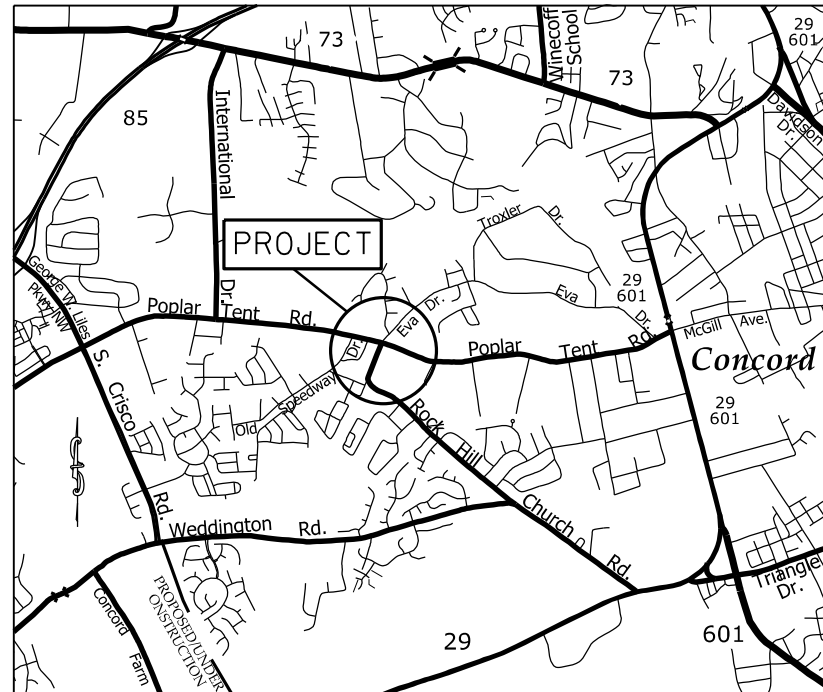


PROJECT: 47866 TIP:



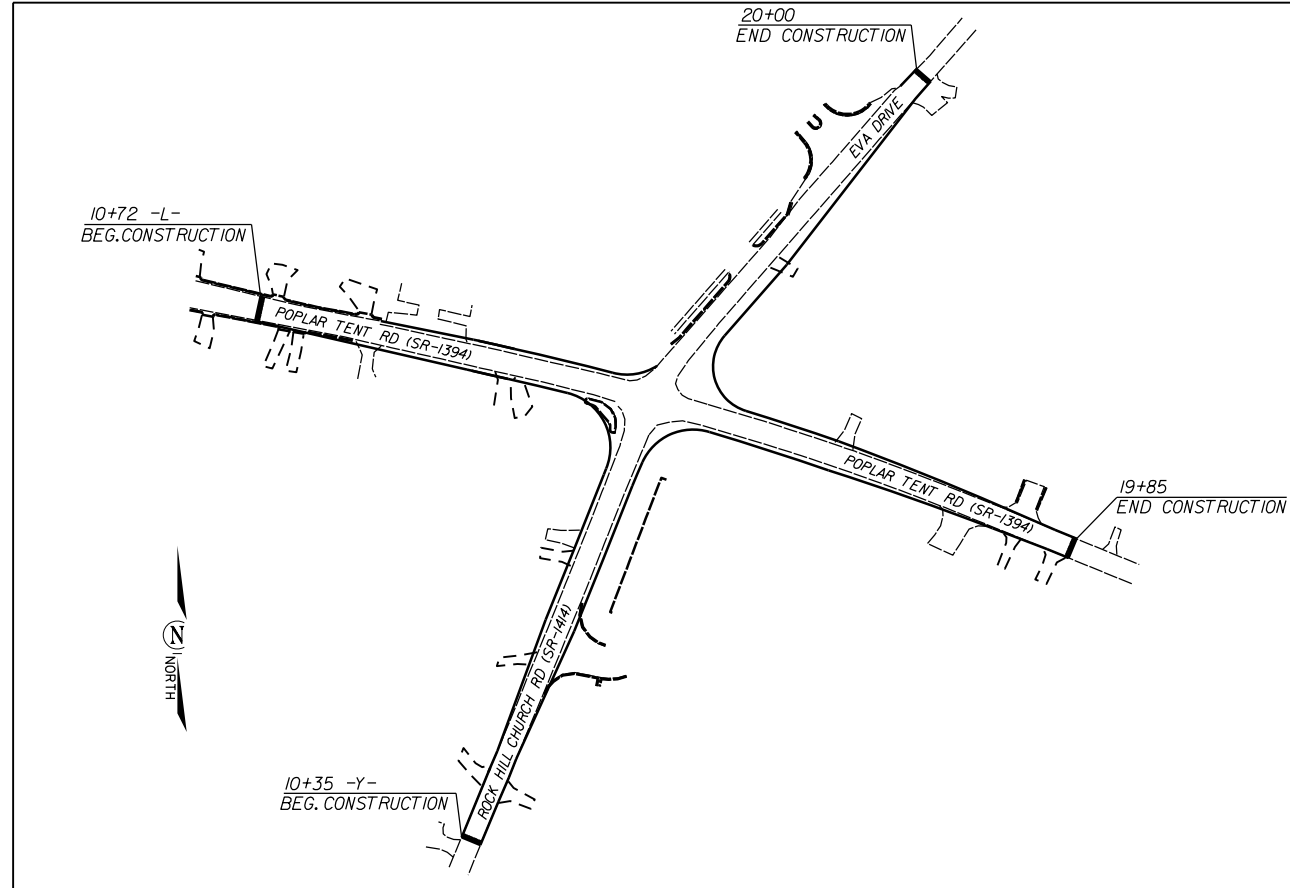
VICINITY MAP NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CABARRUS COUNTY

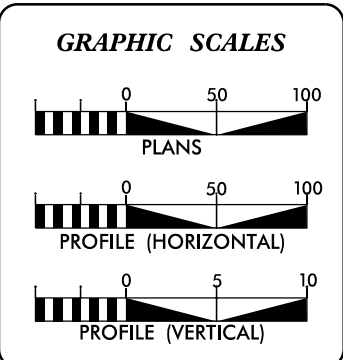
LOCATION: INTERSECTION OF POPLAR TENT RD. (SR-1394),
ROCK HILL CHURCH RD. (SR-1414) AND EVA DR.

TYPE OF WORK: GRADING, DRAINAGE, MILLING, CONCRETE CURB AND GUTTER, CONCRETE MONOLITHIC ISLAND, PAVING, TRAFFIC SIGNALS, AND THERMOPLASTIC PAVEMENT MARKING

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	47866	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47866		P.E.	
47866		RW	
47866		CONST.	



CLEARING ON THIS PROJECT SHALL BE TO THE LIMITS ESTABLISHED BY METHOD III AS DESCRIBED IN THE NCDOT STANDARD DRAWINGS



DESIGN DATA

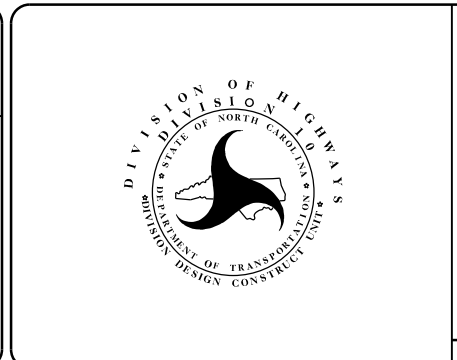
ADT	=	
ADT	=	
DHV	=	%
D	=	%
T	=	%
V	=	MPH

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT	=	0.36	MILES
TOTAL LENGTH OF STATE PROJECT	=	0.36	MILES

Prepared In the Office of:
DIVISION OF HIGHWAYS
DIVISION TEN
DIVISION DESIGN / CONSTRUCT UNIT

2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: 03/08/2022	DONALD HARWARD PROJECT ENGINEER
LETTING DATE: 02/15/2023	DONALD HARWARD PROJECT DESIGN ENGINEER



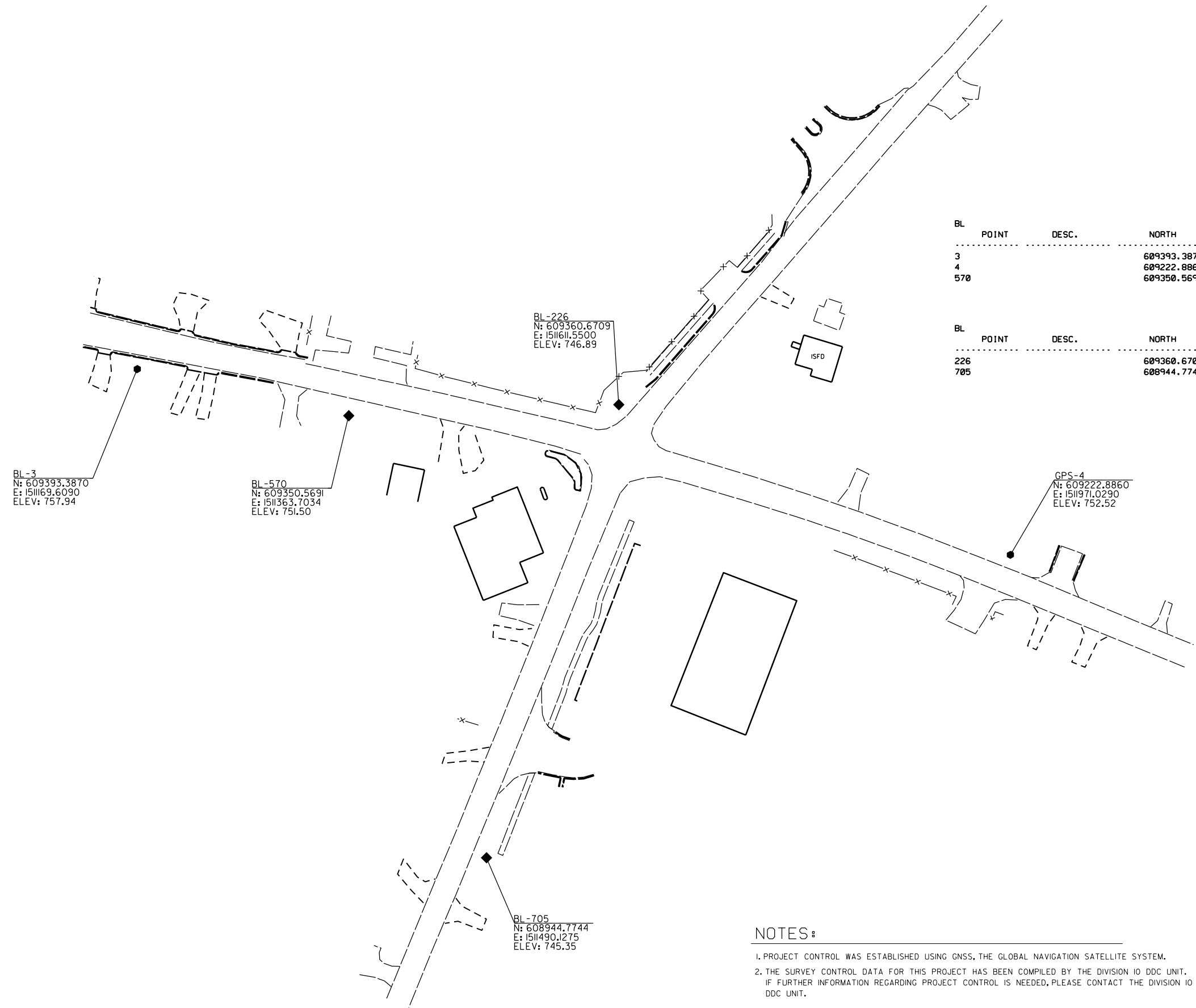
ROADWAY DESIGN ENGINEER

DocuSigned by:
Travis Preslar
A53C1ACTA1FF47B...

SIGNATURE

SURVEY CONTROL SHEET

PROJECT NO.	SHEET NO.
47866	IA
F.A. PROJECT NO.	



BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
3		609393.3870	1511169.6090	757.94	10+53.14	26.63 RT
4		609222.8860	1511971.0290	752.52	18+71.22	23.76 LT
570		609350.5691	1511363.7034	751.50	12+52.14	27.23 RT

BL POINT	DESC.	NORTH	EAST	ELEVATION	Y STATION	OFFSET
226		609360.6709	1511611.5500	746.89	15+79.37	35.28 LT
705		608944.7744	1511490.1275	745.35	11+54.88	21.95 RT

BL-3
N: 609393.3870
E: 1511169.6090
ELEV: 757.94

BL-570
N: 609350.5691
E: 1511363.7034
ELEV: 751.50

BL-226
N: 609360.6709
E: 1511611.5500
ELEV: 746.89

GPS-4
N: 609222.8860
E: 1511971.0290
ELEV: 752.52

BL-705
N: 608944.7744
E: 1511490.1275
ELEV: 745.35

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL - 226" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 609360.6209(ft) EASTING: 1511611.5500(ft) ELEVATION: 746.89(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987655

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL - 226" TO -L- STATION 10+00 IS
N 81° 52' 14" W 895.12'

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

- NOTES:**
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
 - THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED BY THE DIVISION IO DDC UNIT. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE DIVISION IO DDC UNIT.

INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR-1394)
ROCK HILL CHURCH RD. (SR-1414)
AND EVA DRIVE

SCALE	1"=50'		REVISIONS
DATE	11-2019		
DWG. BY	CEB		
DESIGN BY	JDH		
APPROVED	JDH		

RIGHT OF WAY, EASEMENT AND PROPOSED ALIGNMENT SHEET

ROW MARKER IRON PIN & CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	13+01.21	-30.16	609395.8789	1511424.1024
L	14+00.00	-41.00	609384.1300	1511523.4376
L	14+35.00	30.09	609306.6858	1511540.3250
L	14+82.61	-43.12	609365.4337	1511605.0124
L	16+00.00	-45.00	609334.2480	1511719.8187
L	17+03.00	-45.00	609301.9583	1511819.1017
L	18+14.71	-43.50	609262.0494	1511925.0476

L			
TYPE	STATION	NORTH	EAST
PC	10+00.00	609430.4350	1511123.1621
PCC	13+50.15	609355.6792	1511465.2392
PT	18+97.42	609190.9888	1511986.4805
POT	20+58.00	609130.0805	1512135.0607

ROW MARKER IRON PIN & CAP

ALIGN	STATION	OFFSET	NORTH	EAST
Y	10+35.00	30.00	608832.1640	1511449.8190
Y	10+35.00	24.83	608834.1576	1511445.0504
Y	11+54.40	30.00	608941.0904	1511497.3059
Y	14+70.00	-30.49	609255.8048	1511562.8325
Y	16+50.00	38.00	609373.9379	1511712.2021
Y	19+12.73	27.92	609581.5061	1511873.8997

Y			
TYPE	STATION	NORTH	EAST
POT	10+00.00	608811.4431	1511408.6409
POT	10+59.97	608866.7701	1511431.7700
POT	12+05.10	609072.7922	1511522.5552
PC	14+70.42	609244.8833	1511591.3025
PT	16+62.36	609407.7384	1511691.1312
POT	17+49.17	609473.0199	1511748.3615
POT	19+74.17	609646.6824	1511891.4222
POT	21+74.96	609797.4298	1512024.0429

PERMANENT UTILITY EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+83.00	42.00	609351.0087	1511293.1064
L	11+83.00	29.52	609363.1986	1511295.7720
L	11+94.00	42.00	609348.6582	1511303.8311
L	11+94.00	29.52	609360.8443	1511306.5018
L	12+01.35	-30.47	609417.8668	1511326.5490
L	12+96.00	-51.00	609417.3567	1511423.5711
L	12+96.00	-39.00	609405.6475	1511420.9454
L	13+01.15	-51.00	609416.2267	1511428.6077
L	13+01.18	-39.00	609404.5104	1511426.0135
L	17+03.00	-60.00	609316.1486	1511823.9632
L	17+03.00	-53.00	609309.5265	1511821.6945
L	17+13.00	-44.71	609298.3837	1511828.5910
L	17+13.00	-60.00	609312.8340	1511833.5906
L	18+14.71	-57.00	609274.6647	1511929.8538
L	18+20.00	-43.44	609260.0810	1511930.0340
L	18+20.00	-57.00	609272.7451	1511934.8813

PERMANENT UTILITY EASEMENT

ALIGN	STATION	OFFSET	NORTH	EAST
Y	14+64.45	28.53	609228.7565	1511615.5783
Y	14+94.27	48.35	609247.0257	1511644.7170
Y	16+33.00	63.17	609346.0531	1511721.9612
Y	17+97.96	-35.10	609532.9860	1511752.2890
Y	18+02.00	-56.84	609549.9340	1511738.0774
Y	18+11.00	40.00	609495.3062	1511818.5453
Y	18+14.00	-34.60	609545.0548	1511762.8734
Y	18+14.00	-55.00	609558.0251	1511747.1286
Y	21+42.00	-45.00	609802.4105	1511968.4890
Y	21+42.01	-29.46	609792.1499	1511980.1631
Y	21+52.00	-45.00	609809.9185	1511975.0942
Y	21+52.00	-29.46	609799.6539	1511986.7619
Y	21+55.62	29.57	609763.3781	1512033.4746
Y	21+59.02	39.00	609759.7019	1512042.7958

I, Barry D. Davis, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item, R/W and Easement Staking, was performed under my responsible charge meeting NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures as of 2017. Those standards can be found at <https://connect.ncdot.gov/resources/Location/Pages/>.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from survey control established under my supervision; that the depicted property data shown herein were surveyed under my supervision; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (see deeds for final determination).

Witness my signature, registration number and seal this 13th day of NOV 2019

Barry D. Davis, _____ DocuSigned by: _____ PLS# L-4384
Professional Land Surveyor

Barry Davis
0E2AAE4F48174DC...

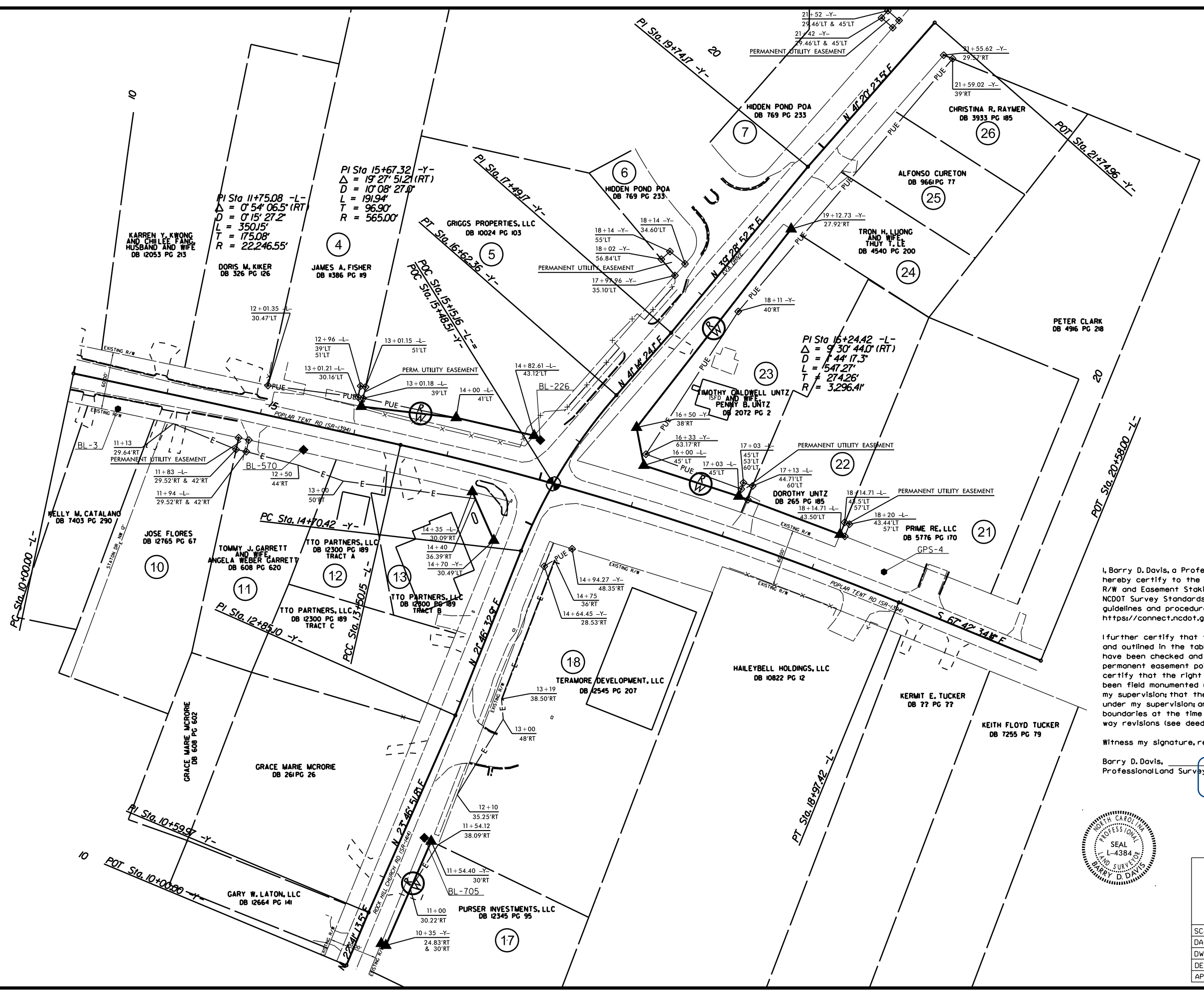


NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED BY THE DIVISION IO DDC UNIT. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE DIVISION IO DDC UNIT.

INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR-1394)
ROCK HILL CHURCH RD. (SR-1414)
AND EVA DRIVE

SCALE	N/A		REVISIONS
DATE	11-2019		
DWG. BY	CEB		
DESIGN BY	JDH		
APPROVED	JDH		



I, Barry D. Davis, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item, R/W and Easement Staking, was performed under my responsible charge meeting NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures as of 2017. Those standards can be found at <https://connect.ncdot.gov/resources/Location/Pages/>.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from survey control established under my supervision; that the depicted property data shown herein were surveyed under my supervision; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (see deeds for final determination).

Witness my signature, registration number and seal this 13th day of NOV 2019

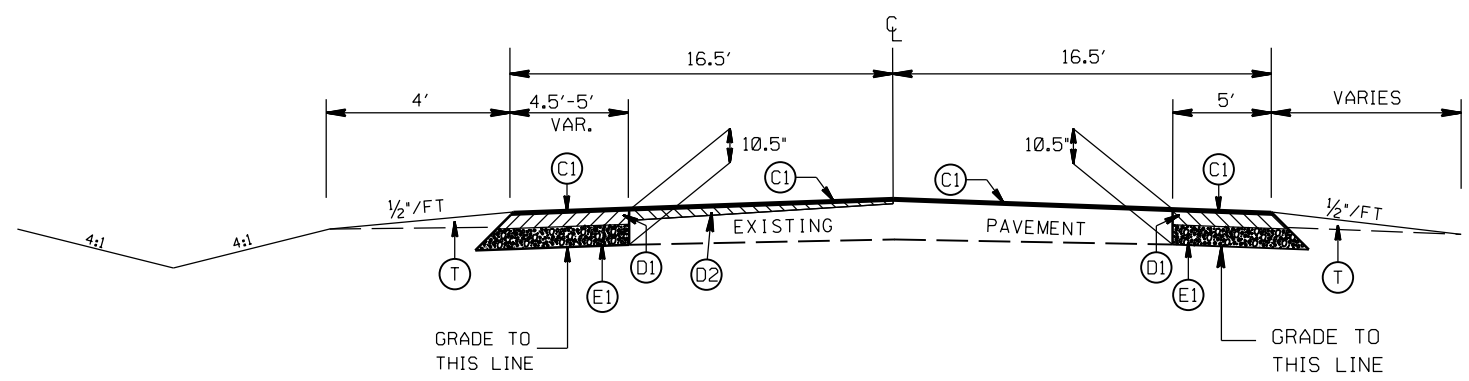
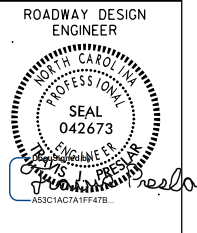
Barry D. Davis, Professional Land Surveyor
 DocuSigned by: Barry Davis
 PLS* L-4384
 0E2AAE4F48174DC...



INSTALL LEFT TURN LANES ON
 POPLAR TENT RD. (SR-1394)
 ROCK HILL CHURCH RD. (SR-1414)
 AND EVA DRIVE

SCALE	1"=50'	REVISIONS
DATE	11-2019	
DWG. BY	CEB	
DESIGN BY	JDH	
APPROVED	JDH	

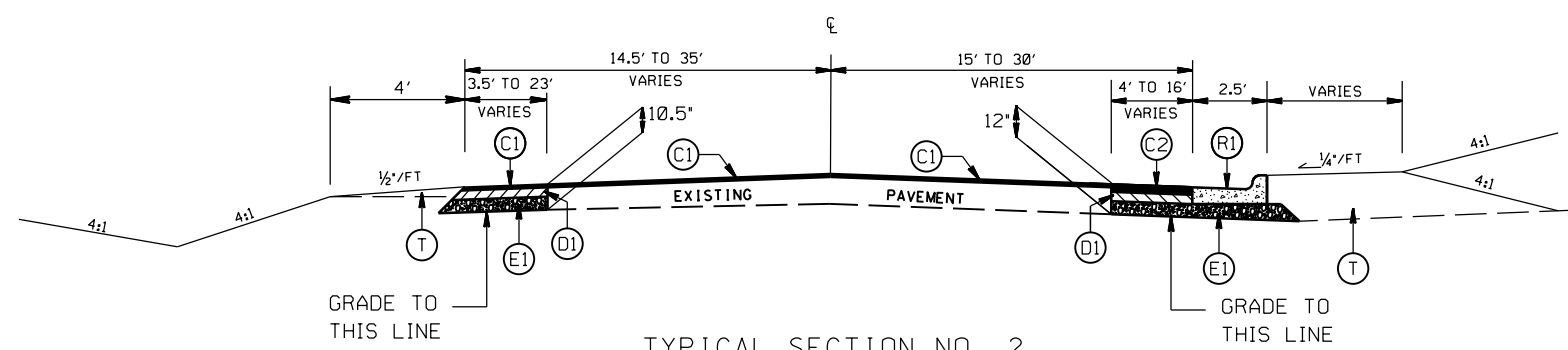




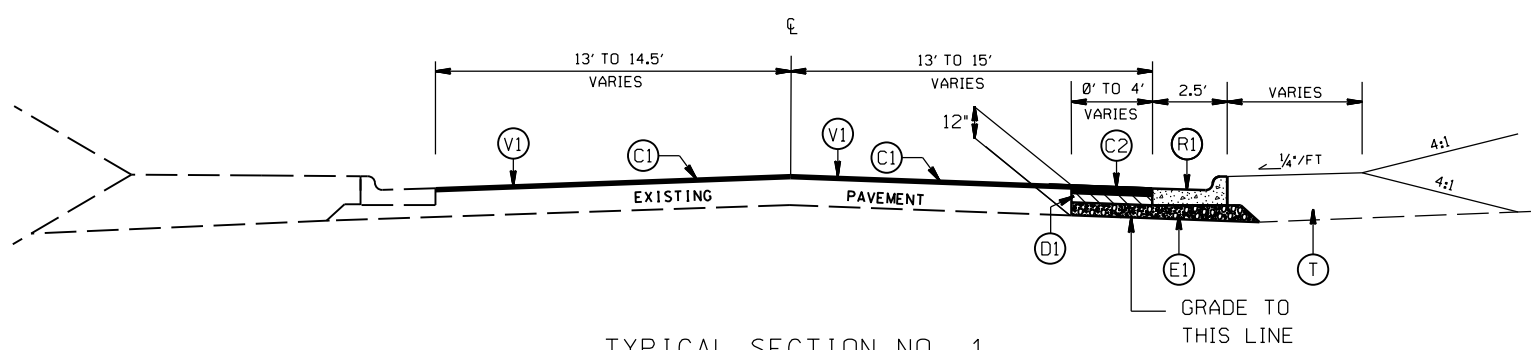
TYPICAL SECTION NO. 3
STA. 13+67.00 TO 14+31.96 -L-

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
(D1)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
(E1)	PROP. APPROX. 5" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(R1)	PROP. 2'-6" CURB & GUTTER
(R3)	PROP. 4" CONC. SIDEWALK (5' IN WIDTH)
(R5)	PROP. 5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
(T)	EARTH MATERIAL
(V1)	MILLING ASPHALT PAVEMENT, 1.5" IN DEPTH



TYPICAL SECTION NO. 2
STA. 12+04.06 TO 13+67.00 -L-
ROCK HILL CH RD/EVA DR TO STA. 15+79.98 -L-



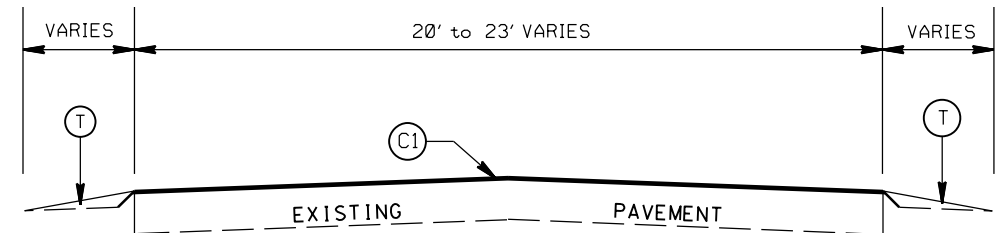
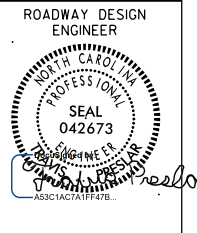
TYPICAL SECTION NO. 1
STA. 10+72.00 TO 12+04.06 -L-

INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR 1394),
ROCK HILL CHURCH RD. (SR 1414) AND
EVA DR.

SCALE	N/A
DATE	8-2020
DWG. BY	DLS
DESIGN BY	JDH
APPROVED	JDH



REVISIONS	

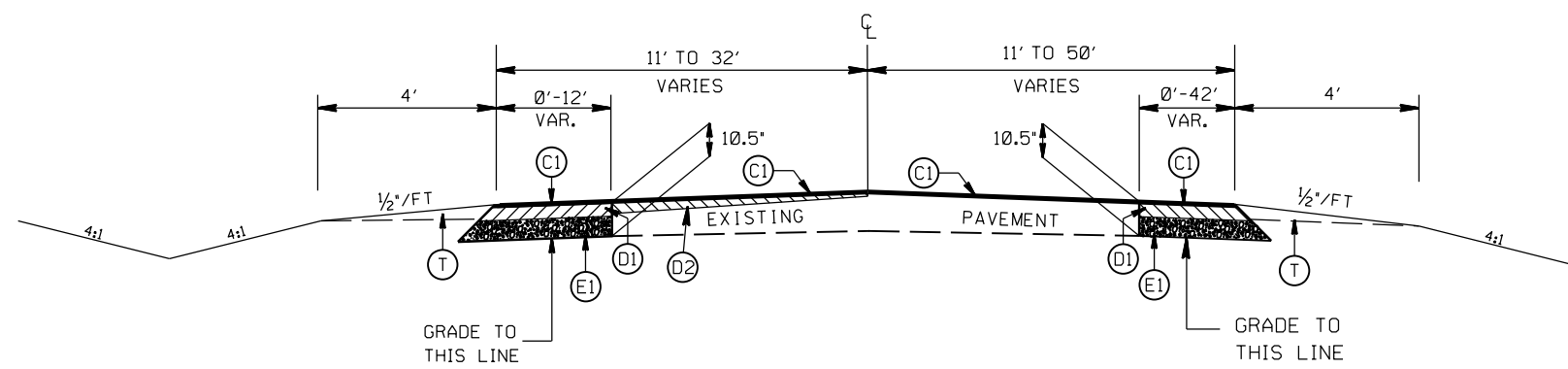


TYPICAL SECTION NO. 6

STA. 19+60.00 TO 19+85.00 -L-
 STA. 19+74.49 TO 20+00.00 -Y-

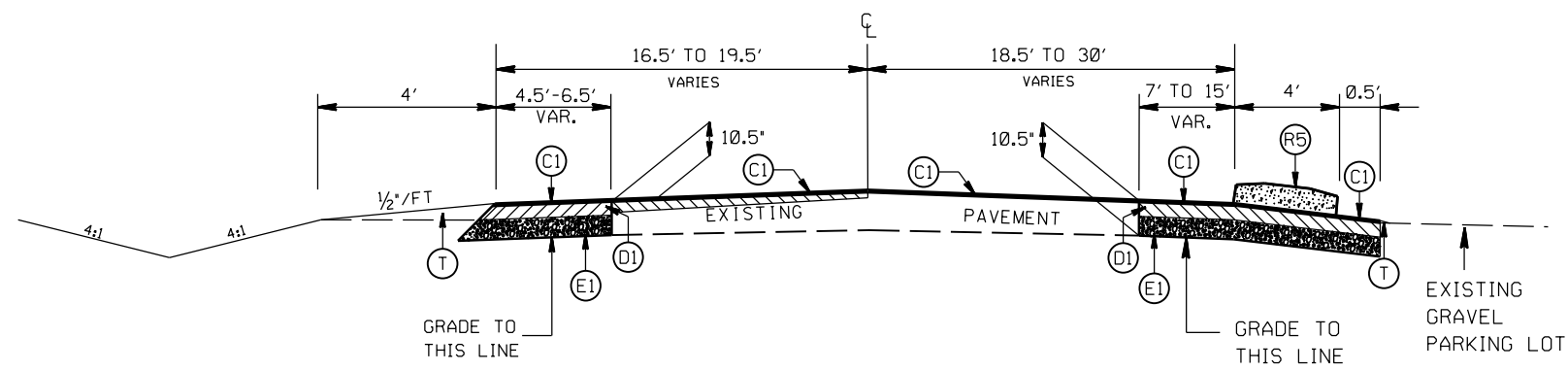
PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
(D1)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
(E1)	PROP. APPROX. 5" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(R1)	PROP. 2'-6" CURB & GUTTER
(R3)	PROP. 4" CONC. SIDEWALK (5' IN WIDTH)
(R5)	PROP. 5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
(T)	EARTH MATERIAL
(V1)	MILLING ASPHALT PAVEMENT, 1.5" IN DEPTH



TYPICAL SECTION NO. 5

STA. 15+79.98 TO 19+60.00 -L-
 POPLAR TENT RD. TO 15+79.09 -Y-



TYPICAL SECTION NO. 4

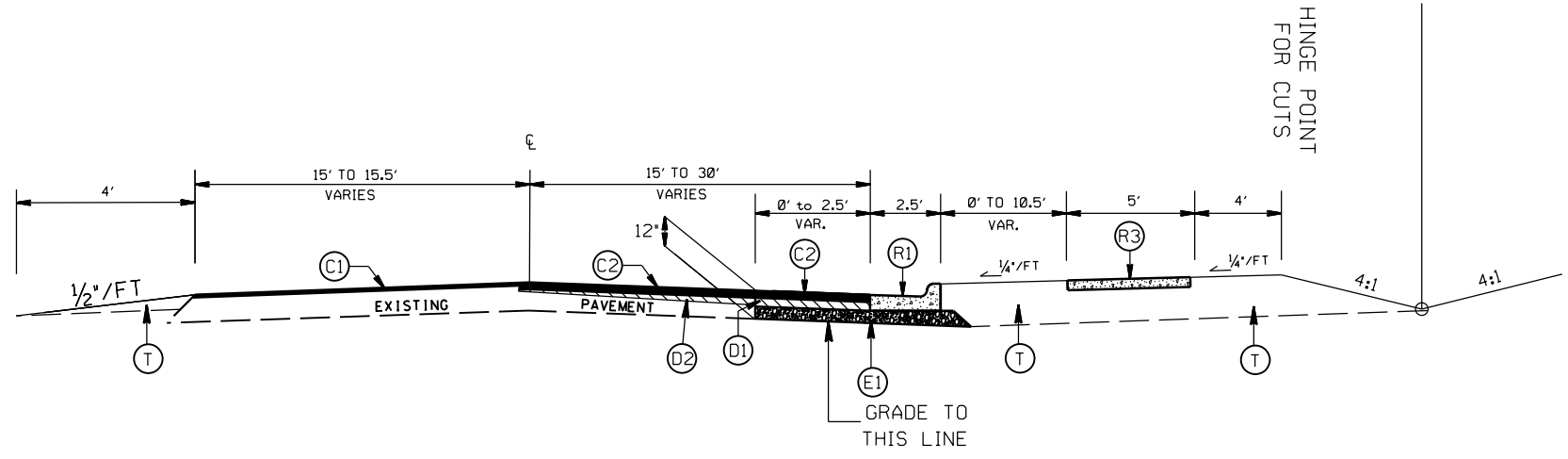
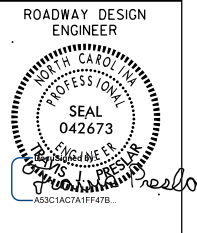
STA. 14+31.96 -L- TO ROCK HILL CH RD/EVA DR

INSTALL LEFT TURN LANES ON
 POPLAR TENT RD. (SR 1394),
 ROCK HILL CHURCH RD. (SR 1414) AND
 EVA DR.

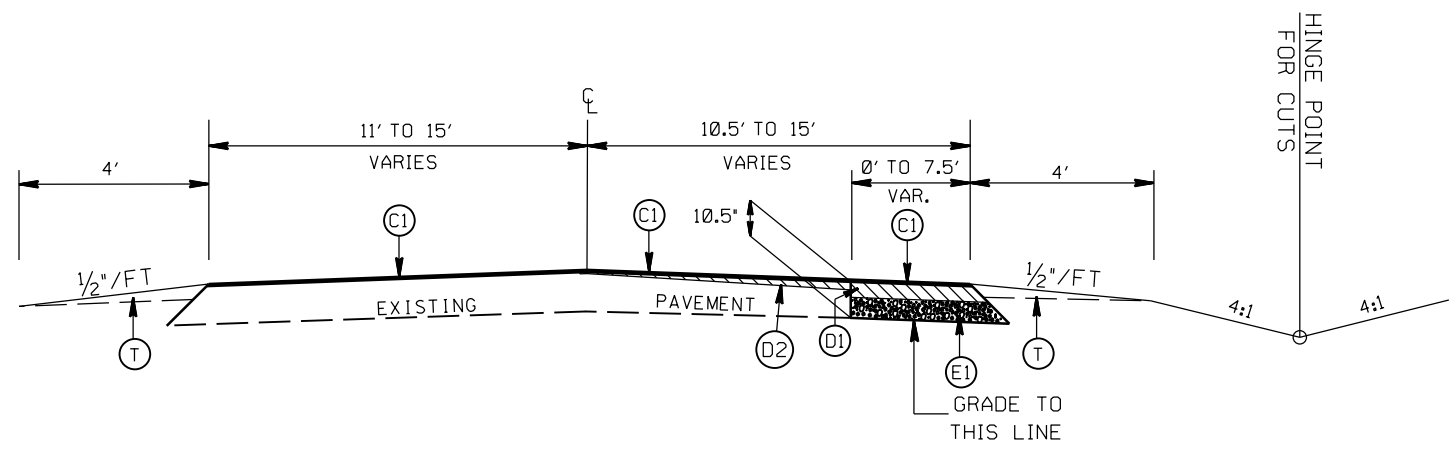
SCALE	N/A
DATE	8-2020
DWG. BY	DLS
DESIGN BY	JDH
APPROVED	JDH



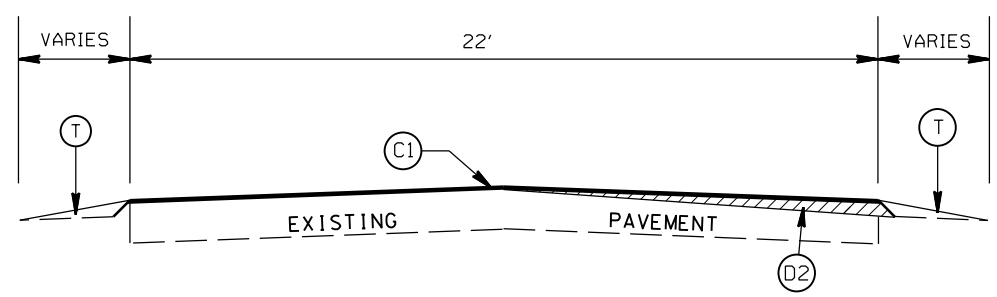
REVISIONS	



TYPICAL SECTION NO. 9
STA. 12+21 TO 12+45.71 -Y-



TYPICAL SECTION NO. 8
STA. 10+60.10 TO 12+21 -Y-



TYPICAL SECTION NO. 7
STA. 10+35.00 TO 10+60.10 -Y-

PAVEMENT SCHEDULE

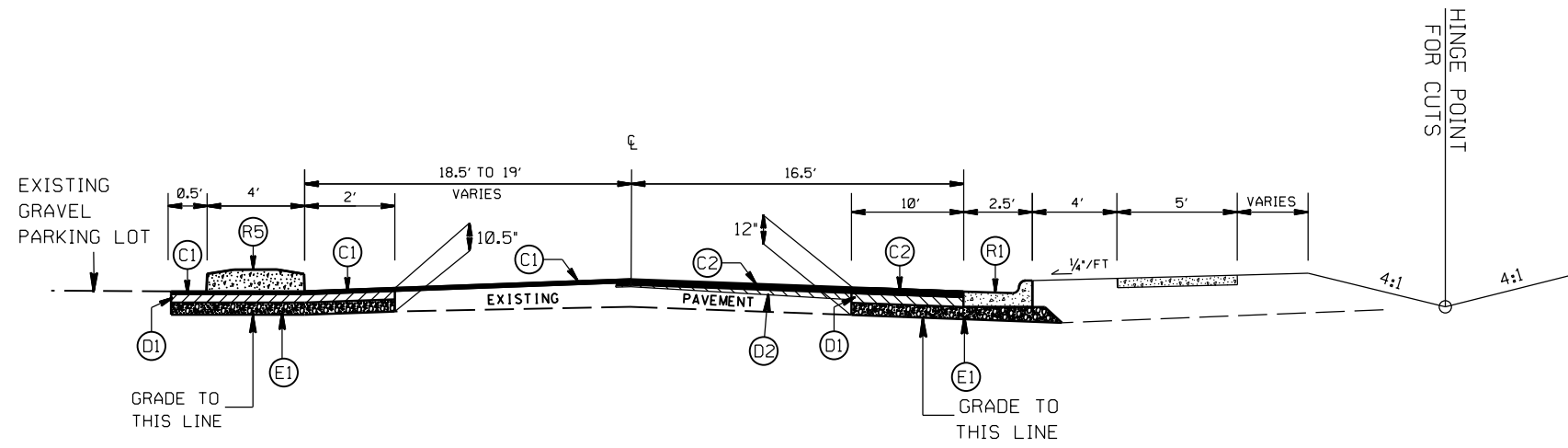
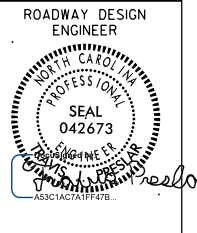
(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
(D1)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
(E1)	PROP. APPROX. 5" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(R1)	PROP. 2'-6" CURB & GUTTER
(R3)	PROP. 4" CONC. SIDEWALK (5' IN WIDTH)
(R5)	PROP. 5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
(T)	EARTH MATERIAL
(V1)	MILLING ASPHALT PAVEMENT, 1.5" IN DEPTH

INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR 1394),
ROCK HILL CHURCH RD. (SR 1414) AND
EVA DR.

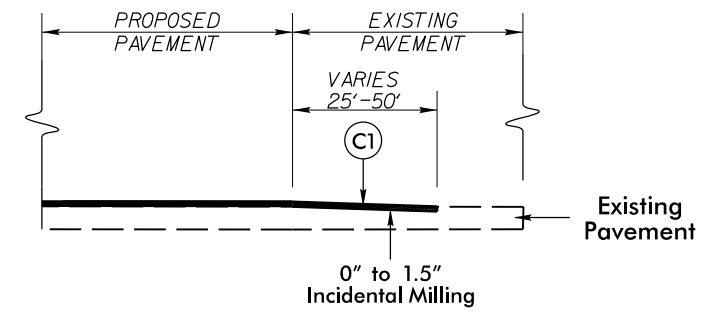
SCALE	N/A
DATE	8-2020
DWG. BY	DLS
DESIGN BY	JDH
APPROVED	JDH



REVISIONS	



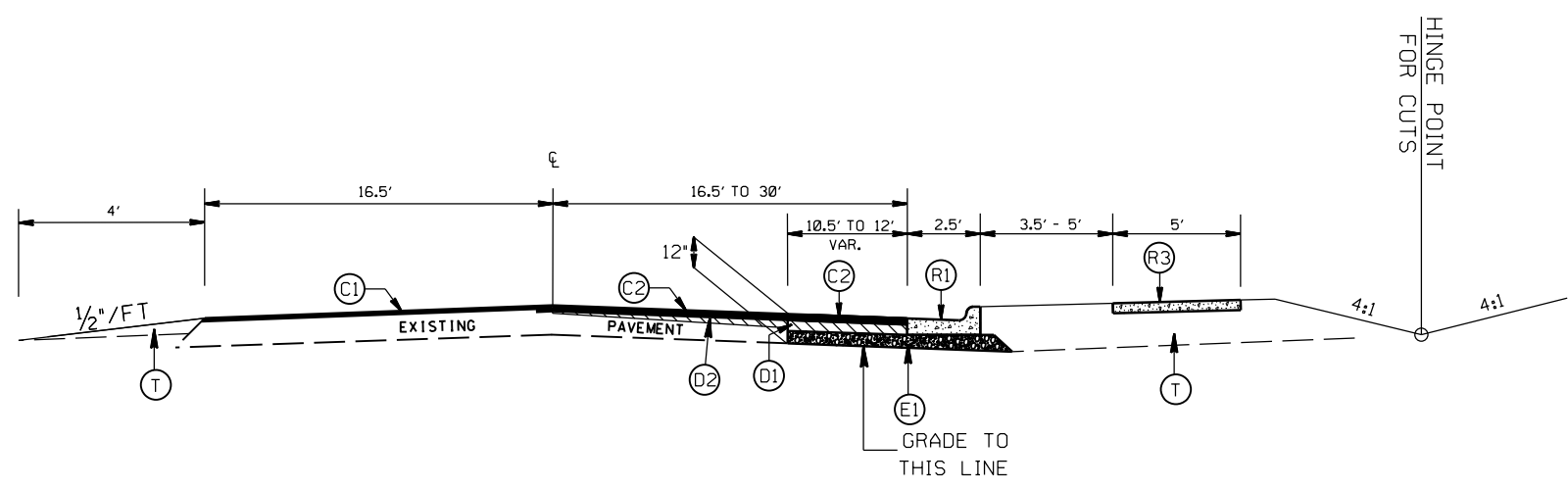
TYPICAL SECTION NO. 12
STA. 14+70.51 TO 14+79.58 -Y-



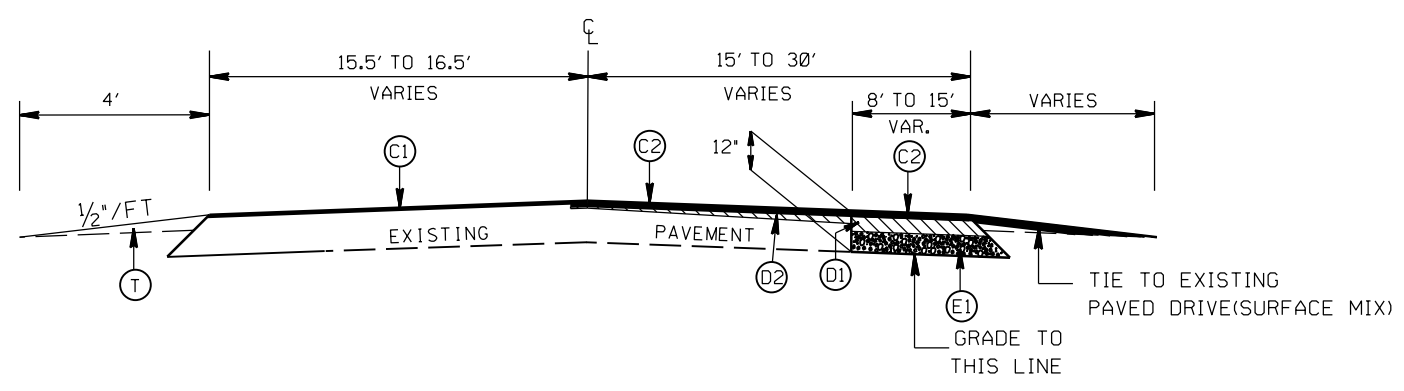
INCIDENTAL MILLING DETAIL
EXISTING ROAD TIE-IN
PROJECT TIE-INS

PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
(D1)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
(E1)	PROP. APPROX. 5" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(R1)	PROP. 2'-6" CURB & GUTTER
(R3)	PROP. 4" CONC. SIDEWALK (5' IN WIDTH)
(R5)	PROP. 5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
(T)	EARTH MATERIAL
(V1)	MILLING ASPHALT PAVEMENT, 1.5" IN DEPTH



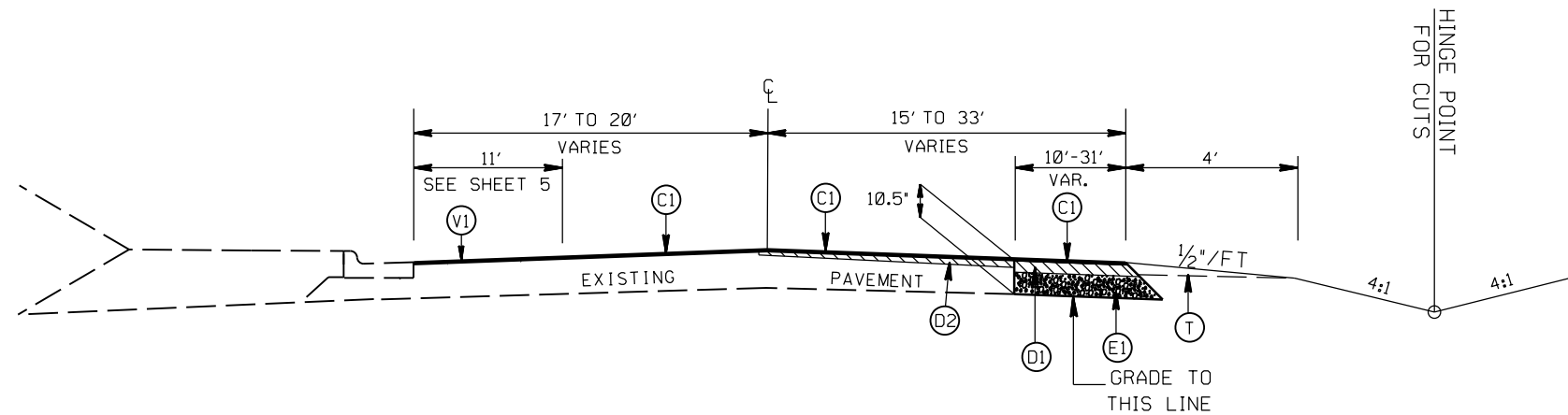
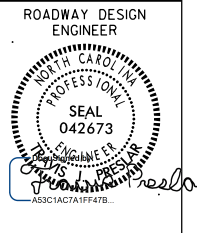
TYPICAL SECTION NO. 11
STA. 12+85.64 TO 14+70.51 -Y-



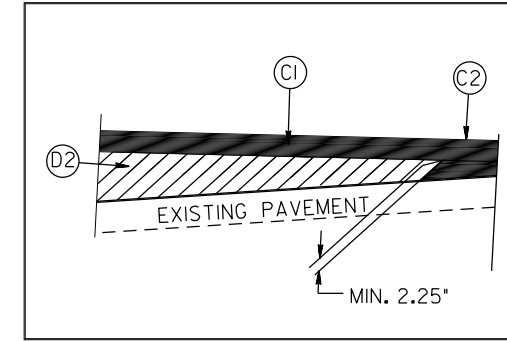
TYPICAL SECTION NO. 10
STA. 12+45.71 TO 12+85.64 -Y-

INSTALL LEFT TURN LANES ON
POPLAR TENT RD.(SR 1394),
ROCK HILL CHURCH RD.(SR 1414) AND
EVA DR.

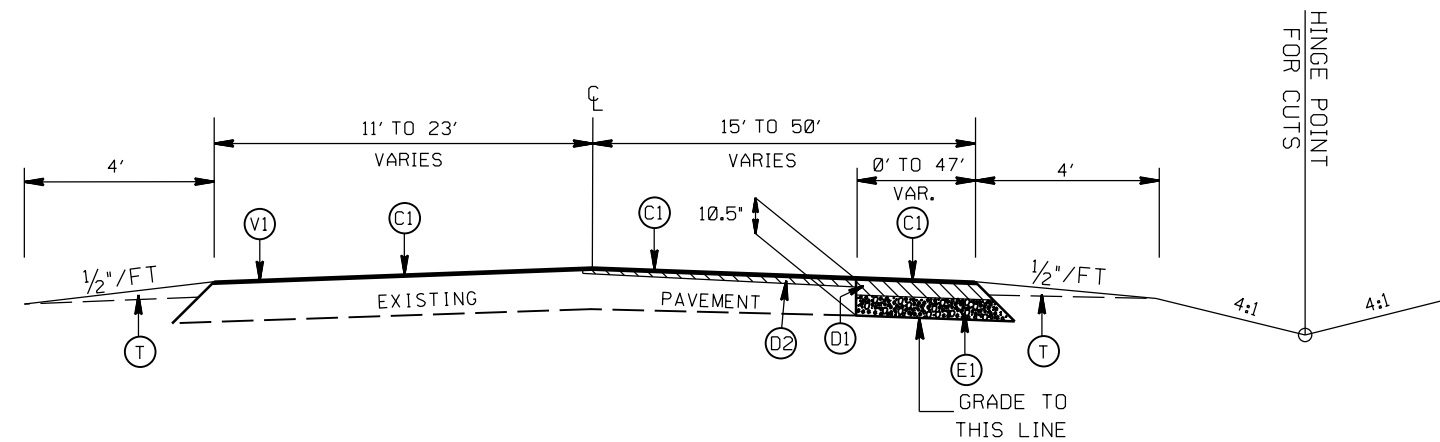
SCALE	N/A		REVISIONS
DATE	8-2020		
DWG. BY	DLS		
DESIGN BY	JDH		
APPROVED	JDH		



TYPICAL SECTION NO. 15
STA. 16+05.26 TO 18+03.76 -Y-



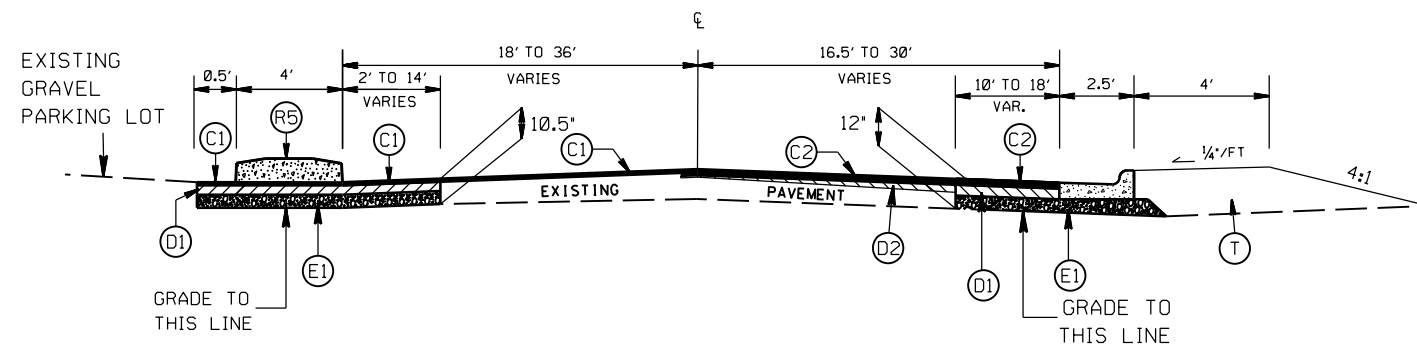
WEDGING DETAIL



TYPICAL SECTION NO. 14
STA. 15+79.09 TO 16+05.26 -Y-

PAVEMENT SCHEDULE

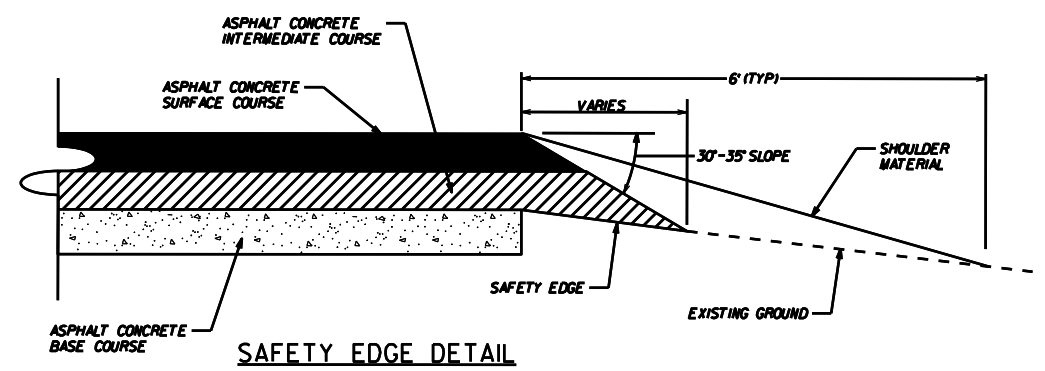
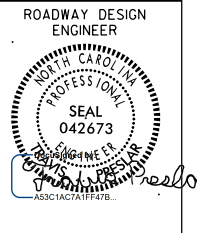
(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
(D1)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
(E1)	PROP. APPROX. 5" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(R1)	PROP. 2'-6" CURB & GUTTER
(R3)	PROP. 4" CONC. SIDEWALK (5' IN WIDTH)
(R5)	PROP. 5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
(T)	EARTH MATERIAL
(V1)	MILLING ASPHALT PAVEMENT, 1.5" IN DEPTH



TYPICAL SECTION NO. 13
STA. 14+79.58 -Y- TO POPLAR TENT RD.

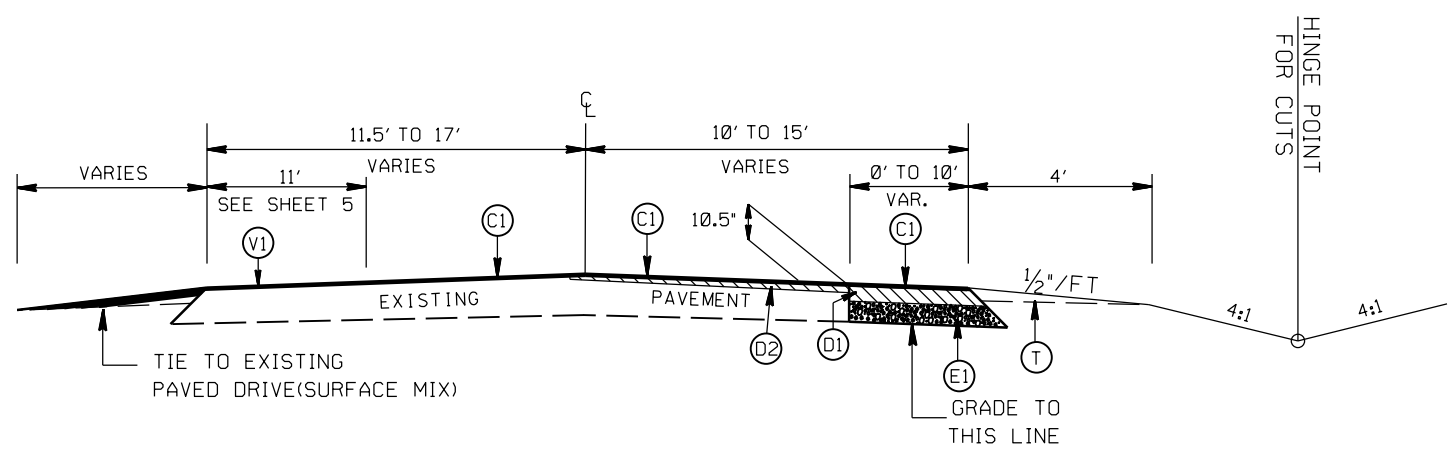
INSTALL LEFT TURN LANES ON
POPLAR TENT RD.(SR 1394),
ROCK HILL CHURCH RD.(SR 1414) AND
EVA DR.

SCALE	N/A		REVISIONS
DATE	8-2020		
DWG. BY	DLS		
DESIGN BY	JDH		
APPROVED	JDH		



PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
(D1)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. INTERMEDIATE COURSE.
(E1)	PROP. APPROX. 5" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(R1)	PROP. 2'-6" CURB & GUTTER
(R3)	PROP. 4" CONC. SIDEWALK (5' IN WIDTH)
(R5)	PROP. 5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
(T)	EARTH MATERIAL
(V1)	MILLING ASPHALT PAVEMENT, 1.5" IN DEPTH



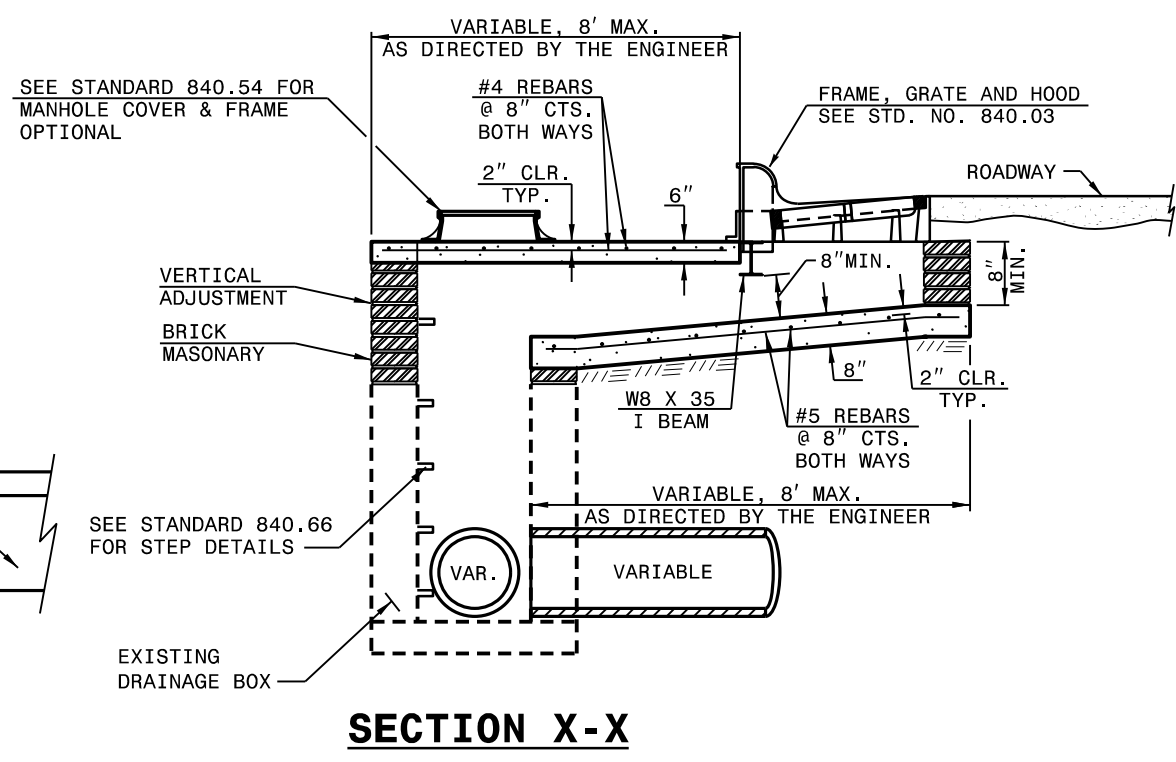
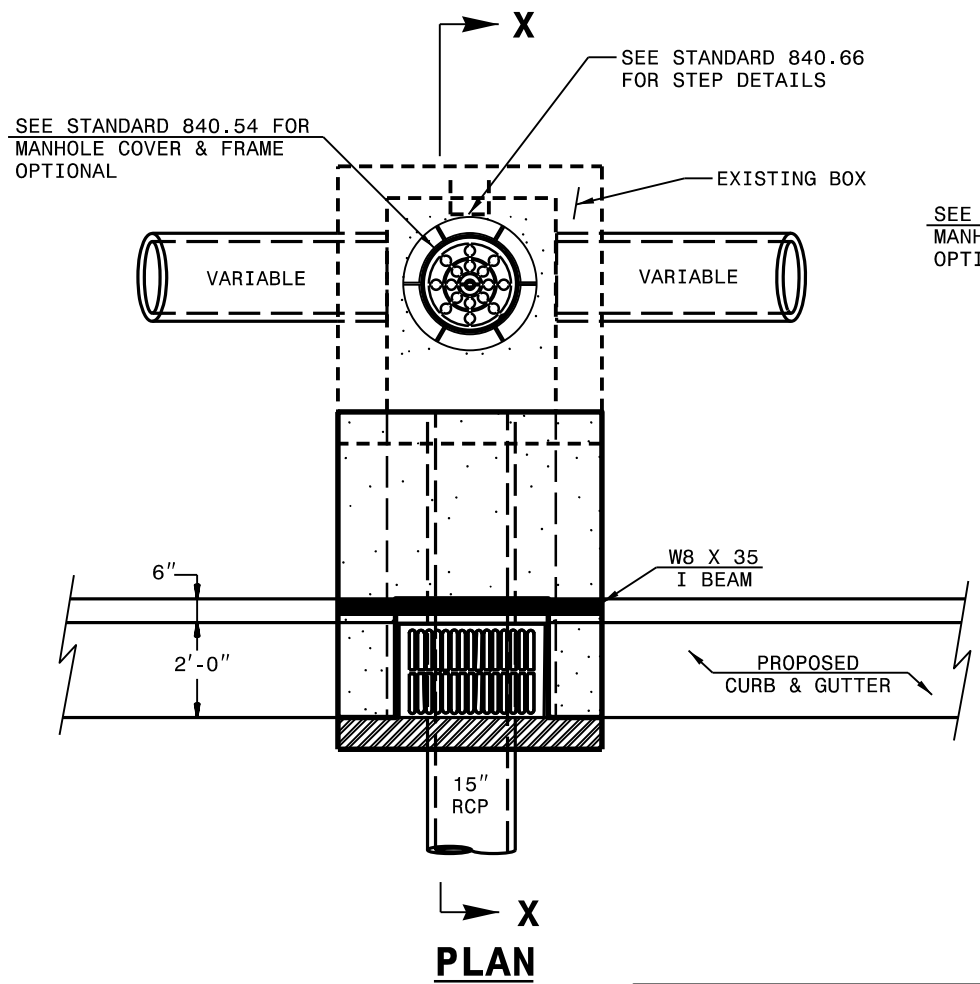
TYPICAL SECTION NO. 16
 STA. 18+03.76 TO 19+74.49 -Y-

INSTALL LEFT TURN LANES ON
 POPLAR TENT RD. (SR 1394),
 ROCK HILL CHURCH RD. (SR 1414) AND
 EVA DR.

SCALE	N/A
DATE	8-2020
DWG. BY	DLS
DESIGN BY	JDH
APPROVED	JDH



REVISIONS	



NOTES:

MORTAR JOINTS 1/2" TO 1/4" THICK.

USE CLASS "B" CONCRETE THROUGHOUT.

USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.

CHAMFER ALL EXPOSED CORNERS 1".

ALL CONVERSIONS SHALL BE ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING NO. 840.66.

DRAWING NOT TO SCALE.


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

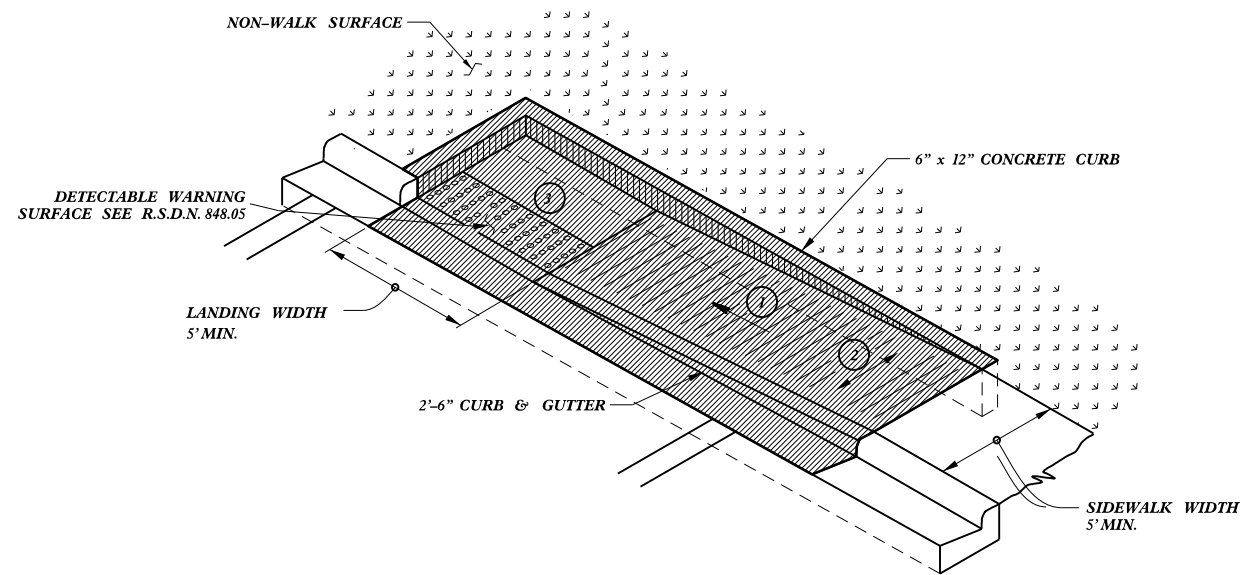
CONVERSION OF EXISTING DRAINAGE BOX TO CATCH BASIN

ORIGINAL BY: E.E. WARD DATE: 1-24-02
 MODIFIED BY: cnbritt DATE: 3-07-13
 CHECKED BY: JDH DATE: _____
 FILE SPEC.: ncbritt/english/hydro/edc to offsetcb.dgn

INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR-1394),
ROCK HILL CHURCH RD. (SR-1414),
AND EVA DR.

SCALE	1-2018	REVISIONS
DATE	CEB	
DWG. BY	JDH	
DESIGN BY	JDH	
APPROVED	JDH	

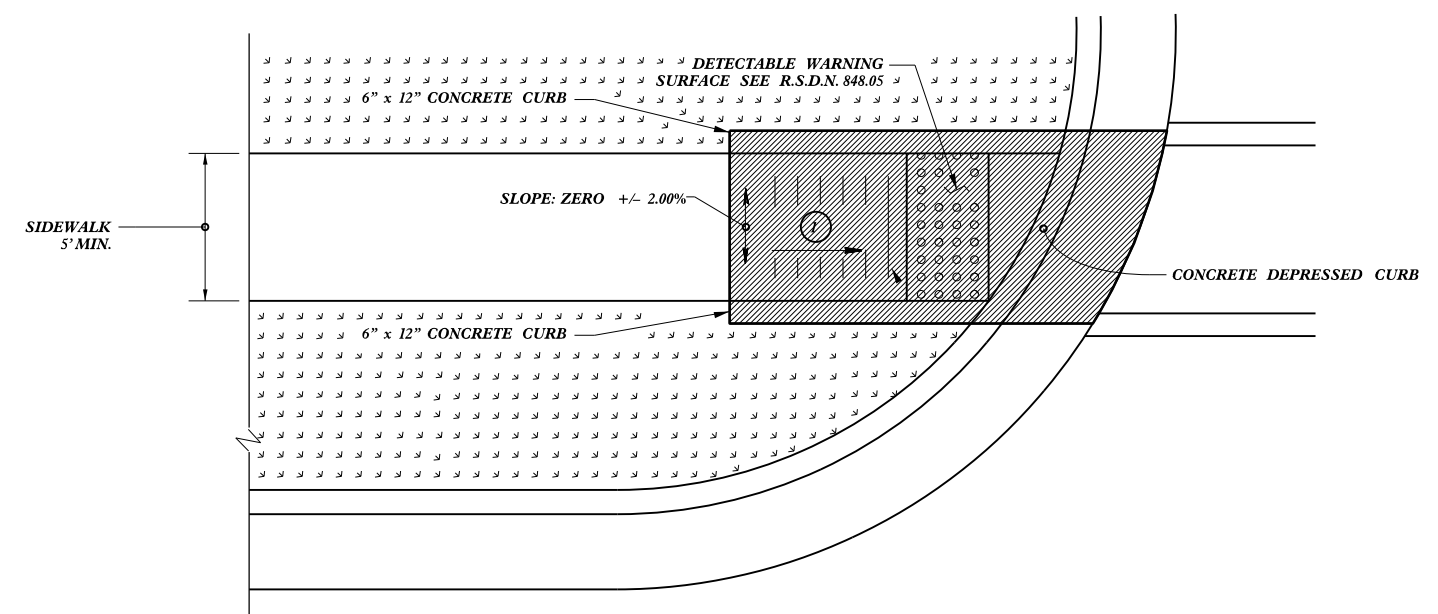




- ① 8.33% (12:1) MAX RAMP SLOPE
- ② CROSS SLOPE: 2.00%
- ③ CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR 1 CURB RAMP

TYPE 1A

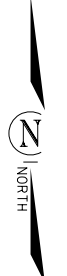
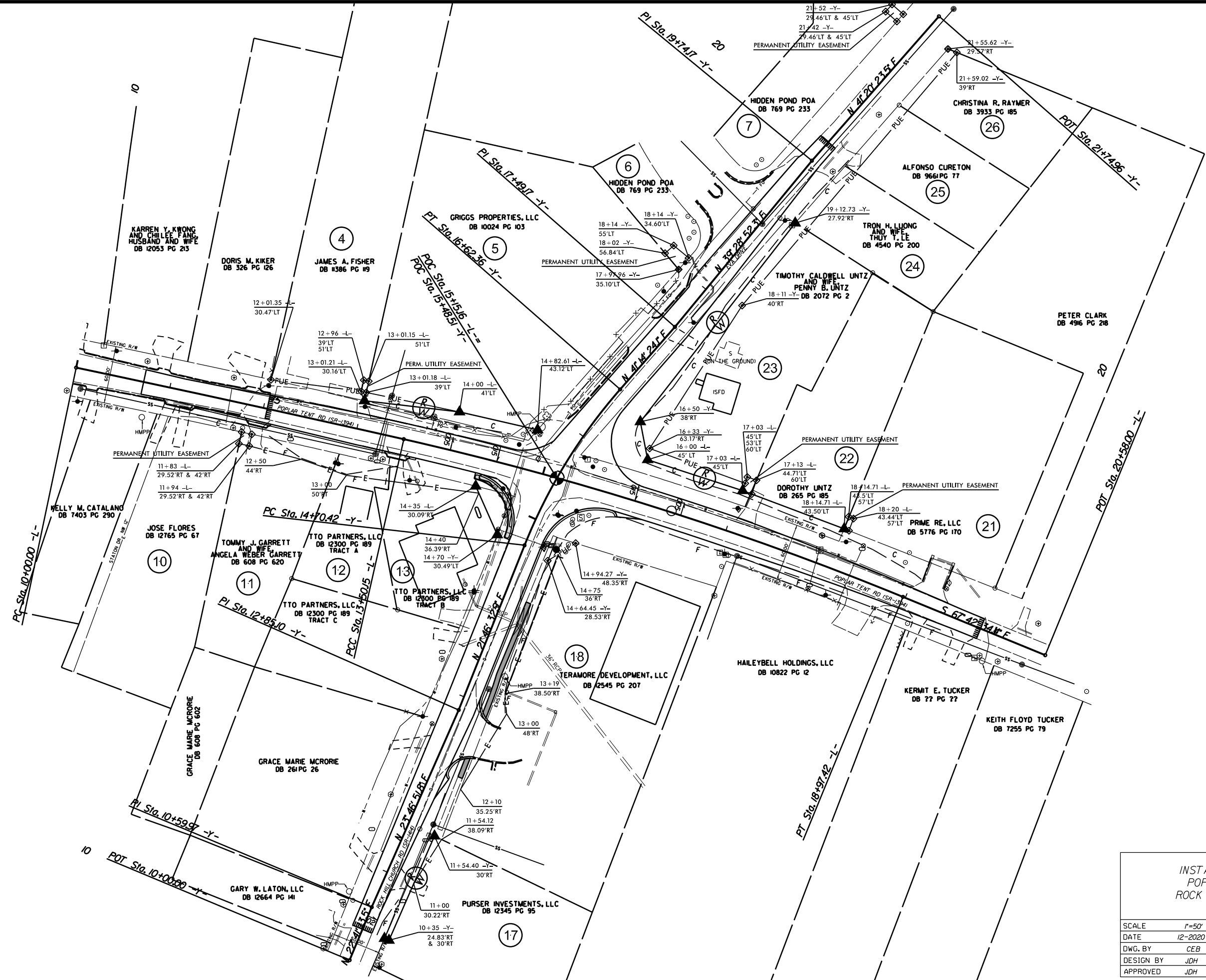
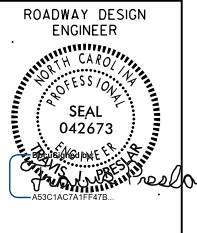


TYPE 1 Modified

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

INSTALL LEFT TURN LANES ON
 POPLAR TENT RD. (SR-1394),
 ROCK HILL CHURCH RD. (SR-1414),
 AND EVA DRIVE

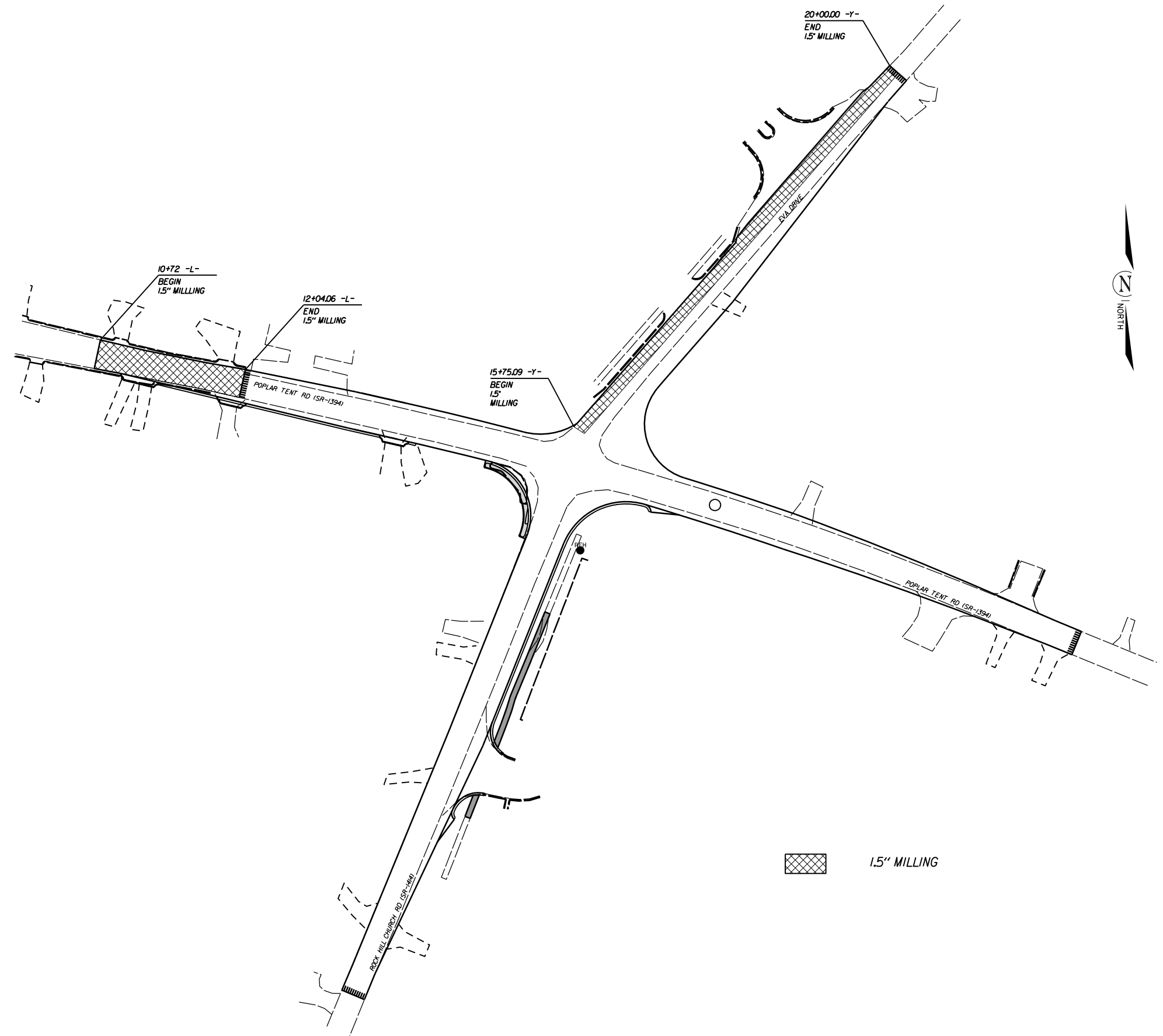
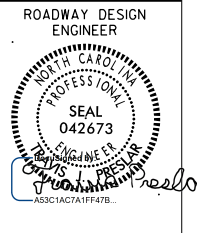
SCALE		REVISIONS
DATE	1-2018	
DWG. BY	CEB	
DESIGN BY	JDH	
APPROVED	JDH	




INSTALL LEFT TURN LANES ON
 POPLAR TENT RD. (SR-1394)
 ROCK HILL CHURCH RD. (SR-1414)
 AND EVA DRIVE


SCALE	1"=50'		REVISIONS
DATE	12-2020		
DWG. BY	CEB		
DESIGN BY	JDH		
APPROVED	JDH		

PROJECT NO.	SHEET NO.
47866	5
F.A. PROJECT NO.	

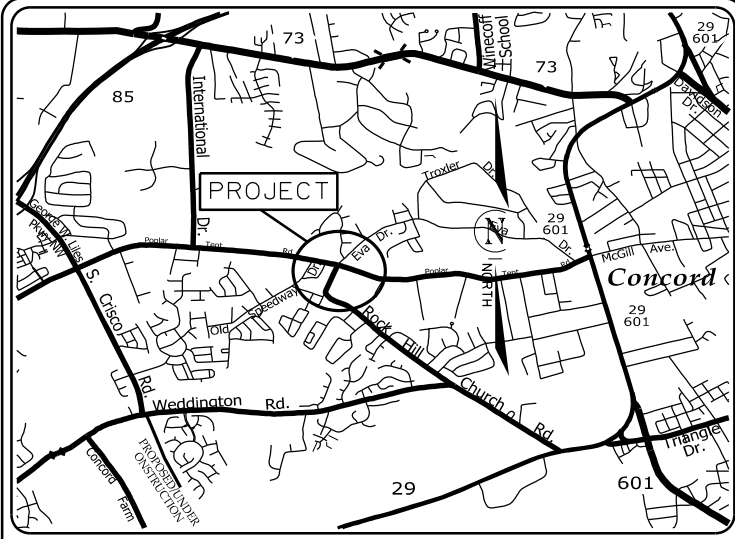


 1.5" MILLING

INSTALL LEFT TURN LANES ON
POPLAR TENT RD (SR 1394),
ROCK HILL CHURCH RD (SR 1414), AND
EVA DR.

SCALE	1"=50'		REVISIONS
DATE	8-2020		
DWG. BY	DLS		
DESIGN BY	JDH		
APPROVED	DCG		

TIP PROJECT: 47866



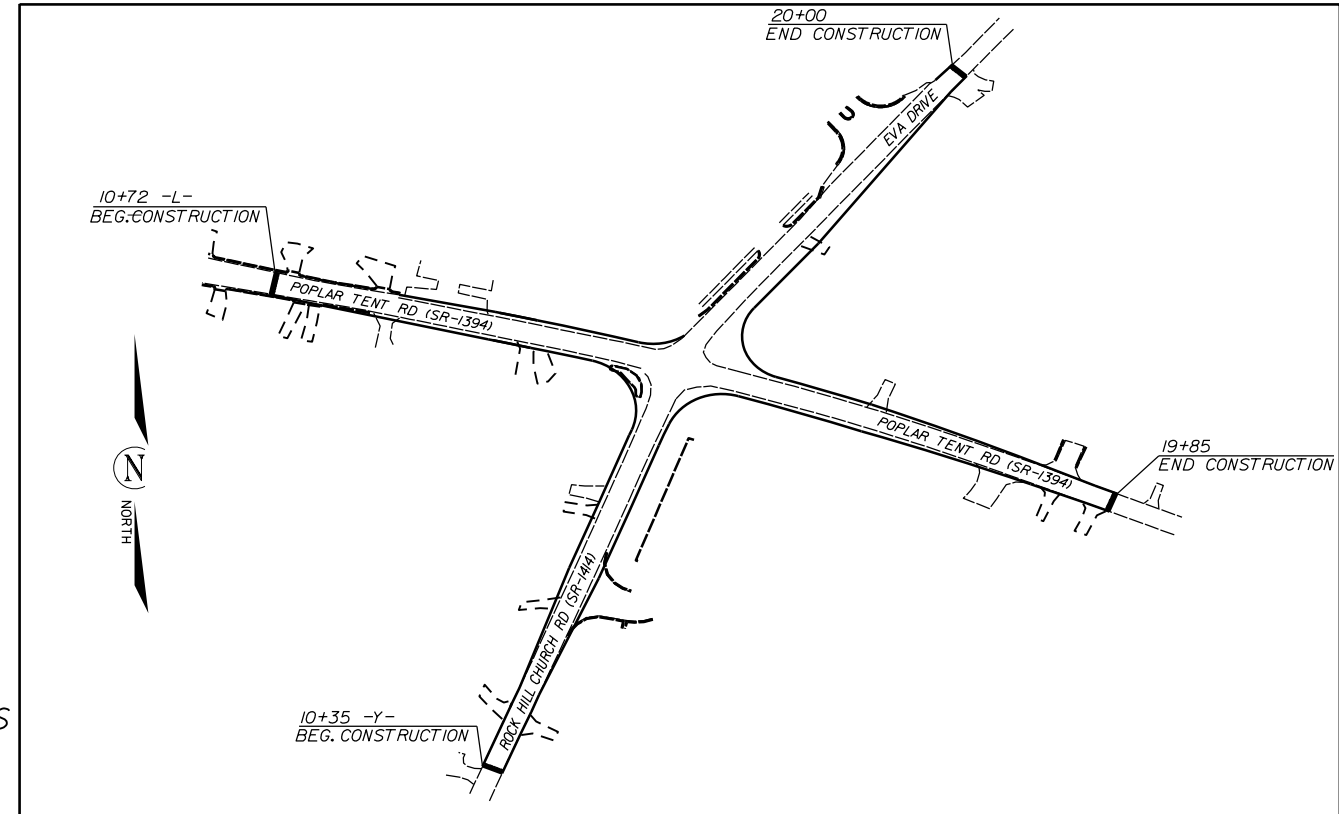
VICINITY MAP
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL**

CABARRUS COUNTY

**LOCATION: INTERSECTION OF POPLAR TENT RD. (SR-1394),
ROCK HILL CHURCH RD. (SR-1414) AND EVA DR.**



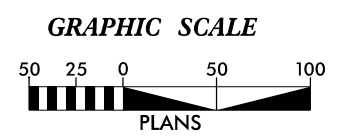
INSTALL PERIMETER EROSION CONTROL MEASURES
DURING INITIAL CLEARING PHASE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	47866	EC-1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
47866		P.E.	
47866		R/W	
47866		CONST.	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1650.03	Temporary Silt Ditch	--- TD ---
1650.05	Temporary Diversion	--- TD ---
1605.01	Temporary Silt Fence	--- III --- III --- III ---
1606.01	Special Sediment Control Fence	--- III --- III --- III ---
1622.01	Temporary Berms and Slope Drains	--- T ---
1650.02	Silt Basin Type B	--- S ---
1633.01	Temporary Rock Silt Check Type-A	--- R ---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	--- R ---
1633.02	Temporary Rock Silt Check Type-B	--- R ---
	Wattle / Coir Fiber Wattle	--- W ---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	--- W ---
1634.01	Temporary Rock Sediment Dam Type-A	--- R ---
1634.02	Temporary Rock Sediment Dam Type-B	--- R ---
1635.01	Rock Pipe Inlet Sediment Trap Type-A	--- R ---
1635.02	Rock Pipe Inlet Sediment Trap Type-B	--- R ---
1650.04	Stilling Basin	--- S ---
1650.06	Special Stilling Basin	--- S ---
	Rock Inlet Sediment Trap:	
1652.01	Type A	--- A ---
1652.02	Type B	--- B ---
1652.03	Type C	--- C ---
	Skimmer Basin	--- S ---
	Tiered Skimmer Basin	--- S ---
	Infiltration Basin	--- I ---

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



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH
THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000
GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019
AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared In the Office of:
DDC UNIT DIVISION 10
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Designed by:
CHAD BURRIS 4159
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

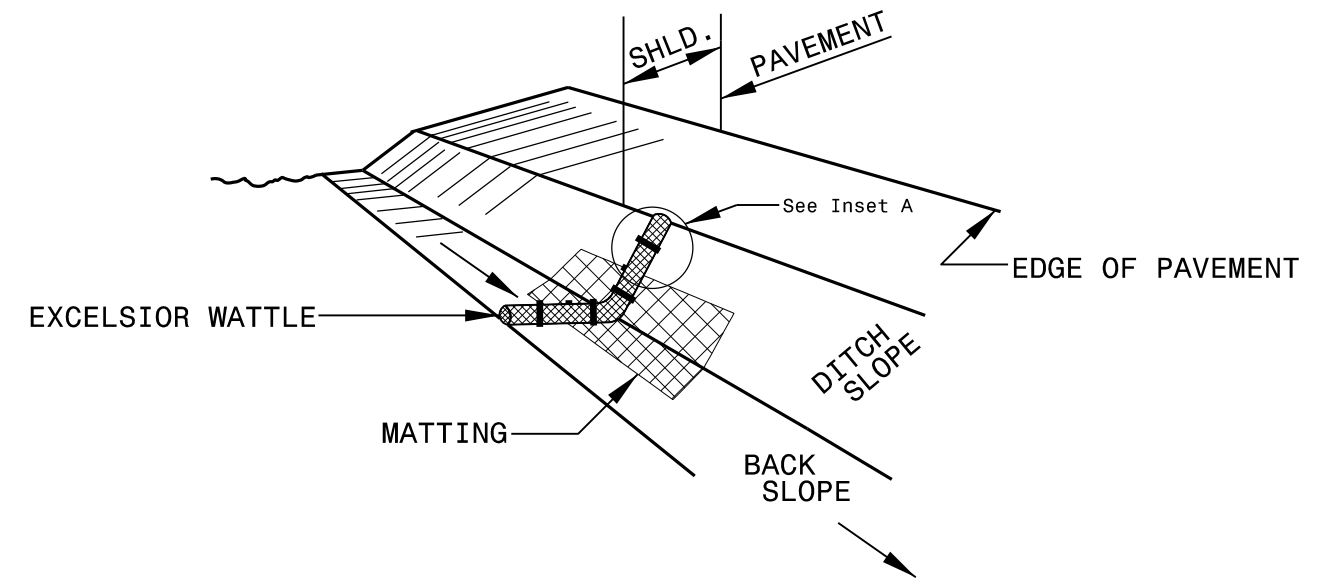
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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 J
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 J
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type J	1634.02 Temporary Rock Sediment Dam Type J
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 J
1630.05 Temporary Diversion	1640.01 Coir Fiber Jaffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

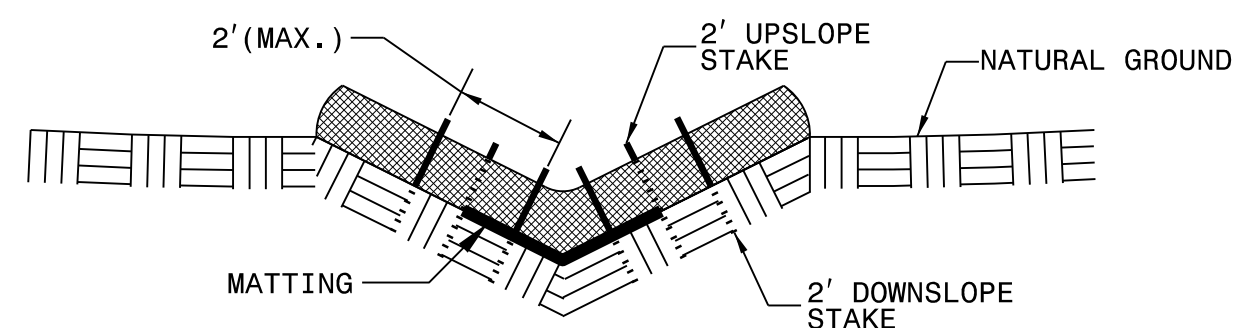
30-AUG-2025 08:57 Tent_Rock_Hill_Church_Eva.ec.ec.tsh.dgn

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

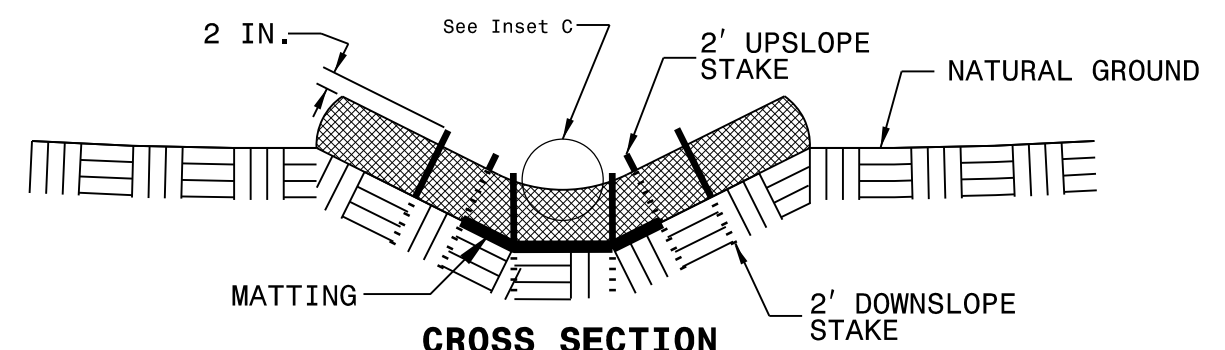
PROJECT NO.	SHEET NO.
47866	EC-2
F.A. PROJECT NO.	



ISOMETRIC VIEW

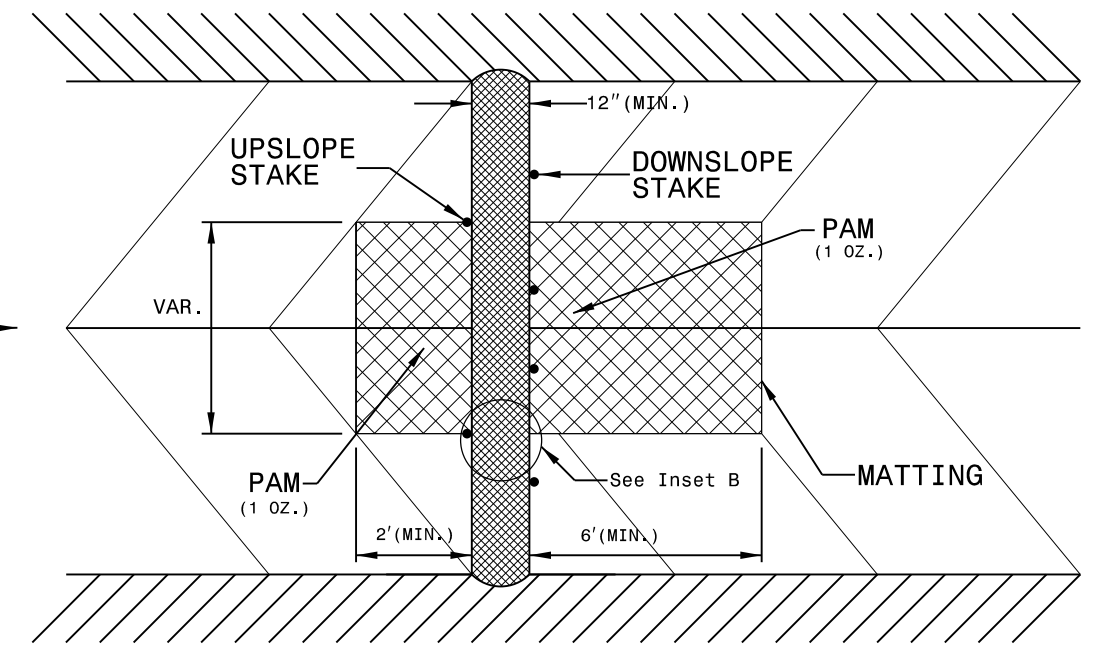
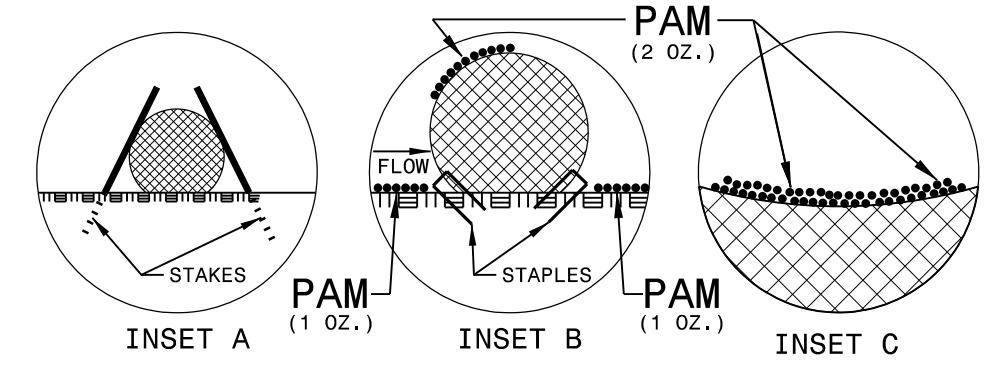


CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

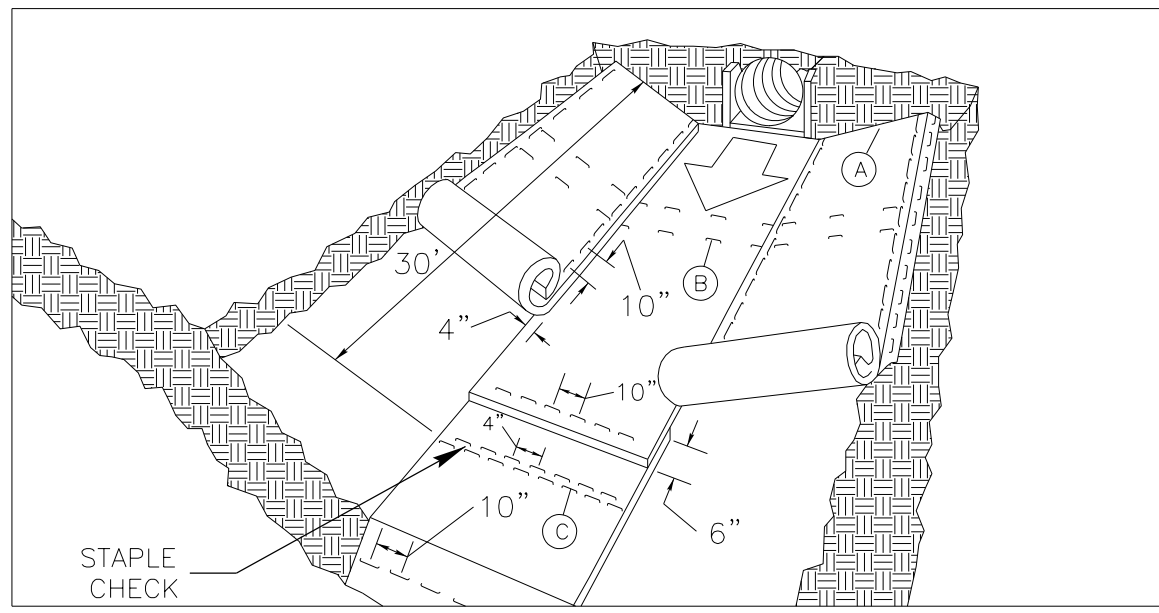
- NOTES:
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE 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.
 - PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
 - INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



TOP VIEW

PROJECT REFERENCE NO. 47866	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

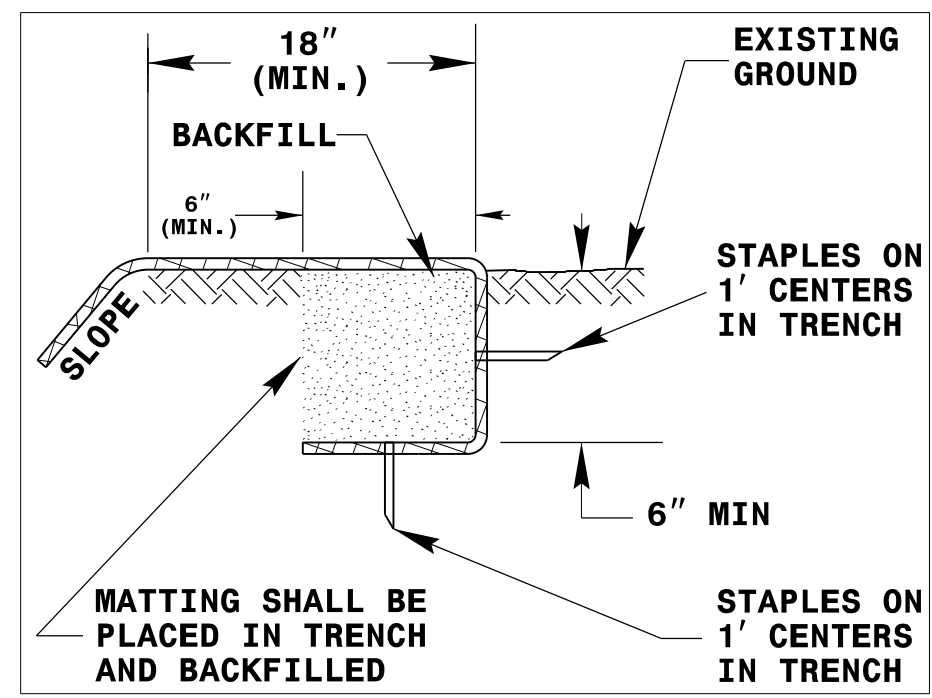
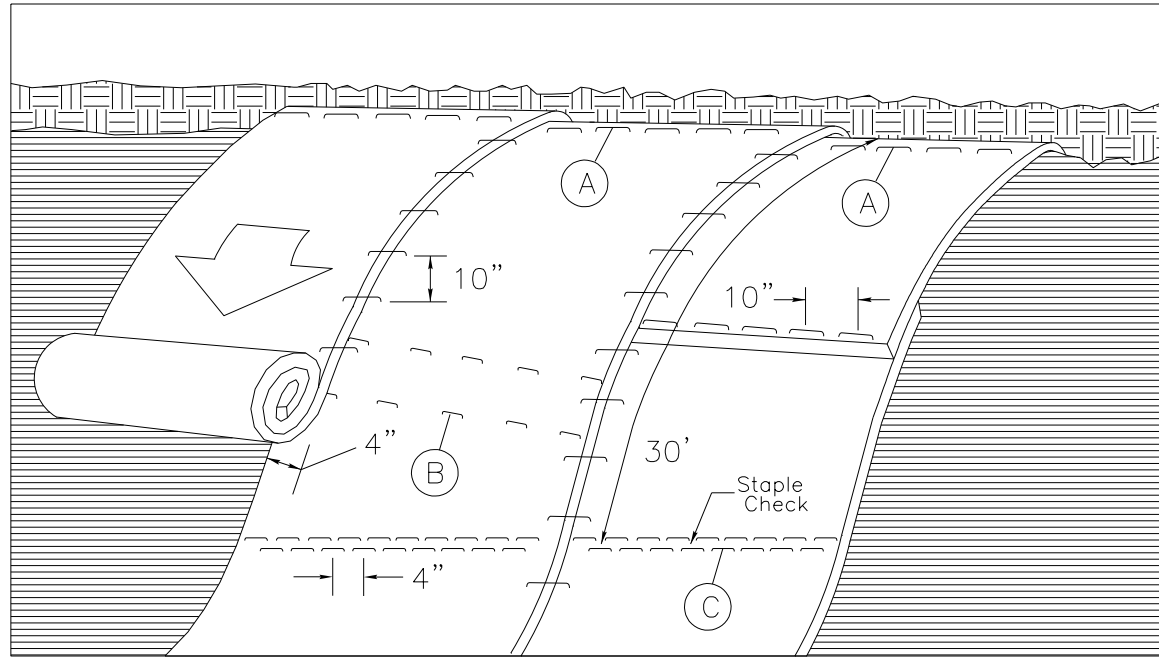


DIAGRAM (A)



MATTING ON SLOPES

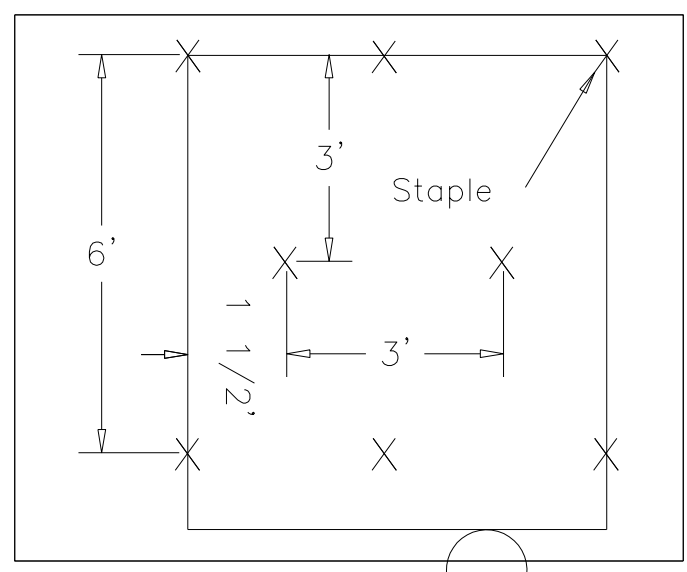


DIAGRAM (B)

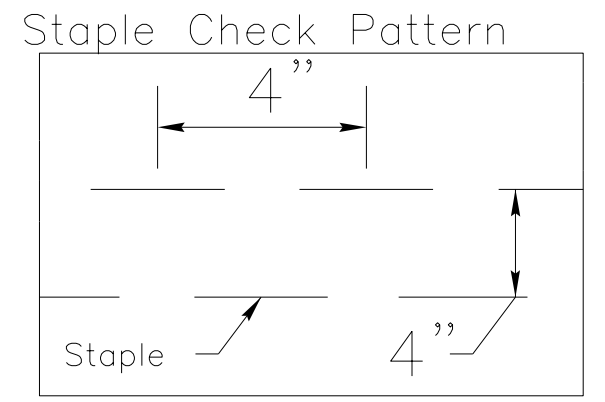


DIAGRAM (C)

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.
 STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOT TO SCALE

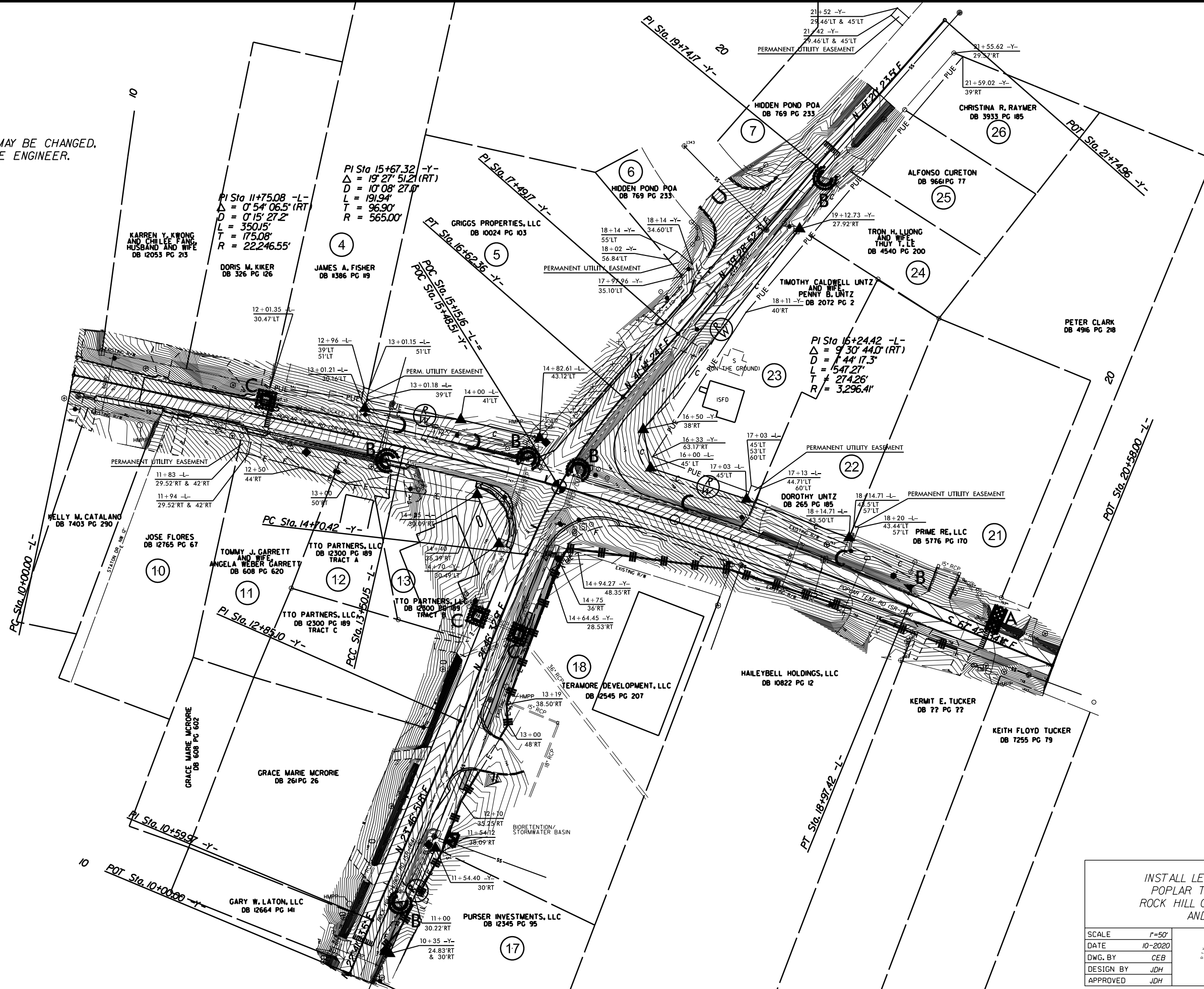
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

PROJECT REFERENCE NO. 47866	SHEET NO. EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
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.

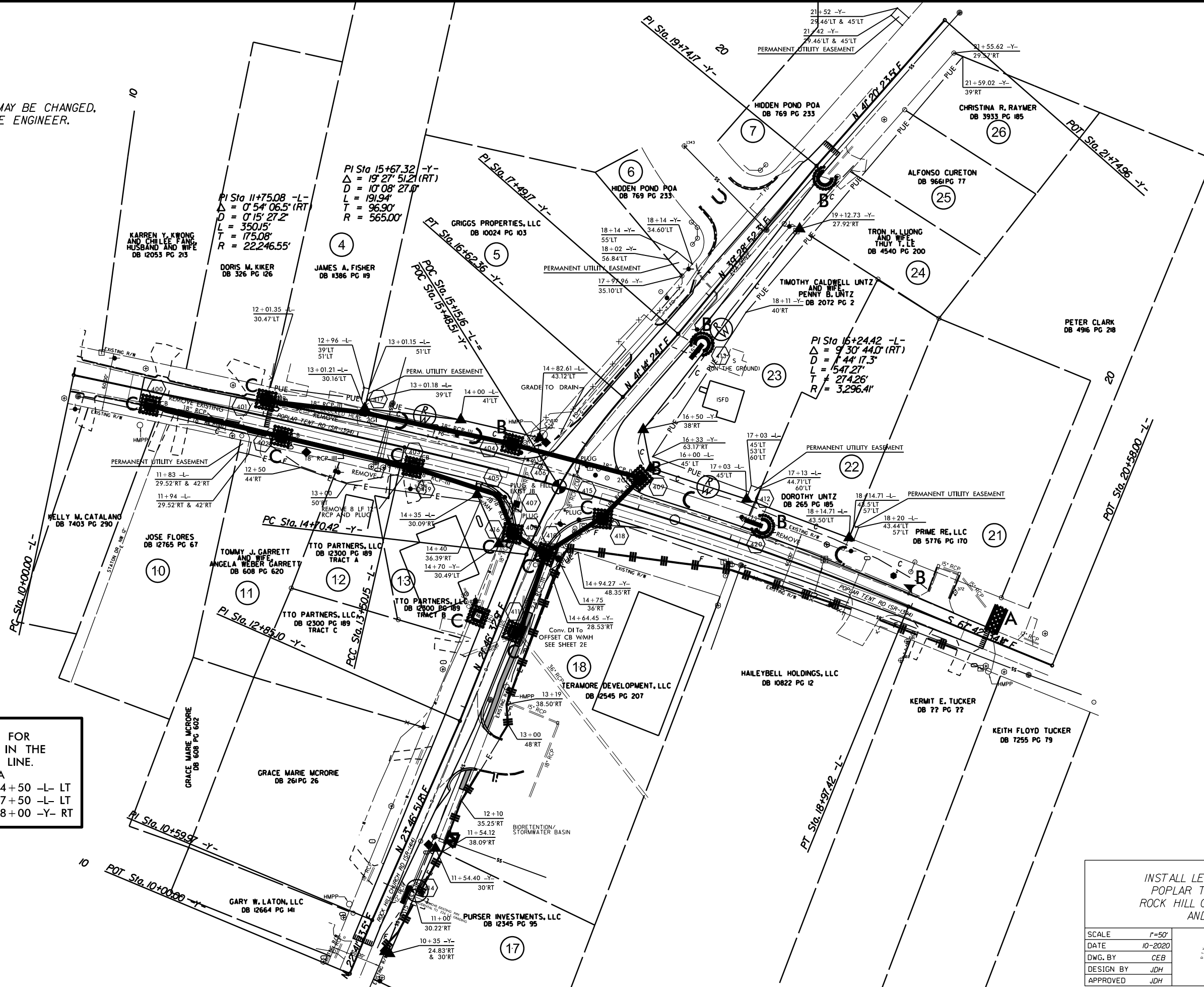
EROSION CONTROL MEASURES MAY BE CHANGED.
IN FIELD AS DIRECTED BY THE ENGINEER.



INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR-1394),
ROCK HILL CHURCH RD. (SR-1414),
AND EVA DRIVE


SCALE	1"=50'		REVISIONS
DATE	10-2020		
DWG. BY	CEB		
DESIGN BY	JDH		
APPROVED	JDH		

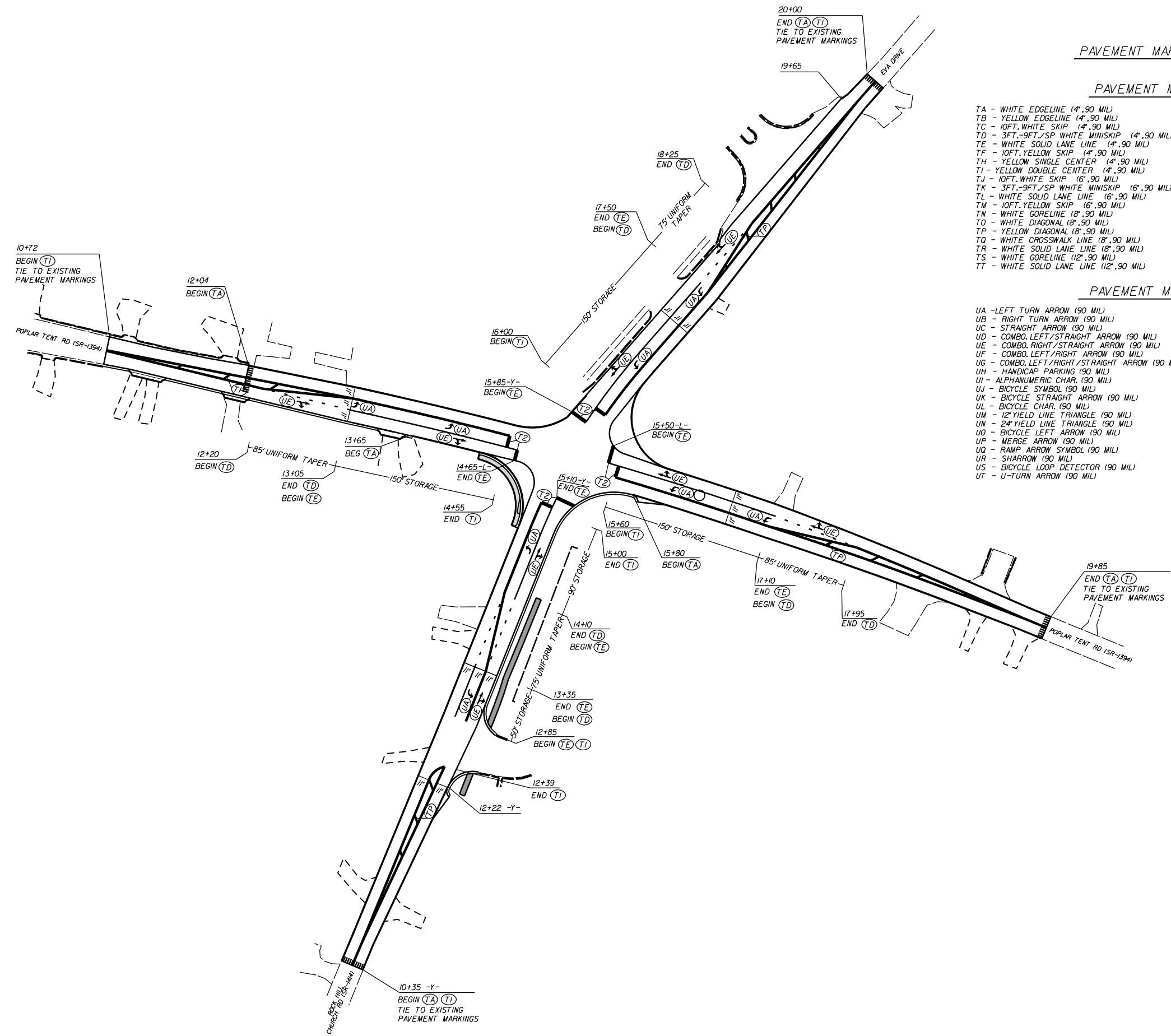
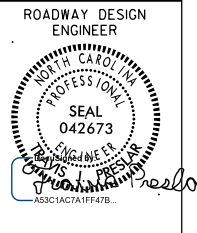
EROSION CONTROL MEASURES MAY BE CHANGED,
IN FIELD AS DIRECTED BY THE ENGINEER.



INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.
SEE SHEET 2A
STA. 13+00 -L- LT TO 14+50 -L- LT
STA. 16+00 -L- LT TO 17+50 -L- LT
STA. 16+00 -Y- RT TO 18+00 -Y- RT

INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR-1394),
ROCK HILL CHURCH RD. (SR-1414),
AND EVA DRIVE

SCALE	1"=50'		REVISIONS
DATE	10-2020		
DWG. BY	CEB		
DESIGN BY	JDH		
APPROVED	JDH		



PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

- | | |
|---|--|
| TA - WHITE EDGELINE (4',.90 MIL) | TU - WHITE DIAGONAL (12',.90 MIL) |
| TB - YELLOW EDGELINE (4',.90 MIL) | TV - YELLOW DIAGONAL (12',.90 MIL) |
| TC - 10FT. WHITE SKIP (4',.90 MIL) | TI - WHITE LINE, RR X (16',.90 MIL) |
| TD - 3FT.-9FT./SP WHITE MINISKIP (4',.90 MIL) | T2 - WHITE STOPBAR (24',.90 MIL) |
| TE - WHITE SOLID LANE LINE (4',.90 MIL) | T3 - WHITE CROSSWALK LINE (24',.90 MIL) |
| TF - 10FT. YELLOW SKIP (4',.90 MIL) | T4 - WHITE RUMBLE STRIP (4',.240 MIL) |
| TH - YELLOW SINGLE CENTER (4',.90 MIL) | T5 - YELLOW RUMBLE STRIP (4',.240 MIL) |
| TJ - YELLOW DOUBLE CENTER (4',.90 MIL) | T6 - WHITE EDGELINE (6',.90 MIL) |
| TK - 3FT.-9FT./SP WHITE MINISKIP (6',.90 MIL) | T7 - YELLOW EDGELINE (6',.90 MIL) |
| TL - WHITE SOLID LANE LINE (6',.90 MIL) | T8 - 2FT.-6FT./SP WHITE MINISKIP (4',.90 MIL) |
| TM - 10FT. YELLOW SKIP (6',.90 MIL) | T9 - 2FT.-6FT./SP YELLOW MINISKIP (4',.90 MIL) |
| TN - WHITE GORELINE (8',.90 MIL) | T10 - 3FT.-3FT./SP WHITE MINISKIP (12',.90 MIL) |
| TO - WHITE DIAGONAL (8',.90 MIL) | T11 - 2FT.-6FT./SP WHITE MINISKIP (6',.90 MIL) |
| TP - YELLOW DIAGONAL (8',.90 MIL) | T12 - 2FT.-6FT./SP YELLOW MINISKIP (6',.90 MIL) |
| TQ - WHITE CROSSWALK LINE (8',.90 MIL) | T13 - 3FT.-9FT./SP WHITE MINISKIP (12',.90 MIL) |
| TR - WHITE SOLID LANE LINE (8',.90 MIL) | T14 - 3FT.-9FT./SP WHITE MINISKIP (12',.90 MIL) |
| TS - WHITE GORELINE (12',.90 MIL) | T15 - YELLOW SINGLE CENTER (6',.90 MIL) |
| TT - WHITE SOLID LANE LINE (12',.90 MIL) | T16 - YELLOW DOUBLE CENTER (6',.90 MIL) |
| | T17 - 3FT.-3FT./SP WHITE MINISKIP ENTRANCE LINE (8',.90 MIL) |

PAVEMENT MARKING SYMBOLS

- | | |
|--|--|
| UA - LEFT TURN ARROW (90 MIL) | UU - FISH-HOOK STRAIGHT ARROW (90 MIL) |
| UB - RIGHT TURN ARROW (90 MIL) | UV - FISH-HOOK LEFT/STRAIGHT ARROW (90 MIL) |
| UC - STRAIGHT ARROW (90 MIL) | UW - FISH-HOOK RIGHT/STRAIGHT ARROW (90 MIL) |
| UD - COMBO. LEFT/STRAIGHT ARROW (90 MIL) | UX - FISH-HOOK LEFT/RIGHT ARROW (90 MIL) |
| UE - COMBO. RIGHT/STRAIGHT ARROW (90 MIL) | UY - FISH-HOOK LEFT/RIGHT/STRAIGHT ARROW (90 MIL) |
| UF - COMBO. LEFT/RIGHT ARROW (90 MIL) | UZ - FISH-HOOK W/CIRCLE STRAIGHT ARROW (90 MIL) |
| UG - COMBO. LEFT/RIGHT/STRAIGHT ARROW (90 MIL) | |
| UH - HANDICAP PARKING (90 MIL) | WA - FISH-HOOK W/CIRCLE LEFT ARROW (90 MIL) |
| UI - ALPHANUMERIC CHAR. (90 MIL) | WB - FISH-HOOK W/CIRCLE LEFT/STRAIGHT ARROW (90 MIL) |
| UJ - BICYCLE SYMBOL (90 MIL) | WC - FISH-HOOK W/CIRCLE LEFT/RIGHT/STRAIGHT ARROW (90 MIL) |
| UK - BICYCLE STRAIGHT ARROW (90 MIL) | |
| UL - BICYCLE CHAR. (90 MIL) | MA - PERMANENT RAISED MARKER (YELLOW & YELLOW) |
| UM - 12" YIELD LINE TRIANGLE (90 MIL) | MB - PERMANENT RAISED MARKER (CRYSTAL & RED) |
| UN - 24" YIELD LINE TRIANGLE (90 MIL) | MC - PERMANENT RAISED MARKER (YELLOW & RED) |
| UO - BICYCLE LEFT ARROW (90 MIL) | MD - PERMANENT RAISED MARKER (YELLOW) |
| UP - MERGE ARROW (90 MIL) | ME - SNOWPLOWABLE MARKER (YELLOW & YELLOW) |
| UQ - RAMP ARROW SYMBOL (90 MIL) | MF - SNOWPLOWABLE MARKER (CRYSTAL & RED) |
| UR - SHARROW (90 MIL) | MG - SNOWPLOWABLE MARKER (YELLOW & RED) |
| US - BICYCLE LOOP DETECTOR (90 MIL) | ML - PERMANENT RAISED MARKER (CRYSTAL & CRYSTAL) |
| UT - U-TURN ARROW (90 MIL) | MO - SNOWPLOWABLE MARKER (CRYSTAL & CRYSTAL) |


INSTALL LEFT TURN LANES ON
POPLAR TENT RD. (SR-1394),
ROCK HILL CHURCH RD. (SR-1414),
AND EVA DRIVE.

SCALE	1"=50'		REVISIONS
DATE	5-2019		
DWG. BY	TBL		
DESIGN BY	JDH		
APPROVED	JDH		

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
CABARRUS COUNTY**

**LOCATION: INTERSECTION OF POPLAR TENT RD
ROCKHILL CHUCH RD AND EVA DR**

PROJECT REFERENCE NO. 47866	SHEET NO. SIGN-1
APPROVED: <i>Renee B. Roach</i>	
DATE: 12/17/2020	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

T.I.P.:

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

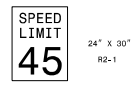





GENERAL NOTES

- . SIGNS FURNISHED BY STATE
- . CONFIRM IN WRITING AT LEAST 4 MONTHS IN ADVANCE, THE ACTUAL DATE THE DEPARTMENT FURNISHED SIGNS WILL BE REQUIRED.
- . ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- . IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
- . ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- . WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	68	L.F.
4102000000	904	SIGN ERECTION, TYPE E	7	E.A.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	3	E.A.
4116100000	904	SIGN ERECTION, RELOCATE SIGN TYPE E	2	E.A.

TYPE E SIGNS

(401) QUANTITY REQ'D <u>2</u>  24" X 30" R2-1 ONE "U" POST PER SIGN	(403) QUANTITY REQ'D <u>1</u>  30" X 30" 1-5 ONE "U" POST PER SIGN	(406) QUANTITY REQ'D <u>1</u>  24" X 30" R2-1 ONE "U" POST PER SIGN
(402) QUANTITY REQ'D <u>1</u>  30" X 30" R1-2L ONE "U" POST PER SIGN	(405) QUANTITY REQ'D <u>1</u>  18" X 18" W13-1P ONE "U" POST PER SIGN	(407) QUANTITY REQ'D <u>1</u>  48" X 24" W1-6L ONE "U" POST PER SIGN

INDEX


SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2	SIGNING PLAN SHEET

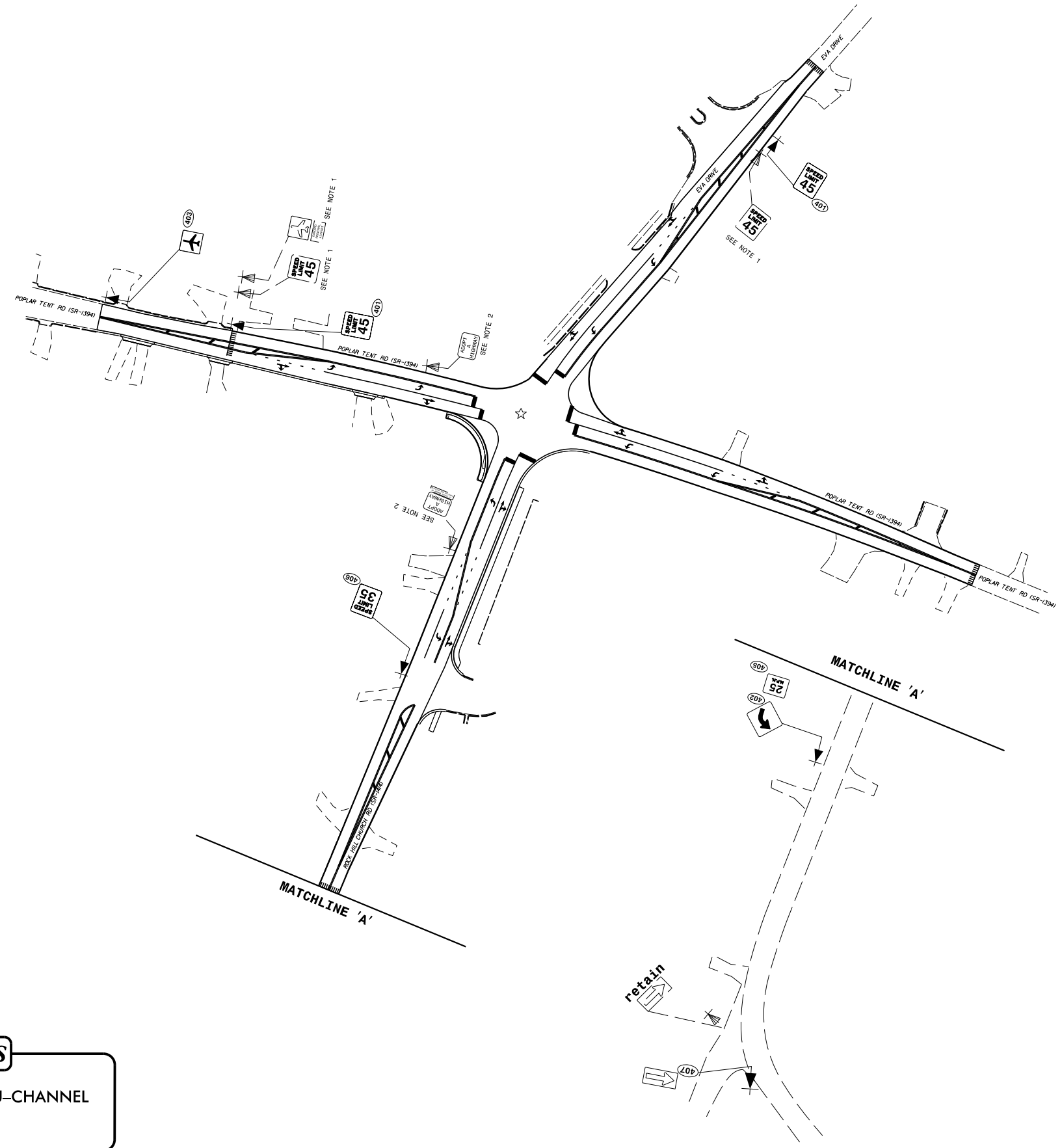
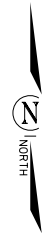
PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

Kelvin Jordan SIGNING & DELINEATION REGIONAL ENGINEER
J.Navarrete SIGNING & DELINEATION PROJECT DESIGN ENGINEER



CONTRACT:

TIP NO. 7866	SHEET NO. SIGN-3
APPROVED: <i>Renee B. Roach</i>	
DATE: 12/17/2020	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



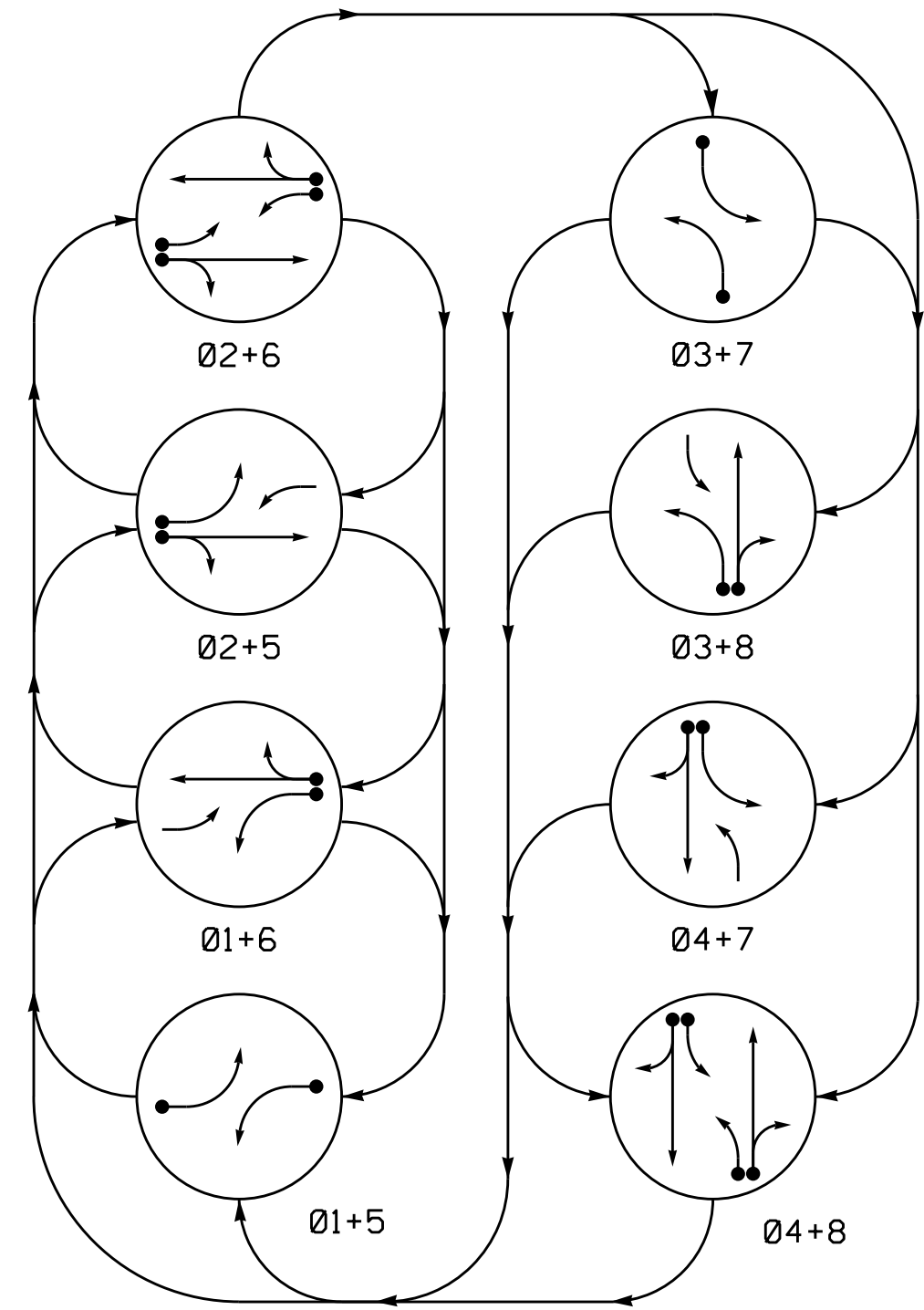
PROJECT NOTES

- 1 DISPOSAL OF SIGN SYSTEM, U-CHANNEL
- 2 RELOCATE SIGN, TYPE E

SIGNING PLAN SHEET

I:\16\20\Si\S&DU\Western Region\Poplar Tent Rock Hill Church Rd\Poplar Tent,rock hill church_eva_col.sgn.dgn
 User:lnnavarrete

PHASING DIAGRAM



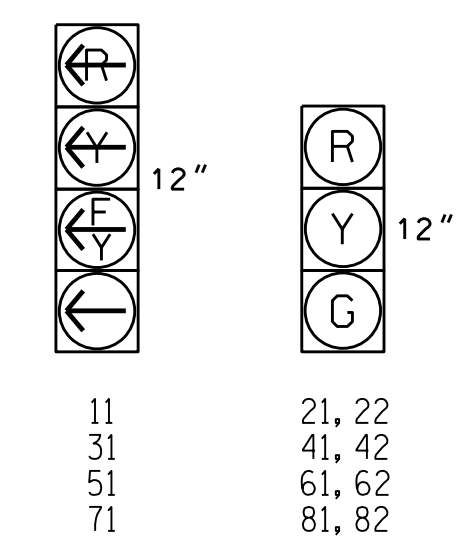
PHASING DIAGRAM DETECTION LEGEND

- ←● DETECTED MOVEMENT
- ← UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ←--- PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE								
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	FLASH
11	←	←	←	←	←	←	←	←	Y
21, 22	R	R	G	G	R	R	R	R	Y
31	←	←	←	←	←	←	←	←	Y
41, 42	R	R	R	R	R	R	G	G	R
51	←	←	←	←	←	←	←	←	Y
61, 62	R	G	R	G	R	R	R	R	Y
71	←	←	←	←	←	←	←	←	Y
81, 82	R	R	R	R	R	G	G	R	

SIGNAL FACE I.D.

All Heads L.E.D.

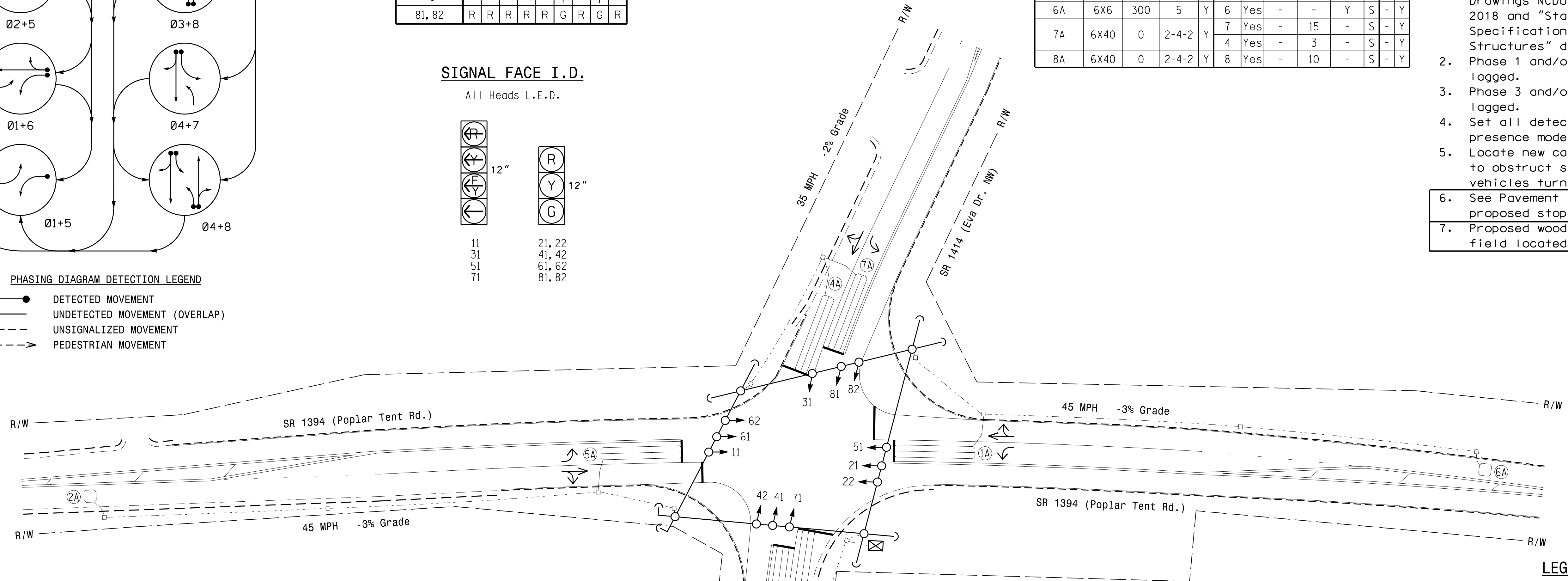


ASC/3 DETECTOR INSTALLATION CHART											
DETECTOR					PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1	Yes	-	15	-	S	- Y
					6	Yes	-	3	-	G	- Y
2A	6X6	300	5	Y	2	Yes	-	-	Y	S	- Y
3A	6X40	0	2-4-2	Y	3	Yes	-	15	-	S	- Y
					8	Yes	-	3	-	S	- Y
4A	6X40	0	2-4-2	Y	4	Yes	-	10	-	S	- Y
5A	6X40	0	2-4-2	Y	5	Yes	-	15	-	S	- Y
					2	Yes	-	3	-	G	- Y
6A	6X6	300	5	Y	6	Yes	-	-	Y	S	- Y
7A	6X40	0	2-4-2	Y	7	Yes	-	15	-	S	- Y
					4	Yes	-	3	-	S	- Y
8A	6X40	0	2-4-2	Y	8	Yes	-	10	-	S	- Y

8 Phase Fully Actuated Concord Signal System

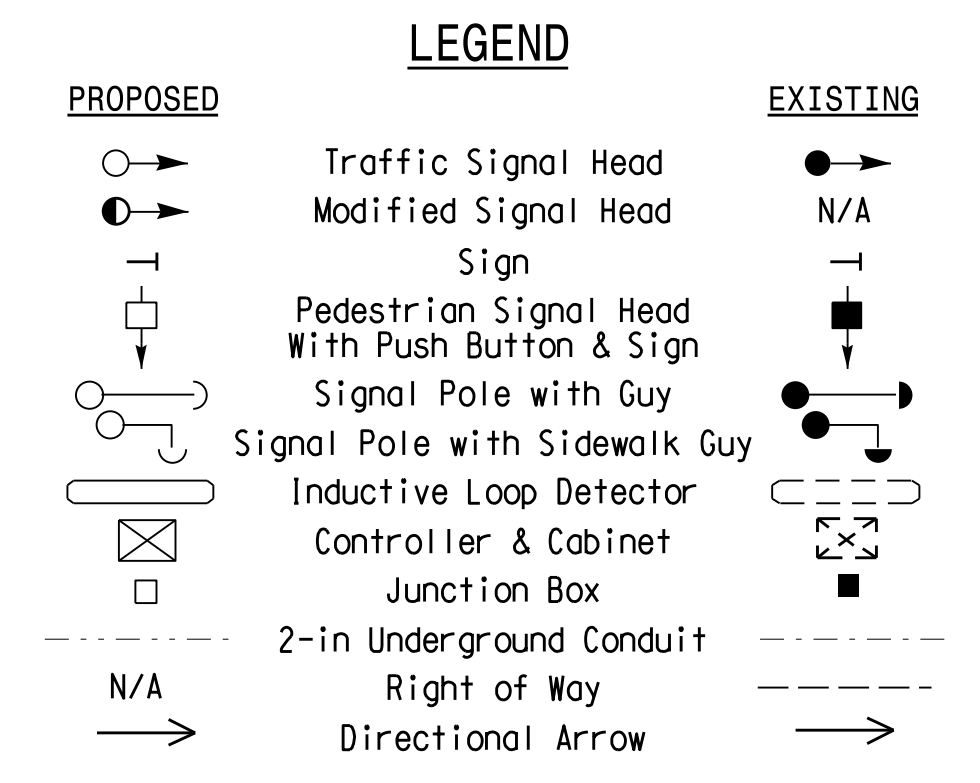
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Phase 1 and/or phase 5 may be lagged.
3. Phase 3 and/or phase 7 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. See Pavement Marking Plans for proposed stop bar locations.
7. Proposed wood poles shall be field located by the Division.



FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Walk *	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max I *	15	90	25	30	15	90	15	30
Yellow	3.0	4.8	3.0	4.0	3.0	4.8	3.0	4.0
Red Clear	2.1	1.1	2.1	1.3	2.6	1.1	2.1	1.3
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-	-	-
Seconds / Actuation *	-	2.5	-	-	-	2.5	-	-
Max Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Locking Detector	-	X	-	-	-	X	-	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-	-
Dual Entry	-	-	-	X	-	-	-	X
Simultaneous Gap	X	X	X	X	X	X	X	X

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



Signal Upgrade

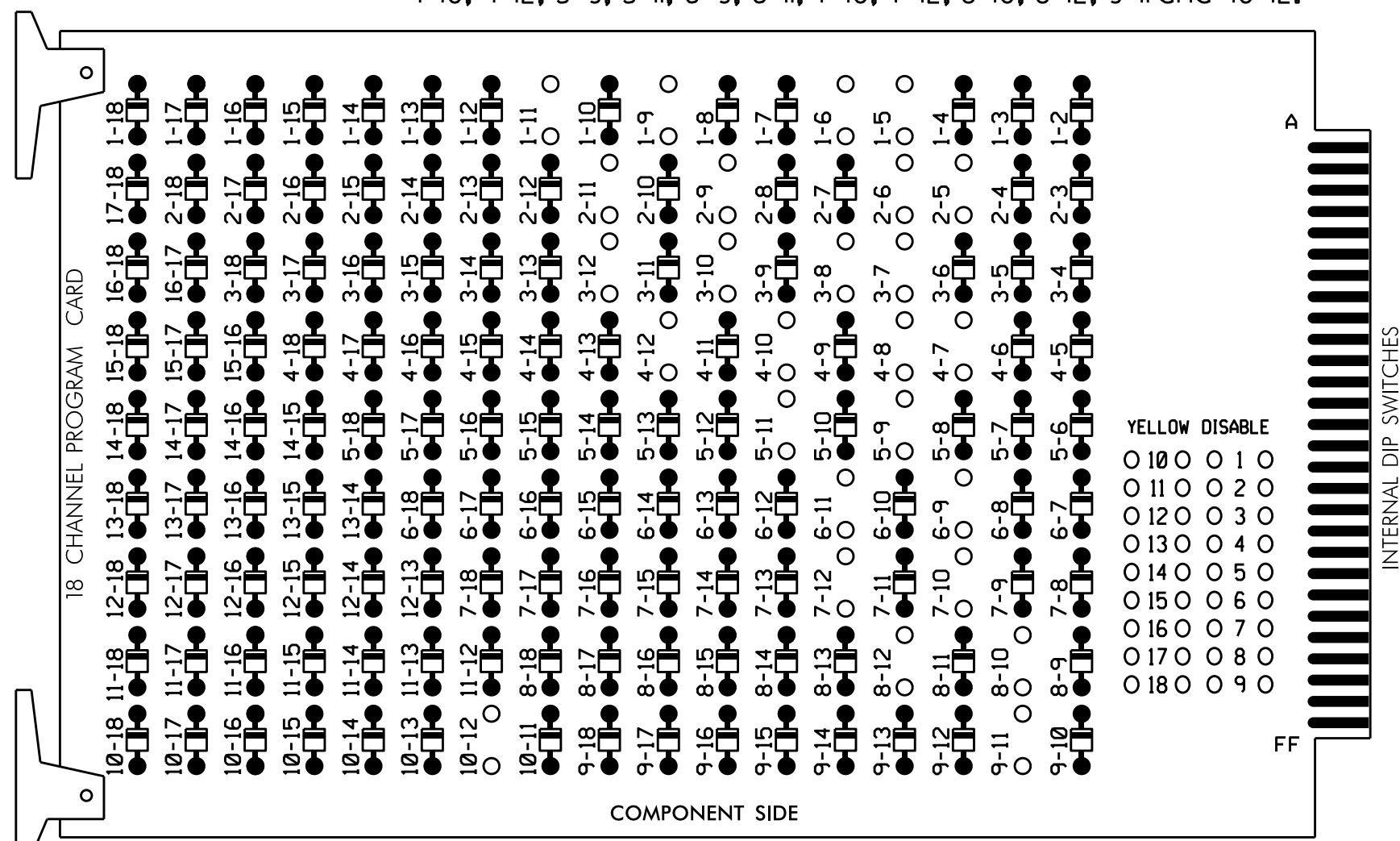
	SR 1394 (Poplar Tent Rd.) at SR 1414 (Rock Hill Church Rd./Eva Dr. NW)		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER R. N. ZINSE 043914 DATE 5/8/2019
	Division 10 Cabarrus County Concord PLAN DATE: May 2019 PREPARED BY: R. N. Zinser	REVIEWED BY: T. J. Williams REVIEWED BY:	

08-MAY-2019 09:37
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**EDI MODEL 2018ECLIP-NC CONFLICT MONITOR
PROGRAMMING DETAIL**

(remove jumpers and set switches as shown)

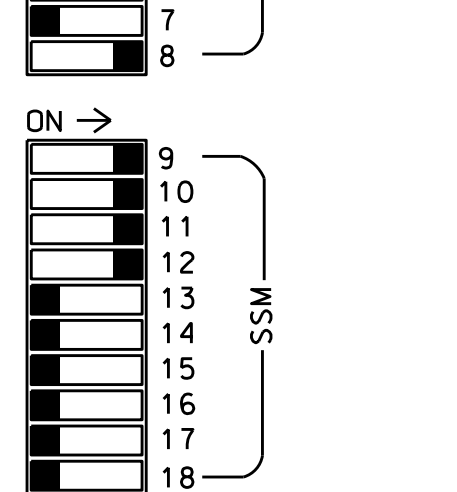
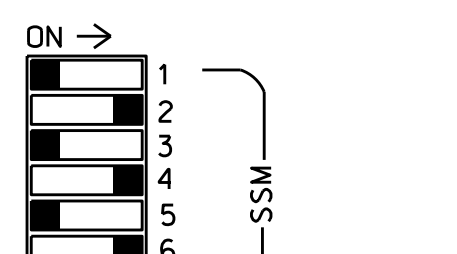
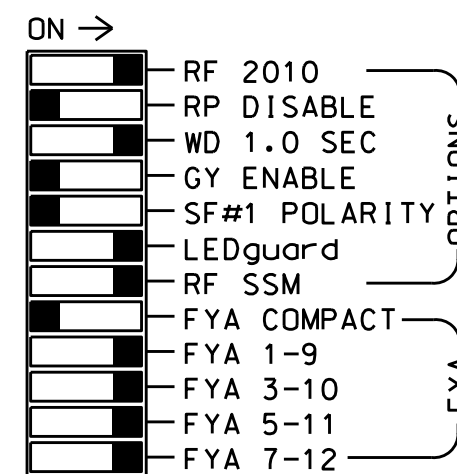
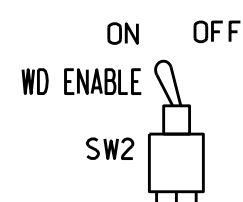
REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 2-5, 2-6, 2-9, 2-11, 3-7, 3-8, 3-10, 3-12, 4-7, 4-8, 4-10, 4-12, 5-9, 5-11, 6-9, 6-11, 7-10, 7-12, 8-10, 8-12, 9-11 and 10-12.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.



■ = DENOTES POSITION OF SWITCH

NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program phases 4 and 8 for Dual Entry.
- Program controller to start up in phase 2 Green and 6 Green.
- The cabinet and controller are part of the Concord Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
 CABINET.....332 W/AUX
 SOFTWARE.....ECONOLITE ASC/3-2070
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S1,S2,S4,S5,S7,S8,S10,S11,
 AUX S1, AUX S2,AUX S4,AUX S5
 PHASES USED.....1,2,3,4,5,6,7,8
 OVERLAP "A".....*
 OVERLAP "B".....*
 OVERLAP "C".....*
 OVERLAP "D".....*
 * See overlap programming detail on sheet 2

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	21,22	NU	31	41,42	NU	51	61,62	NU	71	81,82	NU	11	31	NU	51	71	NU
RED		128			101			134			107							
YELLOW	*	129		*	102		*	135		*	108							
GREEN		130			103			136			109							
RED ARROW													A121	A124		A114	A101	
YELLOW ARROW													A122	A125		A115	A102	
FLASHING YELLOW ARROW													A123	A126		A116	A103	
GREEN ARROW	127				118			133			124							

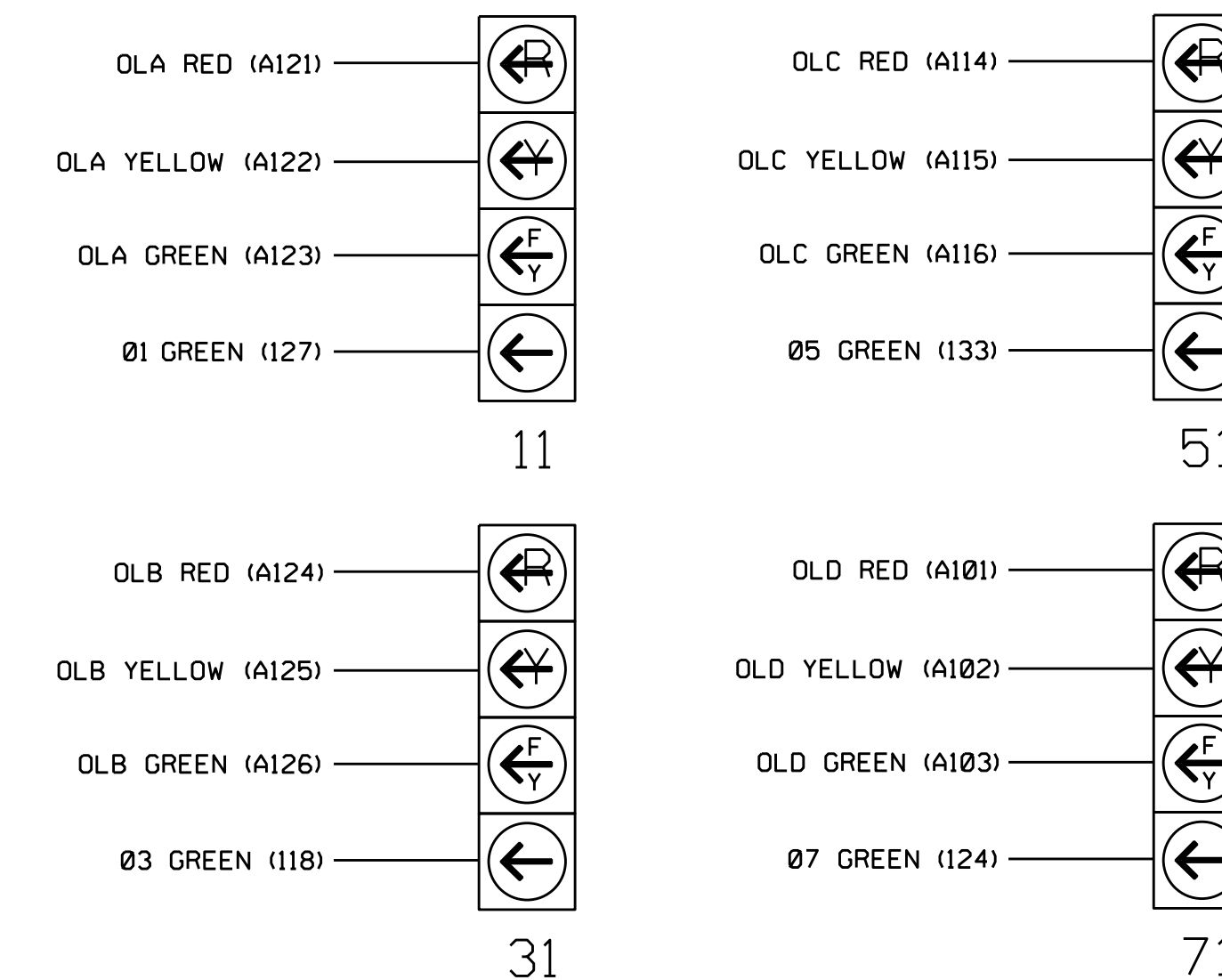
NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

★ See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT

(front view)

FILE "I"	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	∅ 1 1A	∅ 2 2A	∅ 3 3A	∅ 4 4A	∅ 5 5A	∅ 6 6A	∅ 7 7A	∅ 8 8A	∅ 9 9A	∅ 10 10A	∅ 11 11A	∅ 12 12A	∅ 13 13A	∅ 14 14A
FILE "J"	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
 ST = STOP TIME

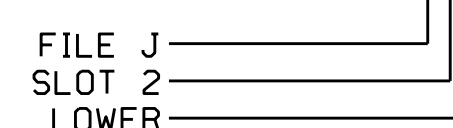
⊗ Wired Input - Do not populate slot with detector card

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND TIME	DELAY TIME	ADDED INITIAL	DETECTOR TYPE
1A ¹	TB2-1,2	I1U	56	1	1	YES		15		S
	-	J4U	48	26	6	YES		3		G
2A	TB2-5,6	I2U	39	2	2	YES			Y	S
	-	J8U	50	28	8	YES		3		S
3A ²	TB4-5,6	I5U	58	3	3	YES		15		S
	-	J1U	55	5	5	YES		15		S
4A	TB4-9,10	I6U	41	4	4	YES		10		S
	-	J1U	55	5	5	YES		15		S
5A ³	TB3-1,2	I1U	55	5	5	YES		15		S
	-	J4U	48	26	6	YES		3		G
6A	TB3-5,6	J2U	40	6	6	YES			Y	S
	-	J5U	57	7	7	YES		15		S
7A ⁴	TB5-5,6	J5U	57	7	7	YES		15		S
	-	J8U	49	24	4	YES		3		S
8A	TB5-9,10	J6U	42	8	8	YES		10		S

- Add jumper from I1-W to J4-W, on rear of input file.
- Add jumper from I5-W to J8-W, on rear of input file.
- Add jumper from J1-W to I4-W, on rear of input file.
- Add jumper from J5-W to I8-W, on rear of input file.

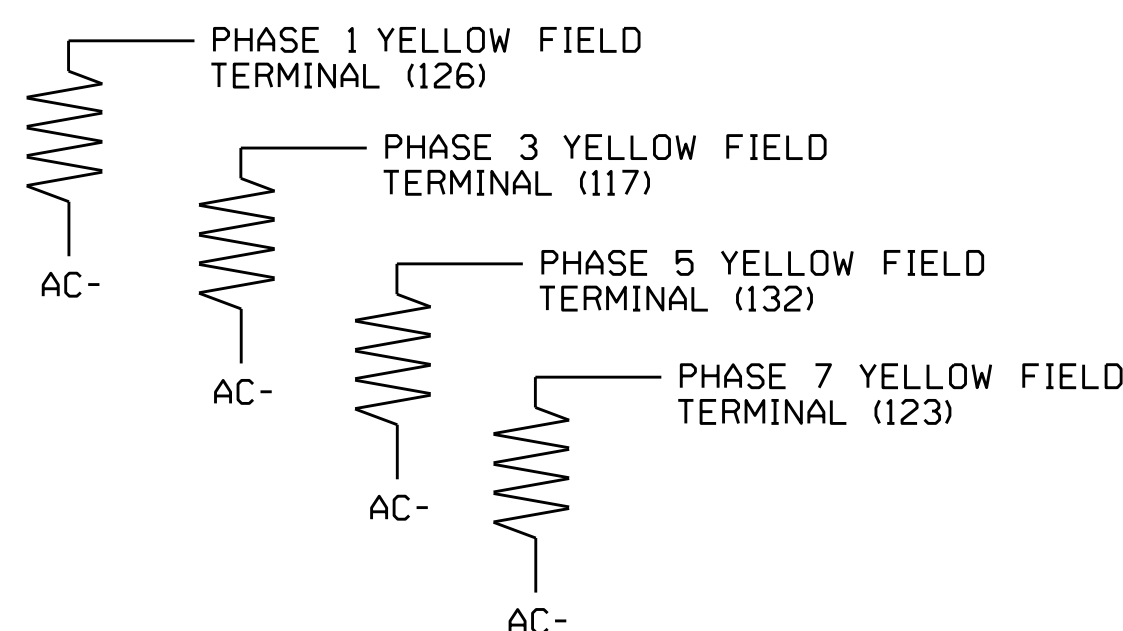
INPUT FILE POSITION LEGEND: J2L



LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-1486
 DESIGNED: May 2019
 SEALED: 5/8/2019
 REVISED: N/A

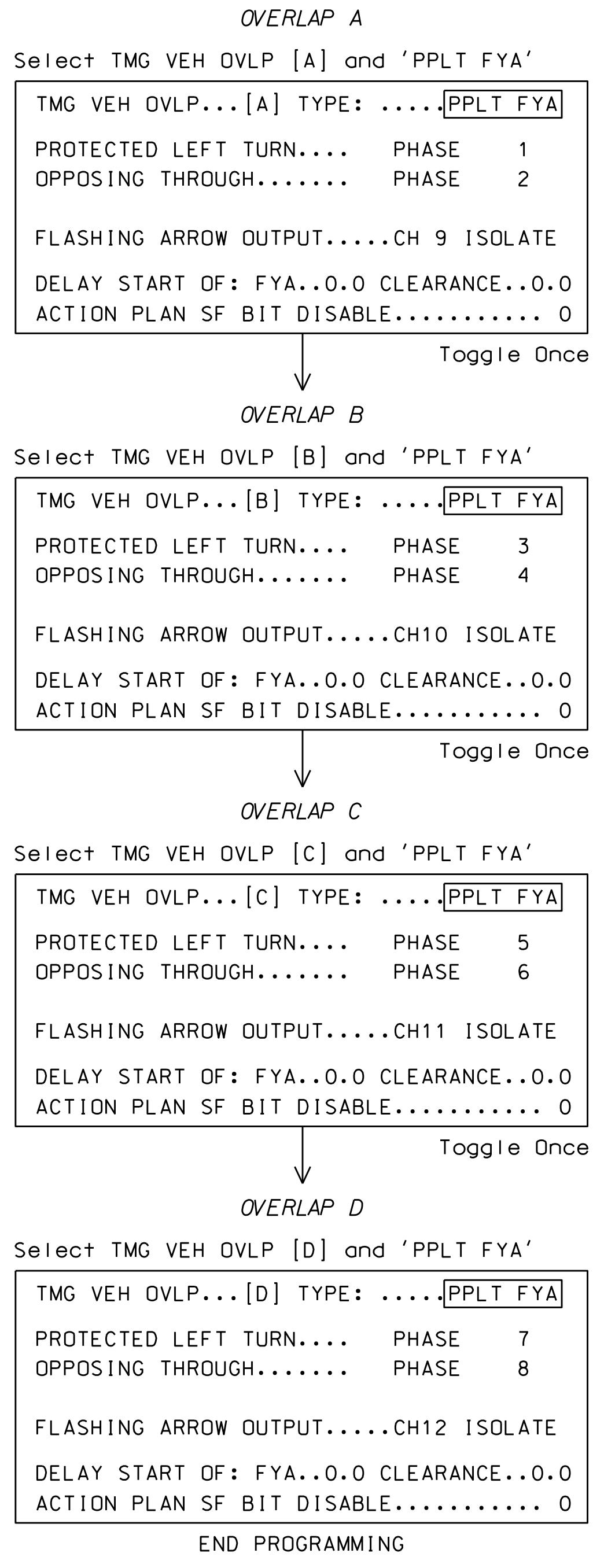
Electrical Detail - Sheet 1 of 2

Prepared In the Offices of:
 Cabarrus County
 Division 10
 PLAN DATE: May 2019
 PREPARED BY: B. Christian
 REVIEWED BY: CES
 SR 1394 (Poplar Tent Rd.) at SR 1414 (Rock Hill Church Rd./Eva Dr. NW)
 750 N. Greenfield Pkwy, Garner, NC 27529
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
 SEAL
 SEAL 031001
 ENGINEER
 TODD JOYCE
 5/13/2019
 DATE
 SIG. INVENTORY NO. 10-1486

ECONOLITE ASC/3-2070 OVERLAP PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select 2. CONTROLLER
2. From CONTROLLER Submenu select 2. VEHICLE OVERLAPS

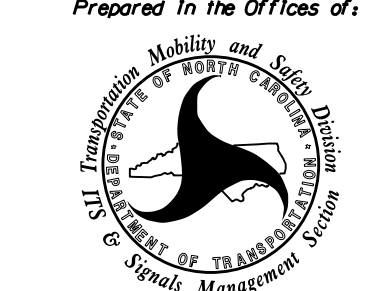


FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO ENSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

1. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
 2. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
 3. REMOVE FLASHER UNIT 2.
- THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 10-1486
DESIGNED: May 2019
SEALED: 5/8/2019
REVISED: N/A

Electrical Detail - Sheet 2 of 2		DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED												
<p style="font-size: small;">ELECTRICAL AND PROGRAMMING DETAILS FOR:</p> <div style="text-align: center; font-size: x-small;"> Prepared In the Offices of:  750 N. Greenfield Pkwy, Garner, NC 27529 </div>	<p style="text-align: center;">SR 1394 (Poplar Tent Rd.) at SR 1414 (Rock Hill Church Rd./ Eva Dr. NW)</p> <p style="font-size: x-small;">Division 10 Cabarrus County Concord</p> <p style="font-size: x-small;">PLAN DATE: May 2019 REVIEWED BY: CES</p> <p style="font-size: x-small;">PREPARED BY: B. Christian REVIEWED BY:</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS	INIT.	DATE										<p style="font-size: x-small;">SEAL</p> <div style="border: 1px solid black; border-radius: 50%; padding: 5px; width: 60px; margin: 0 auto;"> <p style="font-size: x-small; text-align: center;">NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031001 TODD JOYCE</p> </div> <p style="font-size: x-small;">DocuSigned by: <i>D. Todd Joyce</i> 5/13/2019 AB0CAFD0BD241D DATE</p> <p style="font-size: x-small;">SIG. INVENTORY NO. 10-1486</p>
REVISIONS	INIT.	DATE												

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760 760

755 755

750 750

745 745

11+50.00

S.S. 754.17

760 760

755 755

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11+00.00

DRIVEWAY

760 760

755 755

750 750

10+50.00

760 760

755 755

10+00.00

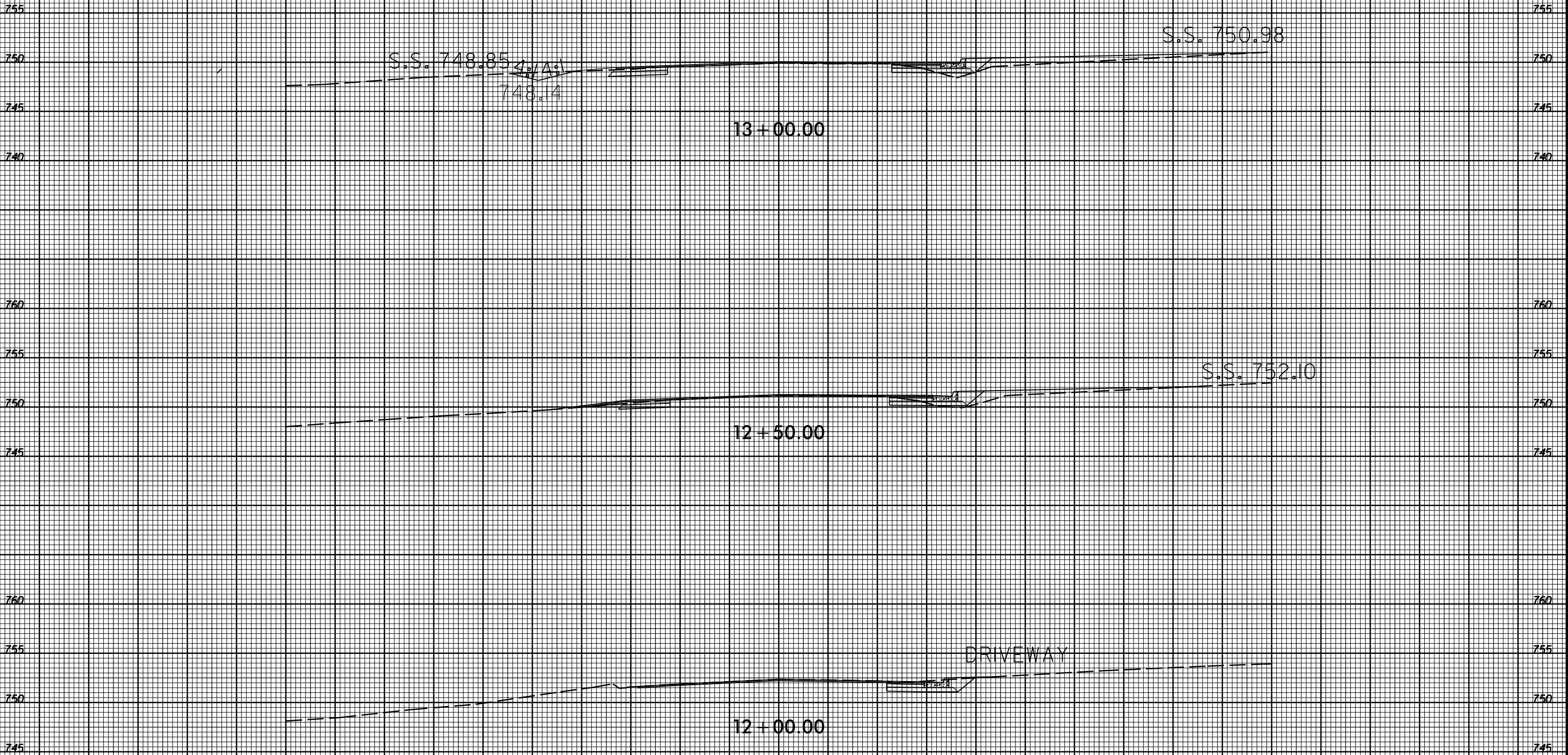
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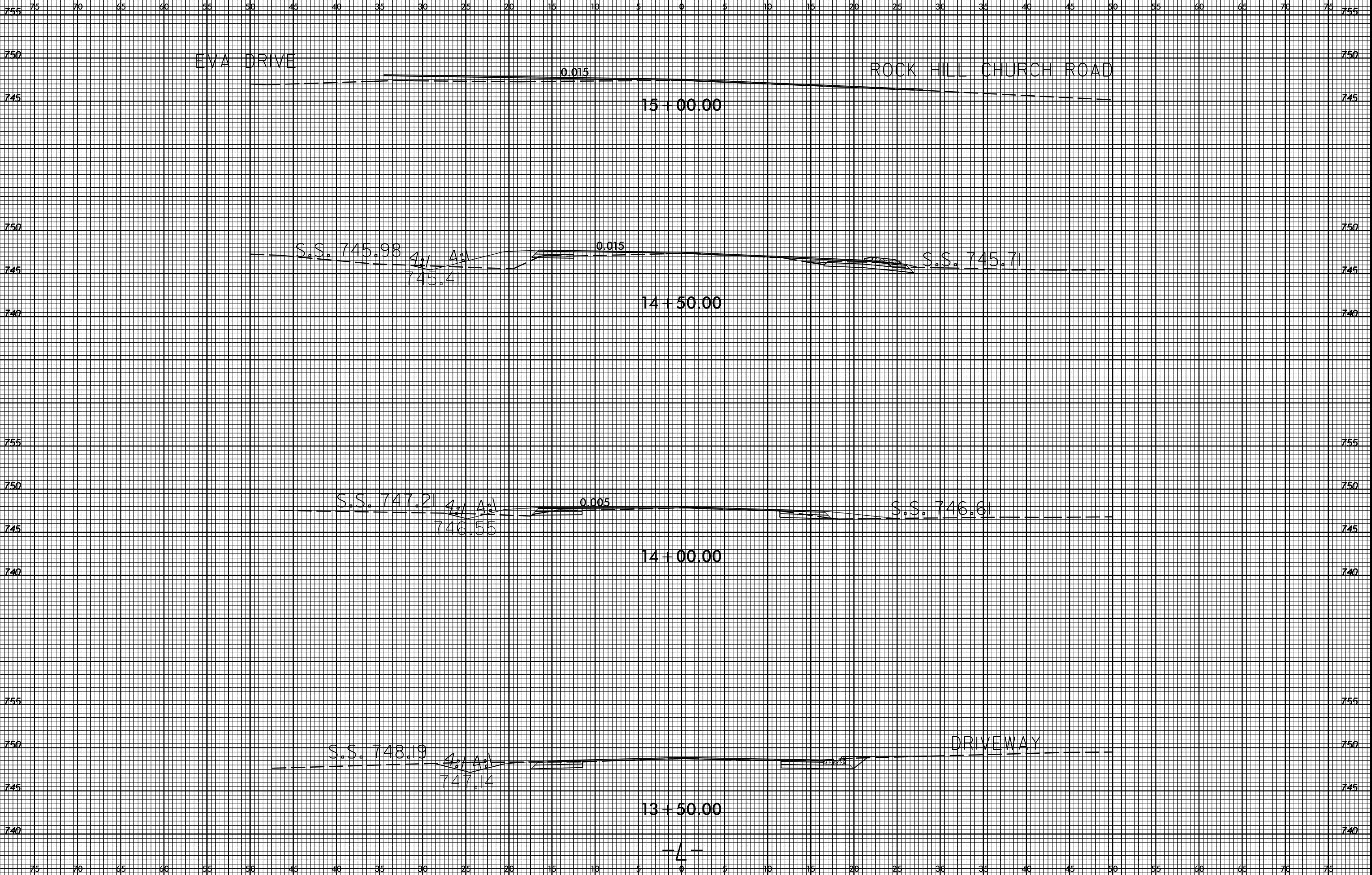
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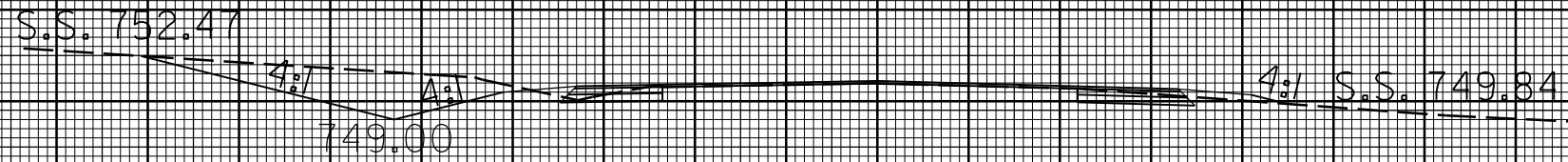
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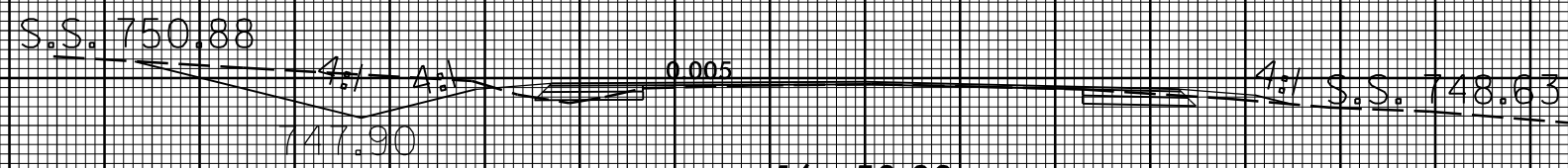
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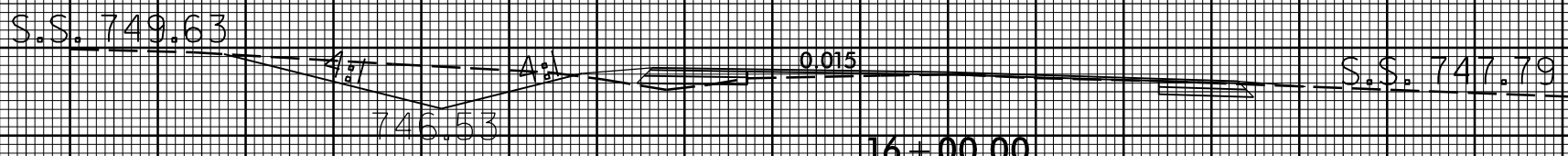
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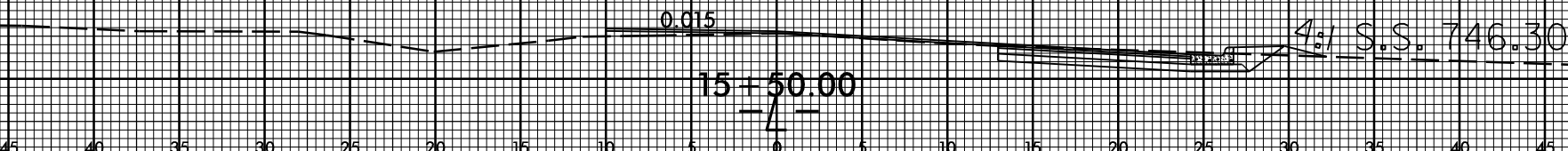
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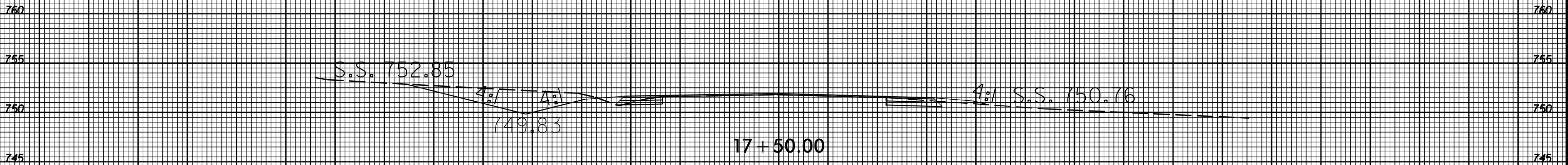
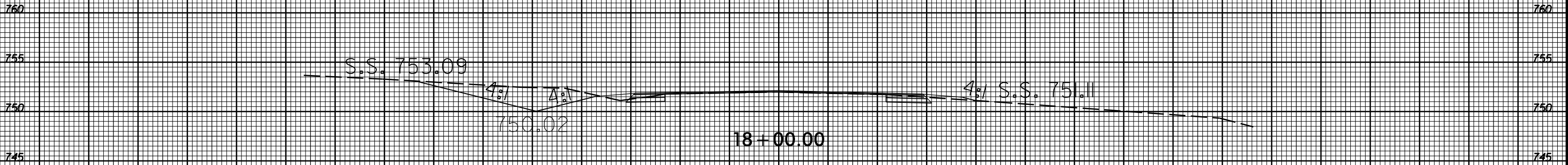
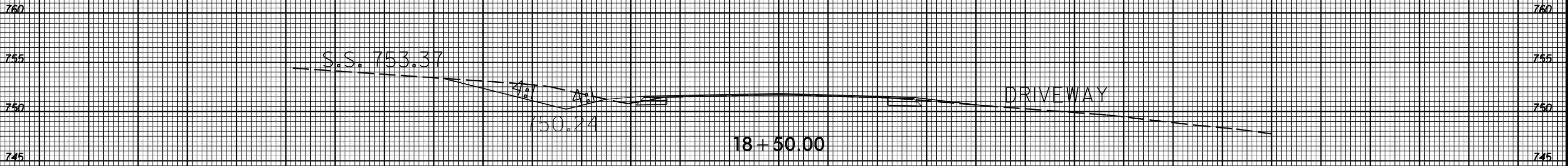
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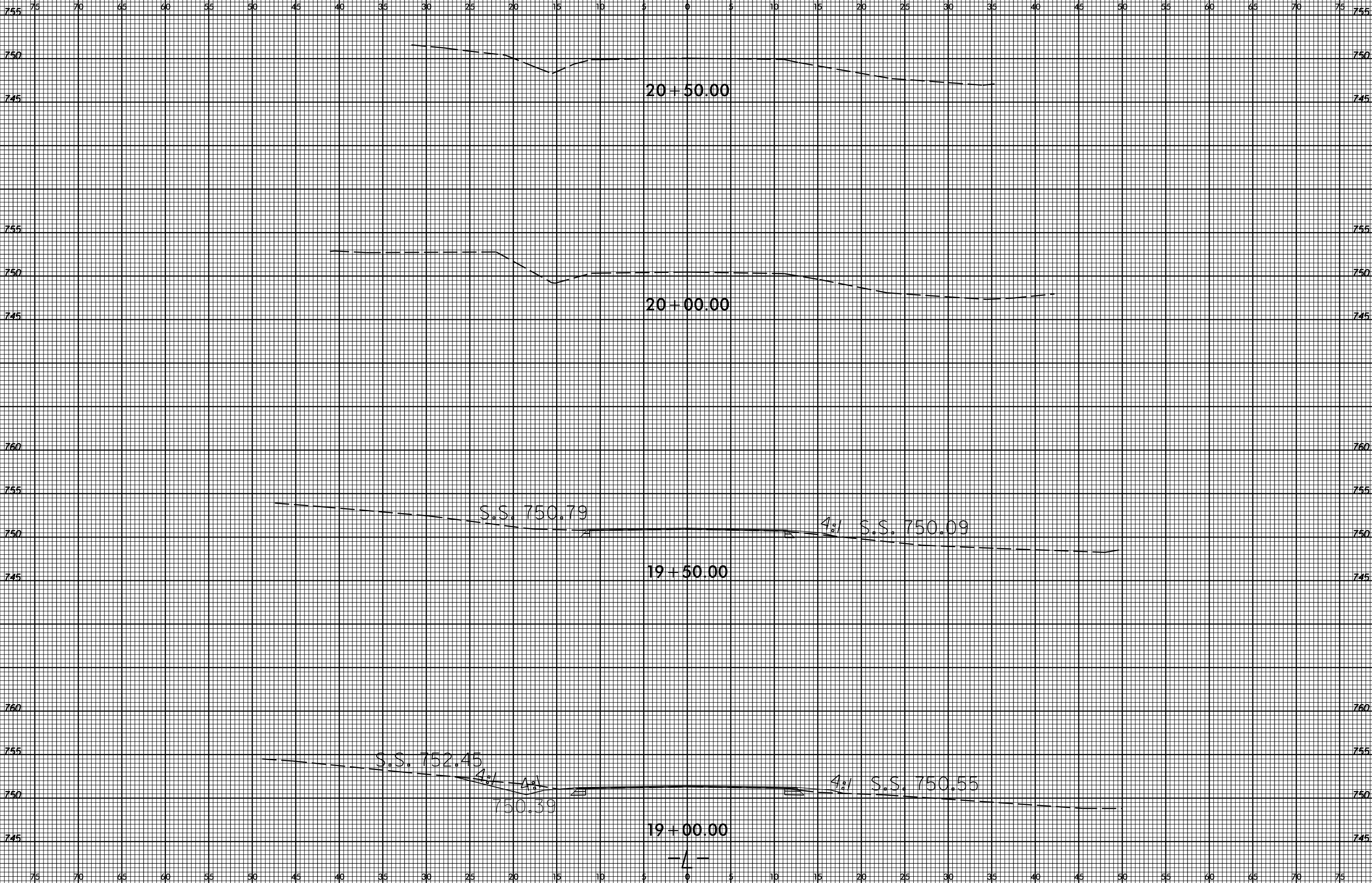
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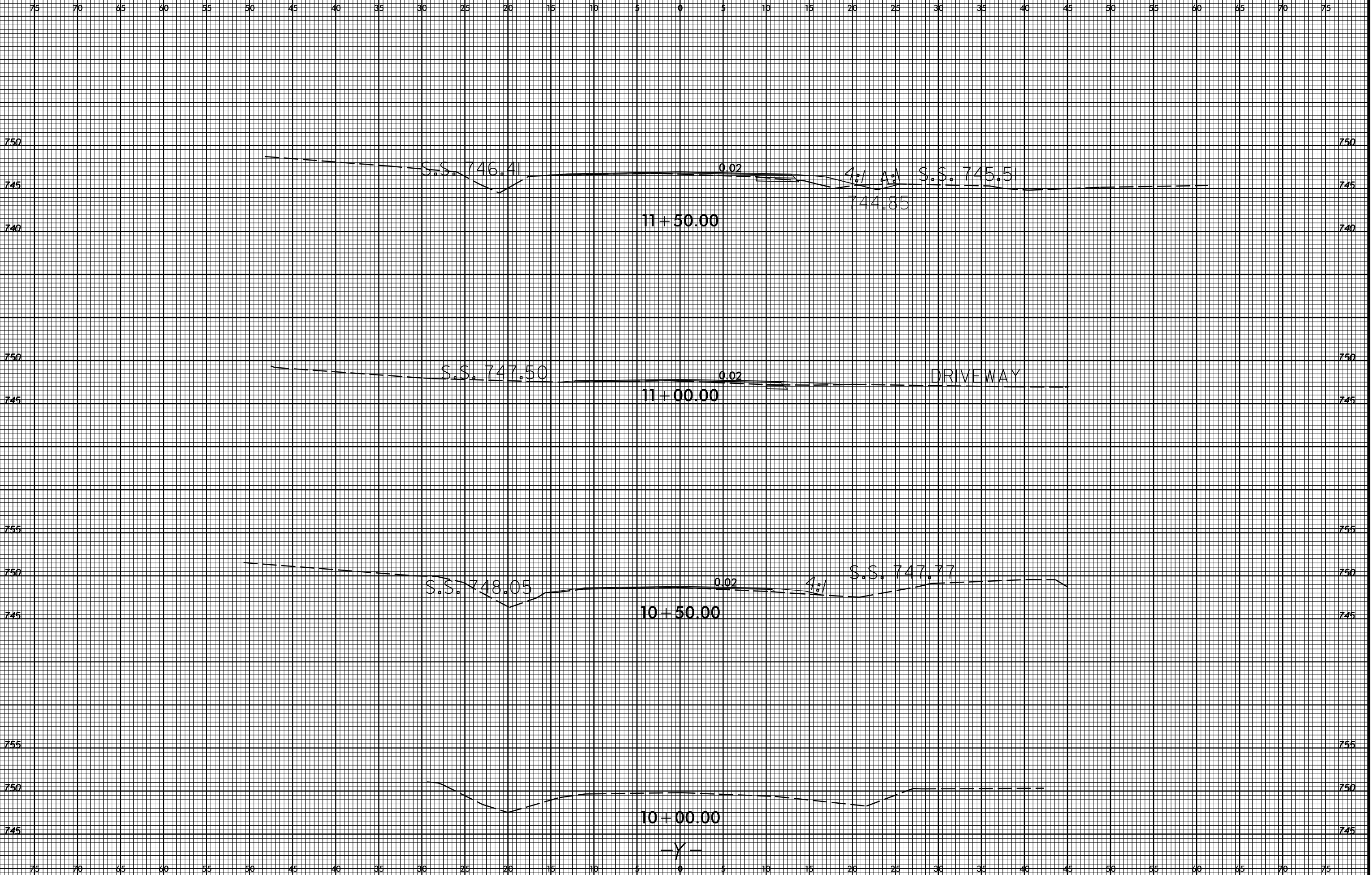


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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

755 755

750 750

INTERSECTION

INTERSECTION

745 745

15+50.00

750 750

745 745

0.02

4:1 S.S. 745.64

740 740

15+00.00

750 750

745 745

S.S. 744.24

0.02

S.S. 745.07

740 740

14+50.00

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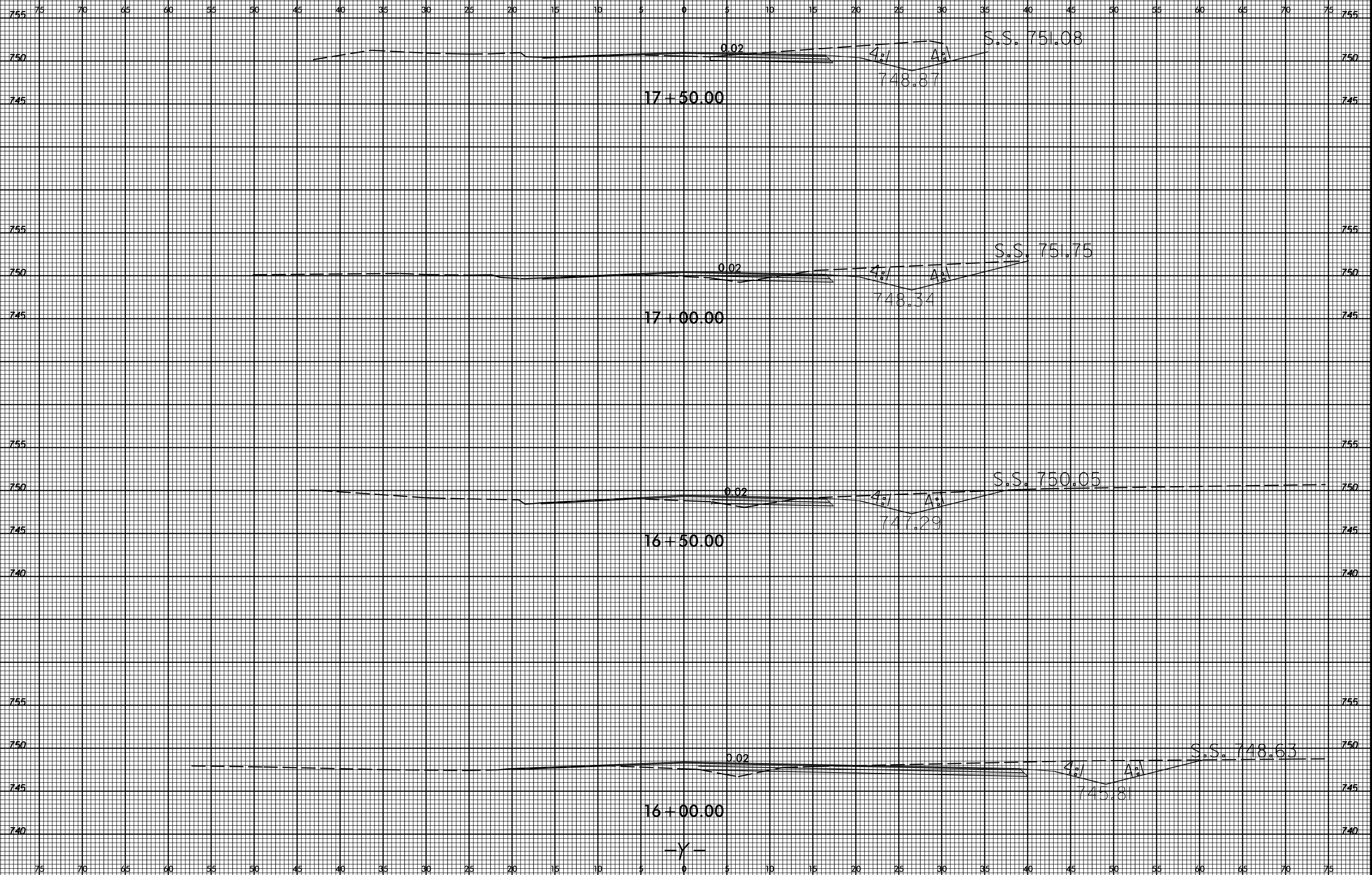
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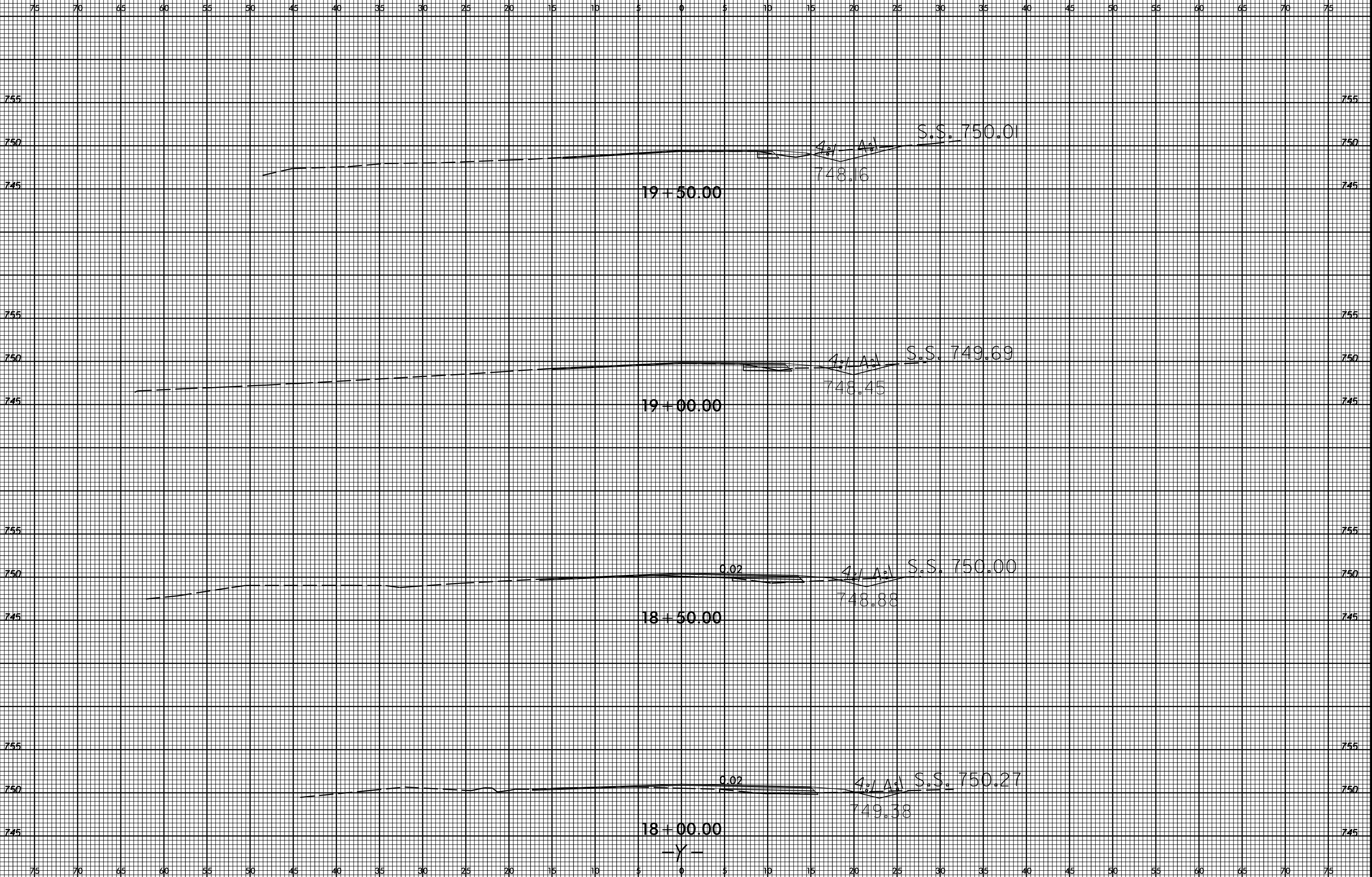
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-Y-

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755

755

750

750

745

745

20+50.00

755

755

750

750

S.S. 750.34

745

745

20+00.00

747.62

740

740

-Y-

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