09/08/9

TIP PROJECT: R-5142

CONTRACT:

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5142	1	

STATE PROJECT NO.	F.A. PROJ. NO.	DESCRIPTION
45042.1.STI	STM-0024(37)	PE, R/W
45042.3.STI	STM-0024(37)	CONST.

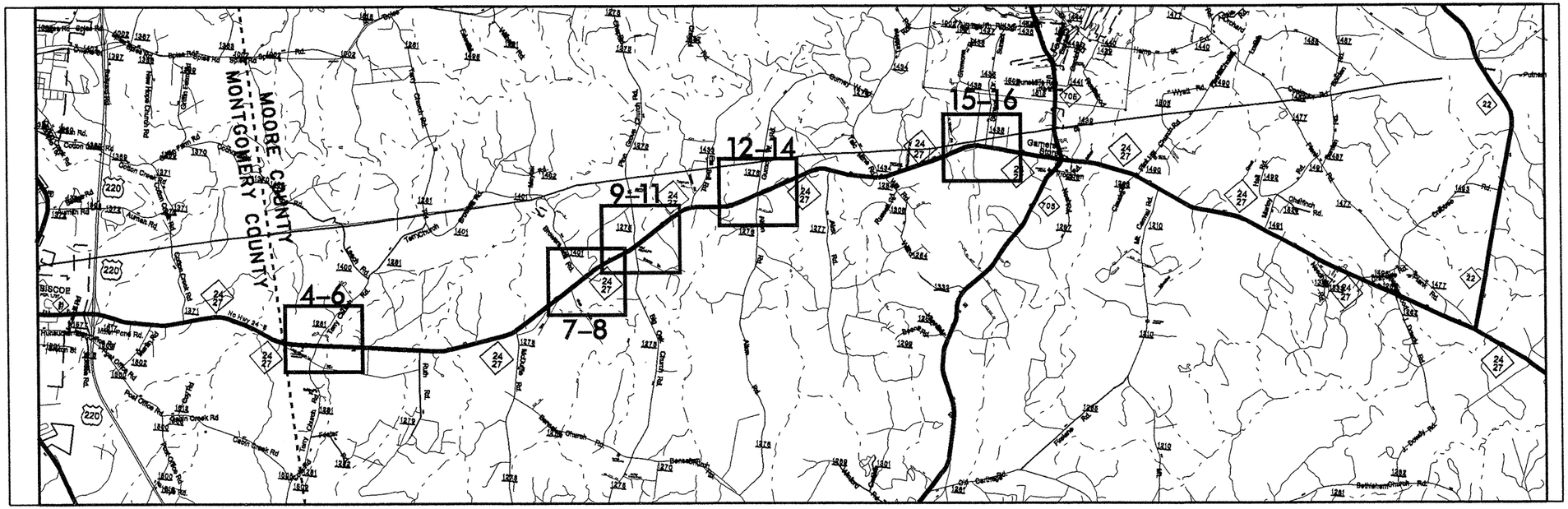
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MOORE COUNTY

LOCATION: *NC 24-27 FROM CONSTRUCTION JOINT WEST OF NC 705 TO MONTGOMERY COUNTY LINE.*

TYPE OF WORK: *GRADING, DRAINAGE, PAVING, JOINT REPAIR, PAVEMENT MARKINGS & MARKERS, AND EROSION CONTROL*

VICINITY MAP



GRAPHIC SCALES

PLANS 0 50

PROFILE (HORIZONTAL) 0 50

DESIGN DATA

ADT 2008 = 4200

DUALS = 6%
TTST = 24%% *
V = 60 MPH

Prepared In the Office of:
DIVISION OF HIGHWAYS
DIVISION 8 DESIGN & CONSTRUCT UNIT
902 N. SANDHILLS BLVD.
ABERDEEN NC 28315
PLANS PREPARED BY:)))

PROJECT LENGTH
ROADWAY: 9.4 MILES
STRUCTURE: ____ MILES
TOTAL: 9.4 MILES

DIVISION OF HIGHWAYS

2006 STANDARD SPECIFICATIONS

LETTING DATE:
June 16, 2009

DIVISION DESIGN & CONSTRUCT ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 26930 ENGINEER GREG S. DAVIS

4-2-09

07-APR-2009 08:45
D:\RDY\MOORE\NC24-27_Stimulus\nc24-27_sr1275_title.dgn
gsdavis AT D8CAD239397

PROJECT REFERENCE NO.	SHEET NO.
R-5142	1-A

INDEX OF SHEETS

INDEX OF SHEETS

GENERAL NOTES: 2006 SPECIFICATIONS

EFFECTIVE: 07-18-06
REVISED: 07-30-08

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.

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.

SUBSURFACE PLANS:

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

UTILITIES

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY DISTRICT ENGINEER'S OFFICE PRIOR TO CONSTRUCTION.

EFF. 07-18-06
REV. 01-02-07

2006 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 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
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
560.02	Method of Shoulder Construction - High Side of Superelevated Curve - Method II
DIVISION 6 - ASPHALT PAVEMENTS	
654.01	Pavement Repairs for Superpave Mix Types
DIVISION 8 - INCIDENTALS	
838.01	Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.11	Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
838.80	Precast Endwalls - 12" thru 72" Pipe 90 Skew
840.72	Pipe Collar
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

◆DATE◆ ◆TIME◆ ◆FILE◆

PROJECT REFERENCE NO.	SHEET NO.
R-5142	1-B

*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
- 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 — CA
- Prop. Control of Access Line — CA
- 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 TS

- Recorded Water Line — W W
- Designated Water Line (S.U.E.*) — W W
- Sanitary Sewer — SS SS
- Recorded Sanitary Sewer Force Main — FSS FSS
- Designated Sanitary Sewer Force Main(S.U.E.*) — FSS FSS
- Recorded Gas Line — G G
- Designated Gas Line (S.U.E.*) — G G
- Storm Sewer — S S
- Recorded Power Line — P P
- Designated Power Line (S.U.E.*) — P P
- Recorded Telephone Cable — T T
- Designated Telephone Cable (S.U.E.*) — T T
- Recorded U/G Telephone Conduit — TC TC
- Designated U/G Telephone Conduit (S.U.E.*) — TC TC
- Unknown Utility (S.U.E.*) — ?UTL ?UTL
- Recorded Television Cable — TV TV
- Designated Television Cable (S.U.E.*) — TV TV
- Recorded Fiber Optics Cable — FO FO
- Designated Fiber Optics Cable (S.U.E.*) — FO 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 — 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 — t
- 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

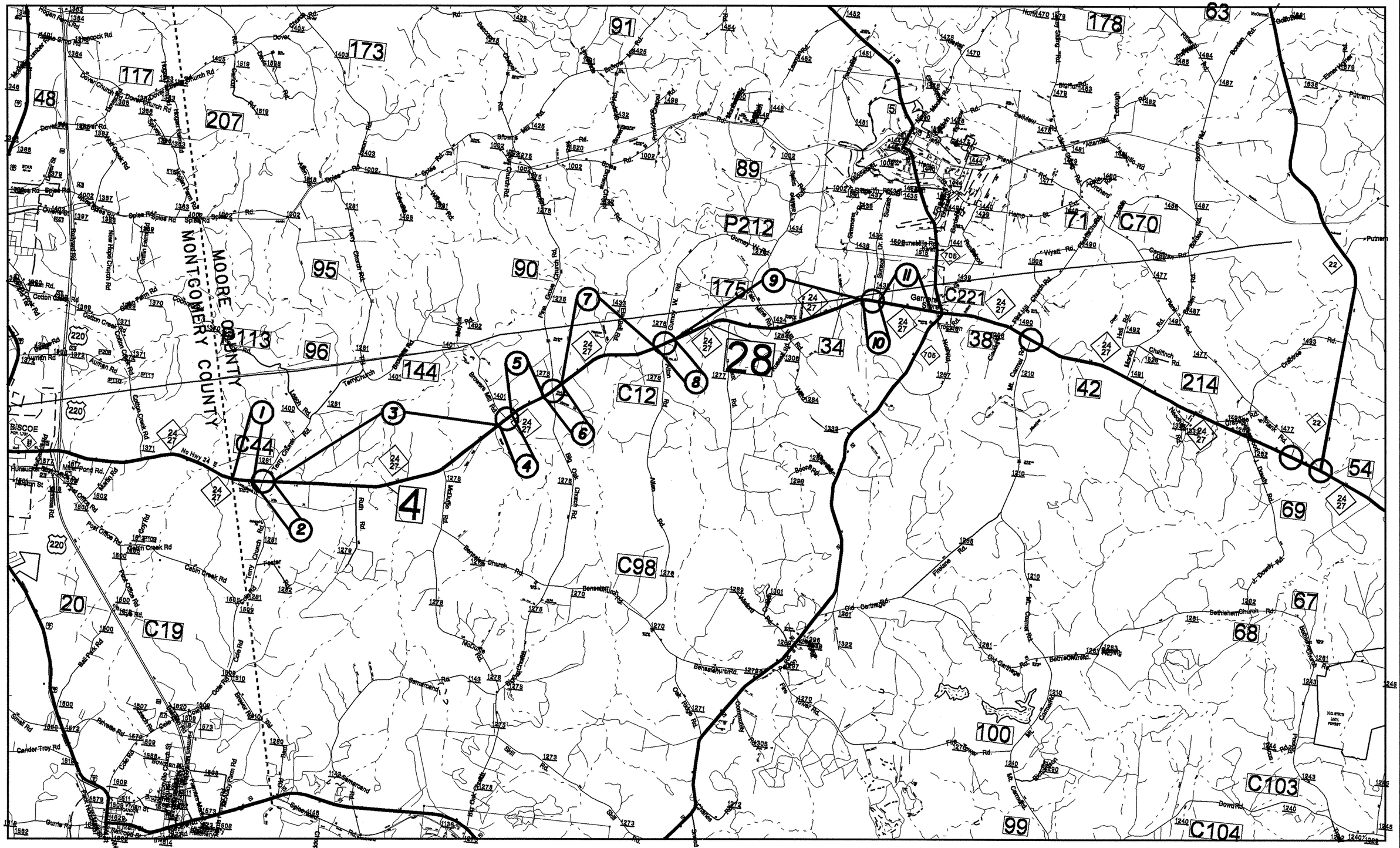
revised 11/09/00

$DATE$ $TIME$ $FILE$

10/26/98

NC HWY 24/27 PROJECT MAP

WBS ELEMENT	SHEET NO.
R-5142	1-C
RW SHEET NO.	



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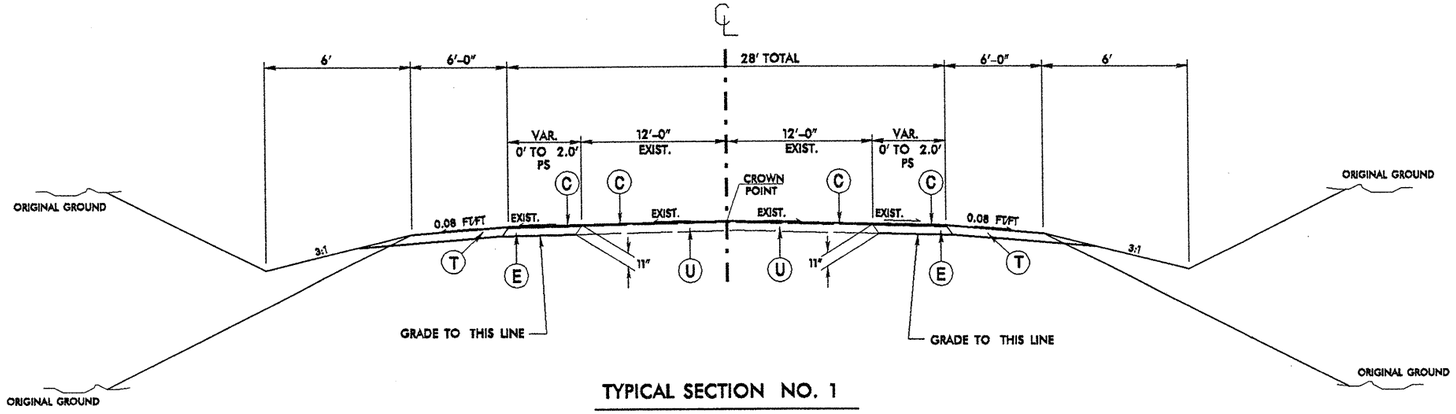
avis AT D8CAD239397

REVISIONS

WBS ELEMENT	SHEET NO.
R-5142	2
R/W SHEET NO.	

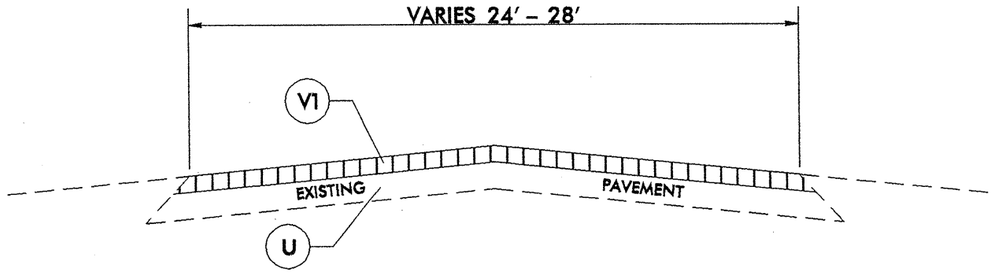
SEAL 26930 ENGINEER DAVID S. DAVIS

DIVISION DESIGN / CONSTRUCT ENGINEER 4-2-09



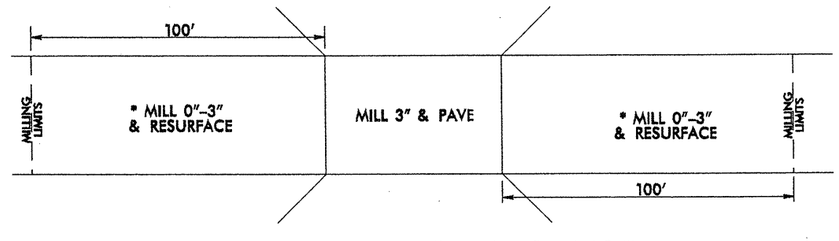
TYPICAL SECTION NO. 1

USE TYPICAL NO. 1 ON MAPS 1, 3, 5, 7, 9 & 11



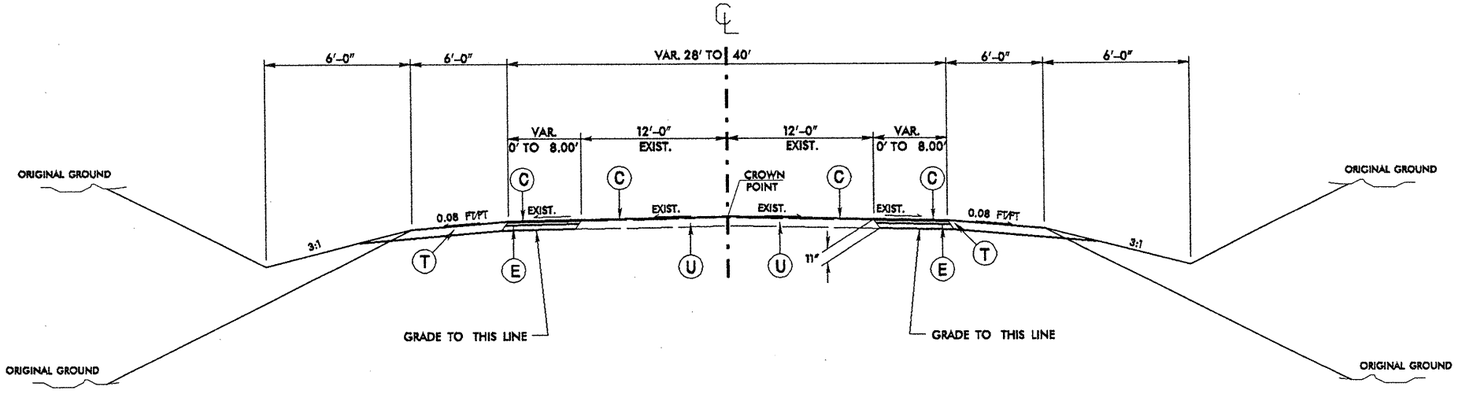
TYPICAL SECTION NO. 3

USE TYPICAL NO. 3 ON ALL MAPS



BRIDGE DRAWING FOR NC 24-27 (BRIDGE NO 4) & (BRIDGE NO. 28)

* MILLING SHALL BE PAID FOR UNDER INCIDENTAL MILLING AND AT LOCATIONS AS DIRECTED BY THE ENGINEER.



TYPICAL SECTION NO. 2

USE TYPICAL NO. 2 ON MAPS 2, 4, 6, 8, & 10

PAVEMENT SCHEDULE	
C	PROP. APPROX. 3 " ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E	PROP. APPROX. 8"(EIGHT) ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING 1.5"

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

REVISIONS

JOINT REPAIR DETAIL

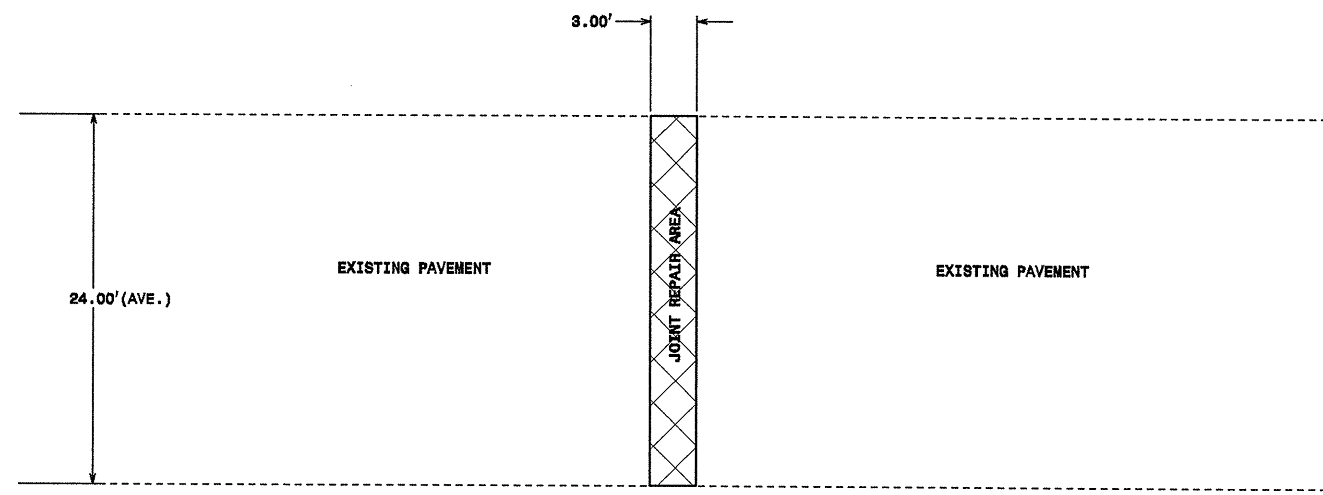
WBS ELEMENT	SHEET NO.
R-5142	2-A
R/W SHEET NO.	

SEAL 26930 ENGINEER GREG S. DAVIS

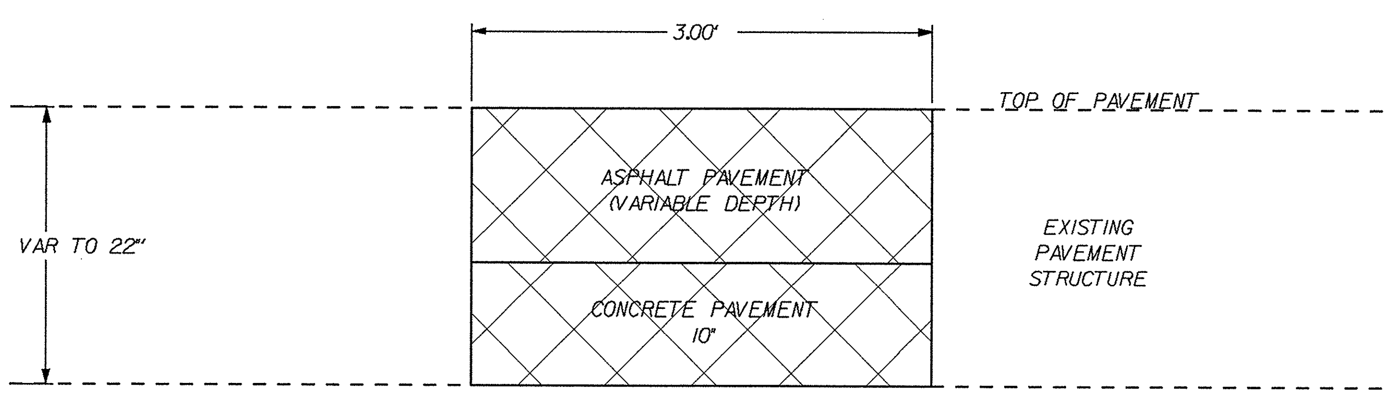
4-2-09

DIVISION DESIGN / CONSTRUCT ENGINEER

JOINT SCHEDULE	
MAP	# JOINTS
1	4
2	4
3	35
4	2
5	6
6	1
7	15
8	3
9	17
10	0
11	4

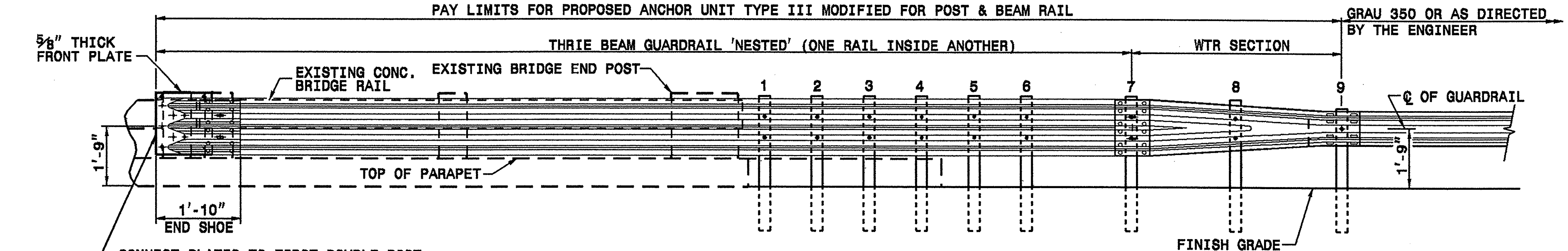


CROSS-SECTION

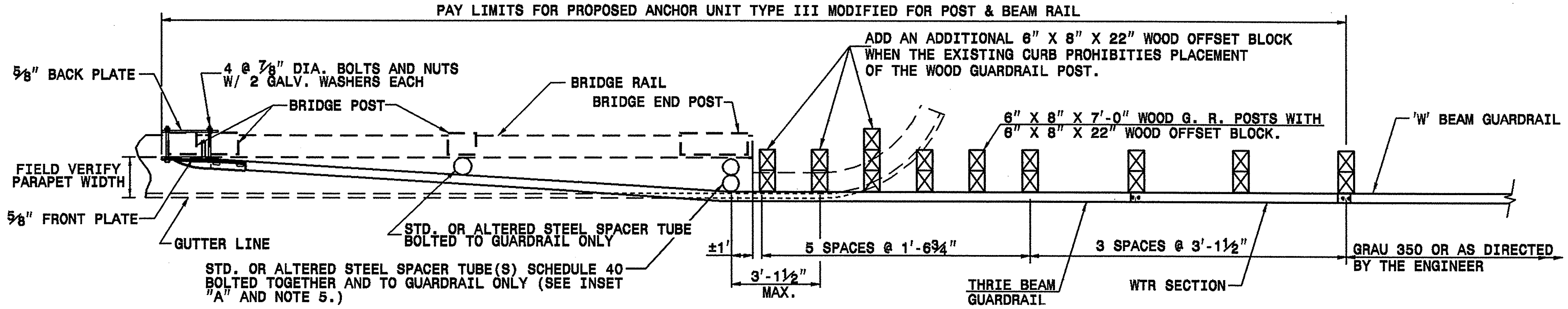


NOTE:
REMOVE ASPHALT AND CONCRETE AT JOINT LOCATIONS AS DIRECTED BY THE ENGINEER (BY SAWING OR MILLING CLEAN JOINTS).
REMOVE A TOTAL WIDTH OF 3' (APPROX. 1.5' EACH SIDE OF JOINT).
REMOVE AND REPLACE WITH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C.
THERE WILL BE NO DIRECT PAY FOR THIS WORK AS IT WILL BE CONSIDERED INCIDENTAL TO TO THE LINE ITEM, JOINT REPAIR (TONNAGE)

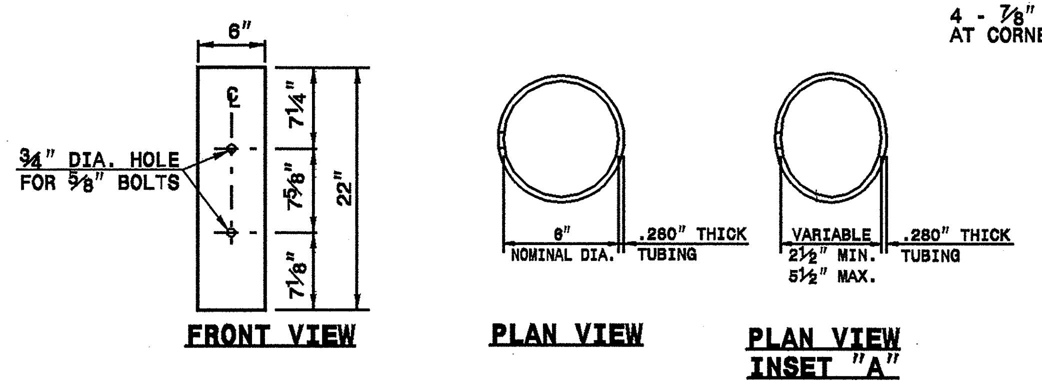
PROJECT REFERENCE NO.	SHEET NO.
R-5142	2-8



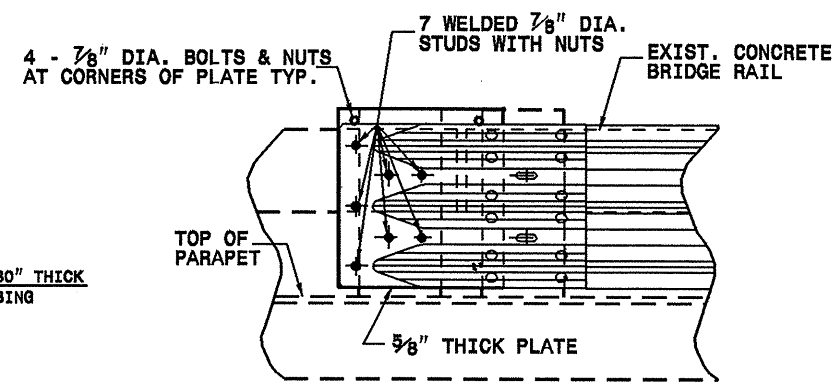
ELEVATION VIEW



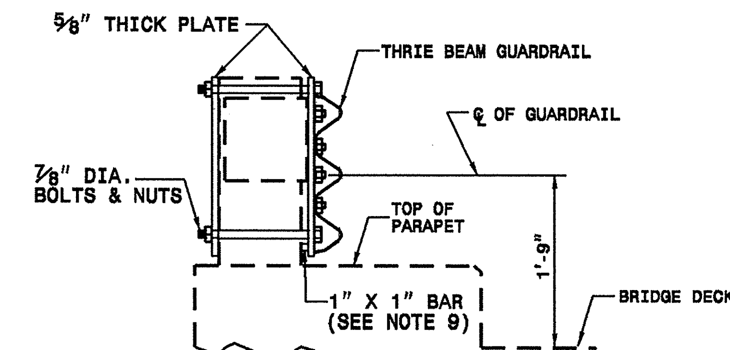
PLAN VIEW



STEEL SPACER TUBE



ELEVATION VIEW

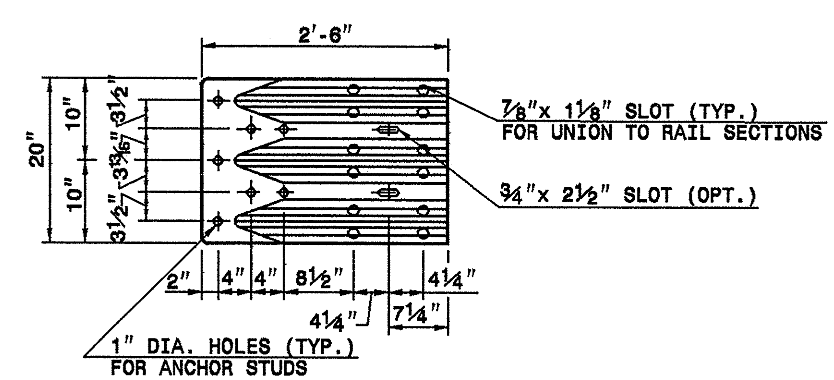


SECTION VIEW

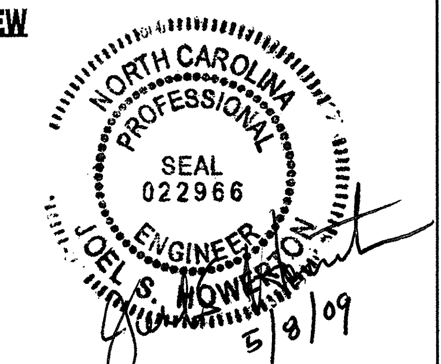
GUARDRAIL ATTACHMENT TO BRIDGE POST

GENERAL NOTES:

1. USE NUTS, BOLTS, AND WASHERS CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-307 AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
2. TAP NUTS FOR THE 7/8" DIA. STUDS AND BOLTS AFTER GALVANIZING SEE A.S.T.M. A-563.
3. USE PLATES AND TUBES CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A-36 AND GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 1076 OF STAND. SPECS.
4. ADDITIONAL FIELD HOLES MAY BE DRILLED IN STEEL RAIL AS DIRECTED BY THE ENGINEER.
5. INSTALL FACE OF GUARDRAIL AS NEAR AS POSSIBLE TO PLUMB WITH THE PARAPET FACE AT BRIDGE END POST SPACER TUBE LOCATION BY USING STANDARD OR ALTERED SPACER TUBES OR A COMBINATION THEREOF OR AS DIRECTED BY THE ENGINEER. FOR VERY SMALL PARAPET WIDTHS, GUARDRAIL MAY BE INSTALLED AGAINST BRIDGE RAIL WITHOUT SPACER TUBES.
6. DO NOT DRILL BRIDGE RAIL IN ORDER TO INSTALL GUARDRAIL ANCHOR UNIT.
7. USE THIS DETAIL ONLY FOR BRIGES WITH POST AND BEAM TYPE RAIL.
8. ATTACH 1" X 1" BAR AND THREADED STUDS TO PLATE WITH ¼" WELDS ALL AROUND.
9. 1" X 1" BAR MAY NOT BE NEEDED ON BRIDGE RAILS WHERE FACE OF RAIL DOES NOT PROJECT BEYOND FACE OF POST.
10. PROVIDE SHOP DRAWINGS OF THE PLATES TO THE ENGINEER FOR APPROVAL BEFORE FABRICATING THE PLATES.
11. LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
12. SEE ROADWAY STANDARD DRAWING 862.03 SHEET 4 FOR ADDITIONAL INFORMATION ON THE TYPE III ANCHOR UNIT



END SHOE



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

GUARDRAIL ANCHOR UNIT TYPE III MODIFIED FOR POST & BEAM RAIL

ORIGINAL BY: E.E. WARD DATE: 01-03
MODIFIED BY: E.E. WARD DATE: 02-04
CHECKED BY: DATE:
FILE SPEC.: \usr\details\stand\bpiii original.dgn

14-MAR-2009 14:52
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.gsdavis AT D8CAD239397

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5142	3	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	GRADING LS	SUPPLE-MENTARY CLEARING & GRUBBING ACR	15" RC PIPE CULVERT, CLASS III LF	18" RC PIPE CULVERT, CLASS III LF	24" RC PIPE CULVERT, CLASS III LF	PIPE REMOVAL LF	INCIDENTAL STONE BASE TONS	SHOULDER CON-STRUCTION SMI	SHOULDER RECON-STRUCTION SMI	1½" MILLING SY	3" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0C TONS	SURFACE COURSE, S9.5C TONS	PG 64-22 PLANT MIX TONS	PG 70-22 PLANT MIX TONS	ASPHALT PAVEMENT REPAIR TONS	PATCHING EXISTING PAVEMENT TONS	JOINT REPAIR TN	SEED & MULCHING AC
R-5142	Moore	1	NC 24-27	FROM MONTGOMERY CO. LINE TO BEGINNING OF PROPOSED TURN LANES AT SR 1281 (MAP#2)	1	No	0.27	26								0.27	0.27	4,120		100	170	795	7	48			40	0.40
		2	NC 24-27	TURN LANES AT SR 1281	2	No	0.26	28	*	*	20	82		60				3,970		105	960	1,160	41	70			40	0.91
		3	NC 24-27	FROM END OF TURN LANES AT SR 1281 TO BEGINNING OF PROPOSED TURN LANES AT SR 1401 (MAP #4)	1	No	3.05	26							215	2.85	3.25	46,525	360	120	1,765	9,100	76	546		155	350	8.83
		4	NC 24-27	TURN LANES AT SR 1401	2	No	0.2	28	*	*	32			32				3,050		70	710	835	31	50			20	0.55
		5	NC 24-27	FROM END OF TURN LANES AT SR 1401 TO BEGINNING PROPOSED TURN LANES AT SR 1275 (MAP#6)	1	No	0.46	26								0.46	0.46	7,020			285	1,360	12	82			60	0.67
		6	NC 24-27	TURN LANES AT SR 1275	2	No	0.27	26	*	*		12	126	93				4,120		135	960	1,125	41	68	26		10	0.90
		7	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1275 TO PROPOSED TURN LANES AT SR 1276 (MAP#8)	1	No	1.3	26							100	1.3	1.3	19,830		70	810	3,860	35	232		70	150	1.90
		8	NC 24-27	TURN LANES AT SR 1276	2	No	0.26	28	*	*	30			24				3,970		135	955	1,130	41	68			30	0.94
		9	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1276 TO BEGINNING OF PROPOSED TURN LANES AT SR 1435 (MAP #10)	1	No	2.47	26							185	2.85	2.05	37,700	360	205	1,795	7,305	77	438		125	170	7.19
		10	NC 24-27	TURN LANES AT SR 1435	2	No	0.2	28	*	*	52			20				3,050		70	665	800	29	48				0.90
		11	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1435 TO CJ WEST OF NC 705	1	No	0.66	26								1.16	0.16	10,070		100	720	1,960	31	118			40	0.96
GRAND TOTAL							9.4		1	1	134	94	126	229	500	8.89	7.49	143,425	720	1,110	9,795	29,430	421	1,768	26	350	910	24.15

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	WIDTH FT	ENDWALLS CY	PIPE COLLAR CY	FOUNDATION COND. MATERIAL, MINOR STR. TN	STEEL BEAM GUARDRAIL LF	GUARDRAIL ANCHOR UNIT, TYPE III MOD. EA	GUARDRAIL ANCHOR UNITS, TYPE 350 EA	RIP RAP, CLASS B TN	FILTER FABRIC FOR DRAINAGE SY	TEMP SILT FENCE LF	EROSION CONTROL STONE, CLASS A TON	EROSION CONTROL STONE, CLASS B TON	SEDIMENT CONTROL STONE TON	MATTING (EROSION CONTROL) SY	WATTLE LF	POLY-ACRYLAMIDE (PAM) LBS	COIR FIBER BAFFLES LF	TEMPORARY MULCHING AC
R-5142	Moore	1	NC 24-27	FROM MONTGOMERY CO. LINE TO BEGINNING OF PROPOSED TURN LANES AT SR 1281 (MAP#2)	1	0.27	26									200	5	30	15	200				
		2	NC 24-27	TURN LANES AT SR 1281	2	0.26	28			11						680	18	80	44	630	180	2.00	148	0.91
		3	NC 24-27	FROM END OF TURN LANES AT SR 1281 TO BEGINNING OF PROPOSED TURN LANES AT SR 1401 (MAP #4)	1	3.05	26				562.50	4	4			1,000	50	160	90	500				
		4	NC 24-27	TURN LANES AT SR 1401	2	0.2	28			3						640	18	90	48	750	140	1.50	116	0.55
		5	NC 24-27	FROM END OF TURN LANES AT SR 1401 TO BEGINNING PROPOSED TURN LANES AT SR 1275 (MAP#6)	1	0.46	26									500	35	60	40	300				
		6	NC 24-27	TURN LANES AT SR 1275	2	0.27	26	2.40	1	15				10	28	960	18	140	68	225	100	1.50	156	0.90
		7	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1275 TO PROPOSED TURN LANES AT SR 1276 (MAP#8)	1	1.3	26									1,000	50	150	60	500				
		8	NC 24-27	TURN LANES AT SR 1276	2	0.26	28			3						825	12	70	36	405	140	2.00	110	0.94
		9	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1276 TO BEGINNING OF PROPOSED TURN LANES AT SR 1435 (MAP #10)	1	2.47	26				562.50	4	4			500	75	160	80	500				
		10	NC 24-27	TURN LANES AT SR 1435	2	0.2	28			6						570	18	70	40	1,250	180	4.00	106	0.90
		11	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1435 TO CJ WEST OF NC 705	1	0.66	26									500	45	75	50	400				
GRAND TOTAL						9.4		2.40	1	38	1,125	8	8	10	28	7,375	344	1,085	571	5,660	740	11	636	4.20

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5142	3-A	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4589000000-N TRAFFIC CONTROL LS	4685000000-E 4" X 90 M WHITE THERMO LF	4686000000-E 4" X 120 M YELLOW THERMO LF	4686000000-E 4" X 120 M WHITE THERMO LF	4695000000-E 8" X 90 M YELLOW THERMO LF	4710000000-E 24" X 120 M WHITE THERMO LF	4725000000-E THERMO LT ARROW 90 M EA	4725000000-E THERMO STR ARROW 90 M EA	4810000000-E 4" WHITE PAINT LF	4810000000-E 4" YELLOW PAINT LF	4900000000-N YELLOW & YELLOW MARKERS EA	4900000000-N CYAN & RED MARKERS EA
R-5142	Moore	1	NC 24-27	FROM MONTGOMERY CO. LINE		2,845	2,275						2,845	2,845	36	
		2	NC 24-27	TURN LANES AT SR 1281		5,770	4,600	430	140	30	4	4			58	15
		3	NC 24-27	FROM END OF TURN LANES AT SR 1281 TO BEGINNING OF PROPOSED TURN LANES AT SR 1401 (MAP #4)		32,200	26,000			30			32,200	26,000	205	
		4	NC 24-27	TURN LANES AT SR 1401		2,160	4,320	150	145	15	2	2			54	7
		5	NC 24-27	FROM END OF TURN LANES AT SR 1401 TO BEGINNING PROPOSED TURN LANES AT SR 1275 (MAP#6)		4,900	3,900						4,900	3,900	62	
		6	NC 24-27	TURN LANES AT SR 1275		2,890	4,480	440	105	30					56	18
		7	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1275 TO PROPOSED TURN LANES AT SR 1276 (MAP#8)		13,800	11,040			20			13,800	11,000	85	
		8	NC 24-27	TURN LANES AT SR 1276		2,800	4,600	350		30	4	4			57	13
		9	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1276 TO BEGINNING OF PROPOSED TURN LANES AT SR 1435 (MAP #10)		26,100	21,000			30			26,100	21,000	165	
		10	NC 24-27	TURN LANES AT SR 1435		2,225	3,750	600	260	15	2	2				
		11	NC 24-27	FROM END OF PROPOSED TURN LANES AT SR 1435 TO CJ WEST OF NC 705		7,000	6,000						7,000	6,000	45	
TOTAL FOR PROJ NO. R-5142					**1**	**102,690**	**91,965**	**1,970**	**650**	**200**	**12**	**12**	**86,845**	**70,745**	**823**	**53**
							93,935				**24**		**157,590**		**876**	
GRAND TOTAL					**1**	**102,690**	**91,965**	**1,970**	**650**	**200**	**12**	**12**	**86,845**	**70,745**	**823**	**53**
							93,935				**24**		**157,590**		**876**	

COMPUTED BY:	GSD	DATE:	3/11/2009
CHECKED BY:	GSD	DATE:	3/11/2009

PROJECT NO.	SHEET NO.
R-5142	3-B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

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 JUNCTION BOX

STATION / SIZE / THICKNESS OR GAUGE	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 OTHERWISE) 12" .064	15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 OR STD.838.80 CU. YARDS R.C.P.	C.S.P.	QUANITIES 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. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND 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. 840.20	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	MANHOLE STD. 840.51	M.H. STD. 840.51 OR 840.53	M.H. FRAME AND 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
Map#2																																																					
-L-SR1281 11+86	RT	1								42																																											
-L-SR1281 15+88	LT	2								20																																										20	
-L-SR1281 18+55	RT	3								20																																										20	
-L-SR1281 21+91	LT	4							20																																											20	
Map#2 TOTAL									20	82																																										60	
MAP#4																																																					
-L-SR1401 17+54	RT								32																																											32	
Map#4 TOTAL									32																																											32	
MAP#6																																																					
-L-SR-1275 14+57	RT	6								8																	1																							0.4465			REMOVE AND REPLACE HW
-L-SR-1275 18+12	RT	7									84																1.4																									52	REMOVE AND REPLACE HW
-Y1-1275 11+60	LT	8									42																																							0.4465		41	
-L-SR1275 22+45	RT	9								4																																											
MAP#6 TOTAL										12	126																2.4																							0.893		93	
MAP#8																																																					
-L-SR1276 20+63	LT	10							30																																											24	
MAP#8 TOTAL									30																																											24	
MAP#10																																																					
-L-SR1435 14+88	RT	11							28																																											20	
-L-SR1435 15+53	RT	12							24																																												
MAP#10 TOTAL									52																																											20	
PROJECT TOTAL									134	94	126																2.4																							0.9		229	
																																																		Say 1			

COMPUTED BY: GSD DATE: 3-11-09
CHECKED BY: GSD DATE: 3-11-09

PROJECT NO.	SHEET NO.
R-5142	3-C

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
MAP#2					
10+25	24+00	1520	332		1188
MAP#4					
10+25	20+75	323	708	385	
MAP#6					
10+75	24+75	737	991	254	
MAP#8					
10+25	23+50	1177	707		470
MAP#10					
11+00	21+75	689	839	150	
PROJECT TOTALS:		4446	3577	789	1658
Waste to Replace Borrow				-789	-789
PROJECT TOTALS:		4446			869
GRAND TOTALS:		4446			869
SAY:		**4450**			**870**

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

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	SF
Map#1			RT	440
Map#2				
-L-SR1281	10+12	16+67	RT	1607.00
-L-SR1281	17+30	24+01	RT	1653.00
Map#3			RT	300.00
Map#4				
-L-SR1401	10+23	20+99	RT	2692.00
Map#6				
-L-SR1275	11+62	16+99	RT	1397.00
-L-SR1275	17+82	24+49	RT	1591.00
Map#7				200.00
Map#8				
-L-SR1276	10+08	16+58	RT	1746.00
-L-SR1276	10+08	16+50	LT	1830.00
-L-SR1276	17+12	23+62	RT	1920.00
Map#9				2600.00
Map#10				
-L-SR1435	10+81	16+42	RT	1274.00
		TOTAL:		19250.00
			SAY:	19300

* Asphalt removal in joint repair are NOT included in the above quantities.

"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.
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

LINE	BEG. STA.	END STA.	LOC.	LENGTH			WARRANT POINT		"N" DIST	TOTAL	FLAIR LENGTH		W		ANCHORS							IMP. ATTEN. TYPE 350			REMOVE EXISTING GRDRAIL		REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPR. END	TRAIL. END	FROM E.O.L.	SHLDR WIDTH	APPR. END	TRAIL. END	APPR. END	TRAIL. END	Type III MOD	XI	GRAU 350	M-350	XII	CAT-1	VI MOD	EA	G	NG			
Map#3	WB Approach		**Bridge #4**	300					5	8					1		1										
	WB Trail			137.5					5	8					1		1										
	EB Approach			300					5	8					1		1										
	EB Trail			137.5					5	8					1		1										
Map#9	WB Approach			300					5	8					1		1										
	WB Trail			137.5					5	8					1		1										
	EB Approach			300					5	8					1		1										
	EB Trail			137.5					5	8					1		1										
TOTAL				**1750**											**8**		**8**										
Less Anchor Deductions			**Length**																								
	GRAU	8@50'	400																								
	Type III Mod.	8@30'	240																								
PROJECT TOTAL			640	**1110**																							
		SAY		**1125**											**8**		**8**										

MAP #2

PROJECT REFERENCE NO.	SHEET NO.
R-5142	4
R/W SHEET NO.	

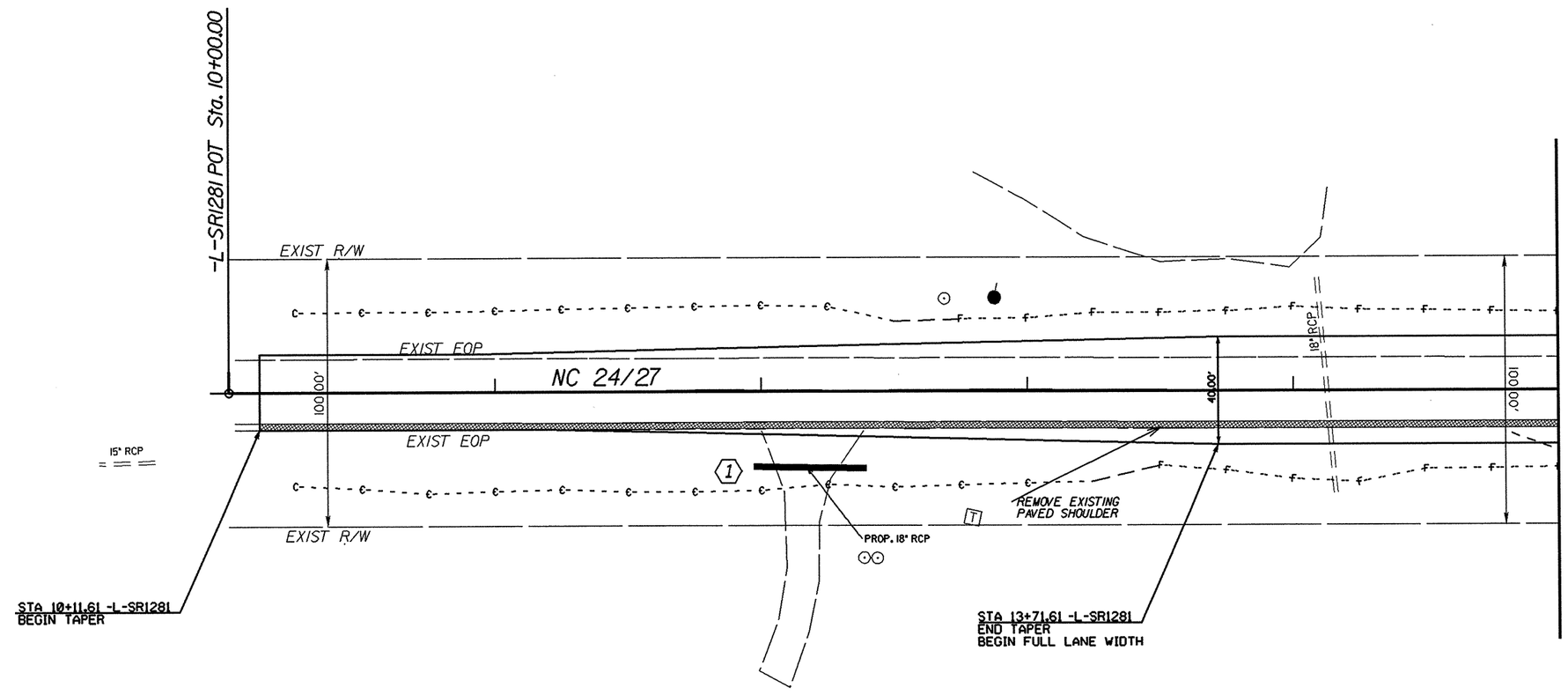
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 26930 GREG E. DAVIS
4-2-09
DIVISION DESIGN / CONSTRUCT ENGINEER

REVISIONS

8/17/99

10

15



1 INCH = 50 FEET

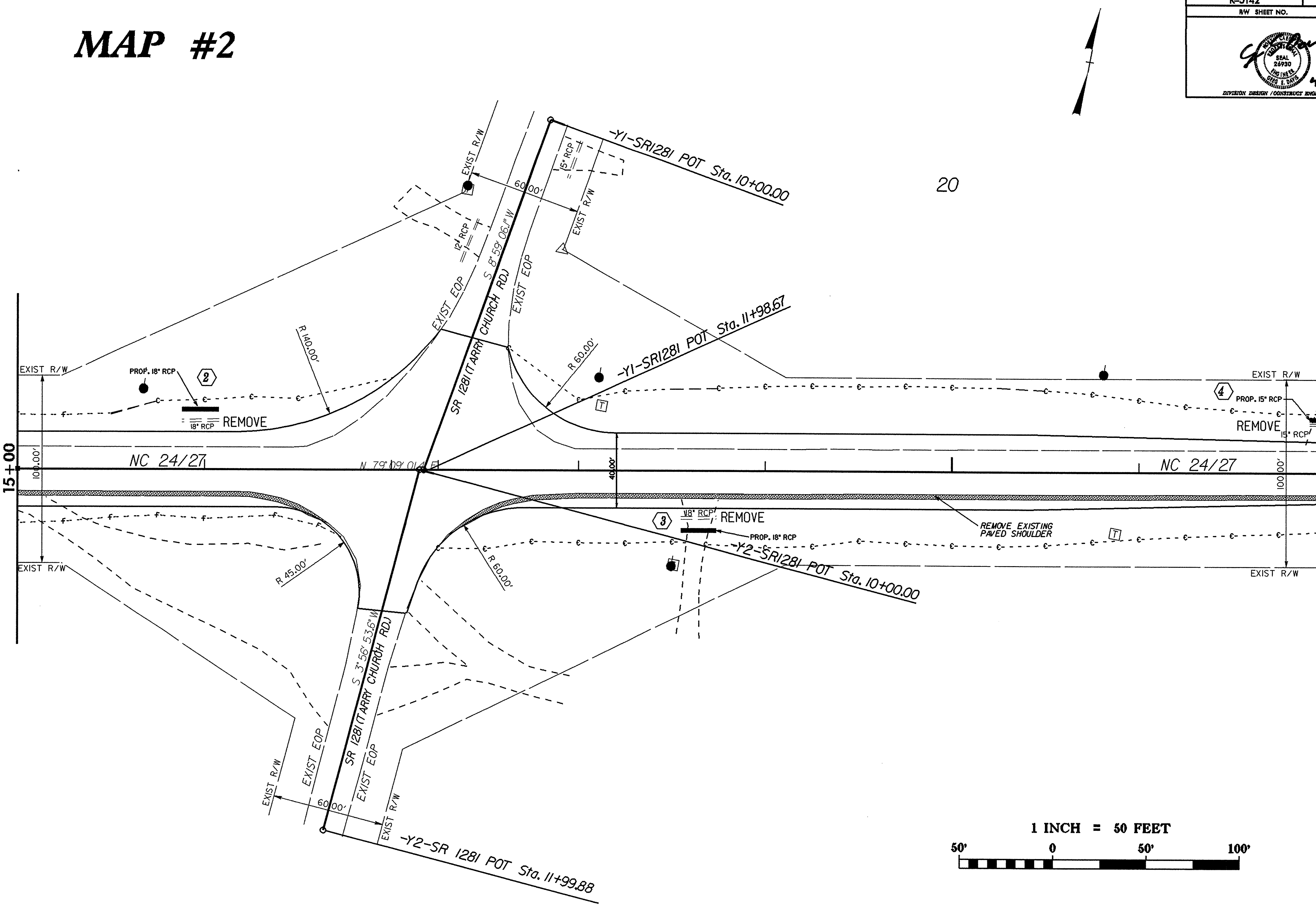
50' 0 50' 100'

PROJECT REFERENCE NO.	SHEET NO.
R-5142	5
R/W SHEET NO.	

DIVISION DESIGN / CONSTRUCT ENGINEER

4-2-09

MAP #2



1 INCH = 50 FEET

50' 0 50' 100'

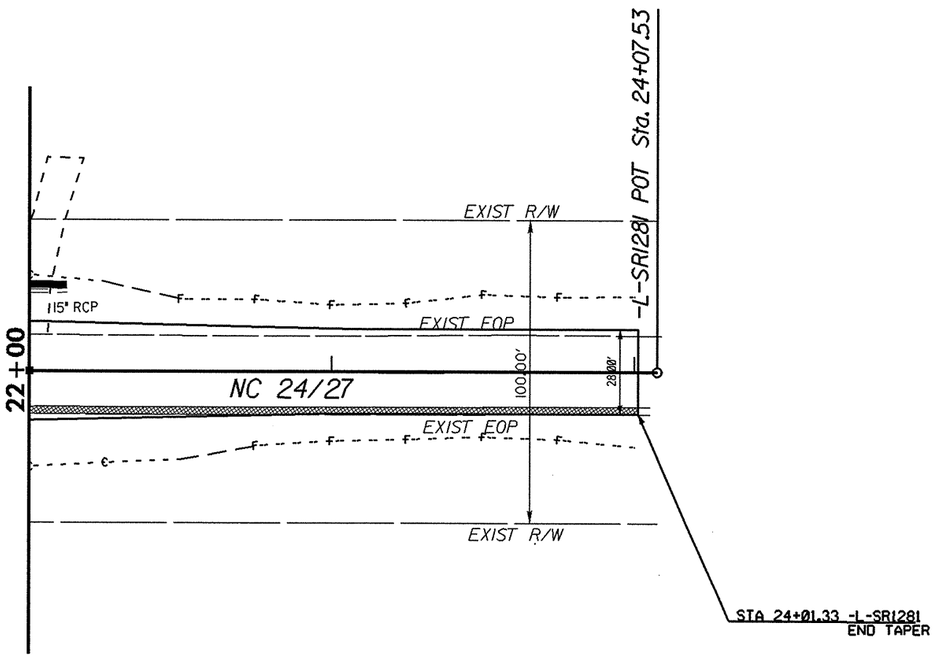
MAP #2

PROJECT REFERENCE NO.	SHEET NO.
R-5142	6
R/W SHEET NO.	

SEAL 26930 ENGINEER CRAIG E. DAVIS

4-2-09

DIVISION DESIGN / CONSTRUCT ENGINEER



1 INCH = 50 FEET

50' 0 50' 100'

REVISIONS

8/17/99

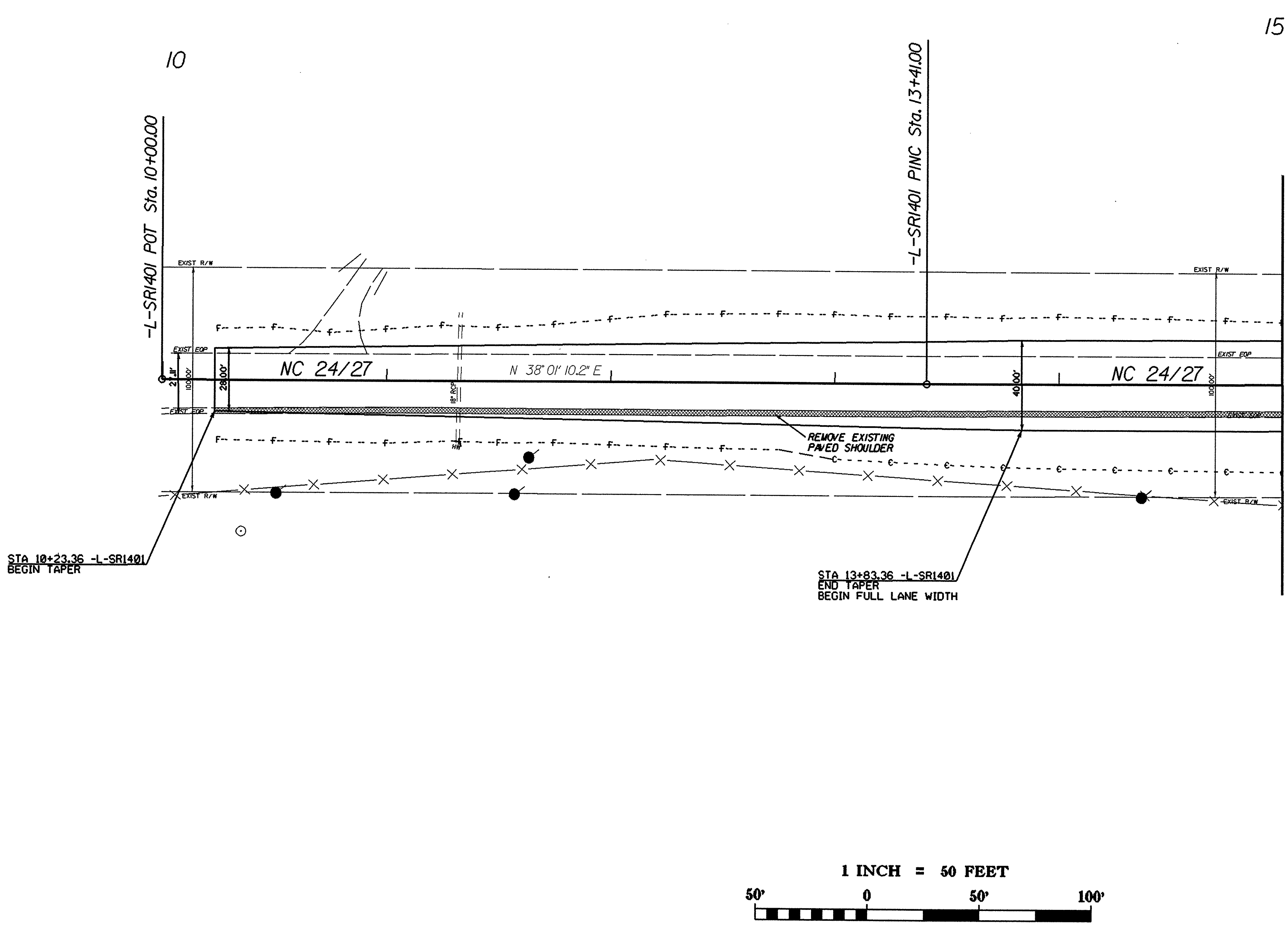
07-APR-2009 08:45
D:\RDT\MOORE\NC24-27\Stymulus\24-27_terry_ch_rd\nc24-27_Terry_Ch_Rd_psh-6.dgn

MAP #4

PROJECT REFERENCE NO.	SHEET NO.
R-5142	7
R/W SHEET NO.	

DIVISION DESIGN / CONSTRUCT ENGINEER

4-2-09



8/17/99

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07-APR-2009 08:45

MAP #4

PROJECT REFERENCE NO.	SHEET NO.
R-5142	8
R/W SHEET NO.	

DIVISION DESIGN / CONSTRUCT ENGINEER

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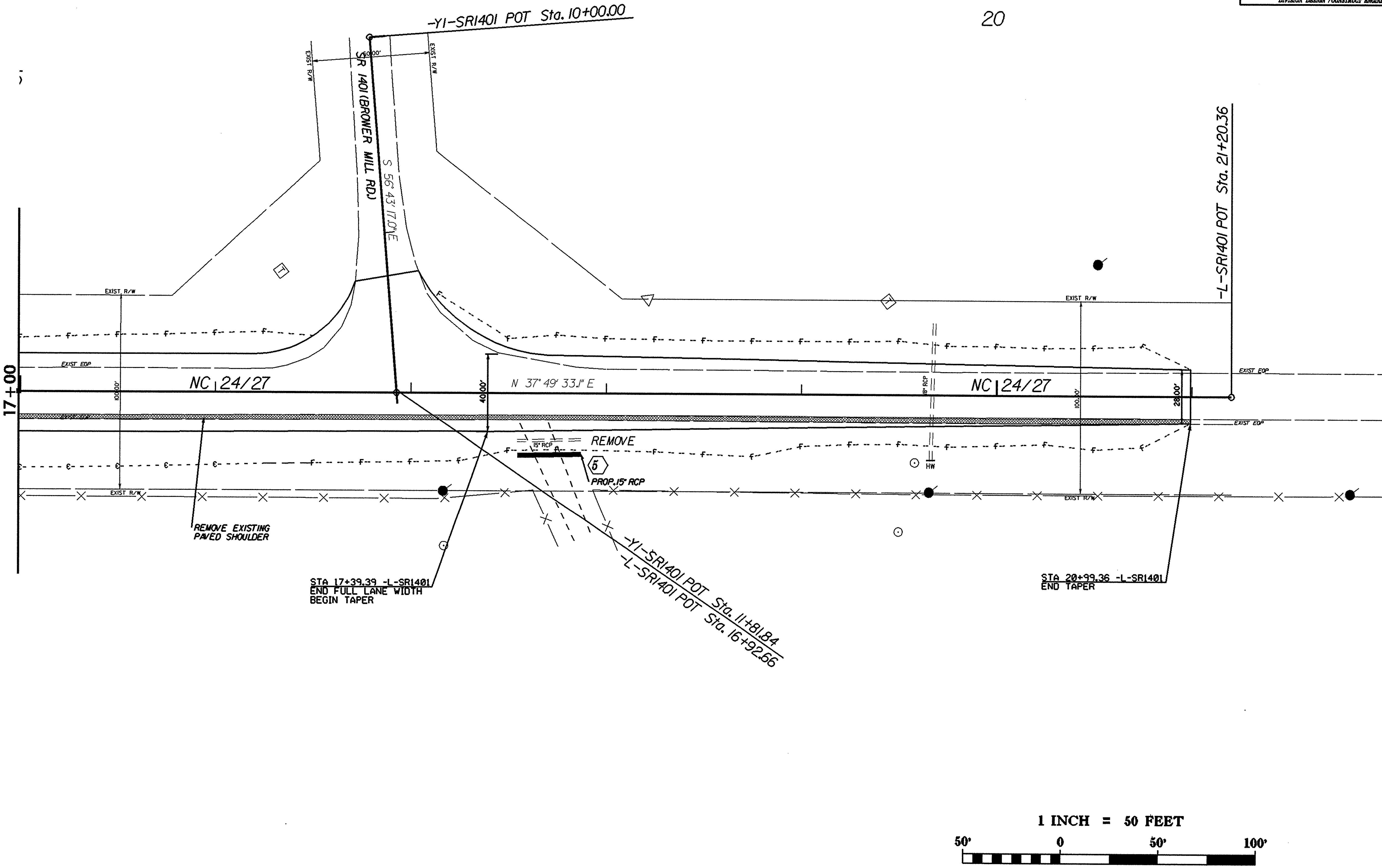


REVISIONS

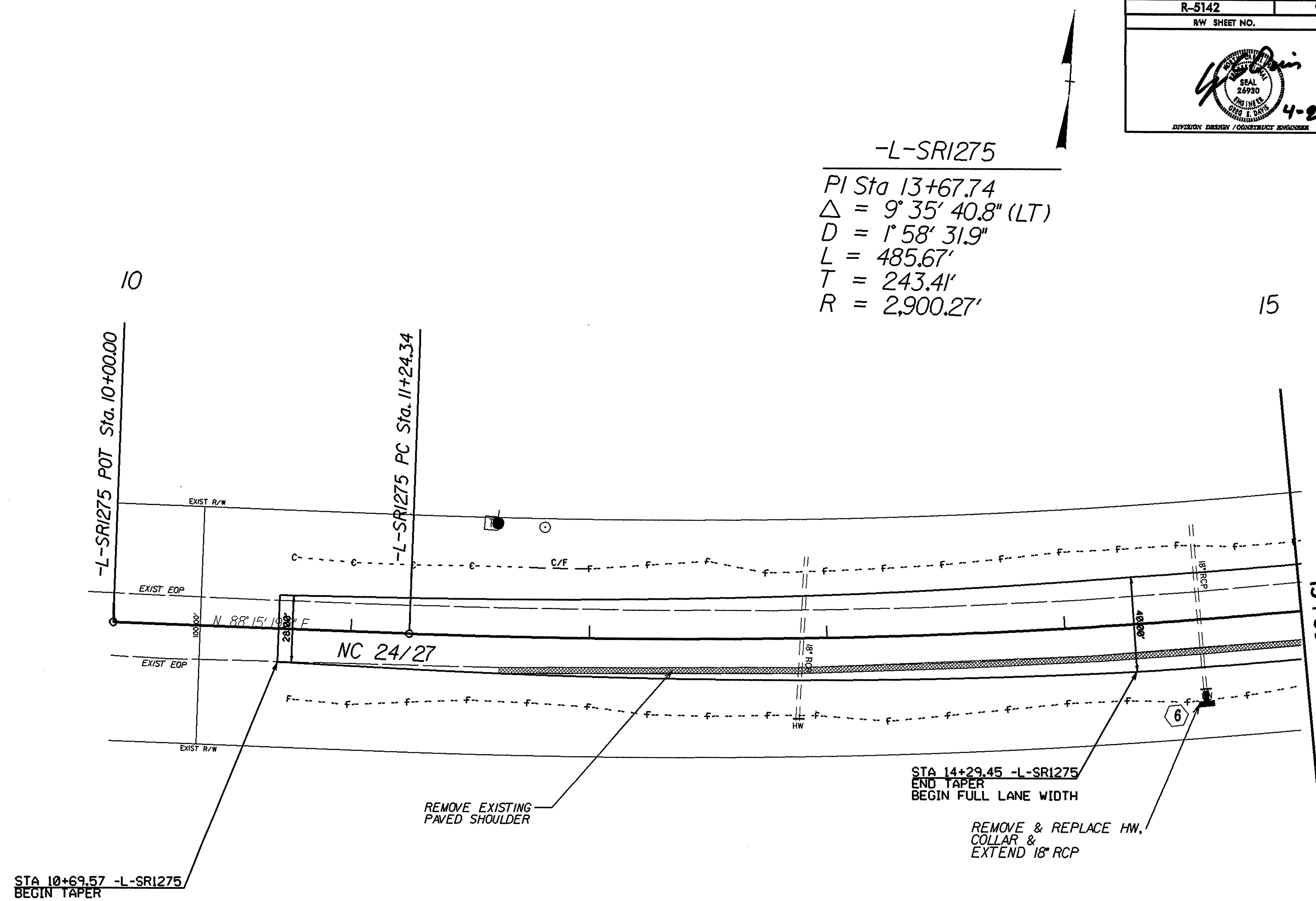
8/17/99

07-APR-2009 08:45

MAP #6

PROJECT REFERENCE NO.	SHEET NO.
R-5142	9
R/W SHEET NO.	

DIVISION DESIGN / CONSTRUCT ENGINEER 4-2-09



1 INCH = 50 FEET

50' 0 50' 100'

REVISIONS

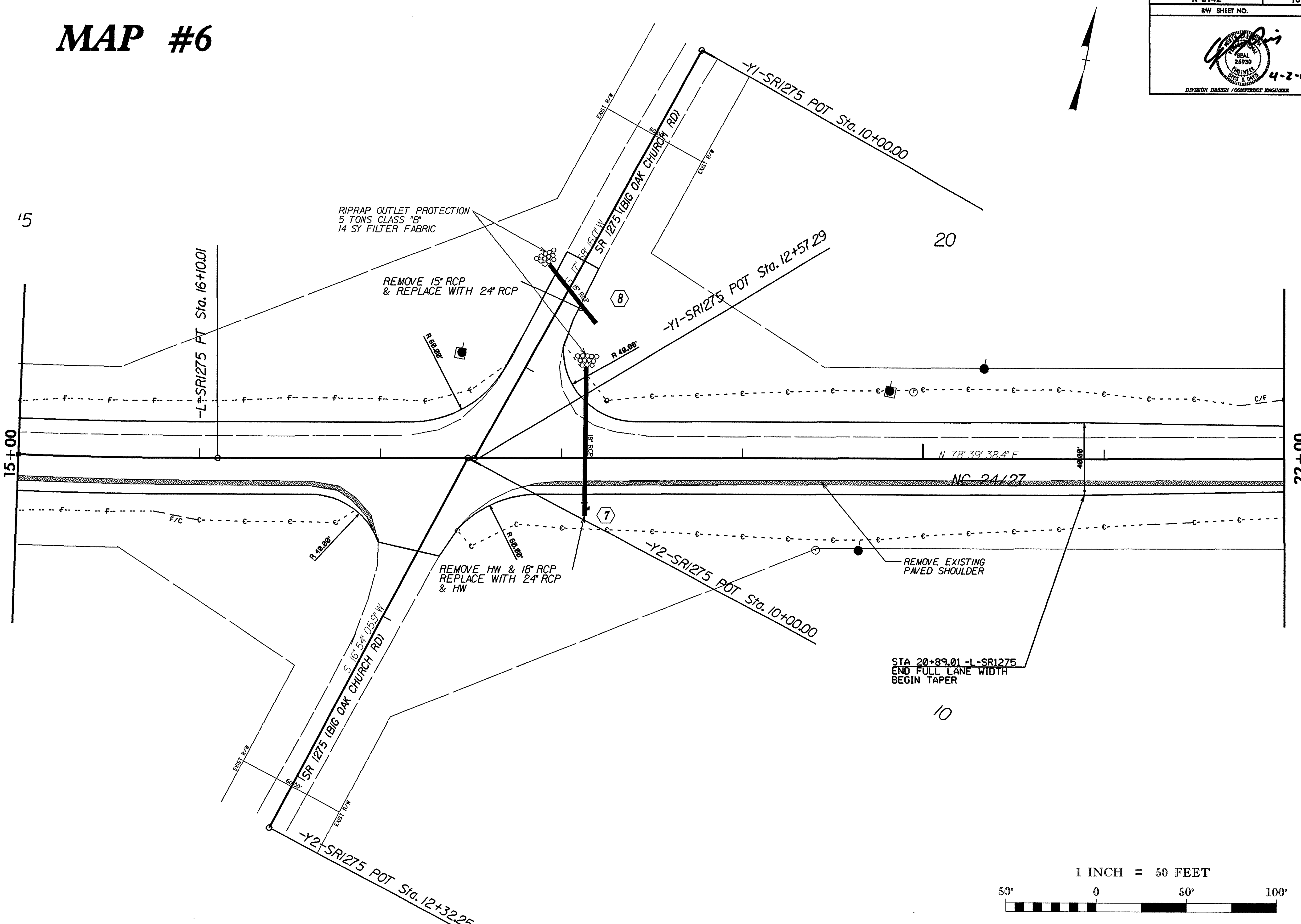
07-APR-2009 08:45

MAP #6

PROJECT REFERENCE NO.	SHEET NO.
R-5142	10
R/W SHEET NO.	

4-2-09

DIVISION DESIGN / CONSTRUCT ENGINEER



-Y1-SR1275 POT Sta. 10+00.00
SR 1275 (BIG OAK CHURCH RD)
EXIST R/W
RIPRAP OUTLET PROTECTION
5 TONS CLASS "B"
14 SY FILTER FABRIC
REMOVE 15" RCP
& REPLACE WITH 24" RCP
-Y1-SR1275 POT Sta. 12+57.29
-L-SR1275 PT Sta. 16+10.01
R 60.00'
R 40.00'
15+00
22+00
20
10
N 78° 39' 38.4" E
NC 24/27
18" RCP
F/C
C/F
REMOVE HW & 18" RCP
REPLACE WITH 24" RCP
& HW
-Y2-SR1275 POT Sta. 10+00.00
REMOVE EXISTING
PAVED SHOULDER
S 16° 54' 05.9" W
STA 20+89.01 -L-SR1275
END FULL LANE WIDTH
BEGIN TAPER
-Y2-SR1275 POT Sta. 12+32.25
1 INCH = 50 FEET
50'
0
50'
100'

REVISIONS

8/17/99

07-APR-2009 08:45

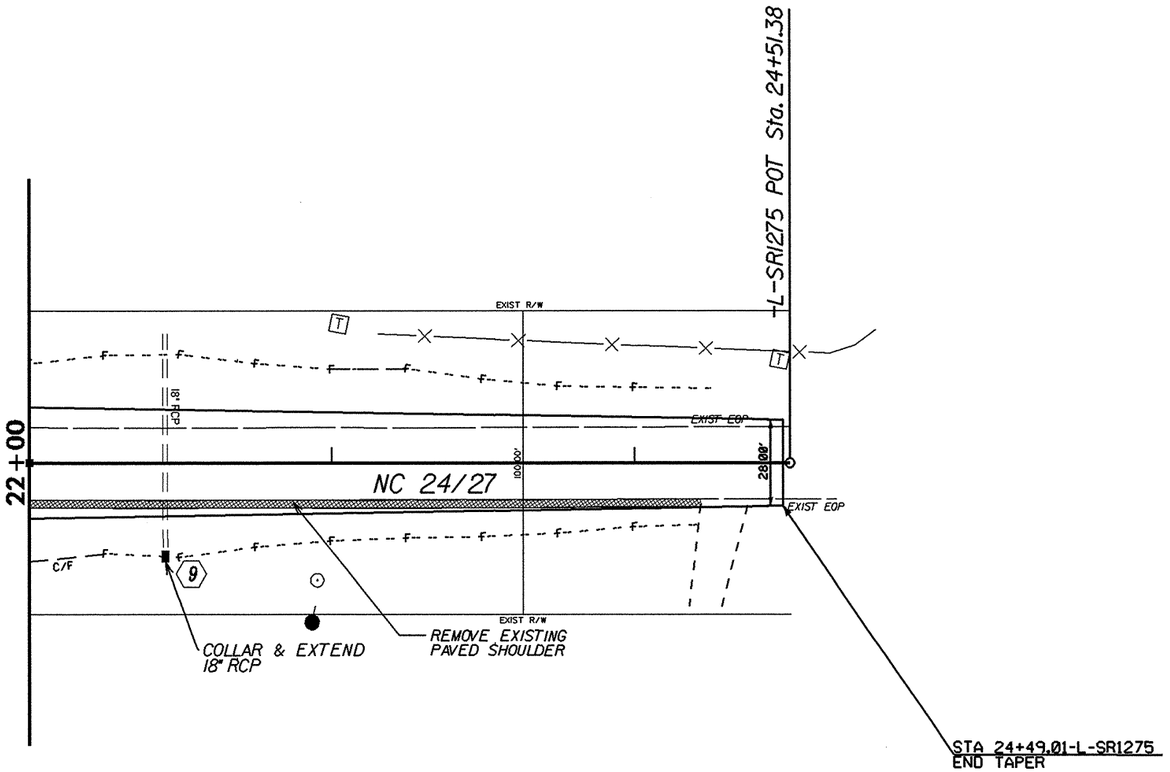
MAP#6

PROJECT REFERENCE NO.	SHEET NO.
R-5142	11
R/W SHEET NO.	

PROFESSIONAL ENGINEER SEAL 26930 ENGINEER GREG E. DAVIS

4-2-09

DIVISION DESIGN / CONSTRUCT ENGINEER



1 INCH = 50 FEET

50' 0 50' 100'

REVISIONS

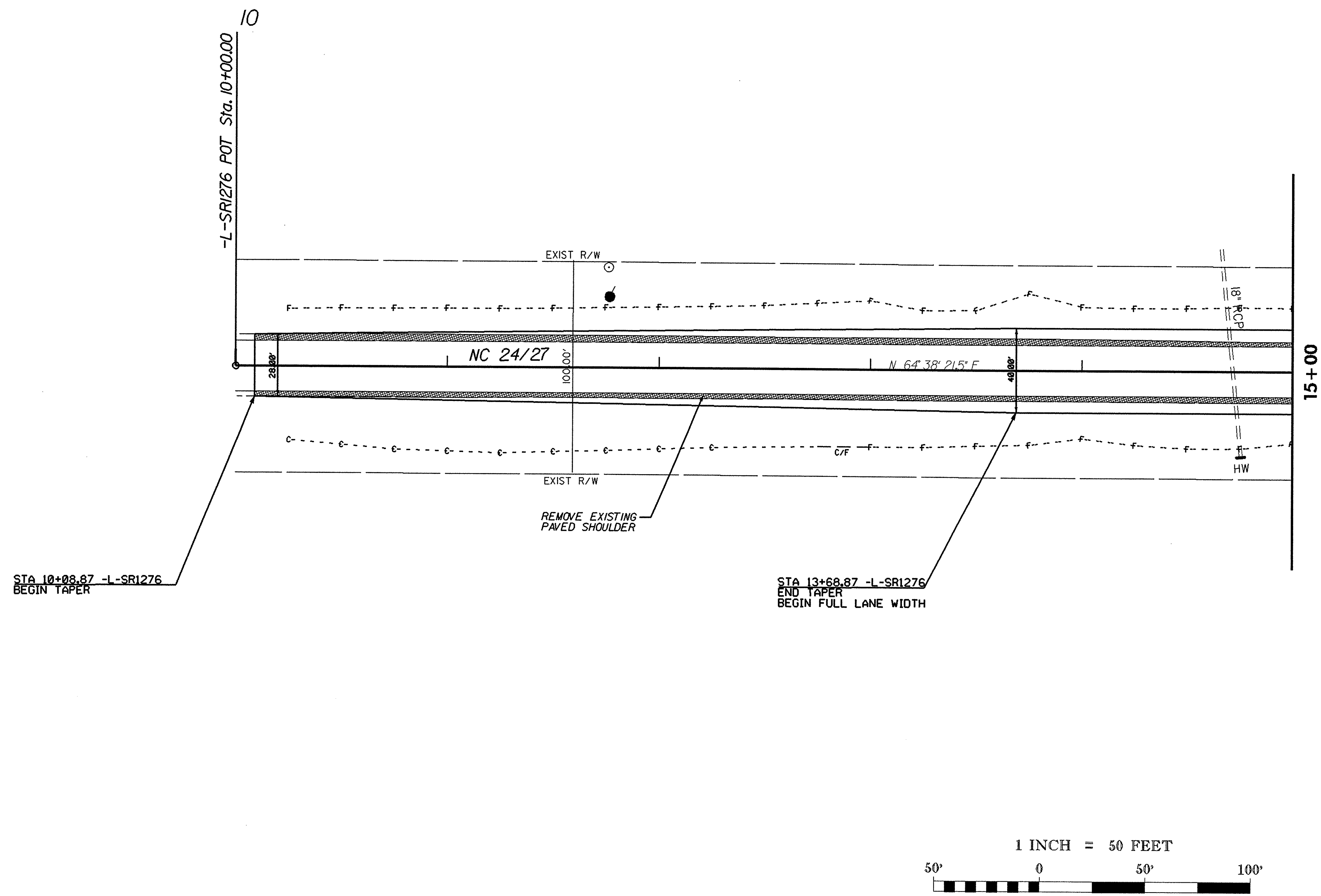
8/17/99

07-APR-2009 08:45
D:\RDY\MOORE\NC24-27_Stimulus\24-27_big_oak_church\nc24-27-SR1275-psh-6.dgn
rdavis

MAP #8

PROJECT REFERENCE NO.	SHEET NO.
R-5142	12
R/W SHEET NO.	

SEAL 26930 GREG S. DAVIS
4-2-09
DIVISION DESIGN / CONSTRUCT ENGINEER



REVISIONS

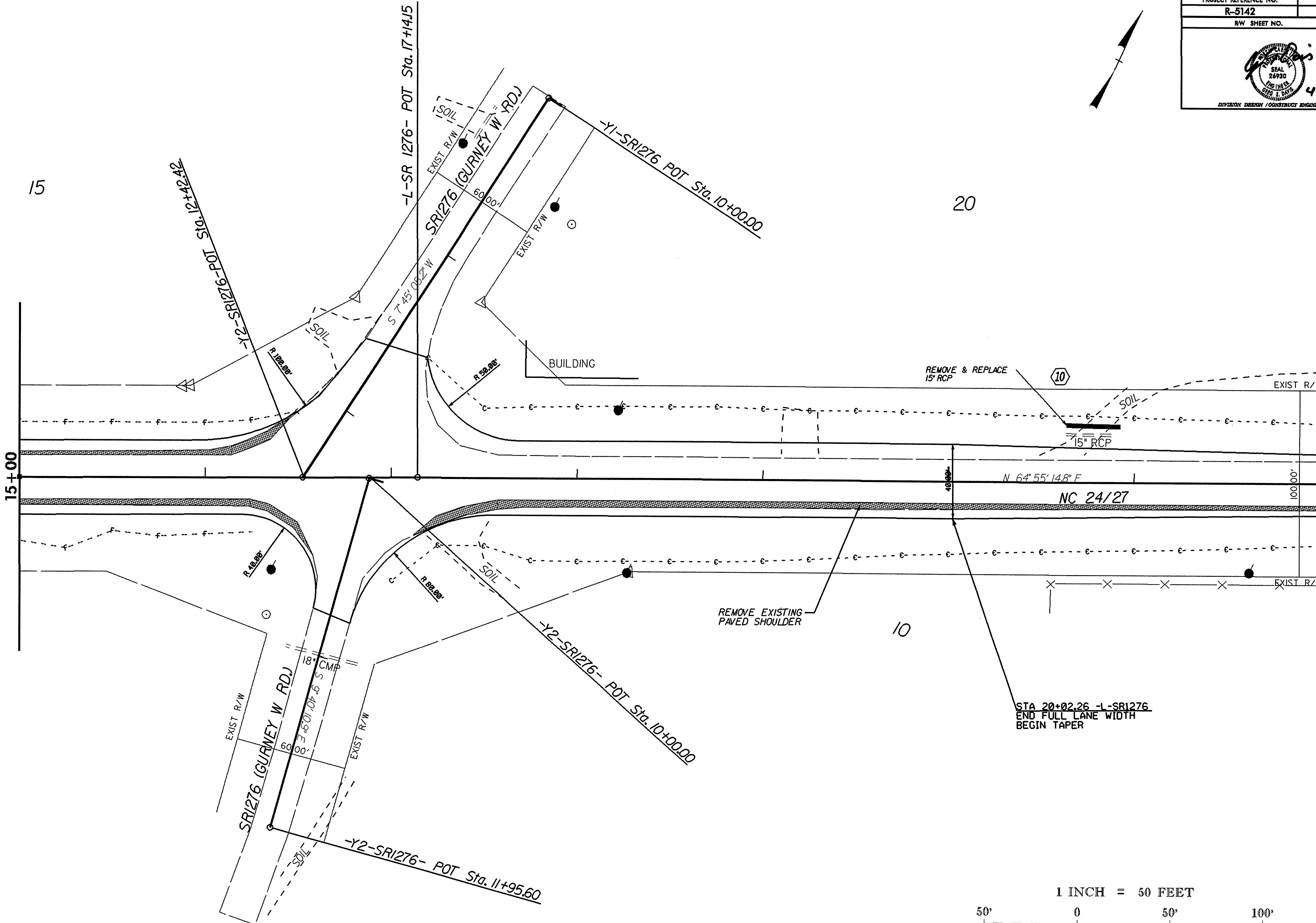
8/17/99

07-APR-2009 08:45
D:\RDY\MODEL\NC24-27_Stimulus\24-27_Gurney_W\nc24-27-sr1276-psh-1.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-5142	13
R/W SHEET NO.	

DIVISION DESIGN / CONSTRUCT ENGINEER

4-2-09



15
20
10
15+00
22+00
-L-SR 1276- POT Sta. 17+14.15
-Y1-SR1276 POT Sta. 10+00.00
-Y2-SR1276-POT Sta. 12+42.42
-Y2-SR1276- POT Sta. 10+00.00
-Y2-SR1276- POT Sta. 11+95.60
SR1276 (GURNEY W RD.)
NC 24/27
N 64° 55' 14.8" E
S 7° 45' 08.2" W
S 9° 40' 10.9" E
EXIST R/W
60.00'
100.00'
BUILDING
SOIL
R 100.00'
R 50.00'
R 40.00'
R 80.00'
18" CMP
15" RCP
REMOVE & REPLACE
15" RCP
10
REMOVE EXISTING
PAVED SHOULDER
STA 20+02.26 -L-SR1276
END FULL LANE WIDTH
BEGIN TAPER
1 INCH = 50 FEET
50'
0
50'
100'

REVISIONS

8/17/99

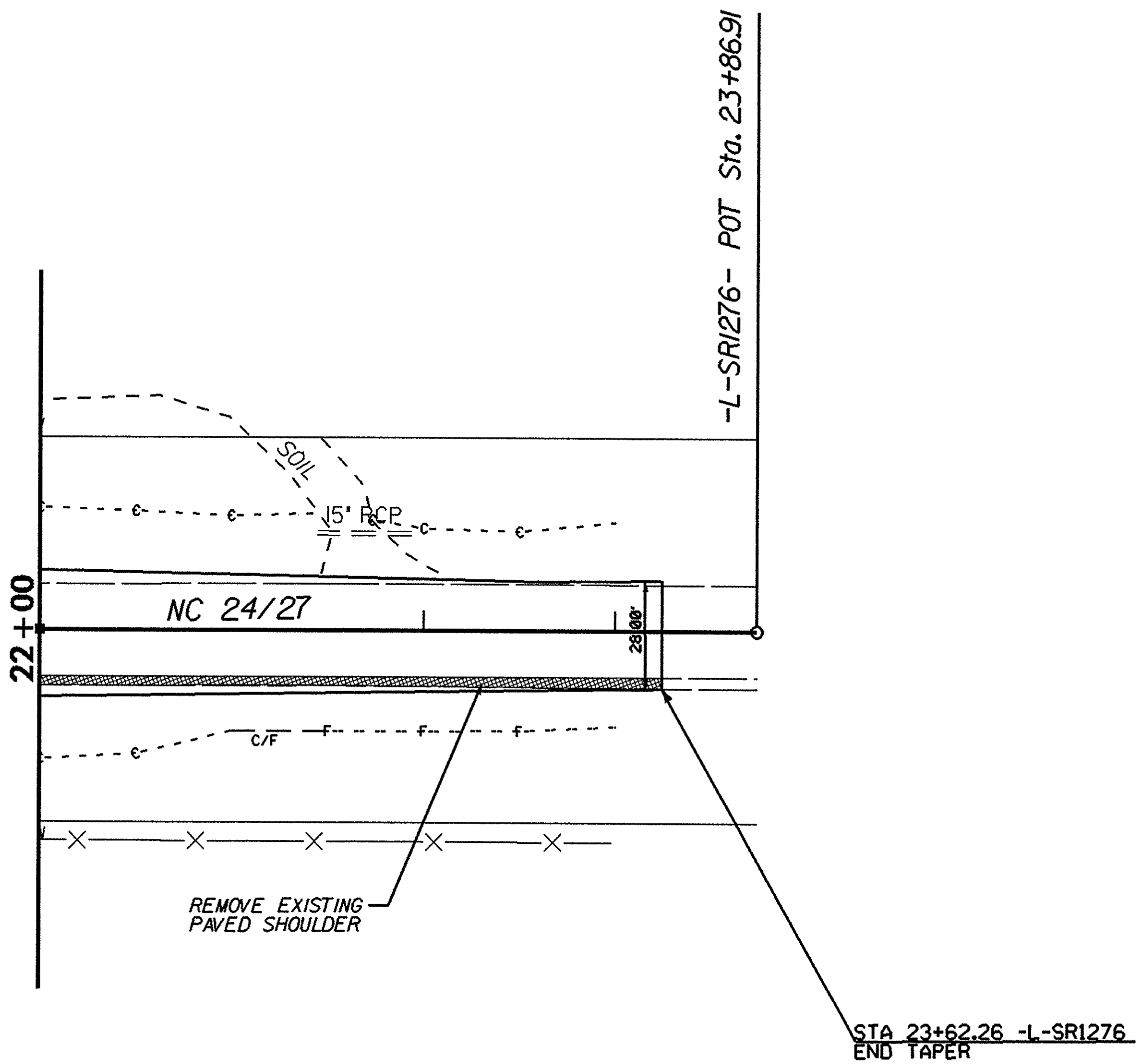
PROJECT REFERENCE NO.	SHEET NO.
R-5142	14
R/W SHEET NO.	

SEAL 26930 ENGINEER GREG S. DAVIS

4-2-09

DIVISION DESIGN / CONSTRUCT ENGINEER

REVISIONS



1 INCH = 50 FEET

50' 0 50' 100'

8/17/99

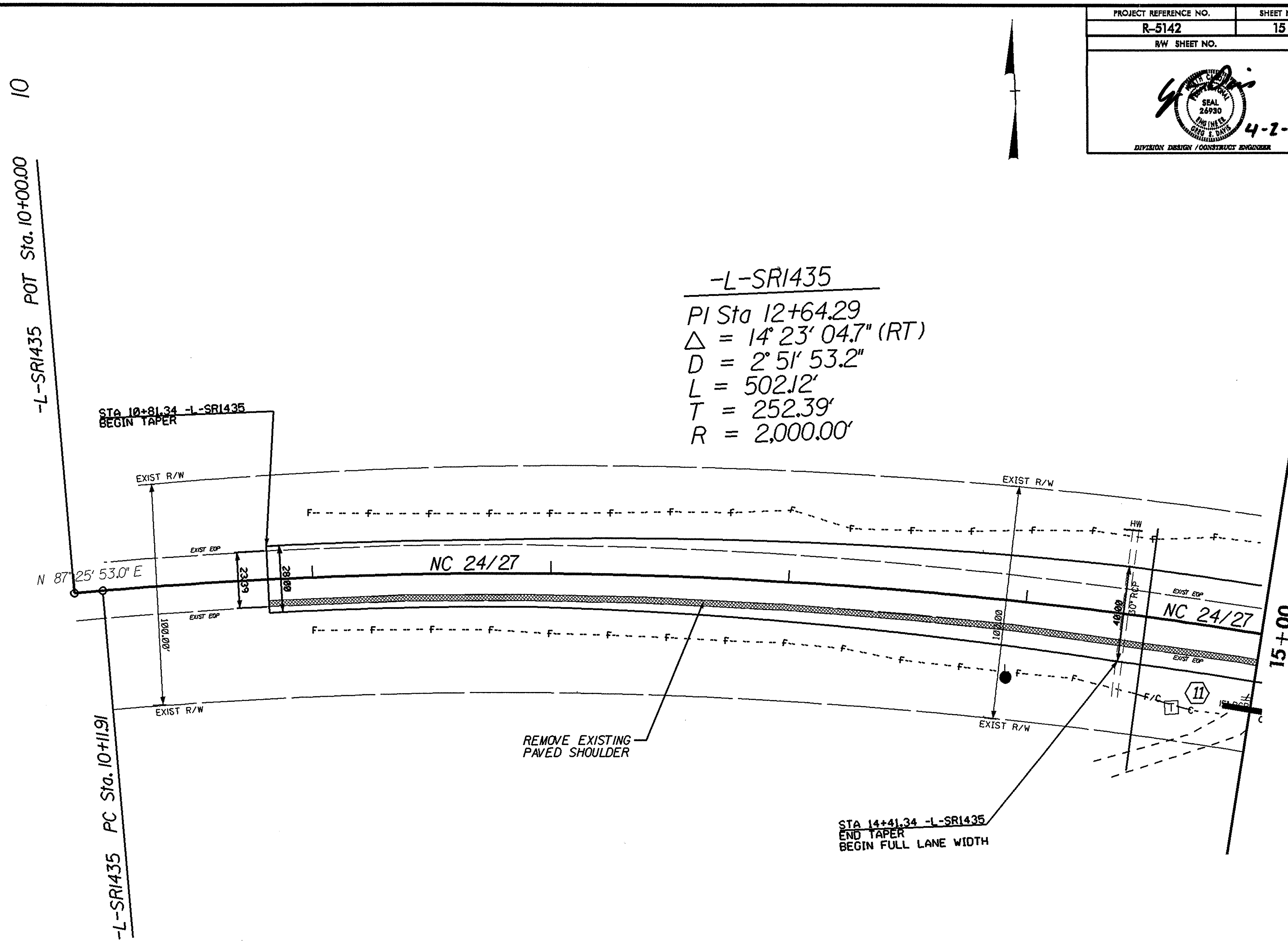
07-APR-2009 08:45 ...nc24-27_Stimulus\24-27_Gurney_W\nc24-27-SR1276-psh-3.dgn

MAP #10

PROJECT REFERENCE NO.	SHEET NO.
R-5142	15
R/W SHEET NO.	

DIVISION DESIGN / CONSTRUCT ENGINEER

4-2-09



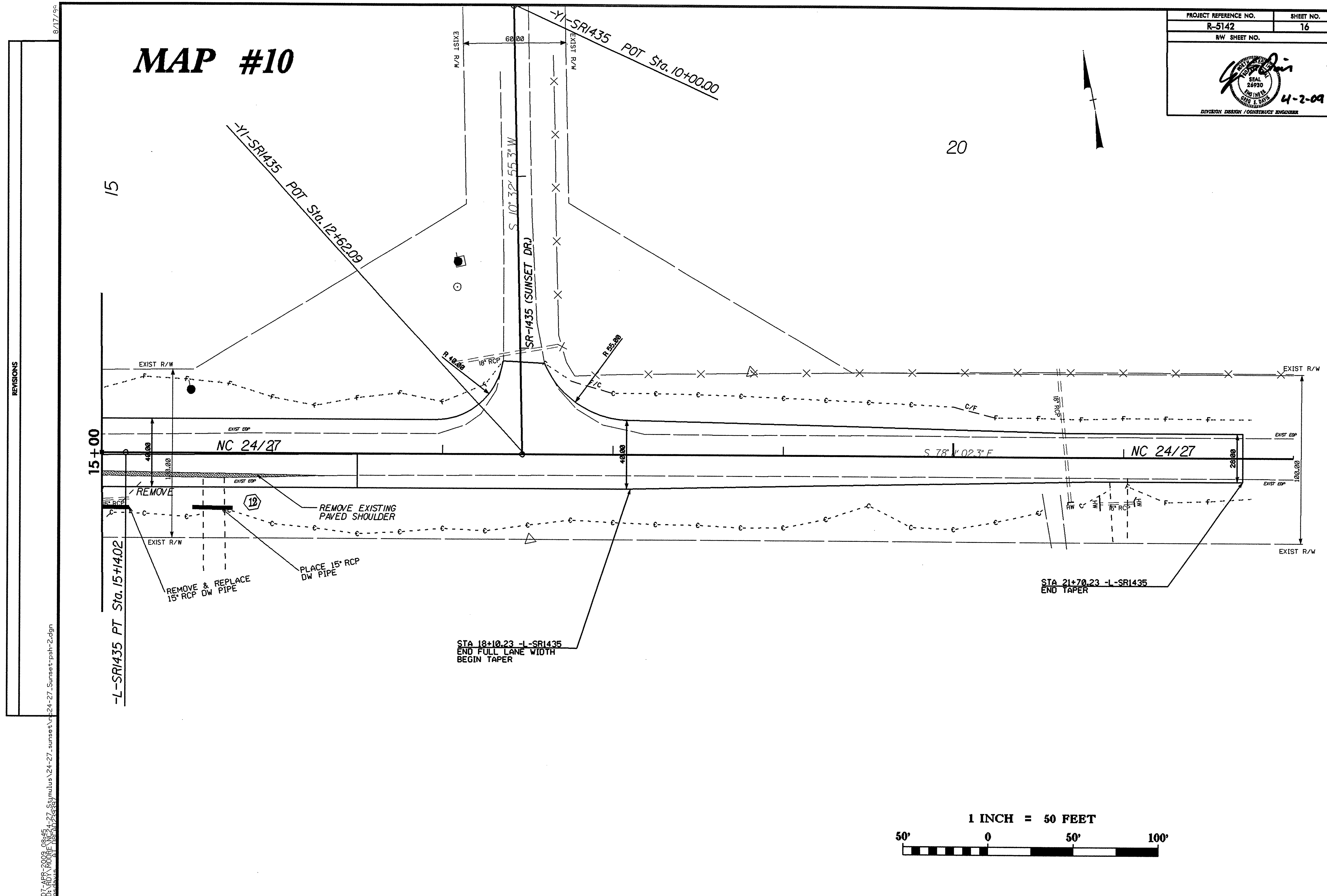
1 INCH = 50 FEET

50' 0 50' 100'

07-APR-2009 08:45

MAP #10

PROJECT REFERENCE NO.	SHEET NO.
R-5142	16
R/W SHEET NO.	

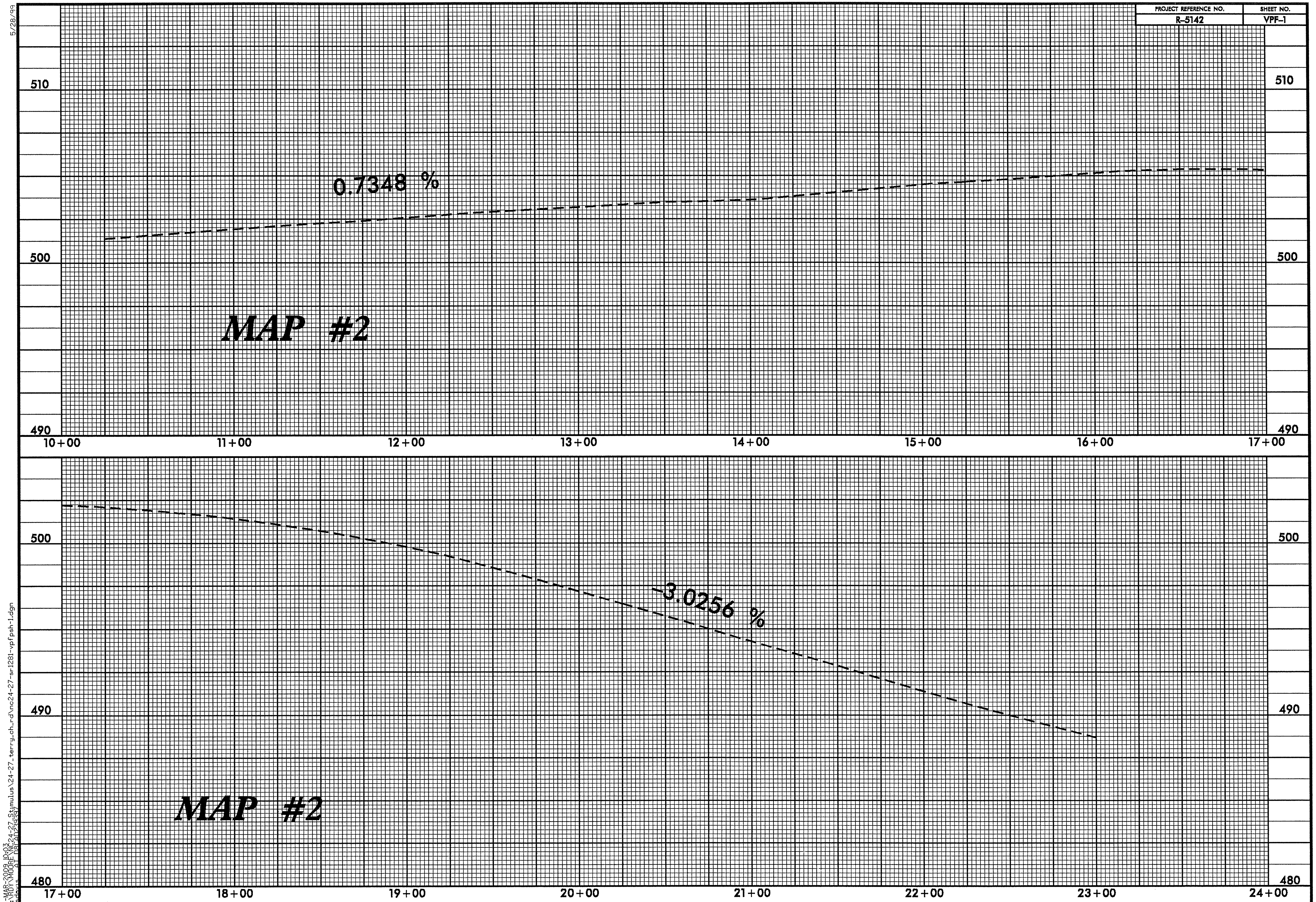


-Y1-SR1435 POT Sta. 10+00.00
-Y1-SR1435 POT Sta. 12+62.09
60.00
EXIST R/W
S 10° 32' 55.3" W
SR-1435 (SUNSET DR.)
R 40.00
R 55.00
18" RCP
NC 24/27
S 78° 1' 02.3" E
EXIST EOP
15+00
15
20
REMOVE
REMOVE EXISTING PAVED SHOULDER
PLACE 15" RCP DW PIPE
REMOVE & REPLACE 15" RCP DW PIPE
-L-SR1435 PT Sta. 15+14.02
STA 18+10.23 -L-SR1435 END FULL LANE WIDTH BEGIN TAPER
STA 21+70.23 -L-SR1435 END TAPER
40.00
100.00
28.00
12
REVISIONS
1 INCH = 50 FEET
50' 0 50' 100'

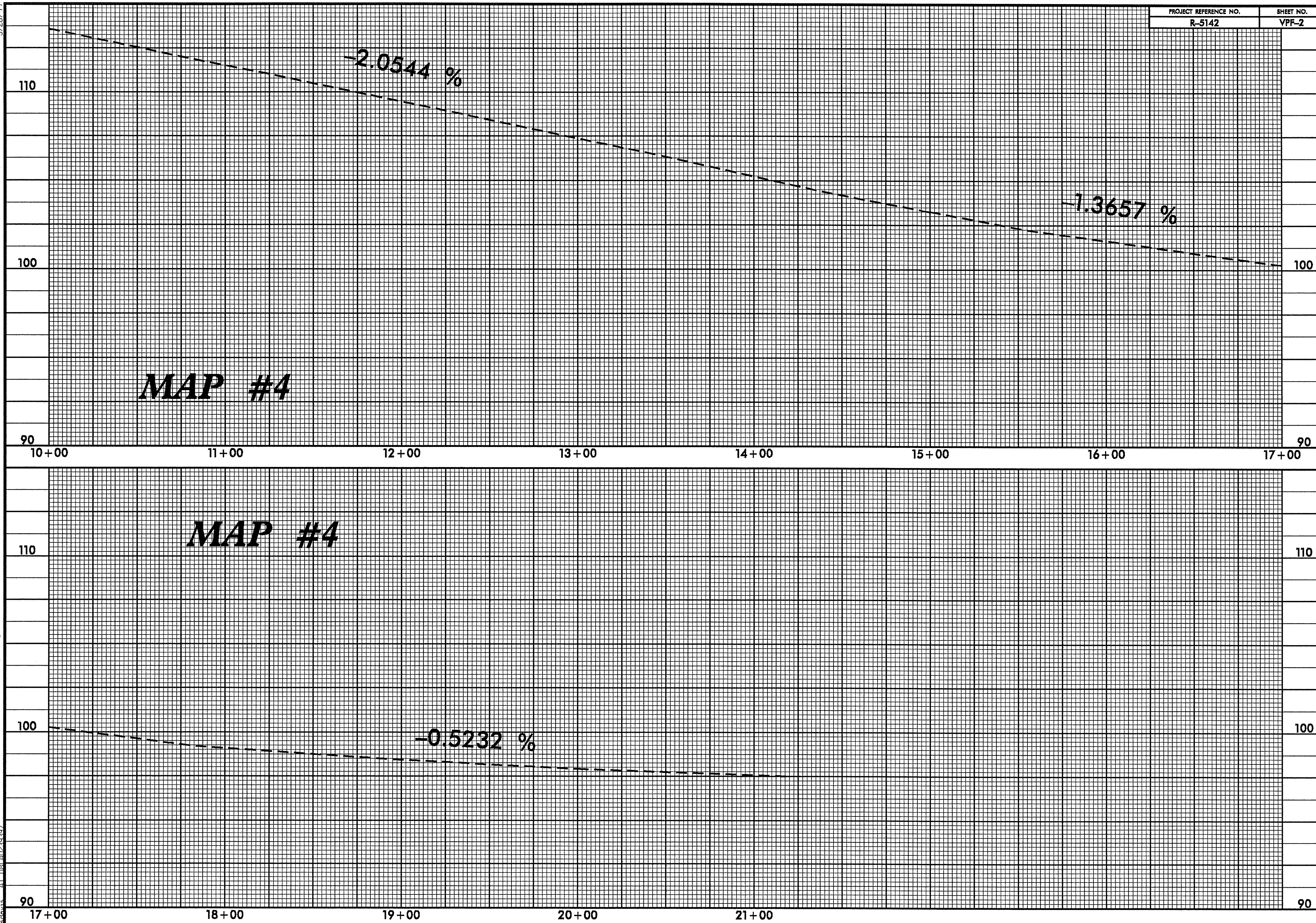
DIVISION DESIGN / CONSTRUCT ENGINEER

4-2-09

07-APR-2009 08:45


PROJECT REFERENCE NO.
R-5142
SHEET NO.
VPF-1
5/28/99
510
500
490
0.7348 %
MAP #2
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
500
490
480
-3.0256 %
MAP #2
17+00
18+00
19+00
20+00
21+00
22+00
23+00
24+00

PROJECT REFERENCE NO.	SHEET NO.
R-5142	VPF-2



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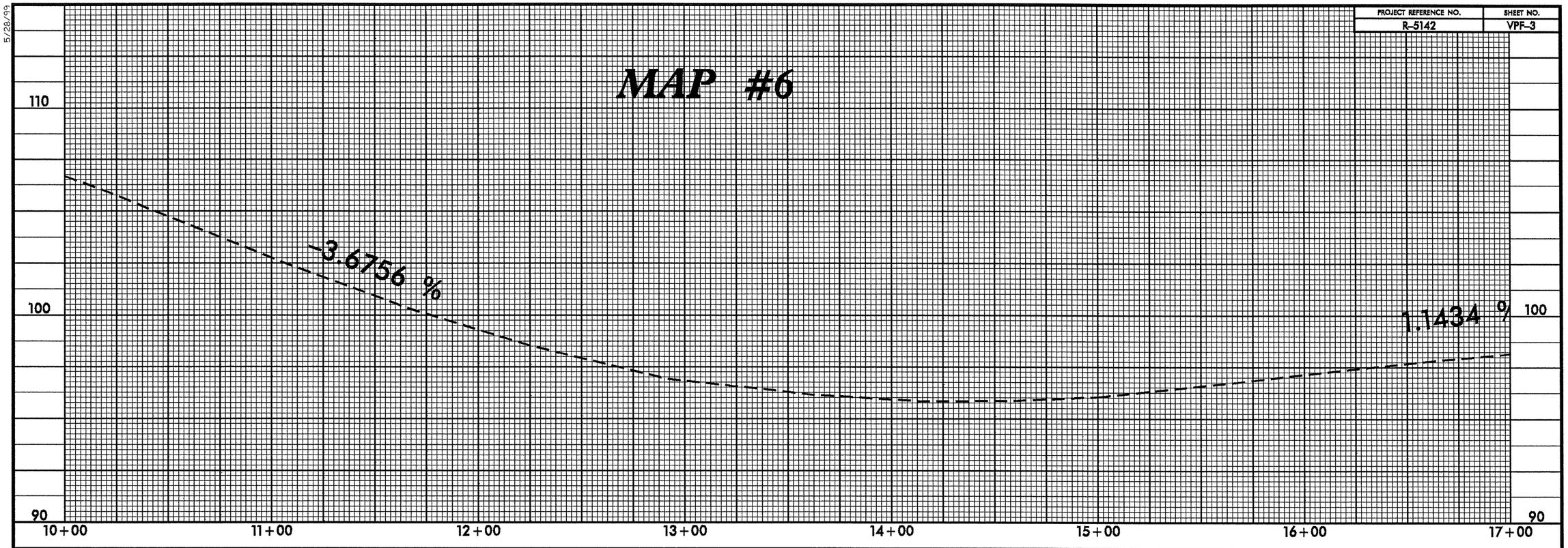
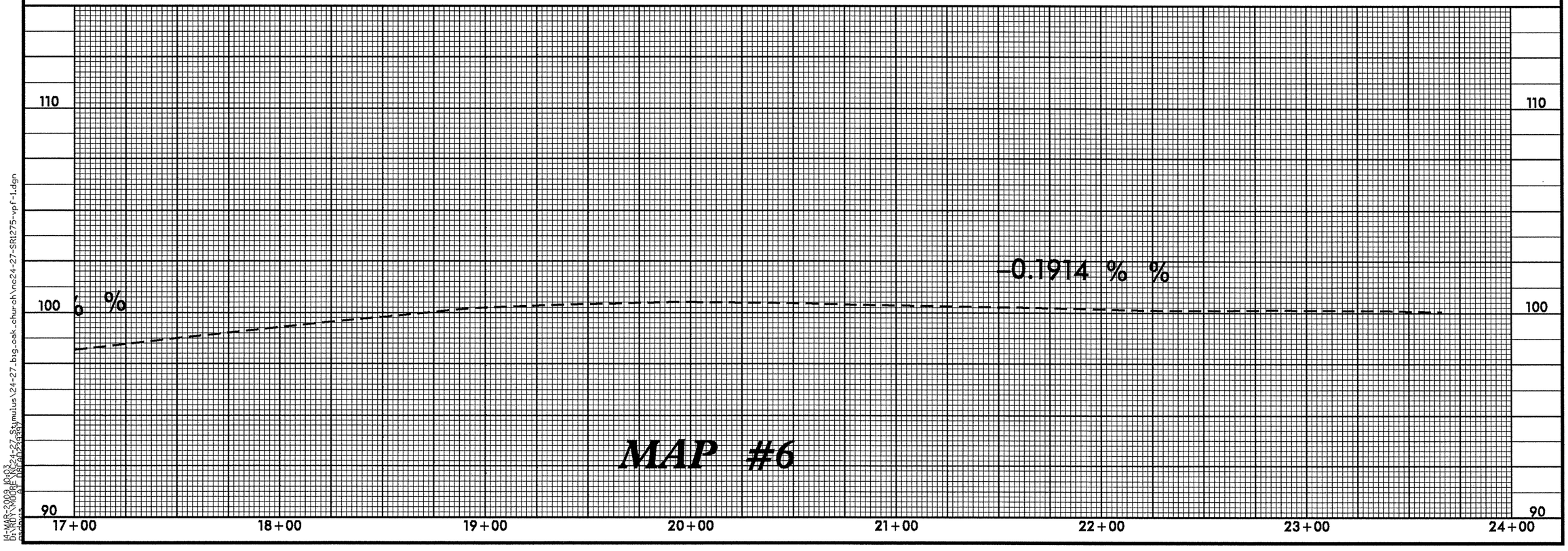
asdavis AT D8CAD239397

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-5142	VPF-3





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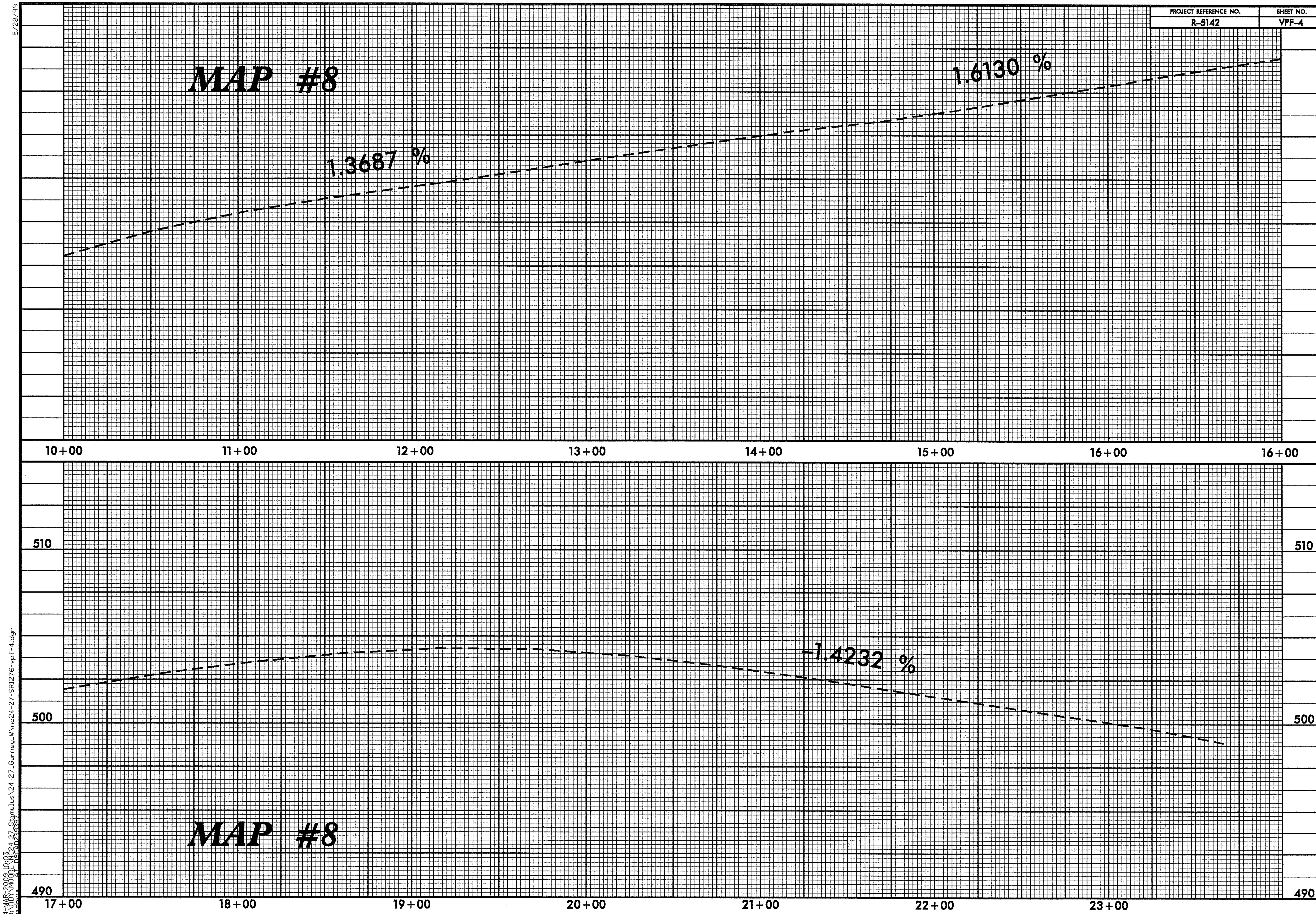
roymoore

PROJECT REFERENCE NO.	SHEET NO.
R-5142	VPF-4



PROJECT REFERENCE NO.	SHEET NO.
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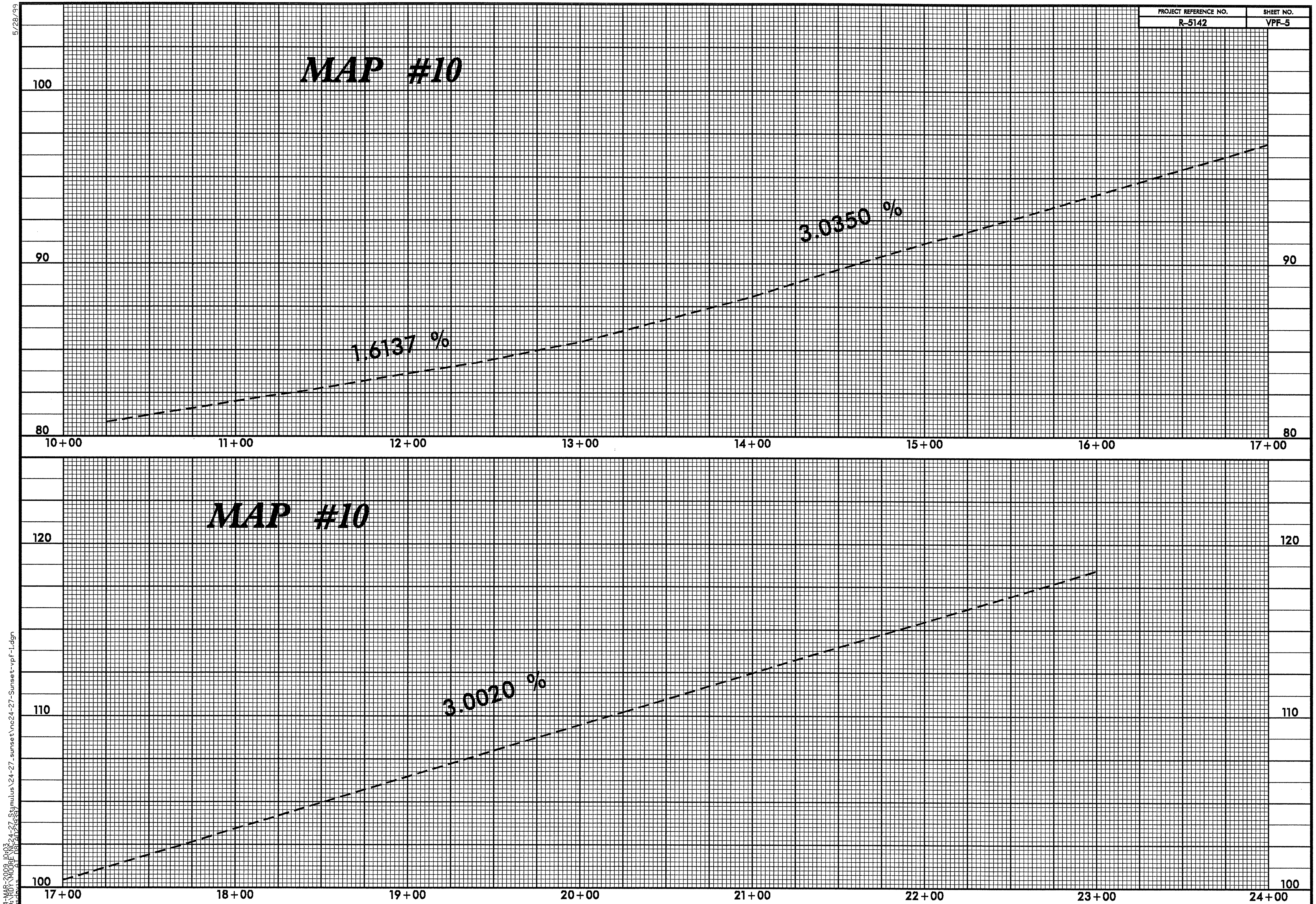

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