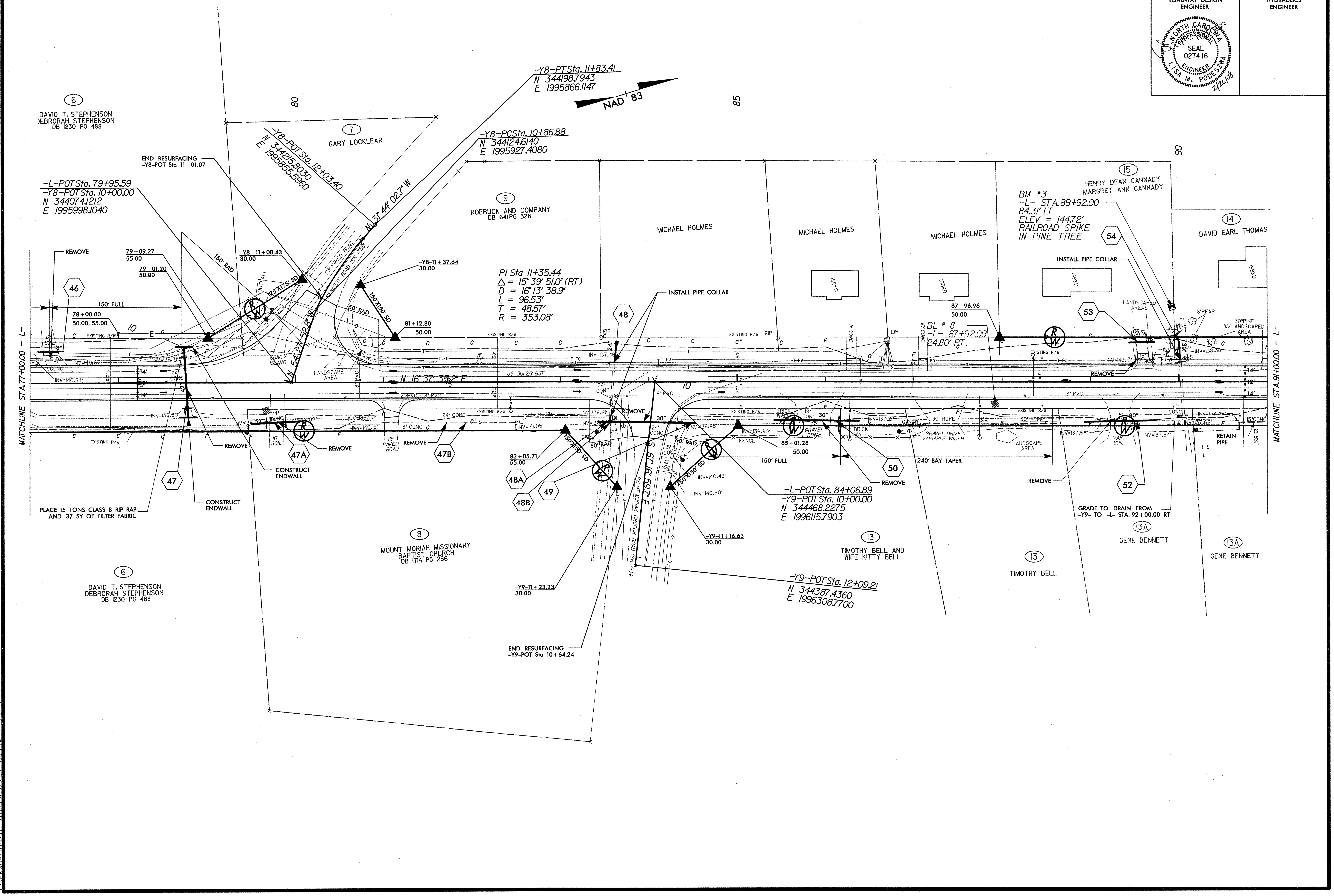
8/17/99
2/26/2008

PROJECT REFERENCE NO.	SHEET NO.
R-5019	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESZWA 2/26/08

8/17/99

REVISIONS



NAD 83
80
85
90
MATCHLINE STA.77+00.00 -L-
MATCHLINE STA.91+00.00 -L-
DAVID T. STEPHENSON
DEBRORAH STEPHENSON
DB 1230 PG 488
GARY LOCKLEAR
ROEBUCK AND COMPANY
DB 641 PG 528
MICHAEL HOLMES
HENRY DEAN CANNADY
MARGRET ANN CANNADY
DAVID EARL THOMAS
MOUNT MORIAH MISSIONARY
BAPTIST CHURCH
DB 1714 PG 256
TIMOTHY BELL AND
WIFE KITTY BELL
TIMOTHY BELL
GENE BENNETT
-Y8-PT Sta. 11+83.41
N 344198.7943
E 1995866.1147
-Y8-PC Sta. 10+86.88
N 344124.6140
E 1995927.4080
-Y8-POT Sta. 12+03.40
N 344215.8030
E 1995855.5960
END RESURFACING
-Y8-POT Sta 11+01.07
-L-POT Sta. 79+95.59
-Y8-POT Sta. 10+00.00
N 344074.1212
E 1995998.1040
PI Sta 11+35.44
Δ = 15° 39' 51.0" (RT)
D = 16° 13' 38.9"
L = 96.53'
T = 48.57'
R = 353.08'
BM #3
-L- STA. 89+92.00
84.31' LT
ELEV = 144.72'
RAILROAD SPIKE
IN PINE TREE
BL # 8
-L- 87+92.09
24.80' RT.
N 16° 37' 35.2" E
N 31° 44' 02.7" W
N 54° 27' 52.8" W
S 67° 16' 59.7" E
US 301 25' BST
23' PAVED ROAD
22' MT. MORIAH CHURCH ROAD (SR 1944)
INSTALL PIPE COLLAR
REMOVE
CONSTRUCT ENDWALL
PLACE 15 TONS CLASS B RIP RAP
AND 37 SY OF FILTER FABRIC
150' FULL
240' BAY TAPER
RETAIN PIPE
GRADE TO DRAIN FROM
-Y9- TO -L- STA. 92+00.00 RT
-L-POT Sta. 84+06.89
-Y9-POT Sta. 10+00.00
N 344468.2275
E 1996115.7903
-Y9-POT Sta. 12+09.21
N 344387.4360
E 1996308.7700
END RESURFACING
-Y9-POT Sta 10+64.24
46
47
47A
47B
48
48A
48B
49
50
52
53
54

2/26/2008

PROJECT REFERENCE NO.	SHEET NO.
R-5019	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027416 ENGINEER LISA M. PODESZWA 2/12/08

REVISIONS

8/17/99

NAD 83

95

100

105

15A EVA THOMAS

15B JAMES THOMAS

14 DAVID EARL THOMAS

16 ARCHIE C. PREVATTE

-L-POT Sta. 105+00.00
N 346473.8208
E 1996714.6912

REMOVE AND REPLACE PAVEMENT AS SHOWN IN CROSS-SECTIONS IN ORDER TO PROVIDE POSITIVE DRAINAGE

PLACE 5 TONS CLASS B RIP RAP AND 14 SY OF FILTER FABRIC

360' APPROACH-DEPARTURE TAPER WITH 2' PAVED SHOULDER

NOT A PART OF THE PROJECT

55

INSTALL PIPE COLLAR

BL # 9
-L- 95+75.75
16.73' RT.

BL # 10
-L- 101+96.01
19.67' RT

99+60.00
50.00, 30.00

MATCHLINE STA.91+00.00 - L -

LANDSCAPED AREA

CHAIN LINK FENCE

VAR. GR

US 301 25' BST

R 2' (TYP.)

8" PVC

24" CONC

WET LANDS

WOODS

INV=142.61'

INV=142.34'

INV=140.20'

INV=140.58'

INV=140.81'

INV=136.74'

11.7'

12.6'

N 16° 37' 35.2" E

91+29.97
30.00

91+30.27
50.00

W/TEL& TRANSF

W/TEL

ISBLK&US

6'CHL

6'CHL&IISBW

PDE

95+60.00
40.00

96+30.00
40.00

97+90.00
40.00

97+90.00
30.00,50.00

95+00.00
30.00, 40.00

95+60.00
30.00,50.00

96+30.00
50.00,30.00

98+50.00
50.00, 30.00

INSTALL PIPE COLLAR

56

PLACE 5 TONS CLASS B RIP RAP AND 14 SY OF FILTER FABRIC

-L-Sta. 99+60.00
END CONSTRUCTION
N 345956.3975
E 1996560.1808

REMOVE EXISTING HEADWALL (TYPICAL)

CEMETERY

10"CHERRY

30"PINE

30" PECAN

8" PVC

W/TEL, TRANSF&LT

W/LT

EXISTING R/W

60'

13A GENE BENNETT

JAMES E. THOMAS
DB 1581 PG 505

CONSTRUCT 4' WIDE CONCRETE MONOLITHIC ISLANDS AS SHOWN. LENGTH OF ISLANDS AND WIDTH OF DRIVEWAY SHALL BE ADJUSTED IN THE FIELD ACCORDINGLY

PLACE ASPHALT AS DETERMINED IN THE FIELD TO ACCOMMODATE ISLAND

15C EVA J. THOMAS
DB 1525 PG 670

17 JAMES H. PEDEN
WILLIAM D. PEDEN

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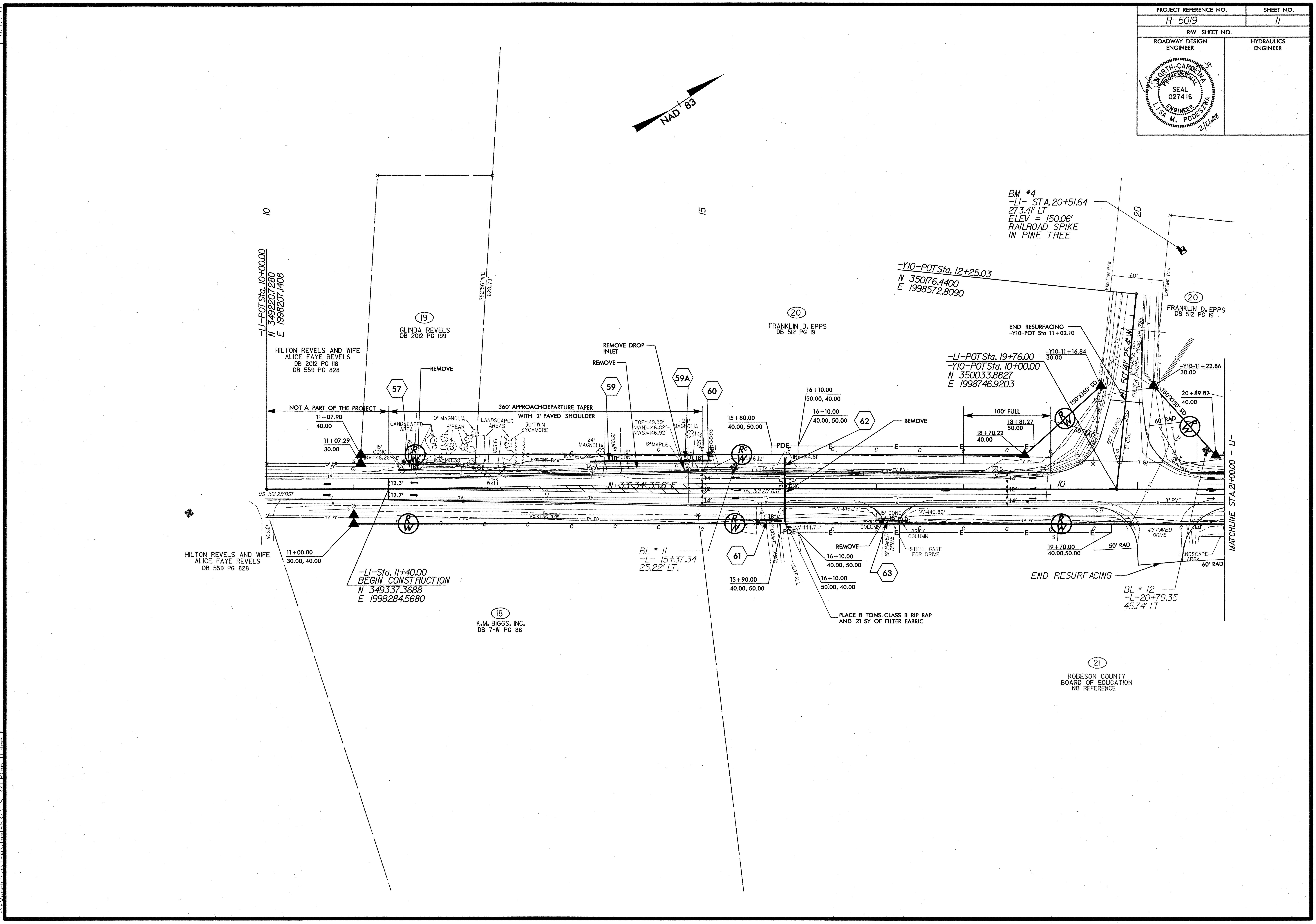

PROJECT REFERENCE NO.
R-5019
SHEET NO.
11
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESZWA
REVISIONS
8/17/99
NAD 83
BM #4
-L1- STA.20+51.64
273.41' LT
ELEV = 150.06'
RAILROAD SPIKE
IN PINE TREE
-Y10-POT Sta. 12+25.03
N 350176.4400
E 1998572.8090
-L1-POT Sta. 10+00.00
N 349220.7280
E 1998207.1408
HILTON REVELS AND WIFE
ALICE FAYE REVELS
DB 2012 PG 118
DB 559 PG 828
GLINDA REVELS
DB 2012 PG 199
FRANKLIN D. EPPS
DB 512 PG 19
REMOVE DROP INLET
REMOVE
NOT A PART OF THE PROJECT
360' APPROACH/DEPARTURE TAPER
WITH 2' PAVED SHOULDER
10" MAGNOLIA
6"PEAR
LANDSCAPED AREAS
30"TWIN SYCAMORE
LANDSCAPED AREA
24" MAGNOLIA
12"MAPLE
S52°56'4"E 628.79'
N 33°34'35.6" E
US 301 25' BST
END RESURFACING
-Y10-POT Sta 11+02.10
-L1-POT Sta. 19+76.00
-Y10-POT Sta. 10+00.00
N 350033.8827
E 1998746.9203
100' FULL
150'X150' SD
60' RAD
50' RAD
END RESURFACING
BL # 11
-L- 15+37.34
25.22' LT.
BL # 12
-L-20+79.35
45.74' LT
-L1-Sta. 11+40.00
BEGIN CONSTRUCTION
N 349337.3688
E 1998284.5680
K.M. BIGGS, INC.
DB 7-W PG 88
ROBESON COUNTY
BOARD OF EDUCATION
NO REFERENCE
PLACE 8 TONS CLASS B RIP RAP
AND 21 SY OF FILTER FABRIC
STEEL GATE FOR DRIVE
BRICK COLUMN
46' PAVED DRIVE
MATCHLINE STA.21+00.00 - L1-
2/26/2008

PROJECT REFERENCE NO.	SHEET NO.
R-5019	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 027416 ENGINEER LISA M. PODESTA 2/24/08

REVISIONS

8/17/99

NAD 83

MATCHLINE STA.21+00.00 - LI-

20 FRANKLIN D. EPPS DB 512 PG 19

22 DOROTHY B. HARDIN DB 417 PG 239

23 MARY E. BREWER DB 745 PG 635

28 STEPHEN HAROLD BELL AND WIFE MARY BELL

28 STEPHEN HAROLD BELL AND WIFE MARY BELL DB 14-V PG 221

S40°33'19"W 239.30'

S40°33'19"W 1629.89'

S49°39'41"E 280.95'

N49°25'41"W 356.95'

N49°25'41"W 326.89'

S35°17'41"E 315.99'

25

30

360' APPROACH/DEPARTURE TAPER WITH 2' PAVED SHOULDER

INSTALL 48' 8"X12" CONCRETE CURB

INSTALL PIPE COLLAR

28+00.00 40.00,50.00

29+69.26 50.00

29+69.06 40.00

REMOVE

6"PEAR TREES W/LANDSCAPED AREAS

LANDSCAPED AREA

31+50.00 40.00, 30.00

6"PEAR

64A

65

71

REMOVE

OLD GAS PUMP ISLAND

GRASS ISLAND

PAVED PARKING

OLD GAS PUMP ISLAND

PAVED PARKING

15' CONC

INV=147.29'

INV=147.25'

INV=146.70'

WOODS

1' C&G AND EXISTING R/W

1' C&G

8" PVC

N 33°34'35.6" E

INV=147.21'

INV=147.64'

12.5'

12.3'

14'

12'

US 301 25'BST

INV=146.60'

TB MH 18"

INV= 146.44'

18" CONC

18" CONC

15" CONC

INV=142.84'

INV=145.49'

24" PINE

18" CMP

INV=144.80'

15" CONC

18" CONC

INV=146.71'

INV=146.68'

EXISTING R/W

ISBRKSCHOOL

12" BK WALL

64

RIM=149.04'

INV=146.64'

INV=146.60'

INSTALL PIPE COLLAR

END RESURFACING

66

67

68

69

70

ECM

40' RAD

150' FULL

20' GRAVEL DRIVE

OUTFALL

ECM 5.97' FROM R/W

25+50.00 40.00, 45.00

BL # 13 -L- 27+77.71 19.20' RT.

28+50.00 40.00, 50.00

28+80.00 50.00, 40.00

30+50.00 45.00, 40.00

31+53.77 30.00

31+52.15 40.00

REMOVE

INSTALL PIPE COLLAR

PLACE 8 TONS CLASS B RIP RAP AND 21 SY OF FILTER FABRIC

PLACE 3 TONS CLASS B RIP RAP AND 10 SY OF FILTER FABRIC

-LI-Sta. 31+60.00
END CONSTRUCTION
END STATE PROJECT R-5019
N 351020.3268
E 1999401.7305

BL # 14 -L- 31+52.21 19.52' RT.

21 ROBESON COUNTY BOARD OF EDUCATION NO REFERENCE

REMOVE EXISTING MANHOLE AND REPLACE WITH TRAFFIC BEARING JUNCTION BOX WITH MANHOLE FRAME AND COVER

24 STEPHEN HAROLD BELL MATIE FAYE BELL DB 1422 PG 221

25 ANTHONY EDEN BLANKS TONIE BLANKS DB 1233 PG 380

26 LESLIE HOWARD BLANKS, ETAL DB 583 PG 693

29 LESLIE HOWARD BLANKS DB 570 PG 786

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