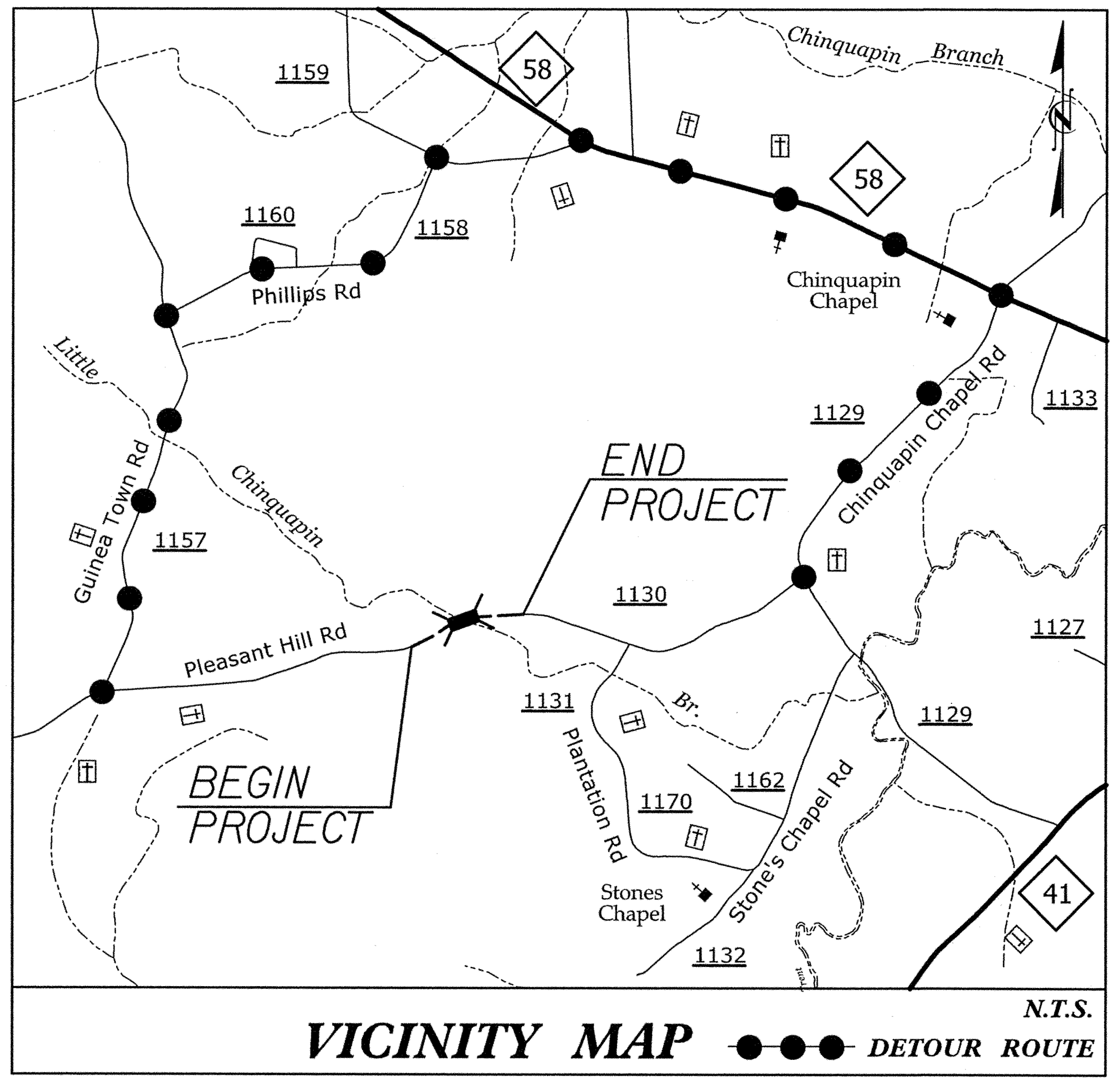
TIP PROJECT: B-5547

CONTRACT:

STATE	PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
NC	B-5547	1	X

STATE PROJ. NO.		DESCRIPTION
50058.1.1		CONST

See Sheet 1-A For Index of Sheets

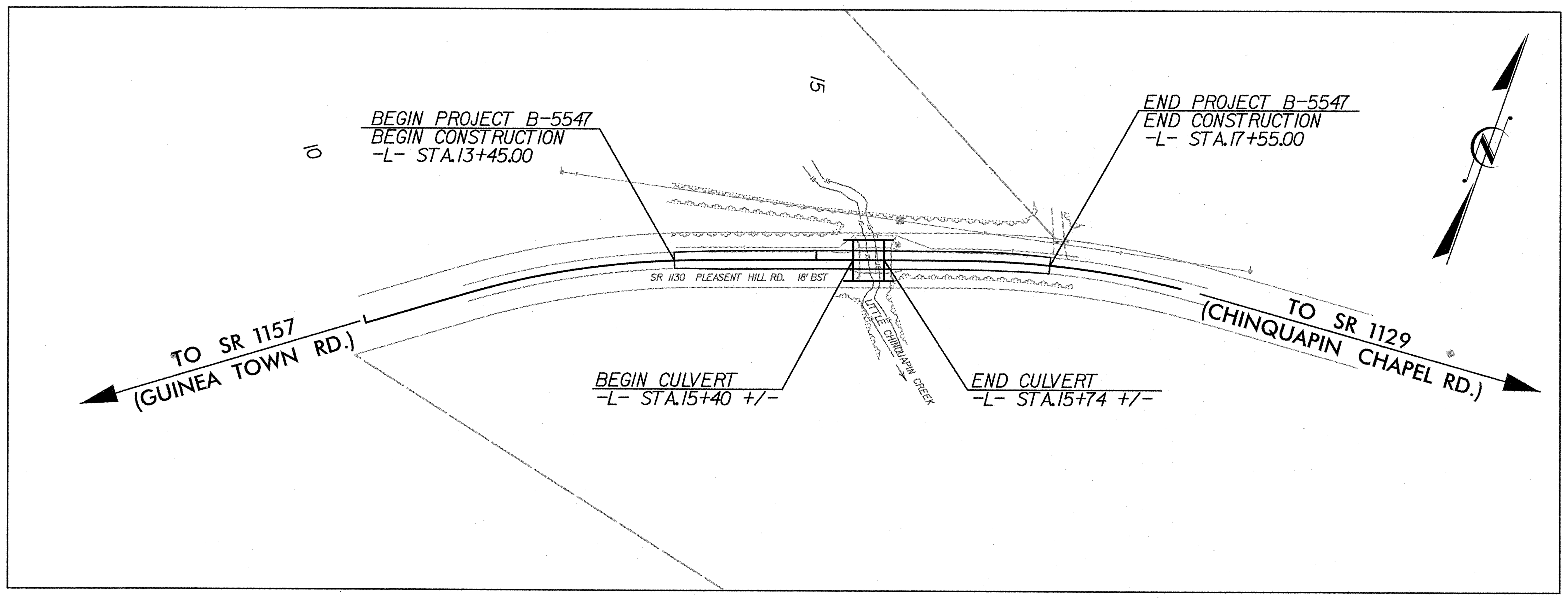


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JONES COUNTY

LOCATION: BRIDGE NO. 038 OVER LITTLE CHINQUAPIN BRANCH ON SR 1130 (PLEASANT HILL RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & CULVERT



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

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 2009 = 250
ADT 2035 = 500
DHV = 10%
D = 60%
T = 6% *
STATUTORY = 55 MPH
ADVISORY = 50 MPH
* TTST 2% DUAL 4%

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-5547 =	0.07 MI.
LENGTH OF STRUCTURE TIP PROJECT B-5547 =	0.01 MI.
TOTAL LENGTH OF TIP PROJECT B-5547 =	0.08 MI.

Prepared In the Office of:

HNTB

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 7, 2013

LETTING DATE:
OCTOBER 9, 2013

ENRICO A. ROQUE, P.E.
PROJECT ENGINEER

ANTHONY THOMPSON, P.E
PROJECT DESIGNER

MARIA ROGERSON, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 15764 ENGINEER JAMES A. BYRD

James A. Byrd P.E. 9/5/13
SIGNATURE:

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 19824 ENGINEER ENRICO A. ROQUE

Enrico A. Roque P.E. 9/5/13
SIGNATURE:

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

P.E.
STATE HIGHWAY DESIGN ENGINEER

$$$$DATE$$$$
$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
B-5547	1-A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 19824 ENGINEER ENRICO A. ROQUE
9/5/13

REVISIONS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES & LIST OF STANDARDS
1-B	SYMBOLOGY SHEET
2	TYPICAL SECTION SHEET
3	EARTHWORK, PAVEMENT REMOVAL & ROW SUMMARY
4	PLAN & PROFILE SHEET
TMP-1 THRU TMP-2	TRAFFIC CONTROL PLANS
EC-1	EROSION CONTROL TITLE SHEET
EC-2	EROSION CONTROL - COIR FIBER WATTLE DETAIL
EC-3	EROSION CONTROL- WATTLE / SILT FENCE BREAK DETAIL
EC-4	EROSION CONTROL - SOIL STABILIZATION TIME FRAMES
EC-5	EROSION CONTROL SHEET
EC-6	EROSION CONTROL - CULVERT PHASING
P-1	PERMIT DRAWING
X-1 THRU X-4	-L- CROSS SECTION SHEETS

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 11/01/11

GRADE LINE:
GRADING AND SURFACING:

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

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

RIGHT-OF-WAY MARKERS:

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

2012 ROADWAY ENGLISH STANDARD DRAWINGS

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

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
876.01	Rip Rap in Channels

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PROJECT REFERENCE NO.	SHEET NO.
B-5547	1-B

Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

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

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite Marker — RW
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- Proposed Wheel Chair Ramp Curb Cut — WCC
- Curb Cut for Future Wheel Chair Ramp — CCFR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

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

EXISTING STRUCTURES:

MAJOR:

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

MINOR:

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

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

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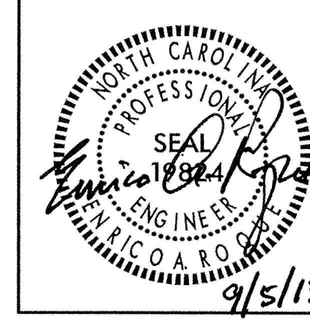
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
B-5547	2
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

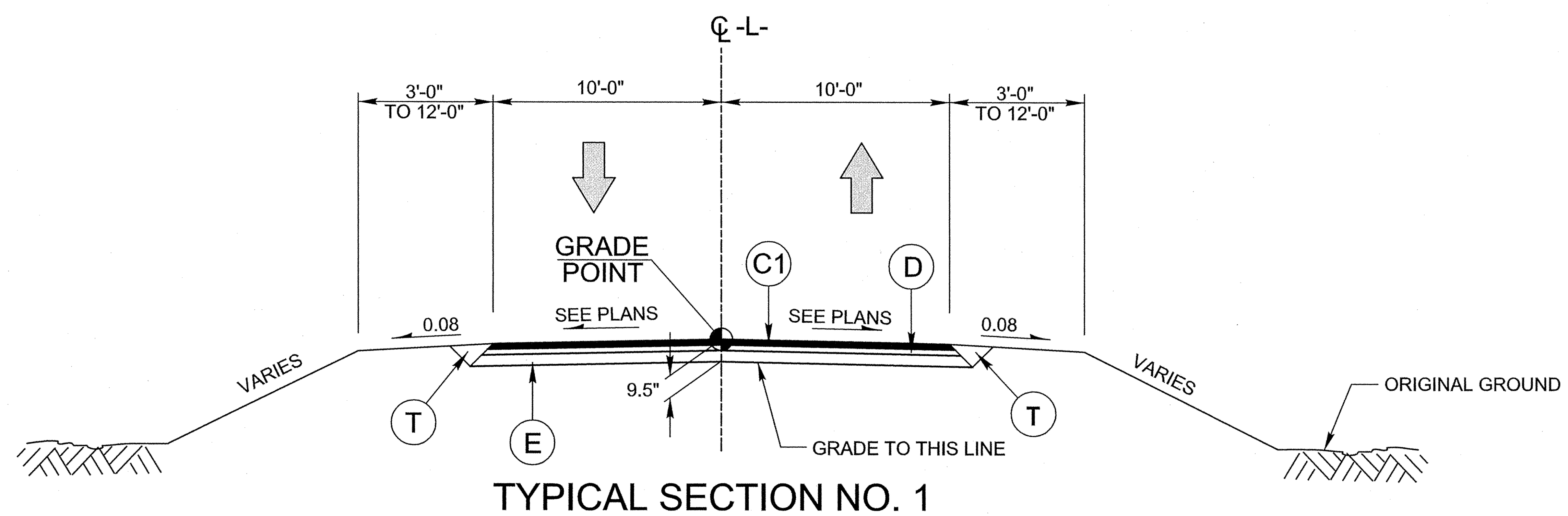


REVISIONS

PAVEMENT SCHEDULE

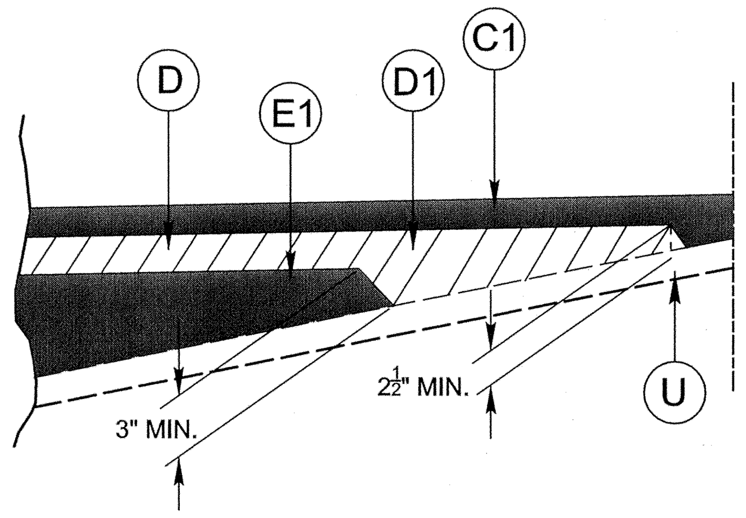
C1	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YARD IN EACH OF TWO LAYERS.
D	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D1	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.
E1	PROP. VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER INCH DEPTH, TO BE PLACED IN LAYERS NOT GREATER THAN 5.5" IN DEPTH OR LESS THAN 3" IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING (SEE DETAIL)

ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 FROM:
-L- STA. 13+45.00 TO -L- STA. 17+55.00



DETAIL SHOWING METHOD OF WEDGING
SEE TYPICAL SECTIONS

$$$$DATE$$$$
$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$

NOTES: * SHOULDER WIDTH INCREASED 3' WITH THE USE OF GUARDRAIL

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
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PROJECT REFERENCE NO.	SHEET NO.
B-5547	3
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 19824 ENGINEER
9/5/13

ROW AREA DATA SUMMARY

PARCEL NO.	PROPERTY OWNERS NAMES	TOTAL ACREAGE	AREA TAKEN (SQFT)	AREA REMAINING RT.	AREA REMAINING LT.	CONST. EASE.	PERM. DRAIN. EASE.	TEMP. DRAIN. EASE.
1	JAMES HERBERT EVANS	–					.14	
1	NORMAN BLIZZARD	–					2133.2	

SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	UNCLASSIFIED EXCAVATION	EMBANK. +%	BORROW	WASTE
–L– STA. 13+45.00	–L– STA. 15+40.00	83	119	36	
–L– STA. 15+74.00	–L– STA. 17+55.00	107	124	17	
PROJECT SUBTOTAL		190	243	53	0
WASTE TO REPLACE BORROW				0	0
PROJECT TOTAL		190	243	53	0
GRAND TOTALS:		190		53	
SAY:		190		60	

PAVEMENT REMOVAL SUMMARY
IN SQUARE YARDS

LOCATION	REMOVAL OF ASPHALT PAVEMENT	BREAKING OF ASPHALT PAVEMENT
-L- STA. 13+45 TO 15+46	412	
-L- STA. 15+81 TO 17+55	359	
GRAND TOTAL	771	
SAY	780	

REVISIONS

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NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
B-5547	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

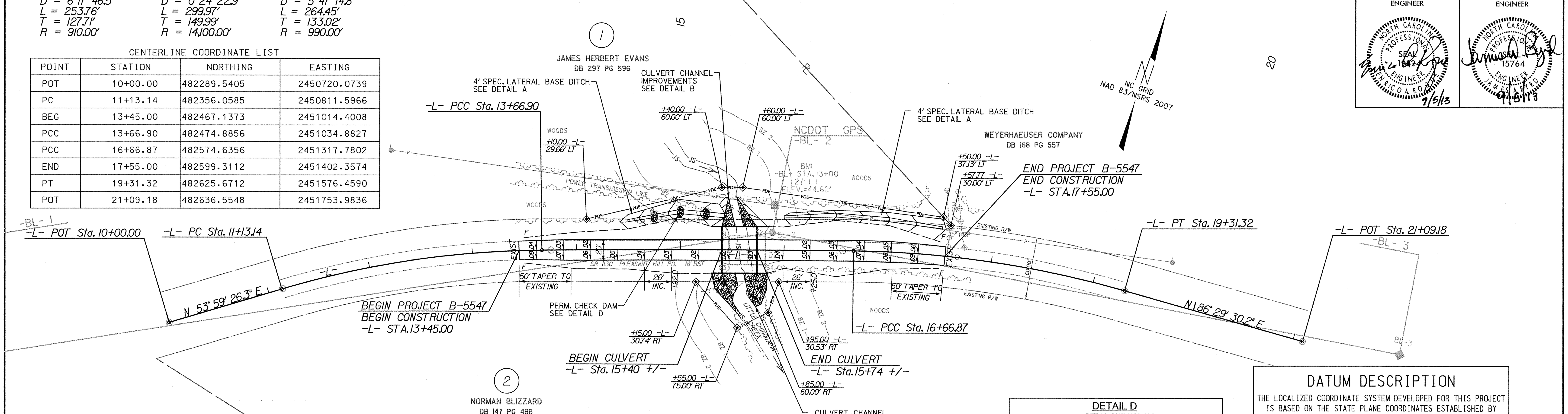
PLAN

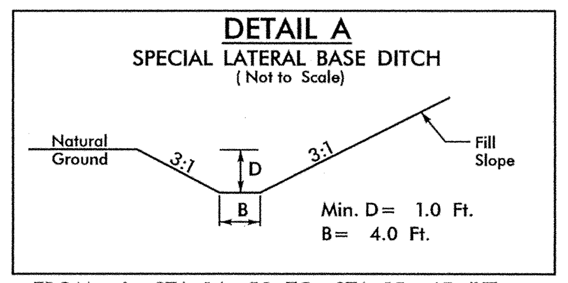
-L-

PI Sta 12+40.85	PI Sta 15+16.89	PI Sta 17+99.89
Δ = 15° 58′ 37.8″ (RT)	Δ = 1° 13′ 08.2″ (RT)	Δ = 15° 18′ 17.9″ (RT)
D = 6° 17′ 46.5″	D = 0° 24′ 22.9″	D = 5° 47′ 14.8″
L = 253.76′	L = 299.97′	L = 264.45′
T = 127.71′	T = 149.99′	T = 133.02′
R = 910.00′	R = 14,100.00′	R = 990.00′

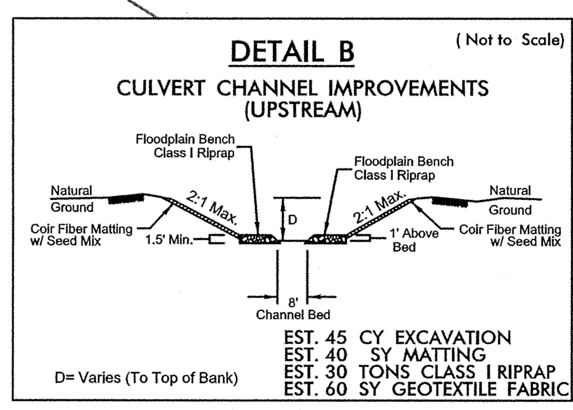
CENTERLINE COORDINATE LIST

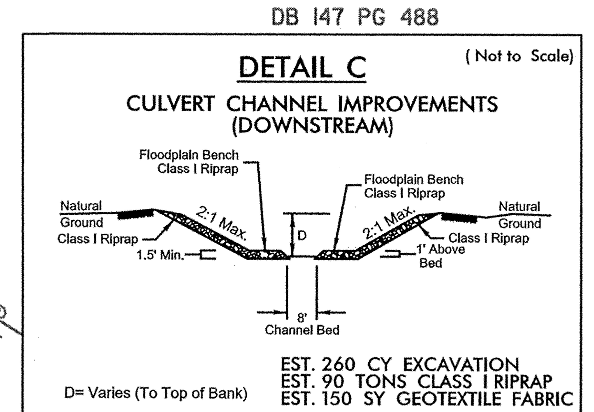
POINT	STATION	NORTHING	EASTING
POT	10+00.00	482289.5405	2450720.0739
PC	11+13.14	482356.0585	2450811.5966
BEG	13+45.00	482467.1373	2451014.4008
PCC	13+66.90	482474.8856	2451034.8827
PCC	16+66.87	482574.6356	2451317.7802
END	17+55.00	482599.3112	2451402.3574
PT	19+31.32	482625.6712	2451576.4590
POT	21+09.18	482636.5548	2451753.9836

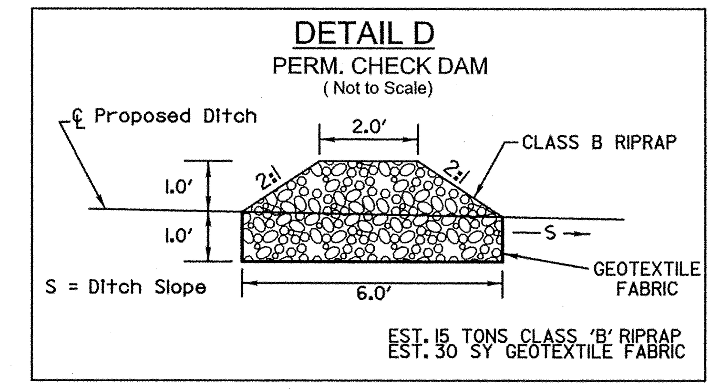




FROM -L- STA. 14+50 TO STA. 15+45 (LT)
FROM -L- STA. 16+00 TO STA. 17+50 (LT)





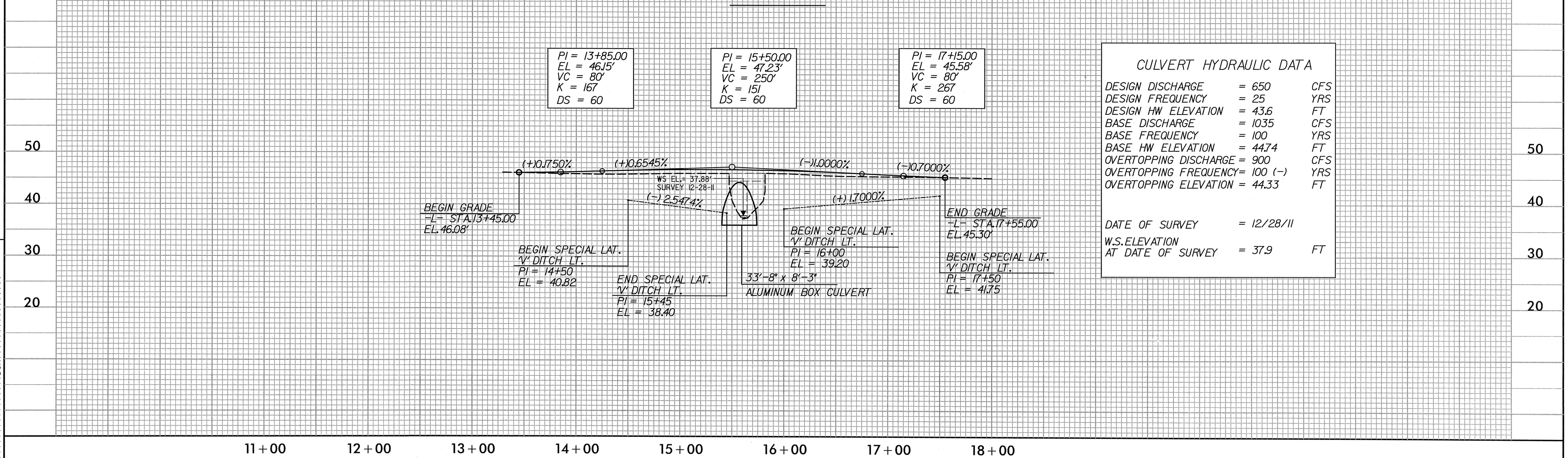


-L- STA. 14+75 (LT)
-L- STA. 15+00 (LT)
-L- STA. 15+25 (LT)

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-2"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 482565.255(ft) EASTING: 2451238.379(ft)
ELEVATION: 45.489(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988135
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-2" TO -L- STATION 10+00.00 IS S61°59′20.7″W 587.08′
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

PROFILE



CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 650	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 43.6	FT
BASE DISCHARGE	= 1035	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 44.74	FT
OVERTOPPING DISCHARGE	= 900	CFS
OVERTOPPING FREQUENCY	= 100 (−)	YRS
OVERTOPPING ELEVATION	= 44.33	FT
DATE OF SURVEY	= 12/28/11	
W.S.ELEVATION AT DATE OF SURVEY	= 37.9	FT

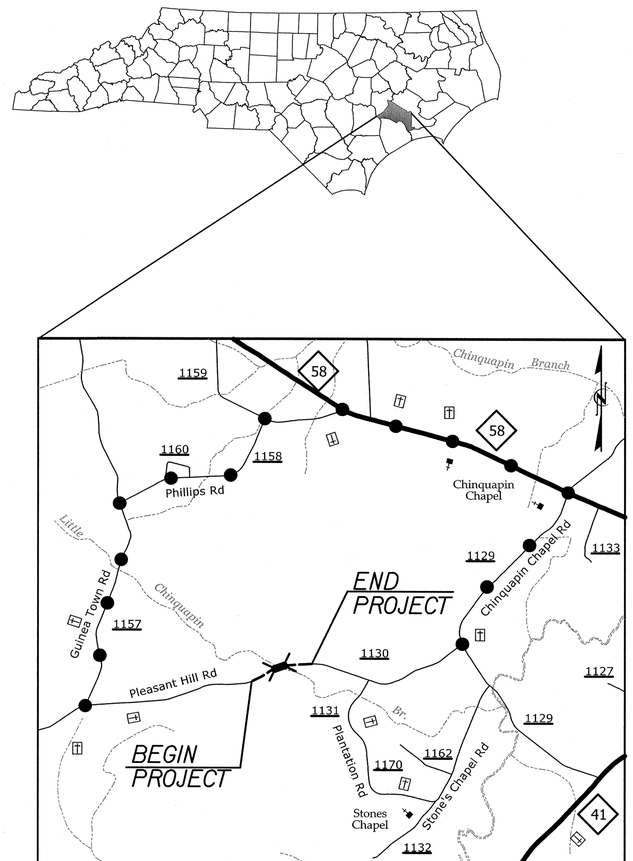
REVISIONS

$$$$DATE$$$$
$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

JONES COUNTY



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET WITH VICINTY MAP, INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-2	GENERAL NOTES, DETOUR AND PLAN.

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.11	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)

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NC License No: C-1554

R. B. EARLY, PE — *TRAFFIC CONTROL PROJECT ENGINEER*
R. B. EARLY, PE — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
J. A. PHILLIPS — *TRAFFIC CONTROL DESIGN ENGINEER*

APPROVED: Rhonda B. Early
DATE: 9.5.13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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

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

STEVEN HAMILTON, PE — *DIVISION TRAFFIC ENGINEER*

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

SHEET NO.
TMP-1

B-5547

TIP PROJECT:

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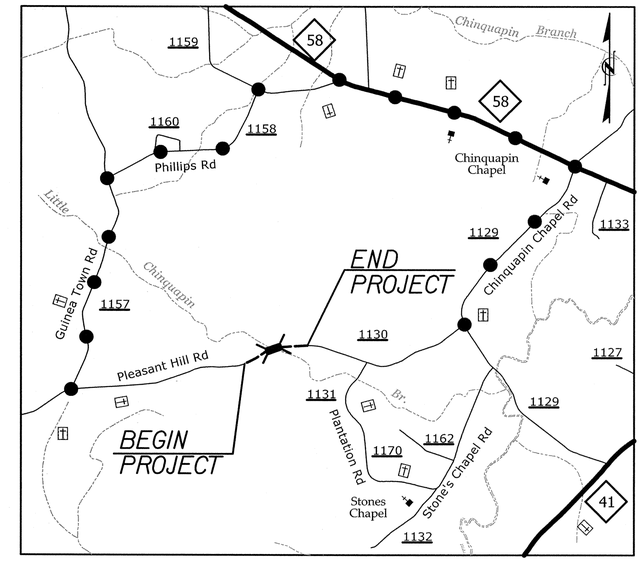
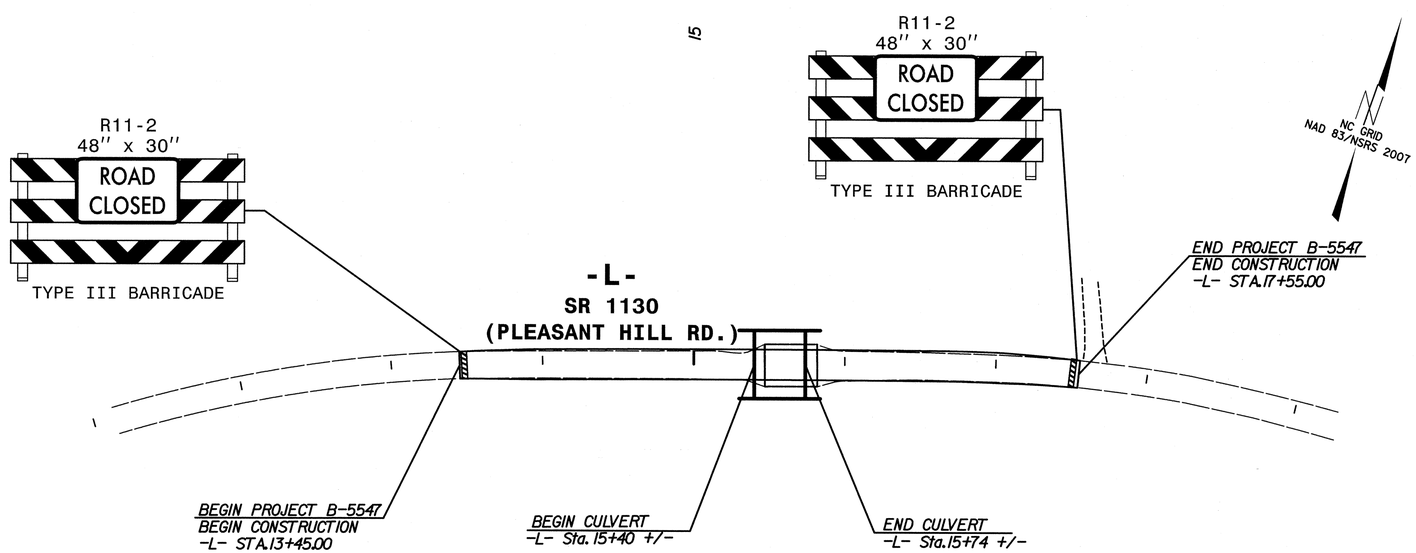
GENERAL NOTES

IMPLEMENT TRAFFIC CONTROL IN ACCORDANCE WITH THE ROADWAY STANDARD DRAWINGS LISTED ON TMP-1.

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

STATE FORCES WILL INSTALL AND MAINTAIN THE PROJECT DETOUR AND THE TYPE III BARRICADES AT THE PROJECT LIMITS.
STATE FORCES WILL INSTALL PAINT AND MARKERS ON THE FINISHED PROJECT.
CALL JIM EVANS AT 252-830-3493 FOR COORDINATION.





APPROVED: Rhonda B. Early DATE: 9-5-13

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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

TRANSPORTATION MANAGEMENT PLAN

GENERAL NOTES

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

8/17/99

REVISIONS

QA/QC STAGE:

REVIEW:
CONCUR:
REVISE:
VERIFY:

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PROJECT: B-5547

TIP #

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5547	EC-1	6

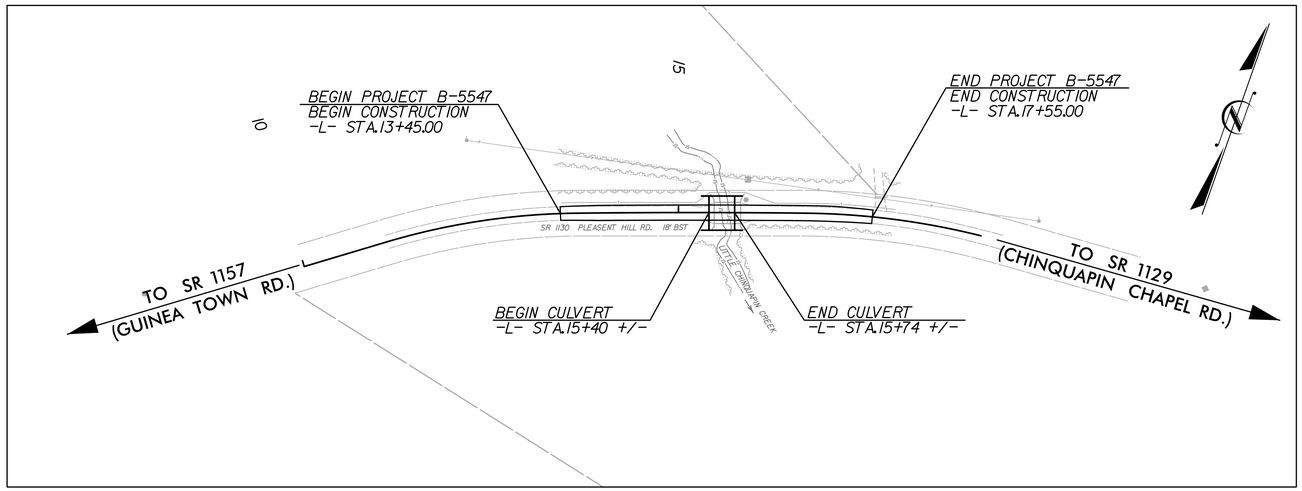
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

LOCATION: JONES COUNTY BRIDGE NO. 038 OVER LITTLE CHINQUAPIN BRANCH ON SR 1130 (PLEASANT HILL RD.)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & CULVERT



EROSION AND SEDIMENT CONTROL MEASURES

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

GRAPHIC SCALE

0
PLANS

0
PROFILE (HORIZONTAL)

0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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

Prepared in the Office of:

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2012 STANDARD SPECIFICATIONS

BENJAMIN J. HENEGAR, E.I
EROSION CONTROL
LEVEL III-A
CERTIFICATION #641

Roadway Standard Drawings

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

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

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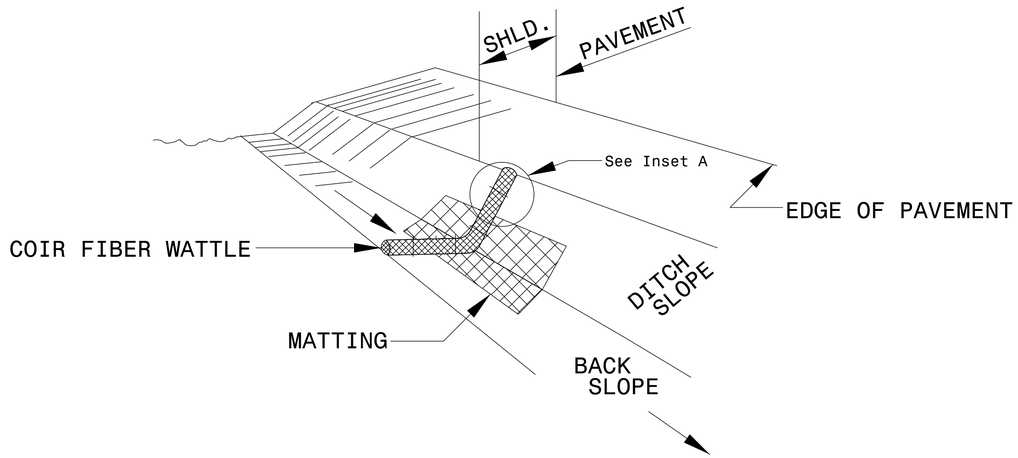
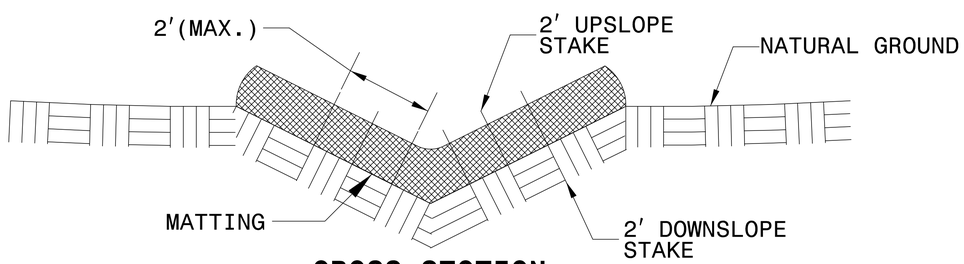
PROJECT REFERENCE NO.	SHEET NO.
B-5547	EC-2

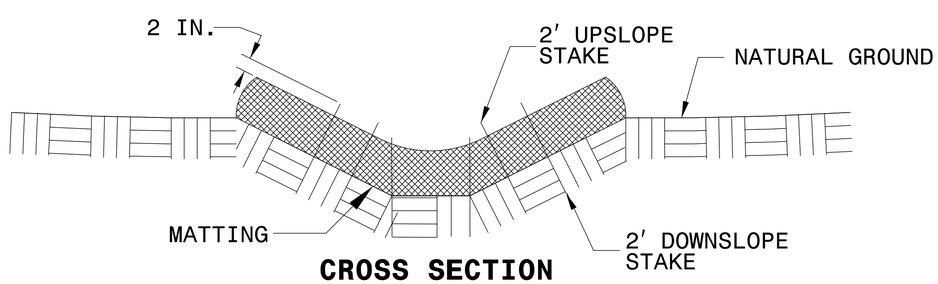
COIR FIBER WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

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

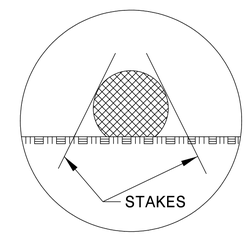
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

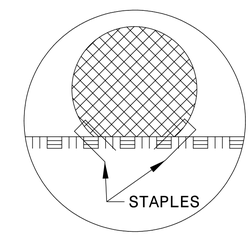
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

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

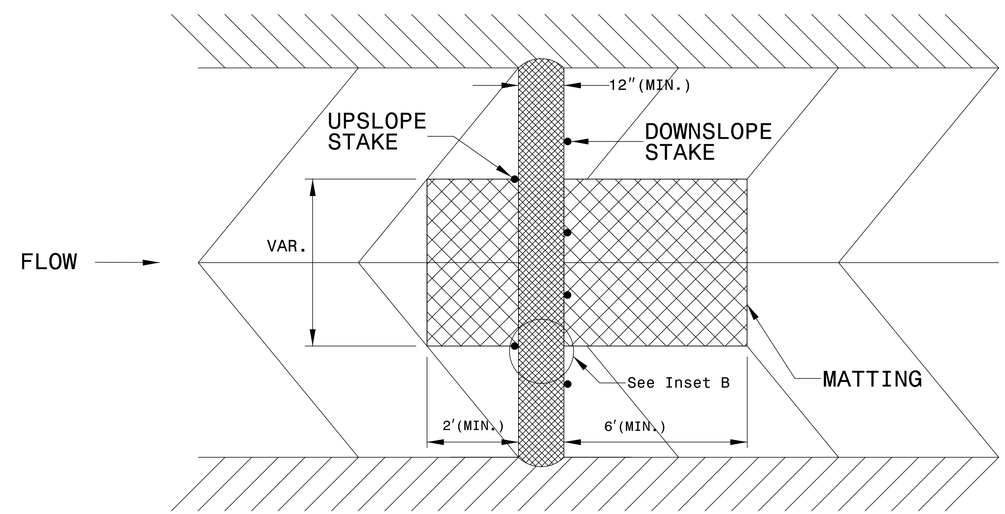
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



TOP VIEW

6/2/99

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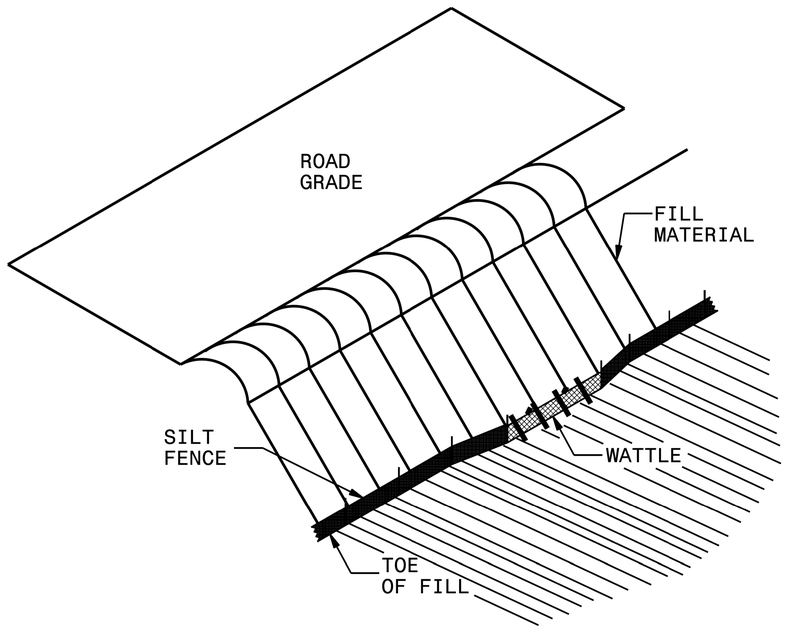
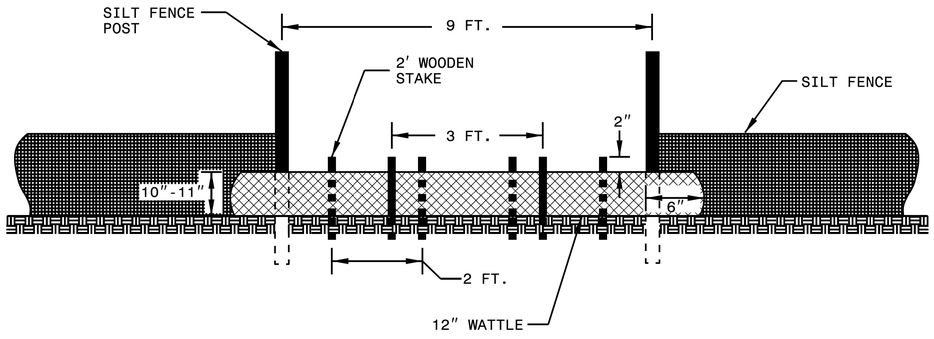
PROJECT REFERENCE NO.	SHEET NO.
B-5547	EC-3

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

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

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

DO NOT PLACE WATTLE ON TOE OF SLOPE.

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

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

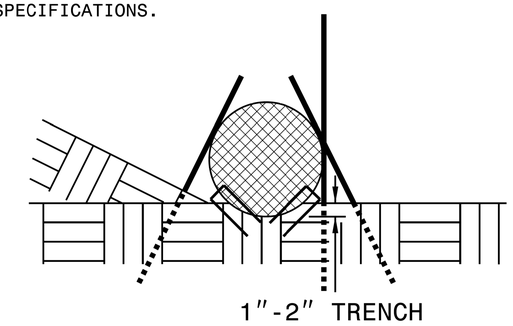
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

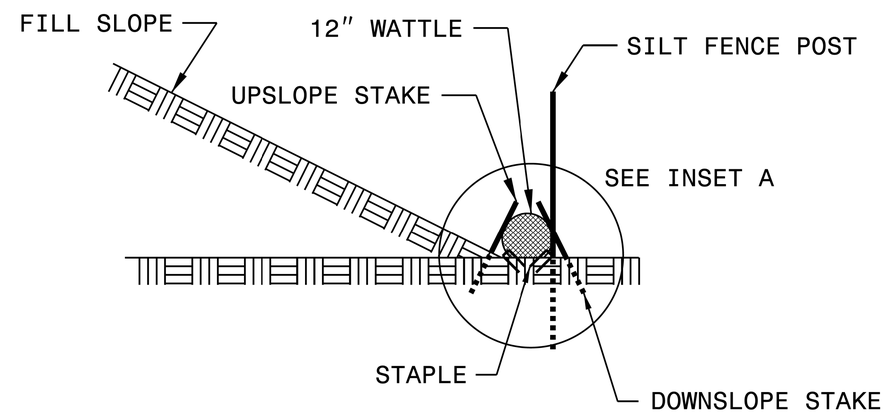
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

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

INSET A





SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-5547	EC-4

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

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

MATTING FOR EROSION CONTROL

SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)	REMARKS
EC-5	-L-	14+42	15+42	LT	170	INSTALL IN PROP. DITCH
EC-5	-L-	16+00	17+55	LT	260	INSTALL IN PROP. DITCH
				SUBTOTAL	430	
				MISCELLANEOUS MATTING	0	
				TOTAL	430	
				SAY	430	

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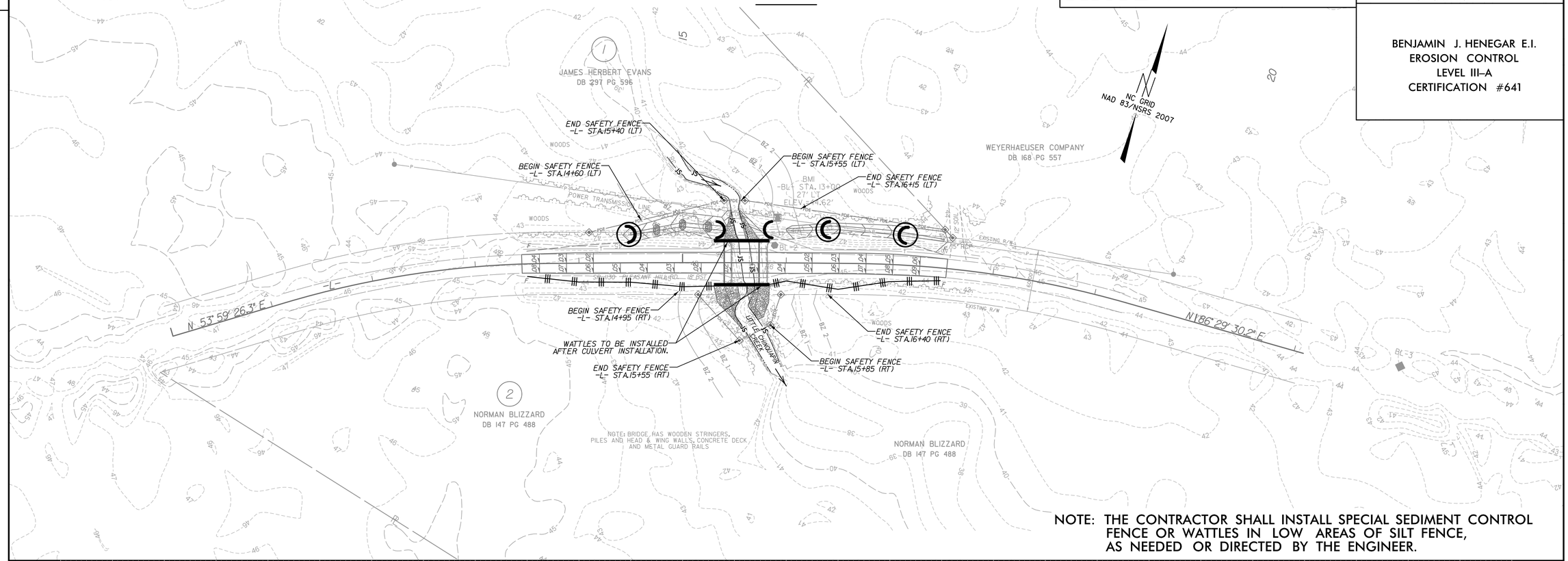
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
B-5547	EC-5
R/W SHEET NO.	

BENJAMIN J. HENEGAR E.I.
EROSION CONTROL
LEVEL III-A
CERTIFICATION #641

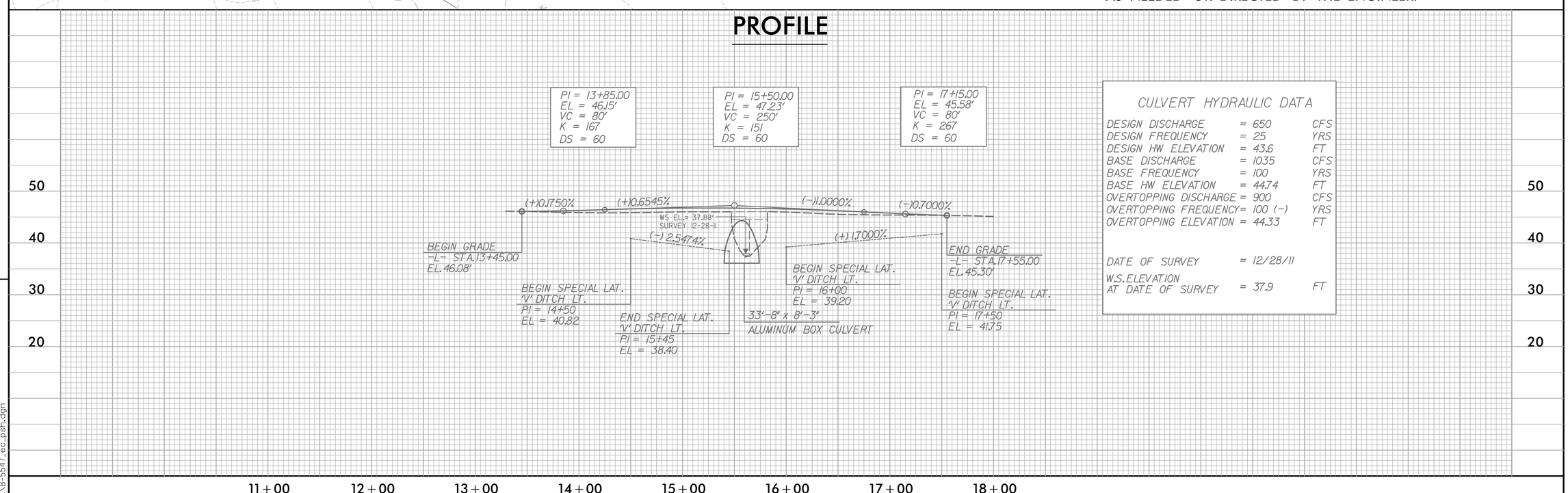
REVISIONS

PLAN



NOTE: THE CONTRACTOR SHALL INSTALL SPECIAL SEDIMENT CONTROL FENCE OR WATTLES IN LOW AREAS OF SILT FENCE, AS NEEDED OR DIRECTED BY THE ENGINEER.

PROFILE



CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 650	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 43.6	FT
BASE DISCHARGE	= 1035	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 44.74	FT
OVERTOPPING DISCHARGE	= 900	CFS
OVERTOPPING FREQUENCY	= 100 (−)	YRS
OVERTOPPING ELEVATION	= 44.33	FT
DATE OF SURVEY	= 12/28/11	
W.S.ELEVATION AT DATE OF SURVEY	= 37.9	FT

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B-5547 CULVERT PHASING
LITTLE CHINQUAPIN BRANCH
JONES COUNTY

HNTB
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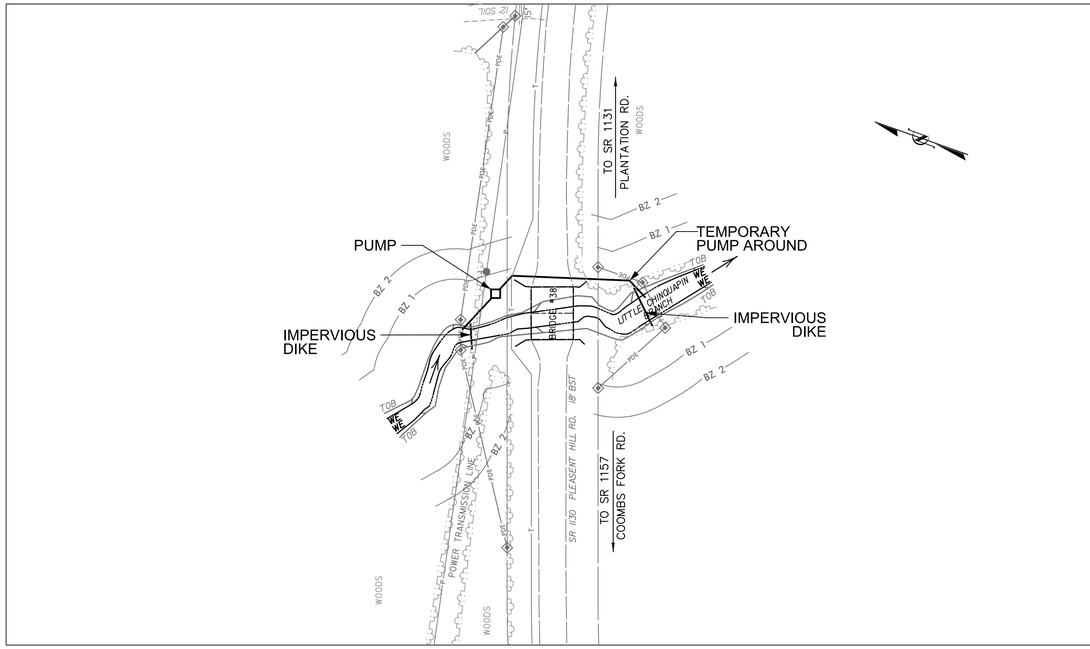
Raleigh, North Carolina 27609
NC License No: C-1554

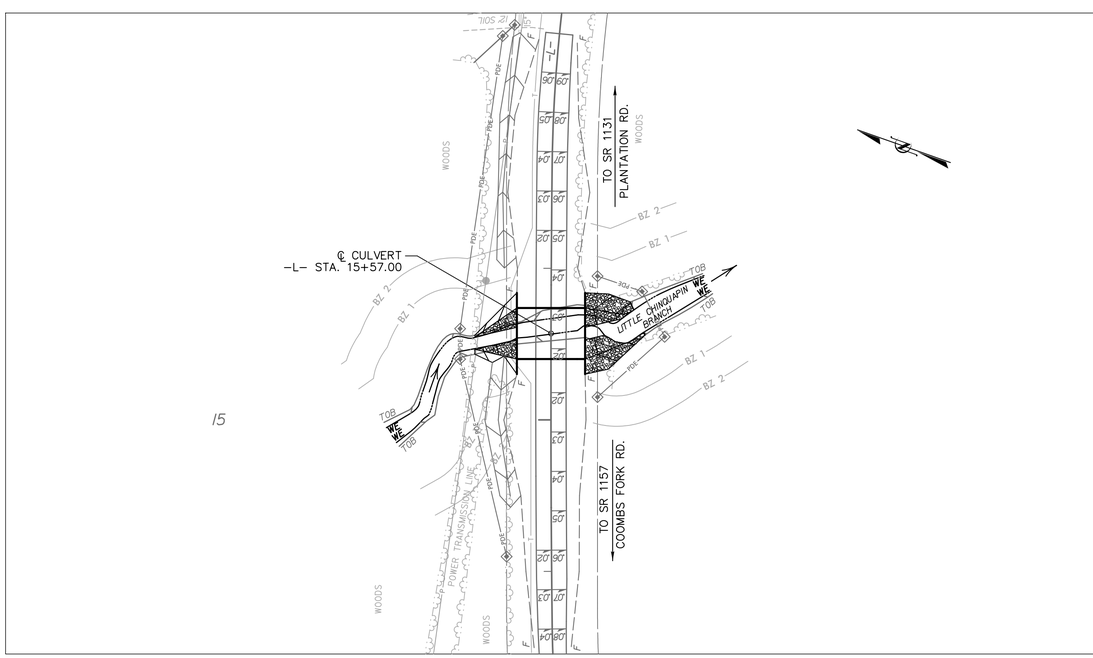
PROJECT REFERENCE NO.	SHEET NO.
B-5547	EC-6
R/W SHEET NO.	

BENJAMIN J. HENEGAR E.I.
EROSION CONTROL
LEVEL III-A
CERTIFICATION #641



PHASE I

1. INSTALL IMPERVIOUS DIKES AS SHOWN.
2. INSTALL PIPE AND PUMP. THEN PUMP LITTLE CHINQUAPIN BRANCH AROUND CONSTRUCTION AREA.
3. DEWATER CONSTRUCTION AREA INTO SPECIAL STILLING BASIN(S).

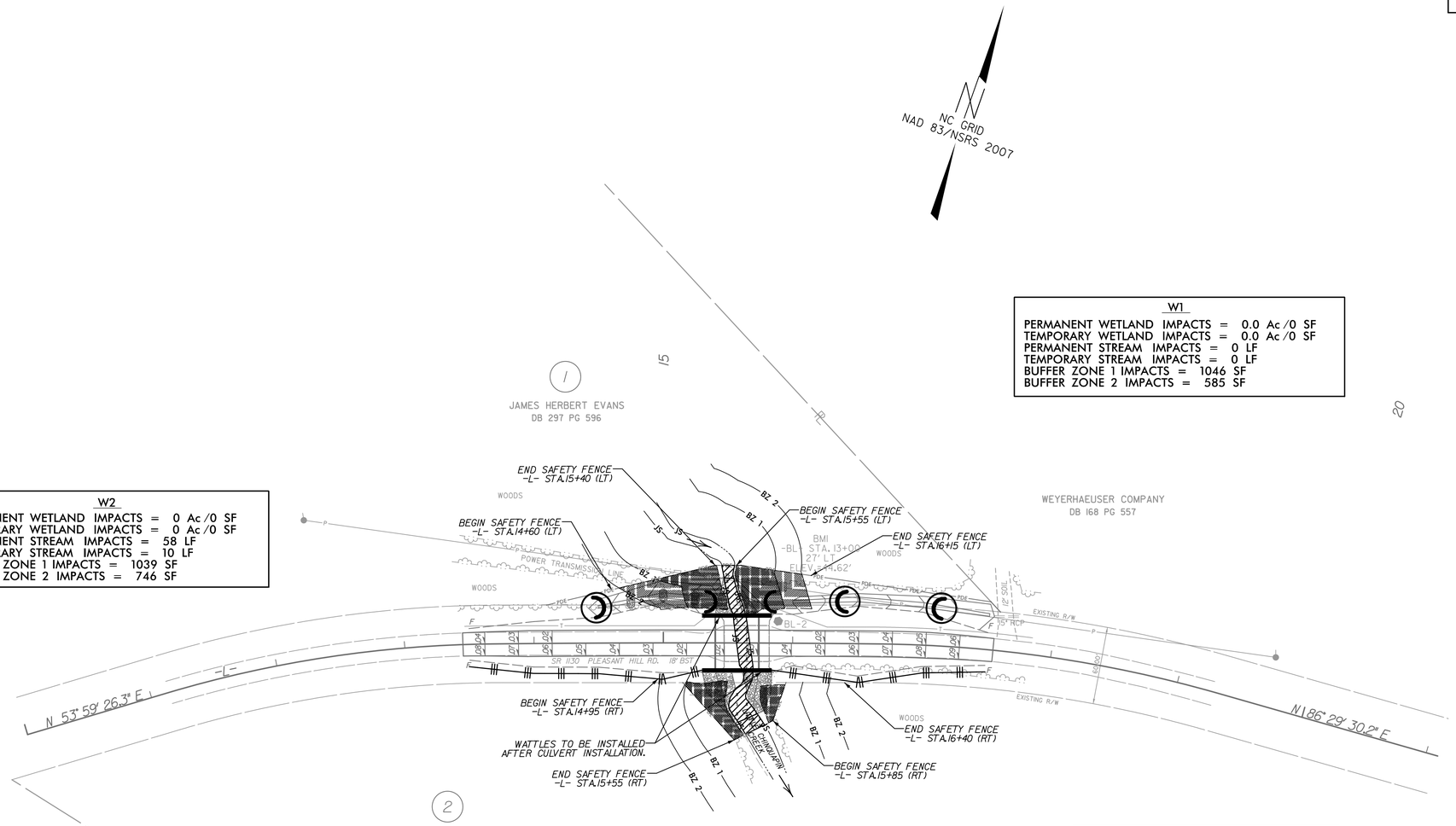


PHASE II

1. REMOVE EXISTING BRIDGE IN ITS ENTIRETY.
2. INSTALL ALUMINUM BOX CULVERT & GRADE CHANNEL. LINE CHANNEL BANKS WITH CLASS I RIP RAP AS SHOWN.
3. REMOVE IMPERVIOUS DIKES, PUMP AND TEMP. PIPE.

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-5547	P-1
R/W SHEET NO.	



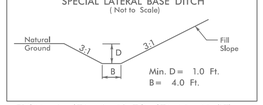
W1

PERMANENT WETLAND IMPACTS = 0.0 Ac /0 SF
TEMPORARY WETLAND IMPACTS = 0.0 Ac /0 SF
PERMANENT STREAM IMPACTS = 0 LF
TEMPORARY STREAM IMPACTS = 0 LF
BUFFER ZONE 1 IMPACTS = 1046 SF
BUFFER ZONE 2 IMPACTS = 585 SF

W2

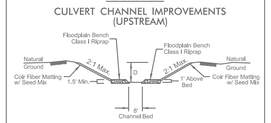
PERMANENT WETLAND IMPACTS = 0 Ac /0 SF
TEMPORARY WETLAND IMPACTS = 0 Ac /0 SF
PERMANENT STREAM IMPACTS = 58 LF
TEMPORARY STREAM IMPACTS = 10 LF
BUFFER ZONE 1 IMPACTS = 1039 SF
BUFFER ZONE 2 IMPACTS = 746 SF

DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)



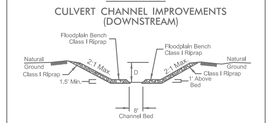
FROM -L- STA. 14+50 TO STA. 15+45 (LT)
FROM -L- STA. 16+00 TO STA. 17+50 (LT)

DETAIL B
(Not to Scale)
CULVERT CHANNEL IMPROVEMENTS
(UPSTREAM)



EST. 45 CY EXCAVATION
EST. 40 SY MATTING
EST. 30 TONS CLASS I RIPRAP
EST. 60 SY GEOTEXTILE FABRIC

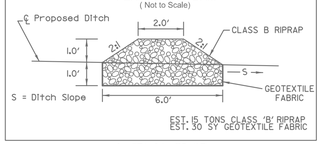
DETAIL C
(Not to Scale)
CULVERT CHANNEL IMPROVEMENTS
(DOWNSTREAM)



EST. 260 CY EXCAVATION
EST. 90 TONS CLASS I RIPRAP
EST. 150 SY GEOTEXTILE FABRIC

NOTE: BRIDGE HAS WOODEN STRINGERS, PILES AND HEAD & WING WALLS, CONCRETE DECK AND METAL GUARD RAILS

DETAIL D
PERM. CHECK DAM
(Not to Scale)



-L- STA. 14+75 (LT)
-L- STA. 15+00 (LT)
-L- STA. 15+25 (LT)

W4

PERMANENT WETLAND IMPACTS = 0 Ac /0 SF
TEMPORARY WETLAND IMPACTS = 0 Ac /0 SF
PERMANENT STREAM IMPACTS = 0 LF
TEMPORARY STREAM IMPACTS = 0 LF
BUFFER ZONE 1 IMPACTS = 359 SF
BUFFER ZONE 2 IMPACTS = 0 SF

W3

PERMANENT WETLAND IMPACTS = 0 Ac /0 SF
TEMPORARY WETLAND IMPACTS = 0 Ac /0 SF
PERMANENT STREAM IMPACTS = 57 LF
TEMPORARY STREAM IMPACTS = 10 LF
BUFFER ZONE 1 IMPACTS = 782 SF
BUFFER ZONE 2 IMPACTS = 0 SF

IMPACT SUMMARY:

404 WETLAND IMPACTS = 0.00 AC
PERMANENT STREAM IMPACTS = 115 FT.
TEMPORARY STREAM IMPACTS = 20 FT.
BUFFER ZONE 1 IMPACT = 3226 SQ FT.
BUFFER ZONE 2 IMPACT = 1331 SQ FT.

LEGEND

ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
DENOTES IMPACTS IN SURFACE WATER

NCDOT
B-5547 JONES COUNTY
REPLACE BRIDGE NO. 0038
SR 1130 (PLEASANT HILL RD.)
OVER LITTLE CHINQUAPIN BRANCH
BETWEEN SR 1157
AND SR 1129

SCALE: 1" = 50'
JULY 10, 2013
FOR PERMITTING ONLY:
NOT FOR CONSTRUCTION

Note: Approximate quantities only. Unclassified Excavation, Borrow 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."

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CROSS–SECTION SUMMARY

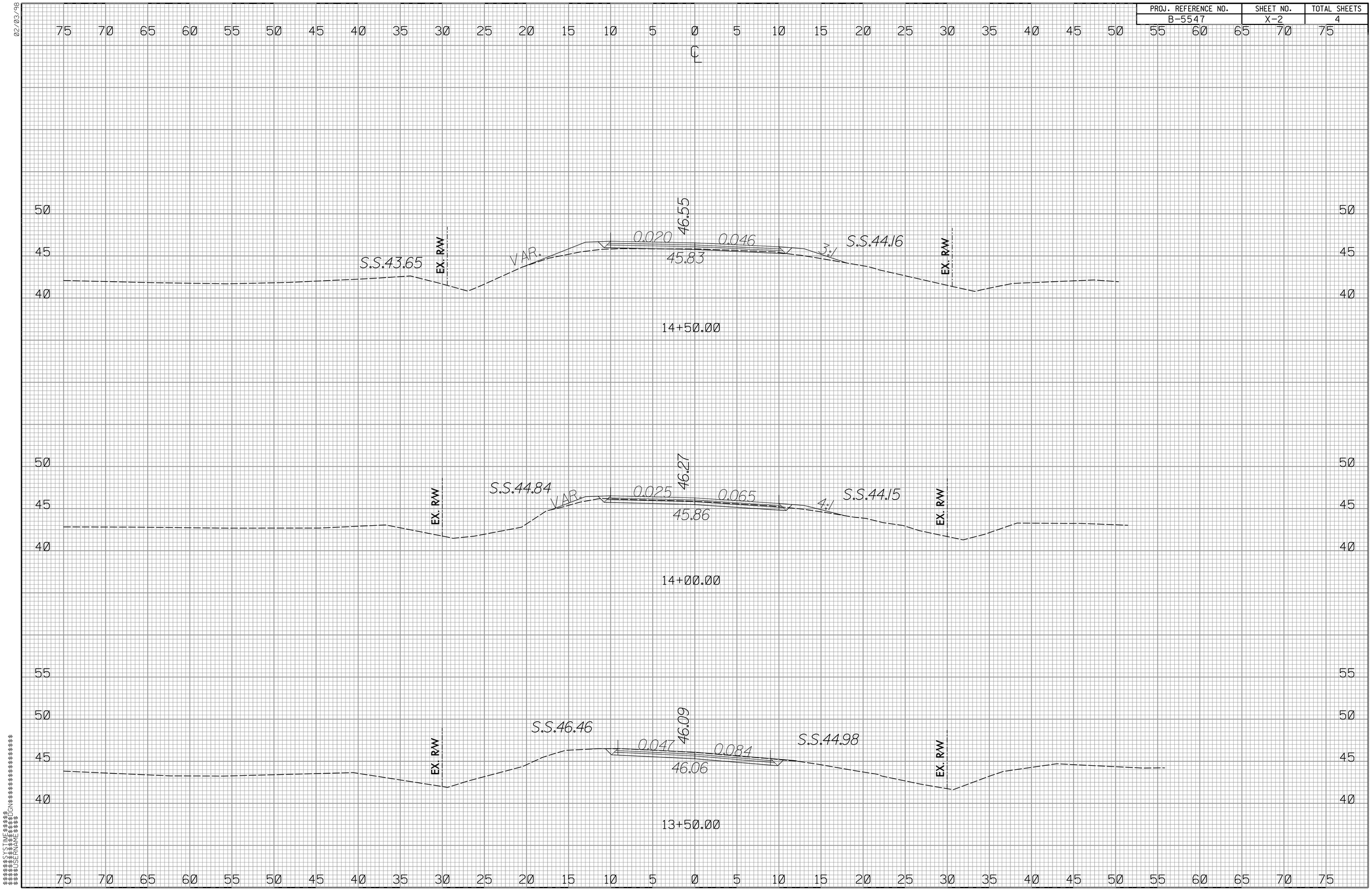
IN CUBIC YARDS

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

STATION	UNCLASSIFIED EXCAVATION	EMBANK.	UNDERCUT
–L– STA. 13+50.00	3	0	0
–L– STA. 14+00.00	23	3	0
–L– STA. 14+50.00	10	12	0
–L– STA. 15+00.00	27	36	0
–L– STA. 15+50.00	20	44	0
–L– STA. 16+00.00	2	8	0
–L– STA. 16+50.00	13	34	0
–L– STA. 17+00.00	38	41	0
–L– STA. 17+50.00	50	15	0
–L– STA. 18+00.00	4	1	0

02/03/98
$$$$$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
B-5547	X-2	4



02/03/98

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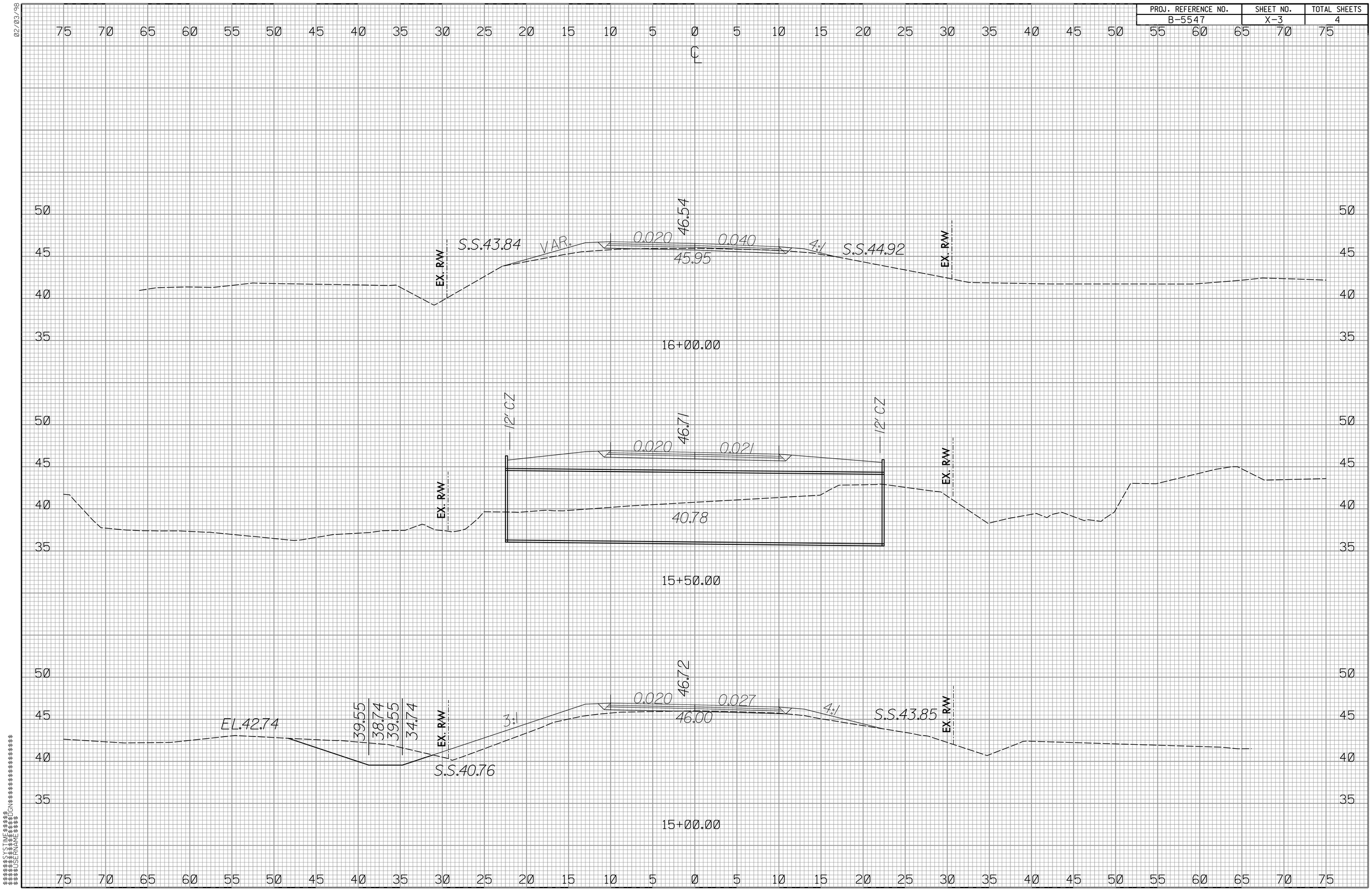
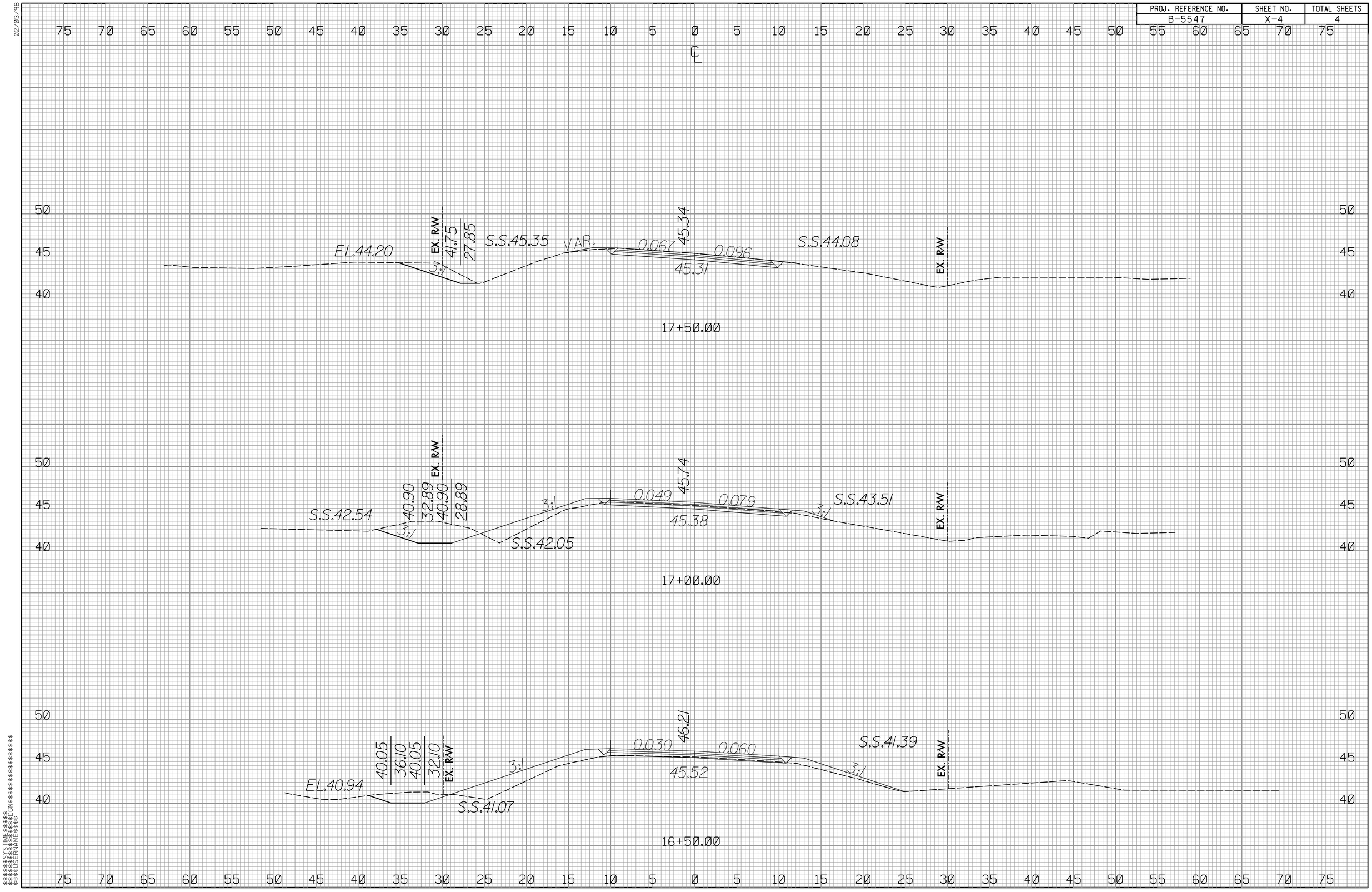
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
B-5547	X-3	4



PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
B-5547	X-4	4



02/03/98

$$$$$$SYSTIME$$$$$$
$$$$$$DGN$$$$$$
$$$$$$USERNAME$$$$$$