STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4255	1	

WBS NO.	F.A. PROJ. NO.	DESCRIPTION
33597.1.1	BRSTP-0801(3)	P.E.
33597.2.1	BRSTP-0801(3)	ROW, UTL
33597.3.1	BRSTP-0801(7)	CONST

TIP PROJECT: B-4255

CONTRACT: C201474

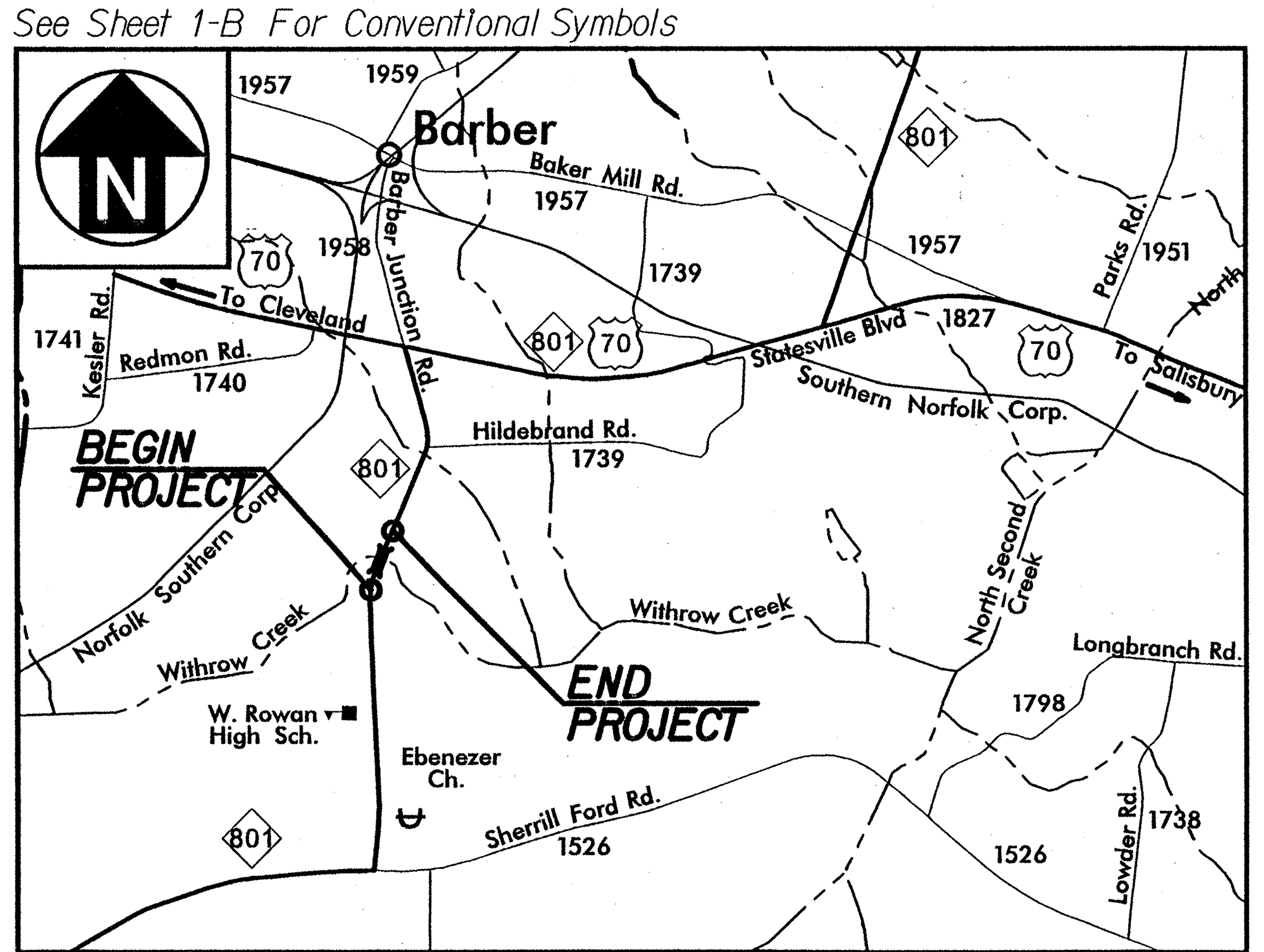
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROWAN COUNTY

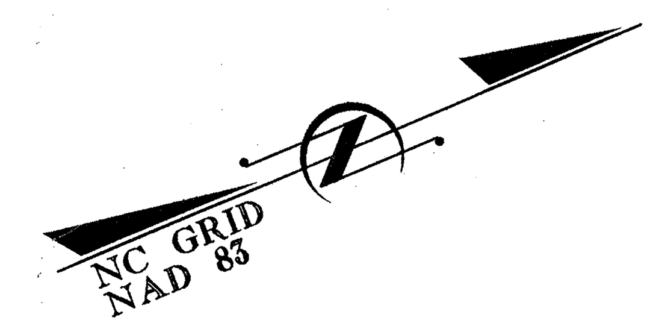
LOCATION: BRIDGE NO. 28 OVER WITHROW CREEK ON NC 801

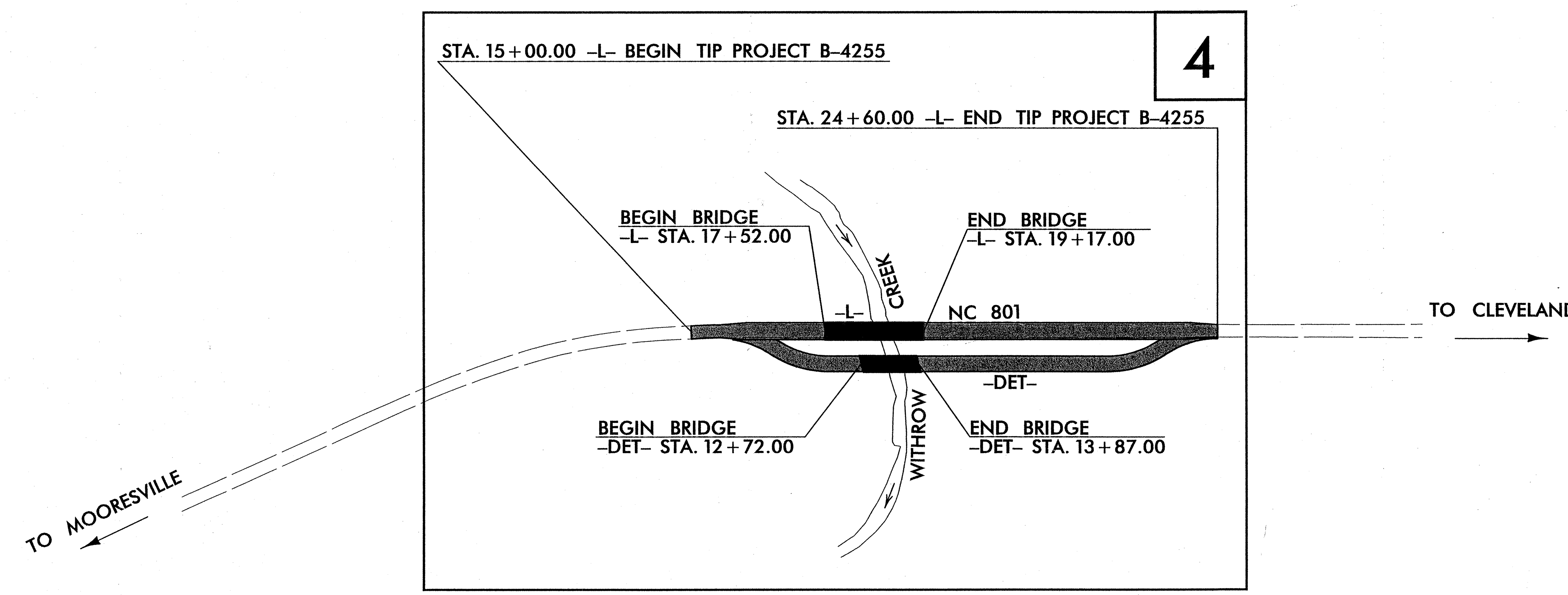
TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP
(NOT TO SCALE)





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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 2006 = 5,700
ADT 2026 = 10,300
DHV = 12 %
D = 55 %
T = 9 % *
V = 60 MPH
* TTST 3% DUAL 6%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4255	=	0.151 MILES
LENGTH STRUCTURE TIP PROJECT B-4255	=	0.031 MILES
TOTAL LENGTH STATE TIP PROJECT B-4255	=	0.182 MILES

Prepared In the Office of:
MULKEY
ENGINEERS & CONSULTANTS
FOR THE NORTH CAROLINA DEPT. OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 18, 2005

LETTING DATE:
JULY 18, 2006

TIM JORDAN, PE
MULKEY E & C
PROJECT MANAGER

DAVID BOCKER, PE
MULKEY E & C
HYDRAULICS ENGINEER

NCDOT CONTACT: CATHY HOUSER, PE

HYDRAULICS ENGINEER
SEAL 029984
5/3/2006
P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER
SEAL 21102
5/3/06
P.E.
SIGNATURE:

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
P.E.
STATE HIGHWAY DESIGN ENGINEER

5/3/2006

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	1-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER TIMOTHY JAMES JORDAN
5/9/06

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS

INDEX OF SHEETS

GENERAL NOTES: 2006 SPECIFICATIONS EFFECTIVE: 07–18–06
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. 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 III.

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.

UNDERDRAINS:
UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

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.

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 DUKE ENERGY, TIME WARNER CABLE, SALISBURY ROWAN UTILITIES, BELL SOUTH AND PUBLIC SERVICE OF NORTH CAROLINA

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED 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	
200.03	Method of Clearing – Method III
225.02	Guide for Grading Subgrade – Secondary and Local
225.04	Method of Obtaining Superelevation – Two Lane Pavement
DIVISION 3 – PIPE CULVERTS	
300.01	Method of Pipe Installation – Method 'A'
310.10	Driveway Pipe Construction
DIVISION 4 – MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
DIVISION 5 – SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction – High Side of Superelevated Curve – Method I
DIVISION 8 – INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
816.04	Markers for Drainage Structure and Concrete Pad
840.00	Concrete Base Pad for Drainage Structures
840.17	Concrete Grated Drop Inlet Type 'A' – 12" thru 72" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames – Brick or Concrete
840.26	Brick Grated Drop Inlet Type 'A' – 12" thru 72" Pipe
840.33	Angled Vane Grates and Frames
840.35	Traffic Bearing Grated Drop Inlet – for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
866.04	Barbed Wire Fence with Wood Posts (2 – 7 Strands)
876.02	Guide for Rip Rap at Pipe Outlets
876.03	Drainage Ditches with Class 'A' Rip Rap
876.04	Drainage Ditches with Class 'B' Rip Rap

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	1-B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CONVENTIONAL SYMBOLS

*S.U.E = SUBSURFACE UTILITY ENGINEER

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
- Exist. Cable Guiderail
- Prop. Cable Guiderail
- 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
- 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
- Cable TV Pedestal — C
- Hydrant
- Satellite Dish
- Exist. Water Valve
- Sewer Clean Out
- Power Manhole — P
- Telephone Booth
- 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
- Exist. Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Property Number — 123
- Parcel Number — 6
- Fence Line — WW & ISBW
- Existing Wetland Boundaries — 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 11/09/00

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	1-C
Location and Surveys	

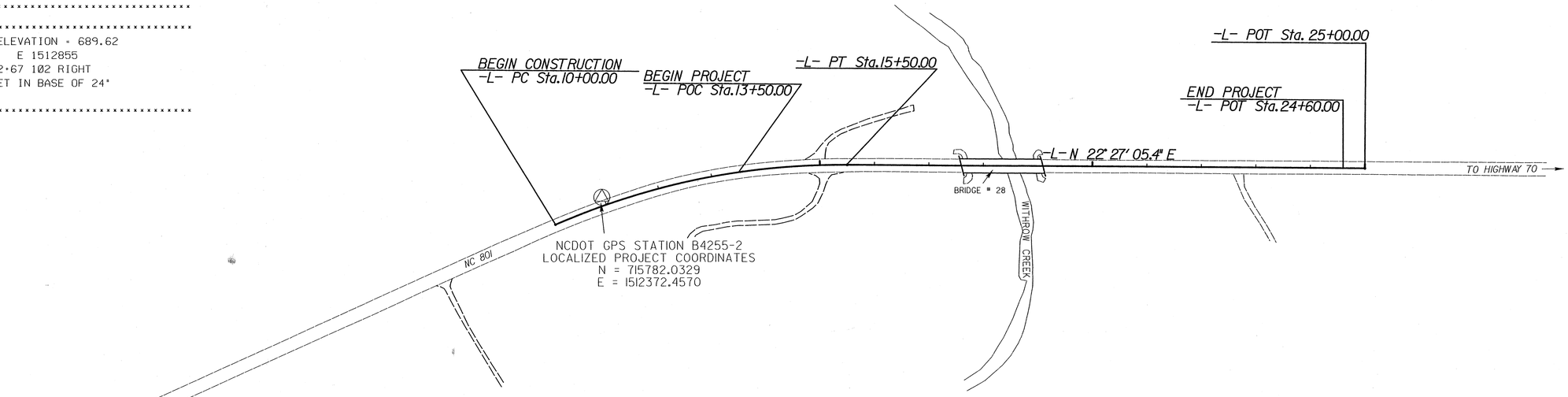
SURVEY CONTROL SHEET B-4255

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	B4255-1	714426.1892	1512424.7540	699.30	OUTSIDE PROJECT LIMITS	
2	B4255-2	715782.0329	1512372.4570	685.69	10+96.61	15.65 LT
3	BL-3	716390.8590	1512539.7127	680.64	17+26.76	15.57 LT
20	(EQUALITY NOT SET)	716487.9301	1512583.2771	UNKNOWN	18+33.11	12.38 LT
4	BL-4	717389.5649	1512987.9205	715.30	OUTSIDE PROJECT LIMITS	

****
BM 1 ELEVATION = 718.10
N 714011 E 1512415
L STATION 10+00
S 0° 57' 09.6" E DIST 1674.01
R/R SPIKE SET IN BASE OF 48"
OAK ON HIGH SCHOOL PROPERTY
IN FRONT OF TENNIS COURTS
****

****
BM 2 ELEVATION = 689.62
N 716845 E 1512855
L STATION 22+67 102 RIGHT
R/R SPIKE SET IN BASE OF 24"
OAK
****



NCDOT GPS STATION B4255-1
LOCALIZED PROJECT COORDINATES
N = 714426.1892
E = 1512424.7540

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4255-1" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF NORTHING: 714426.1892(ft) EASTING: 1512424.7540(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999874930 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4255-1" TO -L- STATION 10+00.00 IS N 1°43'13.53" W 1259.0722 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

NOTES:

THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:

HTTP:\WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT

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.

NOTE: DRAWING NOT TO SCALE

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT MANAGEMENT ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN 5/3/06	NORTH CAROLINA PROFESSIONAL SEAL 13368 ENGINEER DON CHI CHEN 5/9/06

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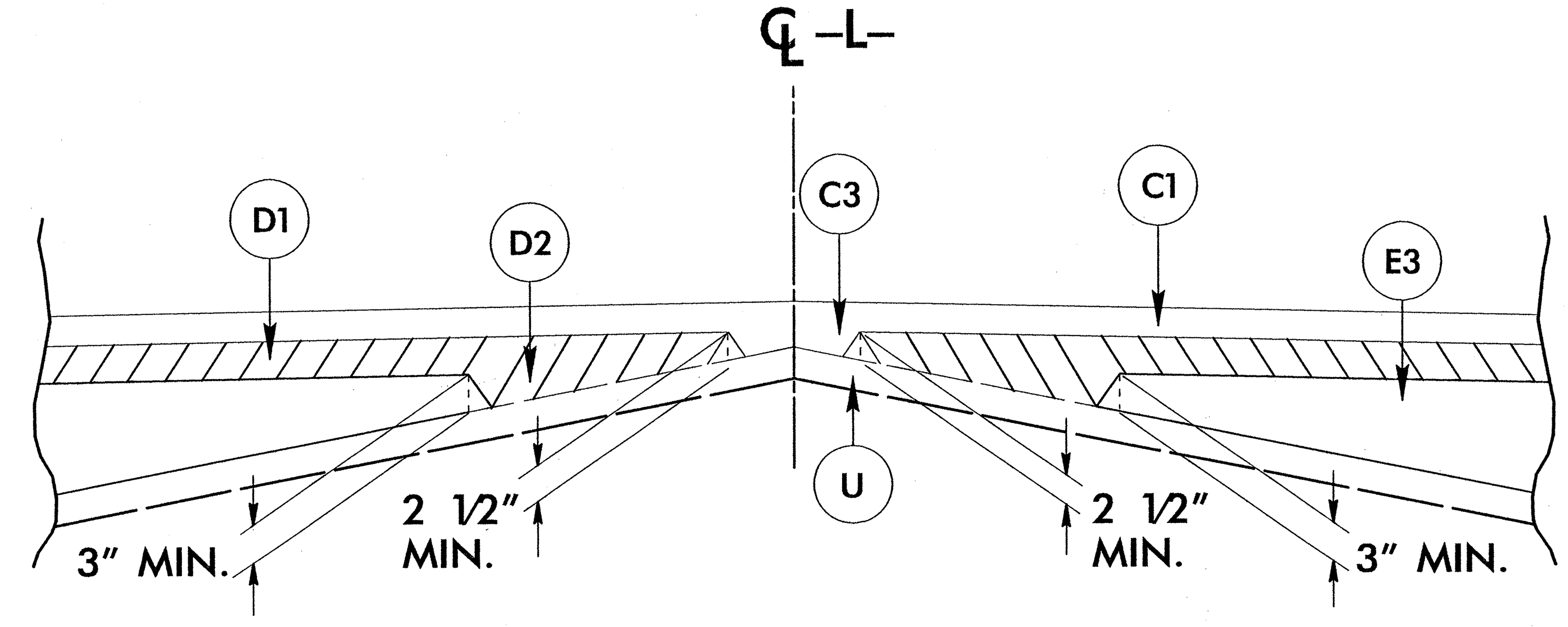
PAVEMENT SCHEDULE

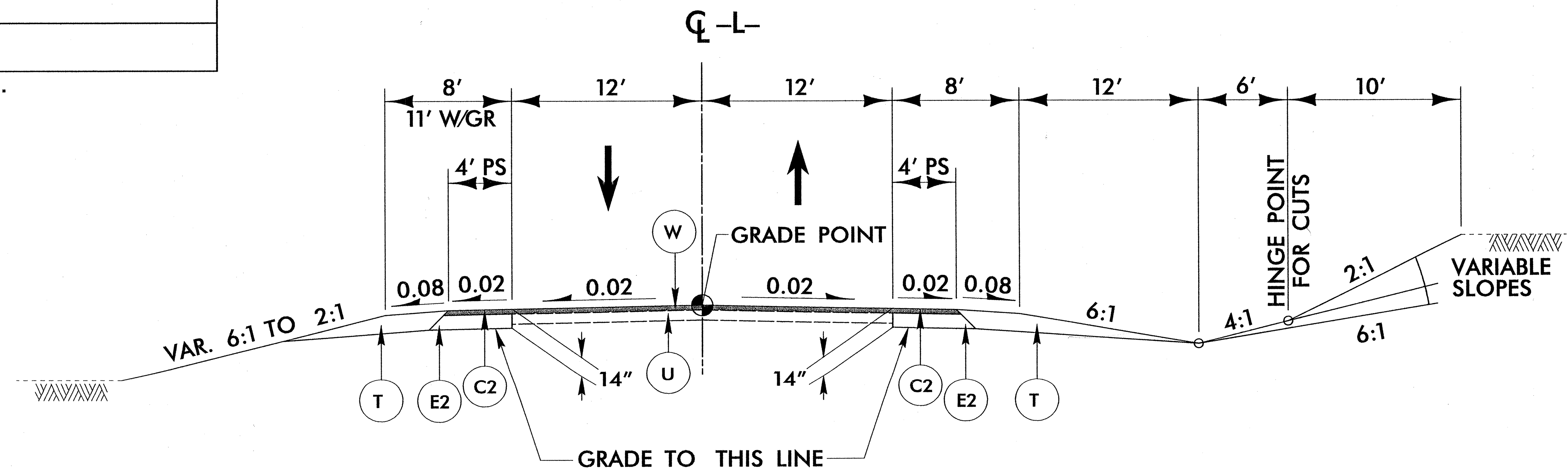
A	CONCRETE WEARING SURFACE (STRUCTURE PAY ITEM)
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD IN EACH OF TWO LAYERS.
C3	PROP. VAR. 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.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 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. APPROX. 11" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E3	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 5½" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING (SEE WEDGING DETAIL)

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



DETAIL SHOWING METHOD OF WEDGING

USE IN CONJUCTION WITH TYPICAL SECTION NO. 1



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
AT THE FOLLOWING LOCATIONS

-L- STA. 15+00.00 TO STA. 16+90.00
-L- STA. 23+75.00 TO STA. 24+60.00

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	2-A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

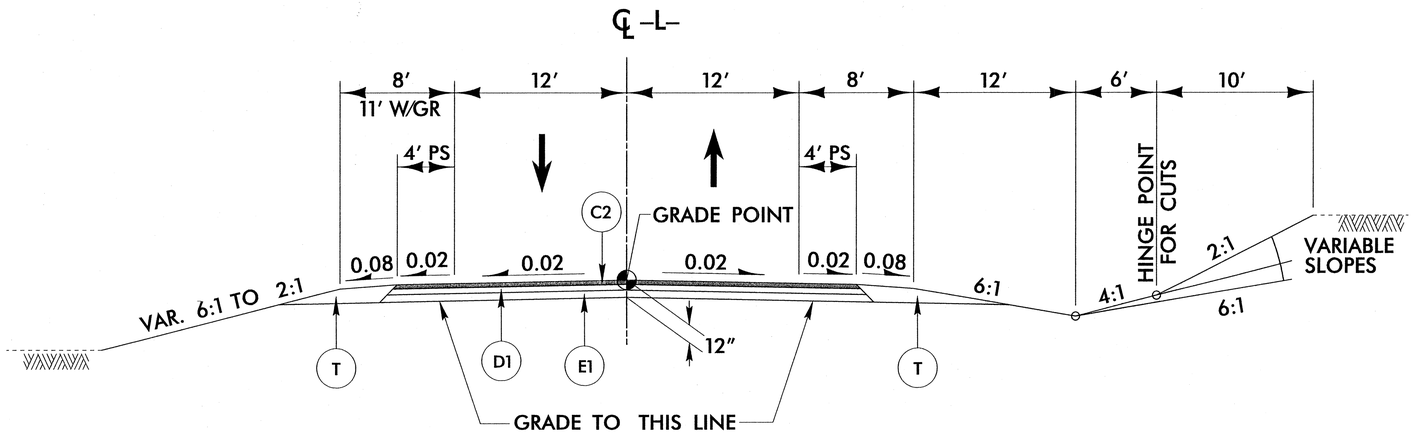
NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN

5/3/06

PAVEMENT MANAGEMENT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 13368 ENGINEER JIAN-CHI CHEN

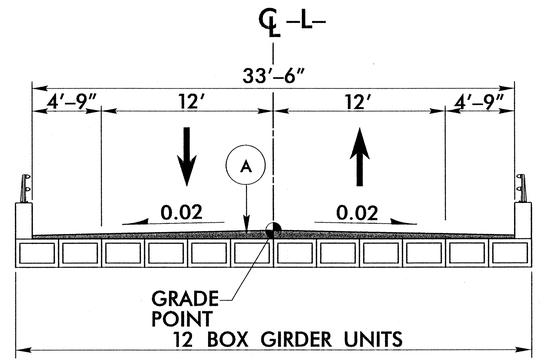
5/9/06



TYPICAL SECTION NO. 2

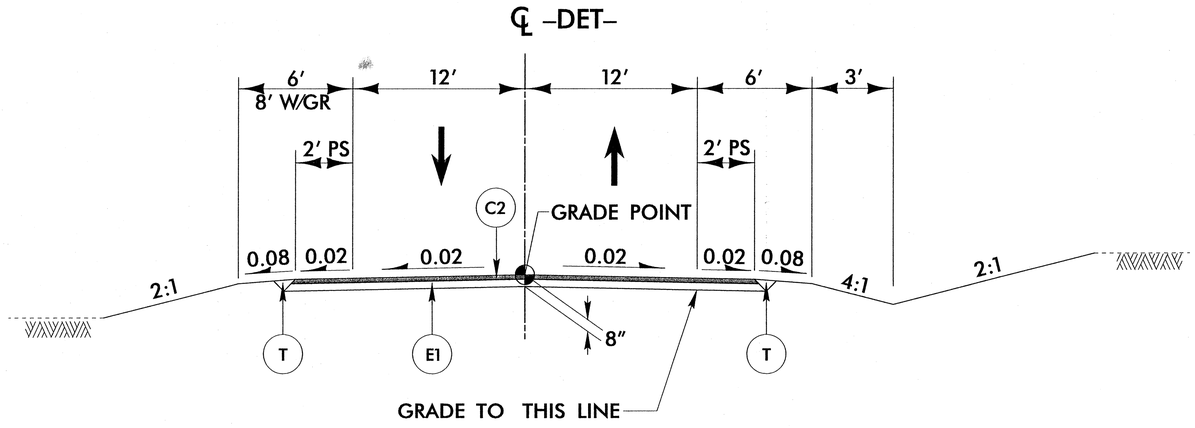
USE TYPICAL SECTION NO. 2
AT THE FOLLOWING LOCATIONS

–L– STA. 16+90.00 TO STA. 17+52.00 (BEGIN BRIDGE)
–L– STA. 19+17.00 (END BRIDGE) TO STA. 23+75.00



DETAIL OF BOX GIRDER BRIDGE

–L– STA 17+52.00 TO STA 19+17.00



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
AT THE FOLLOWING LOCATIONS

–DET– STA. 10+67.19 TO STA. 12+72.00 (BEGIN BRIDGE)
–DET– STA. 13+87.00 (END BRIDGE) TO STA. 18+66.93

A	CONCRETE
C2	3 " S9.5B
C3	VAR. S9.5B
D1	4" I19.0B
E1	5 " B25.0B
T	EARTH

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-L-	-DET-			
PI Sta 12+79.05	PI Sta 10+54.95	PI Sta 11+61.78	PI Sta 17+74.64	PI Sta 18+81.47
Δ = 23° 52' 24.3" (RT)	Δ = 33° 05' 08.0" (RT)	Δ = 33° 05' 08.0" (LT)	Δ = 33° 05' 07.8" (LT)	Δ = 33° 05' 07.8" (RT)
D = 4° 20' 26.1"	D = 30° 58' 14.5"	D = 30° 58' 14.5"	D = 30° 58' 14.5"	D = 30° 58' 14.5"
L = 550.00'	L = 106.83'	L = 106.83'	L = 106.83'	L = 106.83'
T = 279.05'	T = 54.95'	T = 54.95'	T = 54.95'	T = 54.95'
R = 1,320.00'	R = 185.00'	R = 185.00'	R = 185.00'	R = 185.00'
DS = 60 mph	DS = 25 mph	DS = 25 mph	DS = 25 mph	DS = 25 mph

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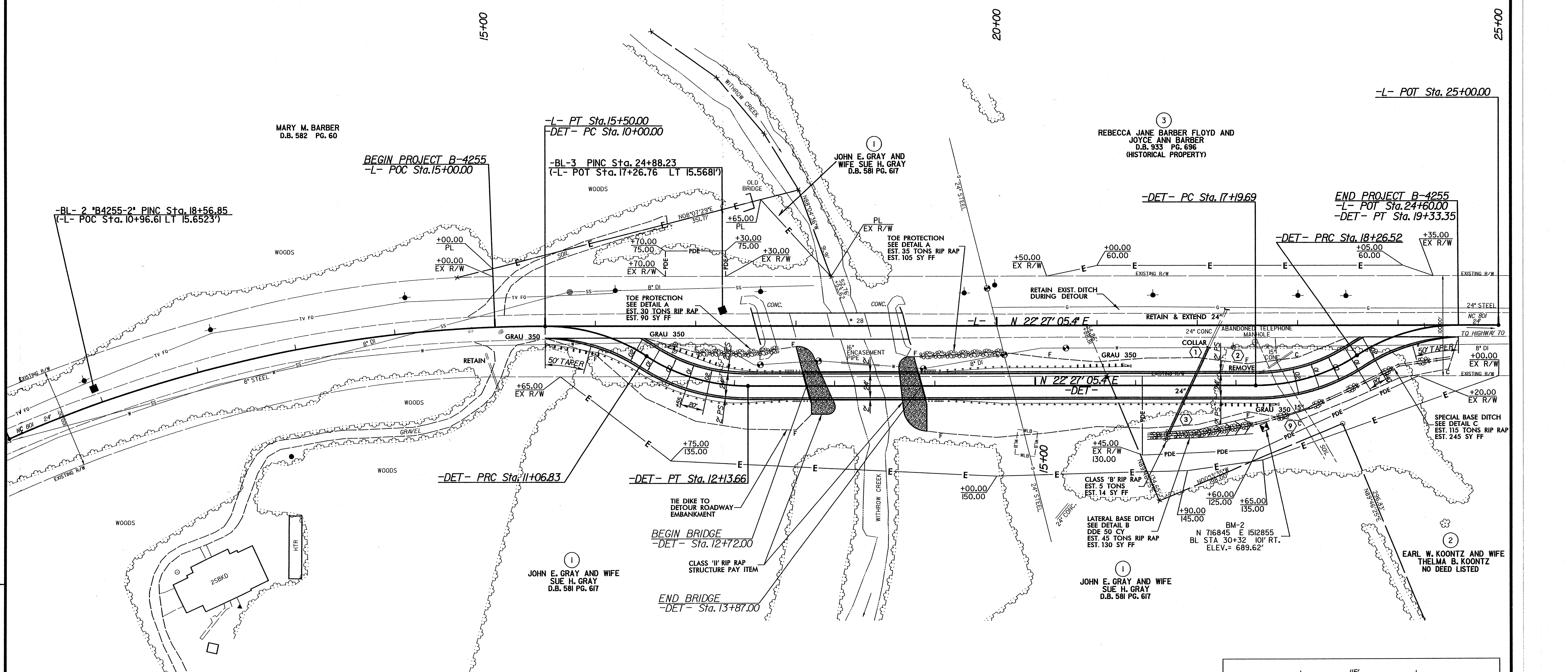
PROJECT REFERENCE NO.	SHEET NO.
B-4255	2-B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN 5/3/06

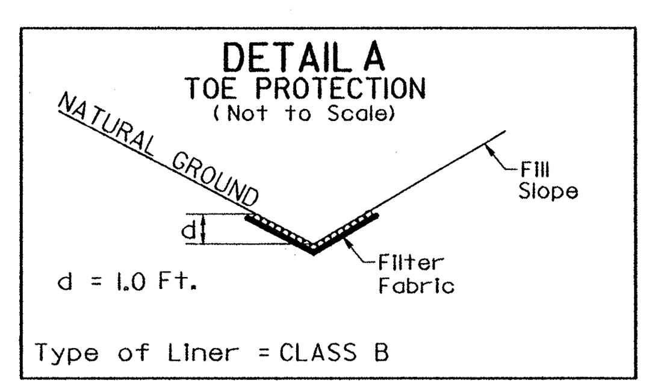
NORTH CAROLINA PROFESSIONAL SEAL 029984 ENGINEER 5/4/2006

FOR -DET- PROFILE SEE SHEET 5

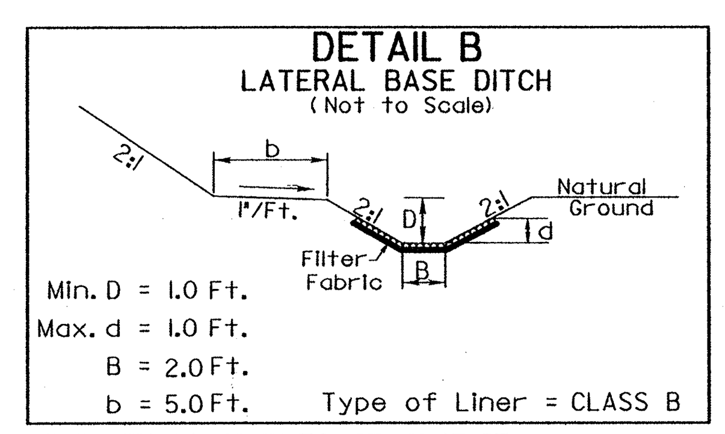
REVISIONS



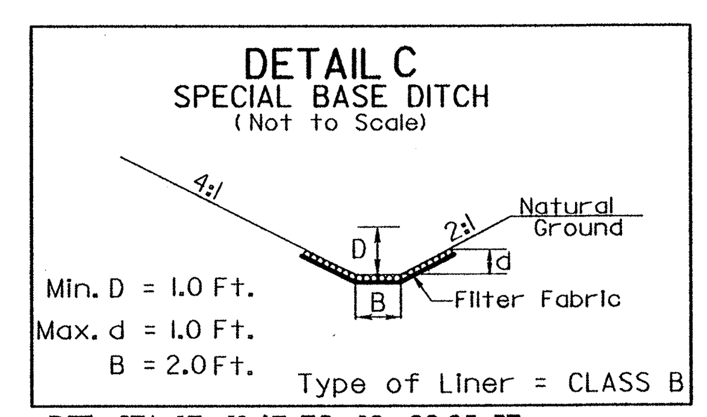
NC GRID NAD 83
15+00
20+00
25+00
MARY M. BARBER
D.B. 582 PG. 60
BEGIN PROJECT B-4255
-L- POC Sta.15+00.00
-L- PT Sta.15+50.00
-DET- PC Sta. 10+00.00
-BL-3 PINC Sta. 24+88.23
(-L- POT Sta. 17+26.76 LT 15.5681')
-BL- 2 "B4255-2" PINC Sta. 18+56.85
(-L- POC Sta. 10+96.61 LT 15.6523')
WOODS
OLD BRIDGE
WITHROW CREEK
JOHN E. GRAY AND
WIFE SUE H. GRAY
D.B. 581 PG. 617
REBECCA JANE BARBER FLOYD AND
JOYCE ANN BARBER
D.B. 933 PG. 696
(HISTORICAL PROPERTY)
-L- POT Sta. 25+00.00
-DET- PC Sta. 17+19.69
END PROJECT B-4255
-L- POT Sta.24+60.00
-DET- PT Sta. 19+33.35
-DET- PRC Sta. 18+26.52
TOE PROTECTION
SEE DETAIL A
EST. 35 TONS RIP RAP
EST. 105 SY FF
TOE PROTECTION
SEE DETAIL A
EST. 30 TONS RIP RAP
EST. 90 SY FF
RETAIN EXIST. DITCH
DURING DETOUR
RETAIN & EXTEND 24"
ABANDONED TELEPHONE MANHOLE
-L- N 22° 27' 05.4" E
-DET- N 22° 27' 05.4" E
GRAU 350
50' TAPER
RETAIN
REMOVE
COLLAR
16" ENCASEMENT PIPE
24" STEEL
8" DI
8" STEEL
TO HIGHWAY 70
NC 801
EXISTING R/W
SPECIAL BASE DITCH
SEE DETAIL C
EST. 115 TONS RIP RAP
EST. 245 SY FF
-DET- PRC Sta. 11+06.83
-DET- PT Sta. 12+13.66
TIE DIKE TO
DETOUR ROADWAY
EMBANKMENT
BEGIN BRIDGE
-DET- Sta. 12+72.00
CLASS 'II' RIP RAP
STRUCTURE PAY ITEM
END BRIDGE
-DET- Sta. 13+87.00
CLASS 'B' RIP RAP
EST. 5 TONS
EST. 14 SY FF
LATERAL BASE DITCH
SEE DETAIL B
DDE 50 CY
EST. 45 TONS RIP RAP
EST. 130 SY FF
BM-2
N 716845 E 1512855
BL STA 30+32 101' RT.
ELEV.= 689.62'
JOHN E. GRAY AND WIFE
SUE H. GRAY
D.B. 581 PG. 617
EARL W. KOONTZ AND WIFE
THELMA B. KOONTZ
NO DEED LISTED
25BKD
HTR



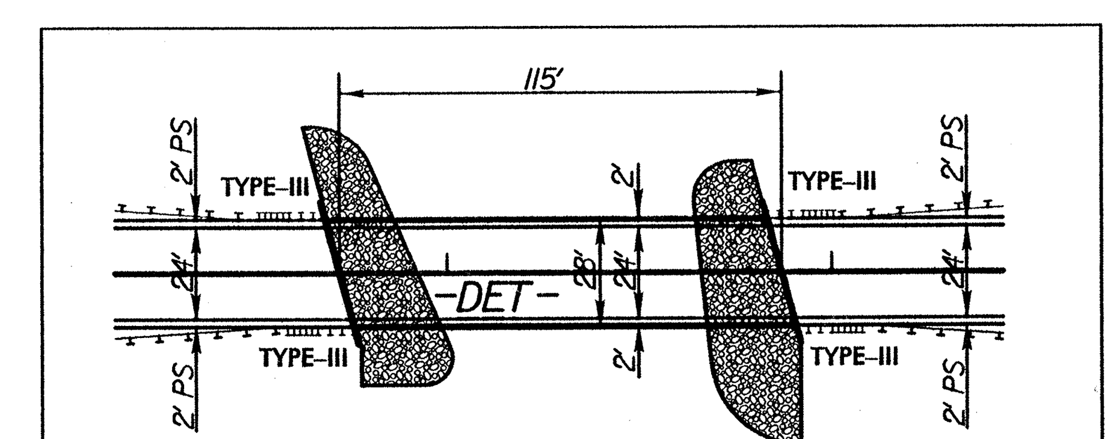
-DET- STA. 11+60.96 TO 12+45 LT
-DET- STA. 13+79 TO 14+75 LT



-DET- STA. 16+11.57 TO 17+11.67 RT



-DET- STA. 17+11.67 TO 19+23.35 RT



SKETCH SHOWING RELATIONSHIP OF BRIDGE TO PAVEMENT AND SHOULDERS

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201474

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0029000000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ********** (18+34.50)
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0057000000-E	226	1,000	CY	UNDERCUT EXCAVATION
0063000000-N	SP	Lump Sum		GRADING
0080000000-E	SP	250	TON	CLASS IV SUBGRADE STABILIZATION
0106000000-E	230	15,300	CY	BORROW EXCAVATION
0134000000-E	240	50	CY	DRAINAGE DITCH EXCAVATION
0195000000-E	265	1,500	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	1,750	SY	FABRIC FOR SOIL STABILIZATION
0318000000-E	300	20	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
0343000000-E	310	24	LF	15" SIDE DRAIN PIPE
0995000000-E	340	40	LF	PIPE REMOVAL
1220000000-E	545	100	TON	INCIDENTAL STONE BASE
1489000000-E	610	1,250	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
1498000000-E	610	400	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B
1519000000-E	610	770	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
1560000000-E	620	120	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
2022000000-E	815	45	CY	SUBDRAIN EXCAVATION
2033000000-E	815	35	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	200	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	6	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
2253000000-E	840	1.5	CY	PIPE COLLARS
2286000000-N	840	3	EA	MASONRY DRAINAGE STRUCTURES
2308000000-E	840	2	LF	MASONRY DRAINAGE STRUCTURES
2354200000-N	840	1	EA	FRAME WITH GRATE, STD 840.24
2363000000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.***** (840.33)
2366000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.24
2556000000-E	846	65	LF	SHOULDER BERM GUTTER
3030000000-E	862	525	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3380000000-E	862	712.5	LF	TEMPORARY STEEL BM GUARDRAIL
3387000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE ********** TEMPORARY (III)
3389100000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350 TEMPORARY
3559000000-E	866	400	LF	** STRAND BARBED WIRE FENCE WITH POSTS (3)
3569000000-E	867	400	LF	BARBED WIRE FENCE RESET
3642000000-E	876	25	TON	RIP RAP, CLASS A
3649000000-E	876	280	TON	RIP RAP, CLASS B
3656000000-E	876	1,400	SY	FILTER FABRIC FOR DRAINAGE
3659000000-N	SP	1	EA	PREFORMED SCOUR HOLES WITH LEVEL SPREADER APRON
4400000000-E	1110	589	SF	WORK ZONE SIGNS (STATIONARY)
4405000000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	128	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4430000000-N	1130	60	EA	DRUMS
4435000000-N	1135	20	EA	CONES
4445000000-E	1145	80	LF	BARRICADES (TYPE III)
4450000000-N	1150	352	HR	FLAGGER
4465000000-N	1160	1	EA	TEMPORARY CRASH CUSHIONS
4590000000-E	SP	3,840	LF	GENERIC TRAFFIC CONTROL ITEM EPOXY PAVEMENT MARKING LINES (4")
4650000000-N	1251	114	EA	TEMPORARY RAISED PAVEMENT MARKERS
4810000000-E	1205	16,800	LF	PAINT PAVEMENT MARKING LINES (4")
4905000000-N	1253	12	EA	SNOWPLOWABLE PAVEMENT MARKERS
6000000000-E	1605	400	LF	TEMPORARY SILT FENCE
6006000000-E	1610	90	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	245	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	315	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	2.5	ACR	TEMPORARY MULCHING
6018000000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.5	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	175	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	5	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6029000000-E	SP	400	LF	SAFETY FENCE
6030000000-E	1630	1,300	CY	SILT EXCAVATION
6036000000-E	1631	650	SY	MATTING FOR EROSION CONTROL
6037000000-E	SP	257	SY	COIR FIBER MAT
6042000000-E	1632	150	LF	1/4" HARDWARE CLOTH
6070000000-N	SP	8	EA	SPECIAL STILLING BASINS
6084000000-E	1660	4	ACR	SEEDING & MULCHING
6087000000-E	1660	1.5	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	75	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	3	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	3.5	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
6123000000-E	1670	1	ACR	REFORESTATION
6132000000-N	SP	1	EA	GENERIC EROSION CONTROL ITEM FAIRCLOTH SKIMMER
				******* BEGIN SCHEDULE AA ******* (3 ALTERNATES) *******
0366000000-E AA1	310	48	LF	15" RC PIPE CULVERTS, CLASS III
0378000000-E AA1	310	116	LF	24" RC PIPE CULVERTS, CLASS III
				*** OR ***
0366000000-E AA2	310	28	LF	15" RC PIPE CULVERTS, CLASS III
0378000000-E AA2	310	96	LF	24" RC PIPE CULVERTS, CLASS III
0536000000-E AA2	SP	20	LF	**** HDPE PIPE CULVERTS (15")
0536000000-E AA2	SP	20	LF	**** HDPE PIPE CULVERTS (24")
				*** OR ***
0366000000-E AA3	310	28	LF	15" RC PIPE CULVERTS, CLASS III
0378000000-E AA3	310	96	LF	24" RC PIPE CULVERTS, CLASS III
0540000000-E AA3	SP	20	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, ***** THICK (15", 0.064")
0540000000-E AA3	SP	20	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, ***** THICK (24", 0.064")
				******* END SCHEDULE AA *******

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	3-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATION	LOCATION (LT,RT, OR CL)	STRUCTURE NO.		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE)								BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE)													CLASS III R.C. PIPE OR C.S. PIPE OR TYPE IR ALUMINIZED OR HDPE PIPE, TYPE S OR D							
SIZE								12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"		30"		36"		42"		48"		12"	15"	18"	24"	30"	36"	42"	48"
THICKNESS OR GAUGE		FROM	TO													.064	.064	.064	.064		.079		.079		.109		.109									
16+55 -DET-	CL	1	3		681.9	673.2					96																									
17+40 -DET-	LT	2																																		
17+00 -L-	RT	4		681.2																																
		4	5		678.5	678.3			28																											
17+00 -L-	LT	5		681.2																																
		5	6		674.9	672.6																								20						
22+38 -L-	LT	7		688.5																																
		7	8		683.2	682.8																										20				
22+90 -L-	RT	9																																		
TOTAL									28		96																			20		20				
SAY																																				

STATION	STRUCTURE NO.		15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS.		QUANTITIES FOR DRAINAGE STRUCTURES	* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. *FT.		C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE					D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME & GRATE STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH GRATE STD. 840.22	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	T.B.D.I. STD. 840.35	G.D.I. ANGLED VANE FRAME WITH 2 GRATES STD. 840.33		PREFORMED SCOUR HOLE	12" FUNNEL DRAIN ELBOWS	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
	FROM	TO				R.C.P.	C.S.P.	PER EACH (0' THRU 5.0')	A 5.0' THRU 10.0'	B 10.0' AND ABOVE		E	F	G																						
16+55 -DET-	1	3																															0.5526			
17+40 -DET-	2																																		40	
17+00 -L-	4							1																			1	1								
	4	5																																		
17+00 -L-	5							1	1.33																		1	1								
	5	6																												1						3GI
22+38 -L-	7							1	.31										1					1	1											
	7	8																															0.5526			REMOVE HEADWALL
22+90 -L-	9		24																																	
TOTAL			24					3	1.64										1					1	1		2	2		1			1.1052		40	
SAY									2																								1.5			

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 BO

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	3-B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

"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 SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR TYPE 350						REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GRAU 350	TYPE III	AT-1						EA	G	NG				
-L-	16+10.08	17+47.58	LT	137.50'				17+47.58	8'	11'					1	1													
-L-	15+31.42	17+56.42	RT	225.00'			17+56.42		8'	11'					1	1													BREAK FOR DRIVE
-L-	19+12.58	22+12.58	LT	300.00'				19+12.58	8'	11'					1	1													
-L-	19+21.42	20+58.92	RT	137.50'			19+21.42		8'	11'					1	1													
		LESS ANCHOR DEDUCTIONS																											
		GRAU-350 4 @ 50' =		- 200.00'																									
		TYPE III 4 @ 18.75' =		- 75.00'																									
			TOTAL	525.00'											4	4													
			SAY	525.00'			(5 ADDITIONAL GUARDRAIL POSTS)																							

"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

TEMPORARY GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	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	GRAU 350	TYPE III							AT-1	EA	G	NG				
-DET-	10+00.75	12+75.75	RT	275.00'			11+05.64		6'	8'					1	1														
-DET-	13+90.75	17+40.75	RT	350.00'				16+61.67	6'	8'					1	1														
-DET-	11+18.25	12+68.25	LT	150.00'				12+11.67	6'	8'					1	1														
-DET-	13+83.25	15+95.75	LT	212.50'			13+83.25		6'	8'					1	1														
		LESS ANCHOR DEDUCTIONS																												
		GRAU-350 4 @ 50' =		-200.00'																										
		TYPE III 4 @ 18.75' =		-75.00'																										
			TOTAL	712.50'											4	4														

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DIVISION OF HIGHWAYS

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	3-C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SUMMARY OF EARTHWORK
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
–DET–					
10+00.00 TO 18+00.00	20		4,350	4,330	
19+50.00 TO 25+00.00	545		7,163	6,618	
SUBTOTAL	565		11,513	10,948	
–L–					
10+00.00 TO 18+00.00	132		390	258	
19+50.00 TO 25+00.00	322		2,157	1,835	
SUBTOTAL	454		2,547	2,093	
–L– W/–DET– REMOVAL					
10+00.00 TO 18+00.00	1,329		9		1,320
19+50.00 TO 25+00.00	1,713		58		1,655
SUBTOTAL	3,042		67		2,975
TOTAL	4,061		14,127	13,041	2,975
LOSS DUE TO CLEARING AND GRUBBING	–1,000			1,000	
EST. SHOULDER MATERIAL			339	339	
PROJECT TOTAL	3,061		14,466	14,380	2,975
EST. TO REPLACE TOPSOIL ON BORROW PIT				720	
GRAND TOTAL	3,061			15,100	
SAY	3,100			15,300	

EST. DDE = 50 CY
EST. UNDERCUT EXCAVATION = 1,000 CY (CONTIGENCY FROM GEOTECHNICAL)
EST. SELECT GRANULAR MATERIAL = 1,500 CY
EST. FABRIC FOR SOIL STABILIZATION = 1,750 SY

Note: Approximate quantities only. Unclassified Excavation, Shoulder Borrow, Fine Grading, Clearing and Grubbing, Breaking of Existing Pavement and Removal of Existing Pavement will be paid for at the contract Lump Sum price for "Grading".

SUMMARY OF PAVEMENT REMOVAL
IN SQUARE YARDS

LOCATION	ASPHALT REMOVAL	ASPHALT BREAK UP	CONCRETE REMOVAL	CONCRETE BREAK UP
–L– 16+90 TO 17+60	186.67			
–L– 18+65 TO 23+75	1,242.67			
–DET– 10+00 TO 11+02.90	93.99			
–DET– 11+02.90 TO 12+72	526.09			
–DET– 13+87 TO 18+30.45	1,379.62			
–DET– 18+30.45 TO 18+66.93	95.74			
TOTAL	3,524.77			
SAY	3,550			

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-L-

PI Sta 12+79.05
Δ = 23° 52' 24.3" (RT)
D = 4° 20' 26.1"
L = 550.00'
T = 279.05'
R = 1,320.00'
DS = 60 mph

NC GRID NAD 83

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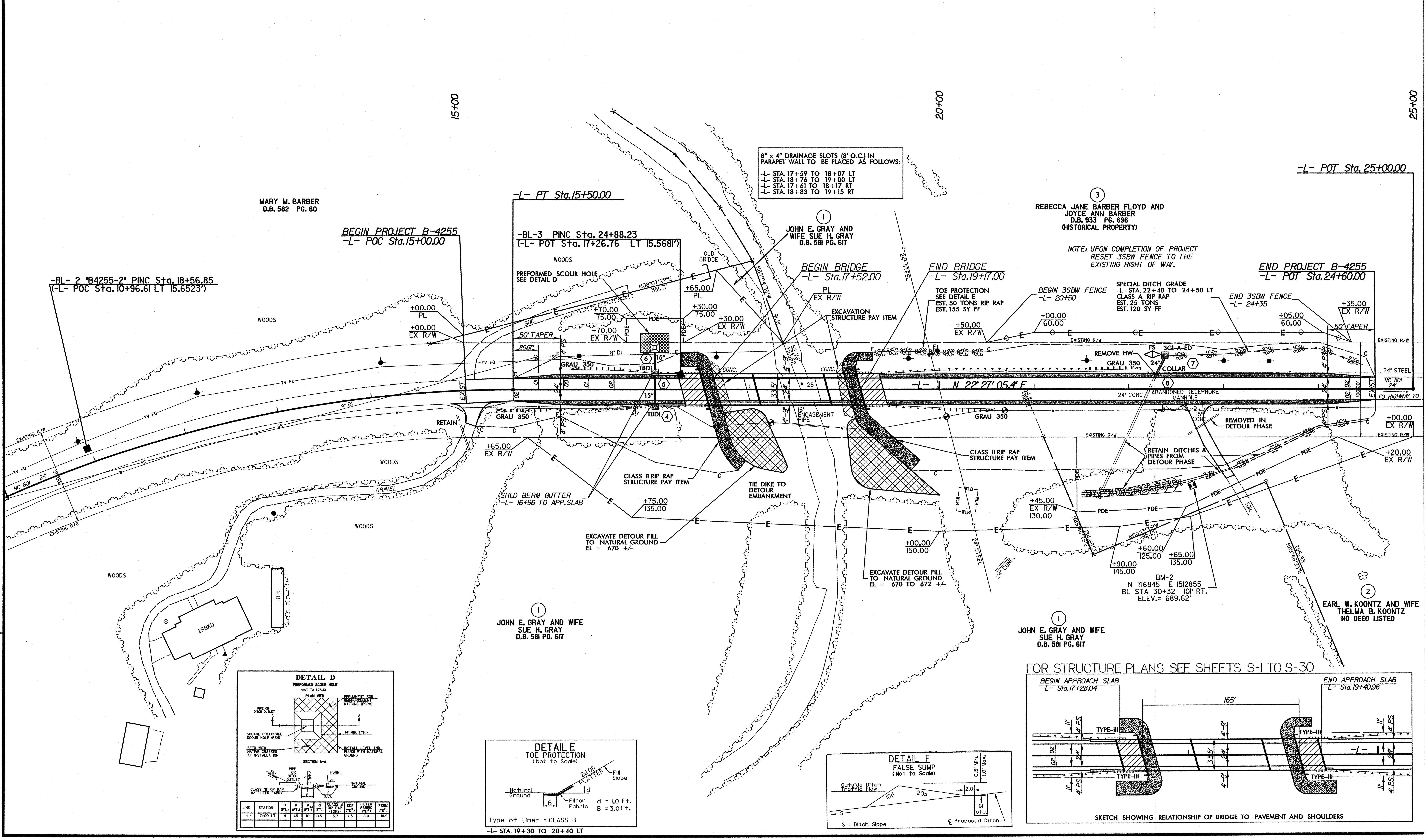
PROJECT REFERENCE NO.	SHEET NO.
B-4255	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN 5/3/06

NORTH CAROLINA PROFESSIONAL SEAL 029984 ENGINEER DAVID P. BOOKER 5/4/2006

REVISIONS

FOR -L- PROFILE SEE SHEET 5



15+00
20+00
25+00
MARY M. BARBER
D.B. 582 PG. 60
BEGIN PROJECT B-4255
-L- POC Sta.15+00.00
-L- PT Sta.15+50.00
-BL-3 PINC Sta. 24+88.23
(-L- POT Sta. 17+26.76 LT 15.5681')
-BL- 2 "B4255-2" PINC Sta. 18+56.85
(-L- POC Sta. 10+96.61 LT 15.6523')
PREFORMED SCOUR HOLE SEE DETAIL D
8" x 4" DRAINAGE SLOTS (8' O.C.) IN PARAPET WALL TO BE PLACED AS FOLLOWS:
-L- STA. 17+59 TO 18+07 LT
-L- STA. 18+76 TO 19+00 LT
-L- STA. 17+61 TO 18+17 RT
-L- STA. 18+83 TO 19+15 RT
JOHN E. GRAY AND WIFE SUE H. GRAY
D.B. 581 PG. 617
BEGIN BRIDGE
-L- Sta.17+52.00
END BRIDGE
-L- Sta.19+17.00
REBECCA JANE BARBER FLOYD AND JOYCE ANN BARBER
D.B. 933 PG. 696
(HISTORICAL PROPERTY)
NOTE: UPON COMPLETION OF PROJECT RESET 3SBW FENCE TO THE EXISTING RIGHT OF WAY.
-L- POT Sta. 25+00.00
END PROJECT B-4255
-L- POT Sta.24+60.00
TOE PROTECTION SEE DETAIL E
EST. 50 TONS RIP RAP
EST. 155 SY FF
BEGIN 3SBW FENCE -L- 20+50
SPECIAL DITCH GRADE
-L- STA. 22+40 TO 24+50 LT
CLASS A RIP RAP
EST. 25 TONS
EST. 120 SY FF
END 3SBW FENCE -L- 24+35
EXCAVATION STRUCTURE PAY ITEM
OLD BRIDGE
-L- N 22° 27' 05.4" E
NC 801
TO HIGHWAY 70
REMOVE HW
ABANDONED TELEPHONE MANHOLE
REMOVED IN DETOUR PHASE
CLASS II RIP RAP STRUCTURE PAY ITEM
RETAIN DITCHES & PIPES FROM DETOUR PHASE
TIE DIKE TO DETOUR EMBANKMENT
SHLD BERM GUTTER -L- 16+96 TO APP.SLAB
EXCAVATE DETOUR FILL TO NATURAL GROUND EL = 670 +/-
EXCAVATE DETOUR FILL TO NATURAL GROUND EL = 670 TO 672 +/-
BM-2
N 716845 E 1512855
BL STA 30+32 101' RT.
ELEV.= 689.62'
EARL W. KOONTZ AND WIFE THELMA B. KOONTZ
NO DEED LISTED
WOODS
2SBKD
FOR STRUCTURE PLANS SEE SHEETS S-1 TO S-30
BEGIN APPROACH SLAB -L- Sta.17+28.04
END APPROACH SLAB -L- Sta.19+40.96
165'
TYPE-III
SKETCH SHOWING RELATIONSHIP OF BRIDGE TO PAVEMENT AND SHOULDERS
DETAIL D
PREFORMED SCOUR HOLE (NOT TO SCALE)
DETAIL E
TOE PROTECTION (Not to Scale)
2:1 OR FLATTER
Natural Ground
Filter Fabric
d = 1.0 Ft.
B = 3.0 Ft.
Type of Liner = CLASS B
-L- STA. 19+30 TO 20+40 LT
DETAIL F
FALSE SUMP (Not to Scale)
S = Ditch Slope

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PROJECT REFERENCE NO.	SHEET NO.
B-4255	5
R/W SHEET NO.	

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ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN — 5/3/06

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 029984 ENGINEER DAVID R. BOCKER — 5/4/2006

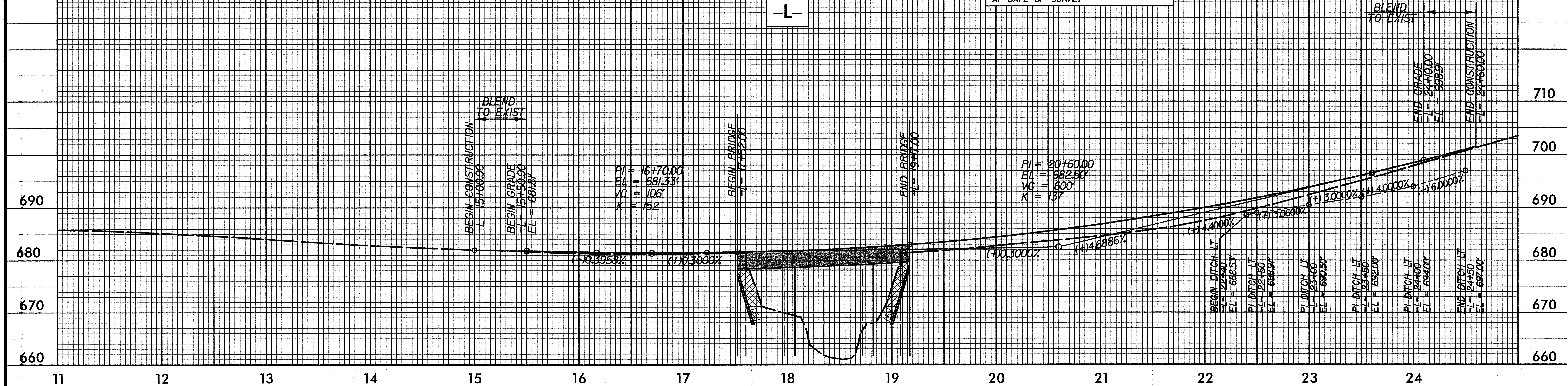
-BL- 2
EL = 685.69'
18" REBAR WITH CAP

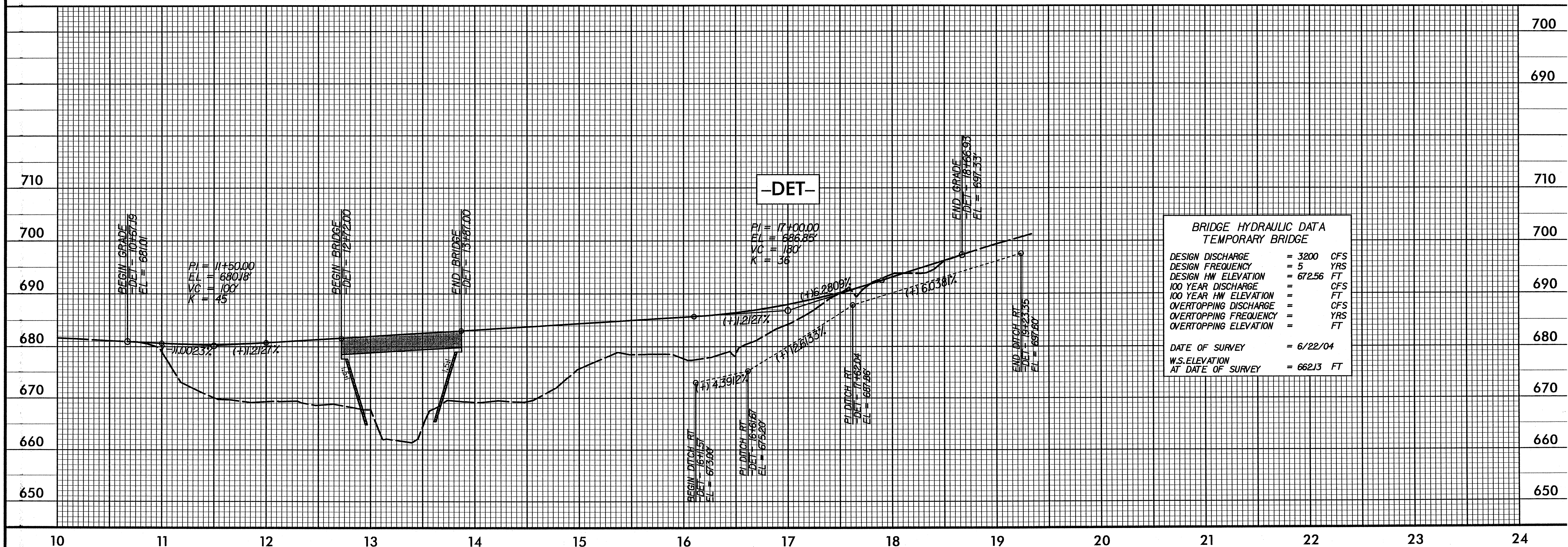
-BL- 3
EL = 680.64'
18" REBAR WITH CAP

BM-2 EL = 689.62'
N=716845 E=1512855
-BL- STA 30+32 101' RT
-L- STA 22+66.88 102.3843' RT
RAILROAD SPIKE SET IN BASE
OF 24" OAK TREE.

BRIDGE HYDRAULIC DATA BOX GIRDER BRIDGE

DESIGN DISCHARGE	= 6800	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 675.2	FT
100 YEAR DISCHARGE	= 8100	CFS
100 YEAR HW ELEVATION	= 676.0	FT
OVERTOPPING DISCHARGE	= 18400	CFS
OVERTOPPING FREQUENCY	= 500 +	YRS
OVERTOPPING ELEVATION	= 680.8	FT
DATE OF SURVEY	= 6/22/04	
W.S.ELEVATION AT DATE OF SURVEY	= 662.13	FT





BRIDGE HYDRAULIC DATA TEMPORARY BRIDGE

DESIGN DISCHARGE	= 3200	CFS
DESIGN FREQUENCY	= 5	YRS
DESIGN HW ELEVATION	= 672.56	FT
100 YEAR DISCHARGE	=	CFS
100 YEAR HW ELEVATION	=	FT
OVERTOPPING DISCHARGE	=	CFS
OVERTOPPING FREQUENCY	=	YRS
OVERTOPPING ELEVATION	=	FT
DATE OF SURVEY	= 6/22/04	
W.S.ELEVATION AT DATE OF SURVEY	= 662.13	FT

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