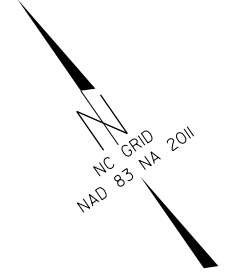


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	SS-4901BI	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
48241.1.1		PE
48241.3.1		CONST

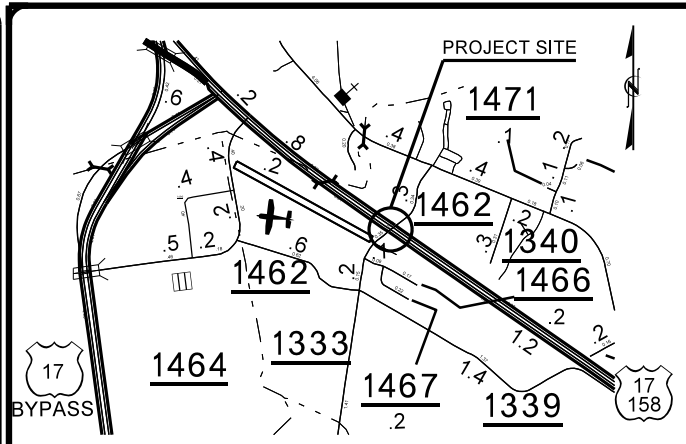


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**PASQUOTANK COUNTY**

LOCATION: US 17/158 (N. ROAD ST.) AT INTERSECTION  
WITH SR 1333 (MAIN ST. EXT.) & SR 1462

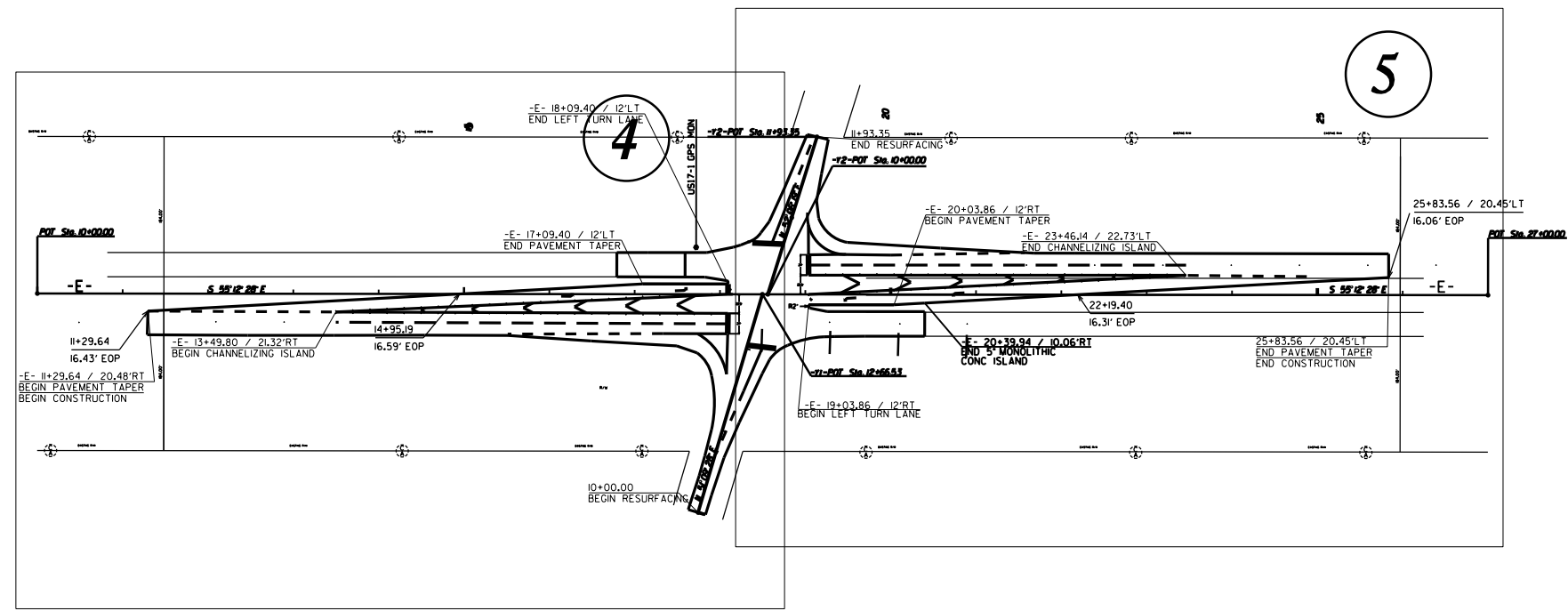
TYPE OF WORK: CONSTRUCT OFFSET LEFT TURN LANES;  
DRAINAGE, BASE, PAVING & RESURFACING



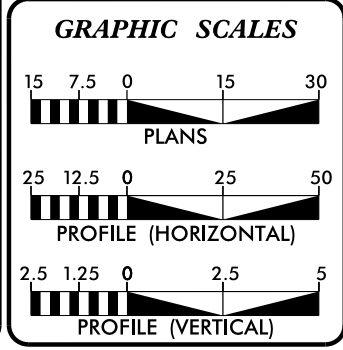
**VICINITY MAP**

TIP NO.: SS-4901BI

CONTRACT: DA00428



NTS



**PROJECT LENGTH**

TOTAL LENGTH PROJECT WBS #48241.1.1 = 0.275 MILES

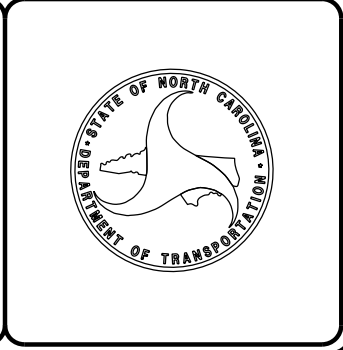
Prepared in the Office of:  
**NCDOT DIVISION ONE**  
113 Airport Dr., Edenton NC, 27932

2018 STANDARD SPECIFICATIONS

**W. B. HOBBS, PE**  
DIVISION PROJECT TEAM LEAD

**CHRIS SLACHTA**  
DIVISION PROPOSALS ENGINEER

**S. P. FENWICK, PLS**  
DIVISION DESIGN ENGINEER



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EFF. 01-16-2018  
REV.

SHEET NUMBER	INDEX OF SHEETS
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1	SURVEY CONTROL SHEETS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 & 2B-2	ROADWAY DETAILS
3B-1	SUMMARY OF QUANTITIES
3B-2	ROADWAY EARTHWORK SUMMARY
4 THRU 6	PLAN AND PROFILE SHEETS
EC-1 THRU EC-5	EROSION CONTROL PLANS
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-7	CROSS-SECTIONS
SIG. 1.0	SIGNAL PLANS

GENERAL NOTES: 2018 SPECIFICATIONS  
EFFECTIVE: 01-16-2018  
REVISED:

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.

SUPERELEVATION:  
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.05 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. 560.02

SUBSURFACE PLANS:  
NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.  
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

2018 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, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
225.01	Guide for Grading Subgrade - Interstate and Freeway
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method 1
DIVISION 8 - INCIDENTALS	
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Mannole Frame and Cover
840.72	Pipe Collar
DIVISION 17 - SIGNALS AND TRAFFIC MANAGEMENT SYSTEMS	
1715.01	UNDERGROUND CONDUIT - TRENCHING
1716.01	JUNCTION BOXES
1725.01	INDUCTIVE DETECTION LOOPS
1726.01	UNDERGROUND CONDUIT - TRENCHING

# 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
Computed Property Corner	-----
Property Monument	□ EDM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	----- MLB
Proposed Wetland Boundary	----- MLB
Existing Endangered Animal Boundary	----- EAB
Existing Endangered Plant Boundary	----- EPB
Existing Historic Property Boundary	----- HPB
Known Contamination Area: Soil	☠ -s- ☠
Potential Contamination Area: Soil	☠ -s- ☠
Known Contamination Area: Water	☠ -w- ☠
Potential Contamination Area: Water	☠ -w- ☠
Contaminated Site: Known or Potential	☠ ☠

## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
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	-----
False Sump	-----

## RAILROADS:

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

Note: Not to Scale

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

## RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	◆
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	-----
New Right of Way Line with Pin and Cap	-----
New Right of Way Line with Concrete or Granite RW Marker	-----
New Control of Access Line with Concrete CA Marker	-----
Existing Control of Access	-----
New Control of Access	-----
Existing Easement Line	----- E
New Temporary Construction Easement	----- E
New Temporary Drainage Easement	----- TDE
New Permanent Drainage Easement	----- PDE
New Permanent Drainage / Utility Easement	----- DUE
New Permanent Utility Easement	----- PUE
New Temporary Utility Easement	----- TUE
New Aerial Utility Easement	----- AUE

## ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	----- C
Proposed Slope Stakes Fill	----- F
Proposed Curb Ramp	----- CR
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	⊙
Storm Sewer	-----

## UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊙
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	-----
H-Frame Pole	-----
U/G Power Line LOS B (S.U.E.*)	----- P
U/G Power Line LOS C (S.U.E.*)	----- P
U/G Power Line LOS D (S.U.E.*)	----- P

## TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊙
Telephone Pedestal	□
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	----- T
U/G Telephone Cable LOS C (S.U.E.*)	----- T
U/G Telephone Cable LOS D (S.U.E.*)	----- T
U/G Telephone Conduit LOS B (S.U.E.*)	----- TC
U/G Telephone Conduit LOS C (S.U.E.*)	----- TC
U/G Telephone Conduit LOS D (S.U.E.*)	----- TC
U/G Fiber Optics Cable LOS B (S.U.E.*)	----- T FO
U/G Fiber Optics Cable LOS C (S.U.E.*)	----- T FO
U/G Fiber Optics Cable LOS D (S.U.E.*)	----- T FO

## WATER:

Water Manhole	⊙
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
Above Ground Water Line	----- A/G Water

## TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	----- TV
U/G TV Cable LOS C (S.U.E.*)	----- TV
U/G TV Cable LOS D (S.U.E.*)	----- TV
U/G Fiber Optic Cable LOS B (S.U.E.*)	----- TV FO
U/G Fiber Optic Cable LOS C (S.U.E.*)	----- TV FO
U/G Fiber Optic Cable LOS D (S.U.E.*)	----- TV FO

## GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	----- G
U/G Gas Line LOS C (S.U.E.*)	----- G
U/G Gas Line LOS D (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
SS Forced Main Line LOS B (S.U.E.*)	----- FSS
SS Forced Main Line LOS C (S.U.E.*)	----- FSS
SS Forced Main Line LOS D (S.U.E.*)	----- FSS

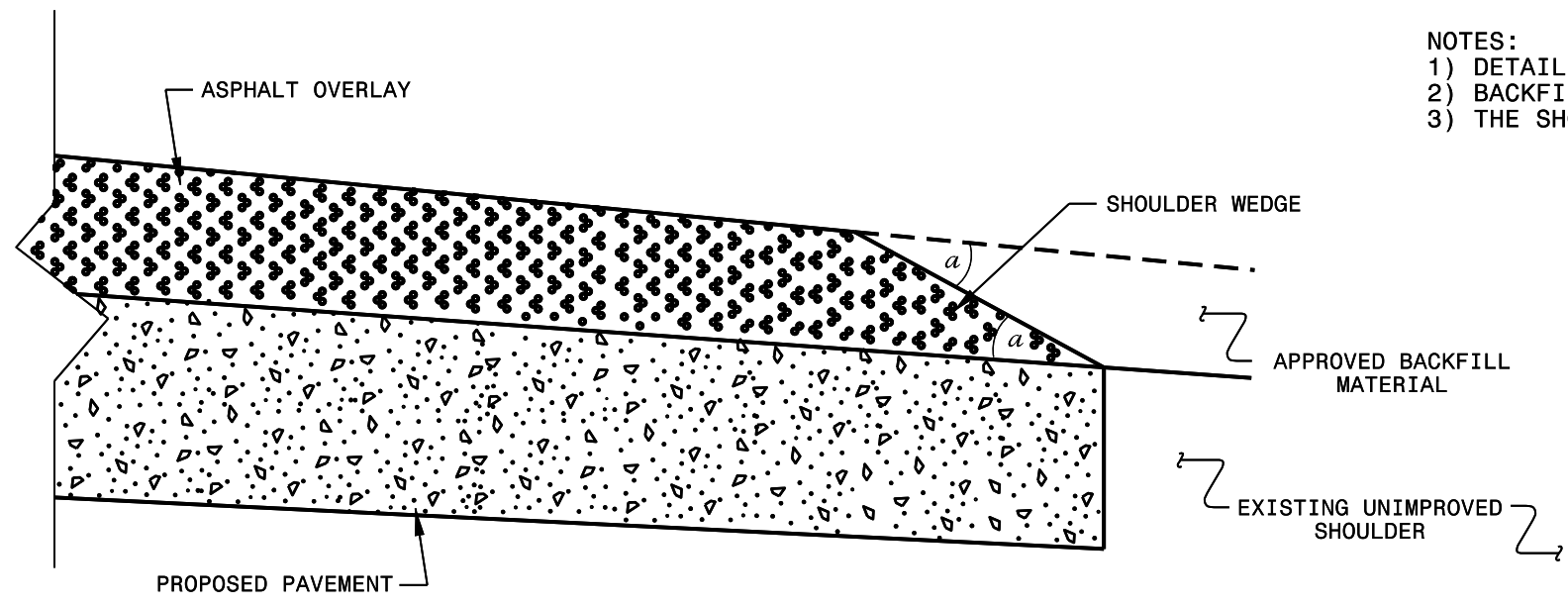
## MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	----- TUL
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	⊠ UST
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

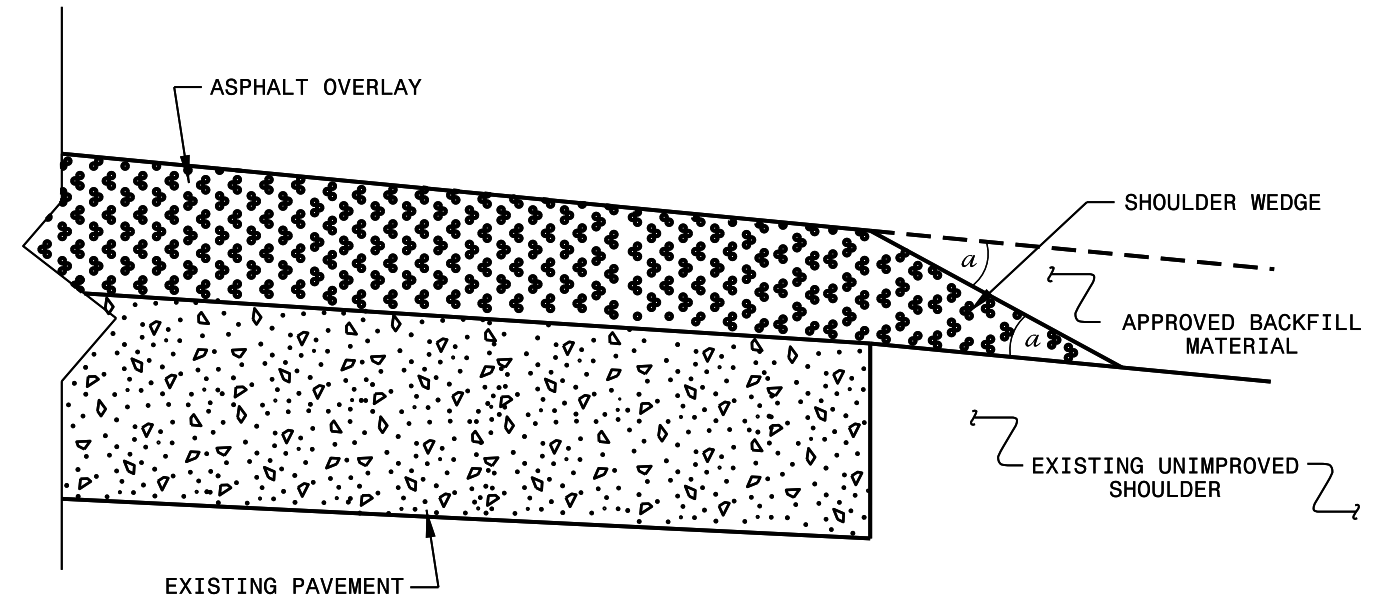




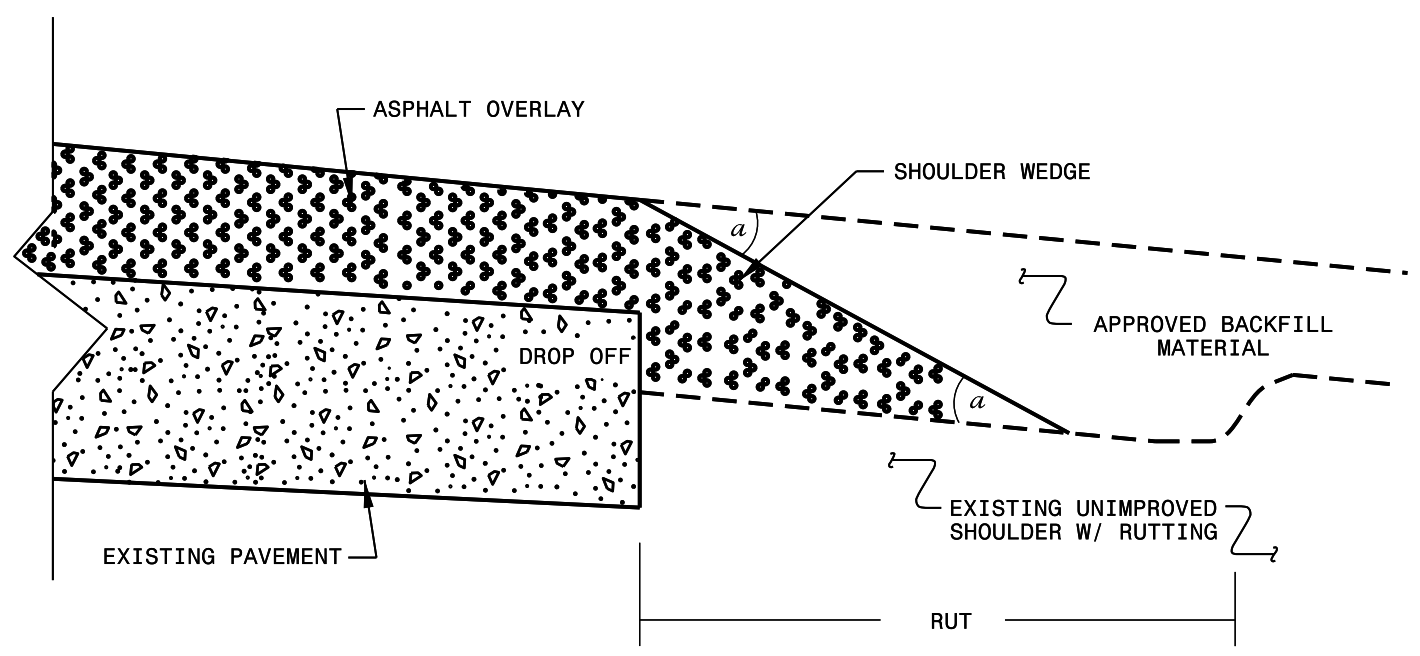
- NOTES:  
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.  
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.  
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**SHOULDER WEDGE DETAIL**  
 (Resurfacing Projects w/ Widening or  
 with Existing Paved Shoulder having no dropoffs)



**SHOULDER WEDGE DETAIL**  
 (Resurfacing Projects w/ NO Widening)

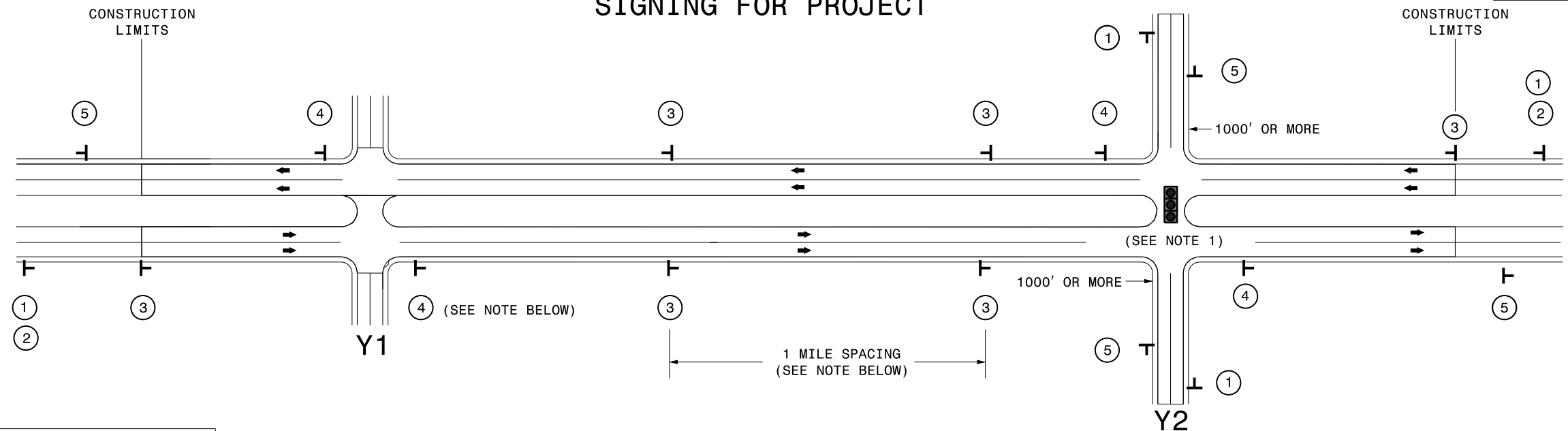


**SHOULDER WEDGE DETAIL**  
 (Resurfacing Adjacent to  
 Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>SHOULDER WEDGE DETAILS</b>	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 10/16/12
CHECKED BY:	DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedge\detail.dgn	

# SIGNING FOR PROJECT



LEGEND	
	STATIONARY SIGN
	DIRECTION OF TRAFFIC FLOW

## MAINLINE (-L-) SIGNING

## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> <li>LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>SUBDIVISION ROADS</li> <li>DEAD END ROADS</li> </ol> <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">   <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;">   <small>W20-7 A 48" X 48"</small> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p>NOTES:</p> <ol style="list-style-type: none"> <li>MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.</li> </ol>
		<p>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.</p>	
		<p>THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</p>	
		<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	

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**RESURFACING  
ADVANCE WARNING SIGNS  
FOR RURAL AND SUBURBAN  
MULTI-LANE ROADWAYS  
W/ SHOULDER SECTIONS**



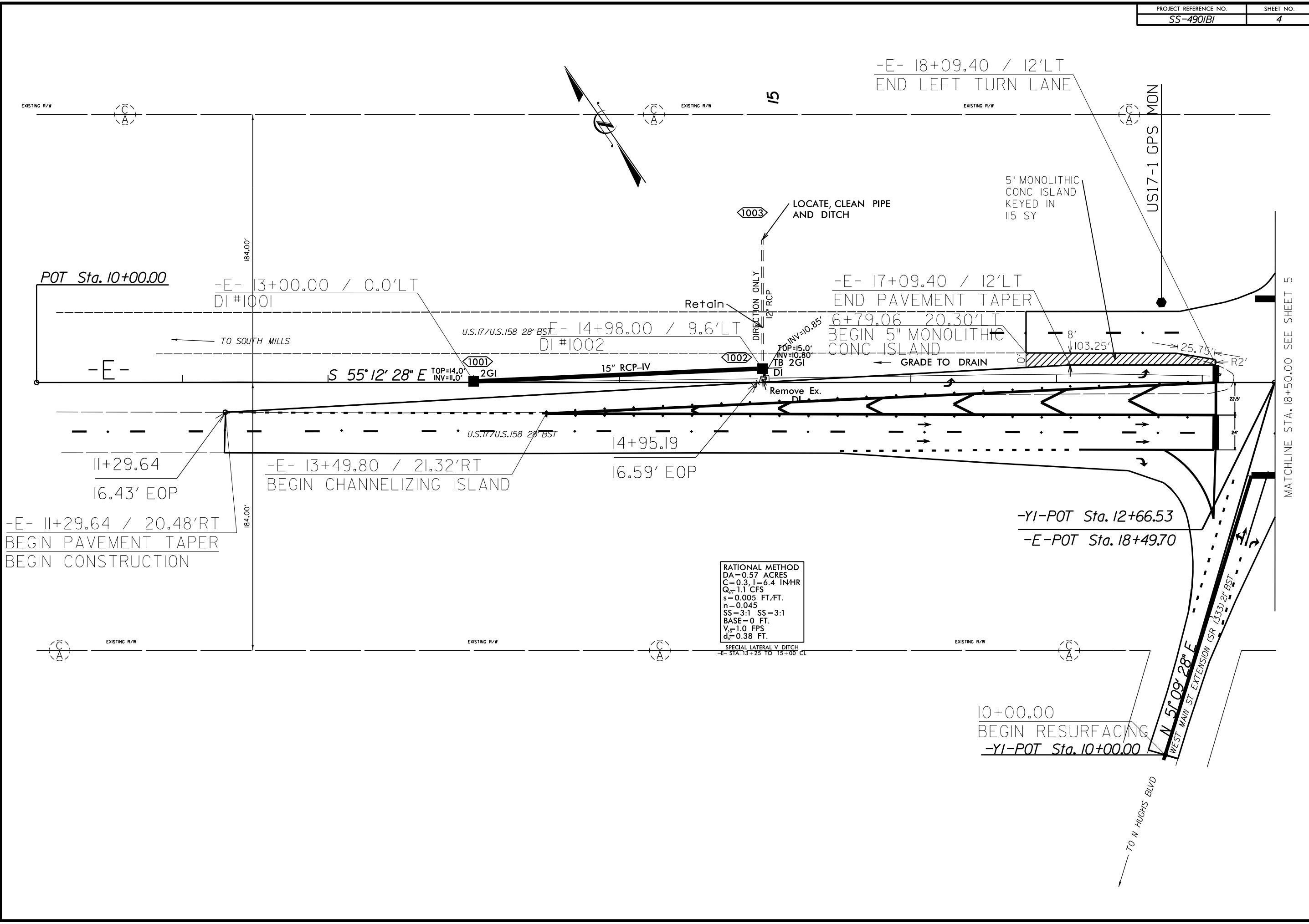




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REVISIONS

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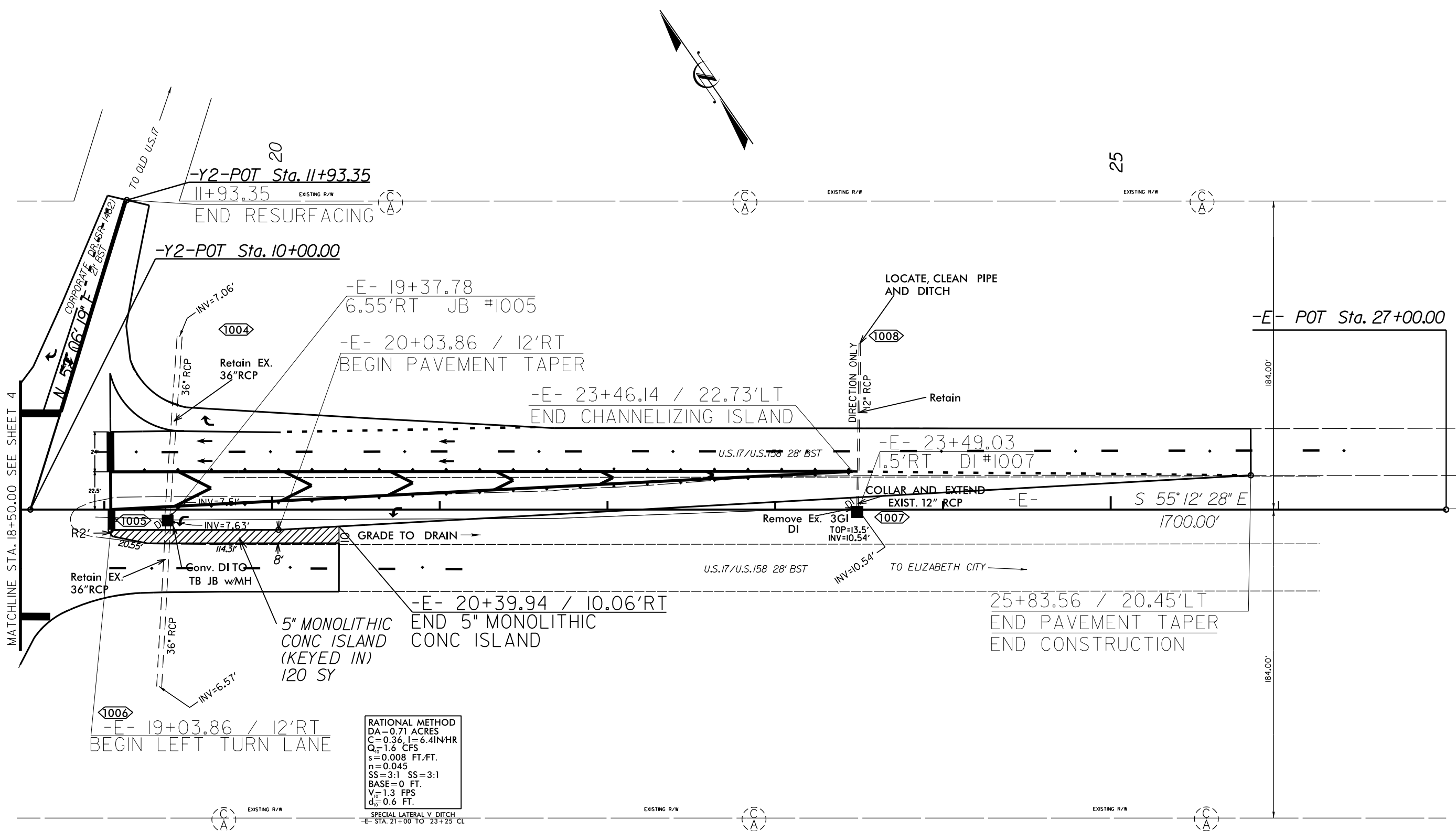


RATIONAL METHOD  
 DA=0.57 ACRES  
 C=0.3, I=6.4 IN/HR  
 Q<sub>10</sub>=1.1 CFS  
 s=0.005 FT./FT.  
 n=0.045  
 SS=3:1 SS=3:1  
 BASE=0 FT.  
 V<sub>10</sub>=1.0 FPS  
 d<sub>10</sub>=0.38 FT.  
 SPECIAL LATERAL V. DITCH  
 -E- STA. 13+25 TO 15+00 CL

MATCHLINE STA. 18+50.00 SEE SHEET 5

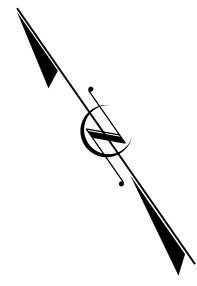
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 17-1599 SR 1333-Design Plan  
 SS-4901B1-17-1599 SR 1333-Design Plan



**RATIONAL METHOD**  
 DA=0.71 ACRES  
 C=0.36, I=6.4 IN/HR  
 Q=1.6 CFS  
 s=0.008 FT./FT.  
 n=0.045  
 SS=3:1 SS=3:1  
 BASE=0 FT.  
 V<sub>100</sub>=1.3 FPS  
 d<sub>100</sub>=0.6 FT.

**SPECIAL LATERAL V DITCH**  
 -E- STA. 21+00 TO 23+25 CL



REVISIONS

MATCHLINE STA. 18+50.00 SEE SHEET 4

184.00'

184.00'

-Y2-POT Sta. 11+93.35

-Y2-POT Sta. 10+00.00

-E- 19+37.78  
6.55'RT JB #1005

-E- 20+03.86 / 12'RT  
BEGIN PAVEMENT TAPER

-E- 23+46.14 / 22.73'LT  
END CHANNELIZING ISLAND

-E- 23+49.03  
1.5'RT DI #1007

-E- 20+39.94 / 10.06'RT  
END 5" MONOLITHIC CONC ISLAND

25+83.56 / 20.45'LT  
END PAVEMENT TAPER  
END CONSTRUCTION

-E- 19+03.86 / 12'RT  
BEGIN LEFT TURN LANE

COLLAR AND EXTEND  
EXIST. 12" RCP  
-E- S 55°12'28" E  
1700.00'

LOCATE, CLEAN PIPE  
AND DITCH

Retain

Remove Ex. 3" GI  
DI  
TOP=13.5'  
INV=10.54'

GRADE TO DRAIN

Retain EX.  
36" RCP

Retain EX.  
36" RCP

Conv. DI TO  
TB JB w/MH

5" MONOLITHIC  
CONC ISLAND  
(KEYED IN)  
120 SY

1006

1004

1005

1007

1008

-E- POT Sta. 27+00.00

11+93.35  
EXISTING R/W  
END RESURFACING

EXISTING R/W

EXISTING R/W

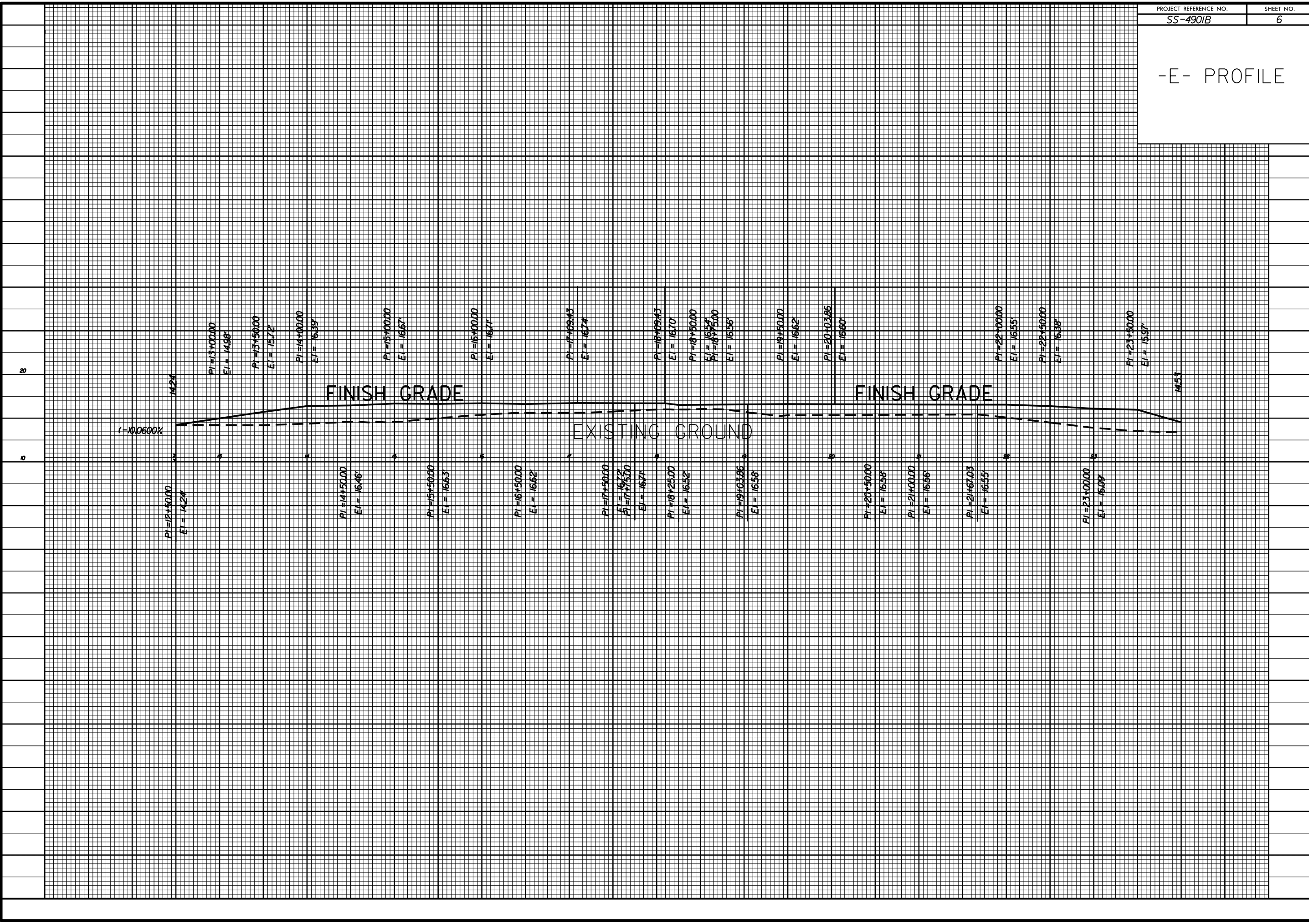
EXISTING R/W

EXISTING R/W

EXISTING R/W

EXISTING R/W

-E- PROFILE

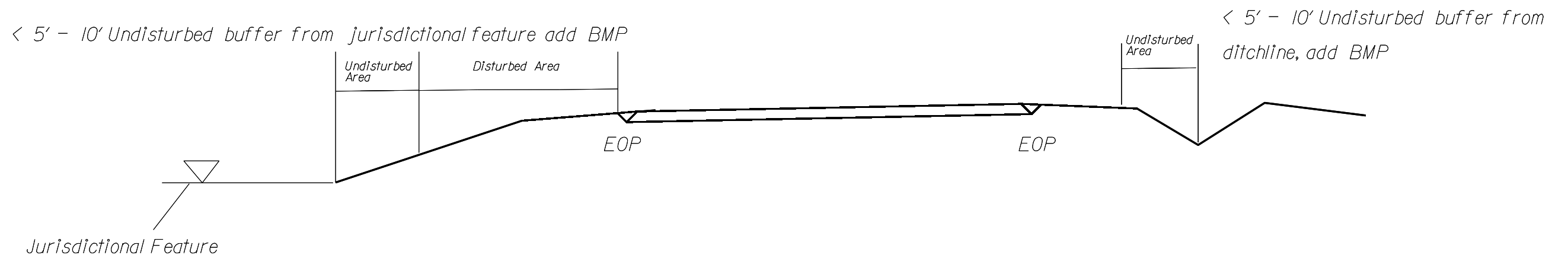
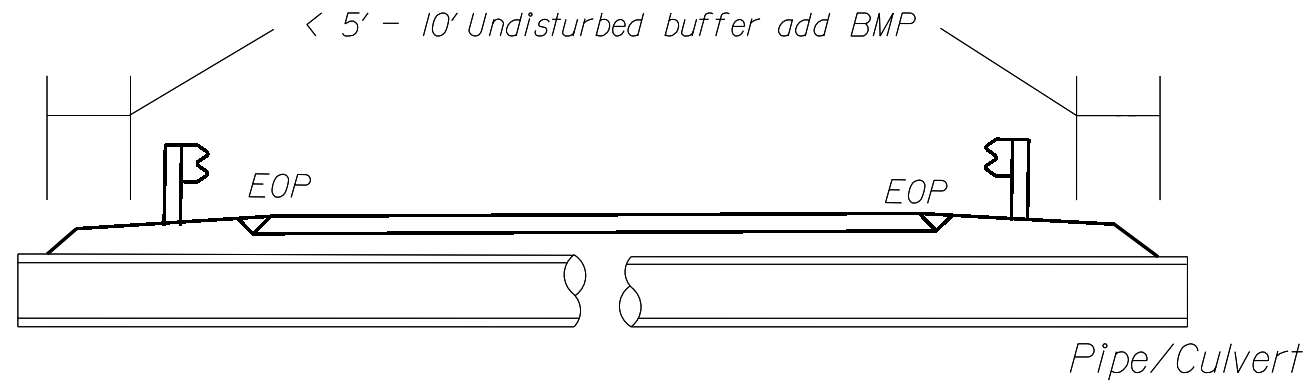


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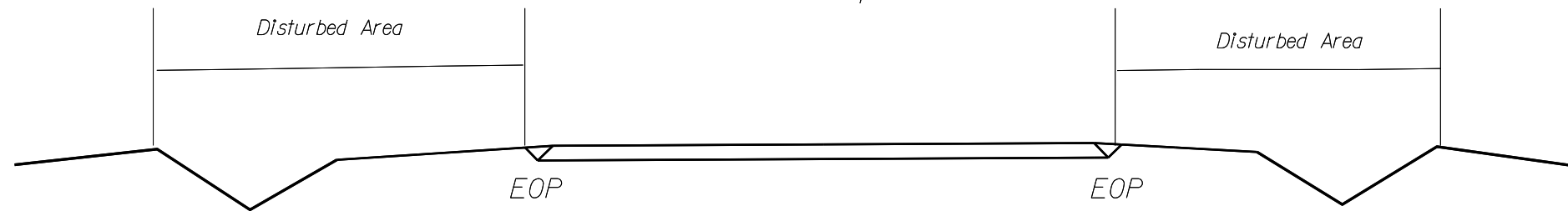
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

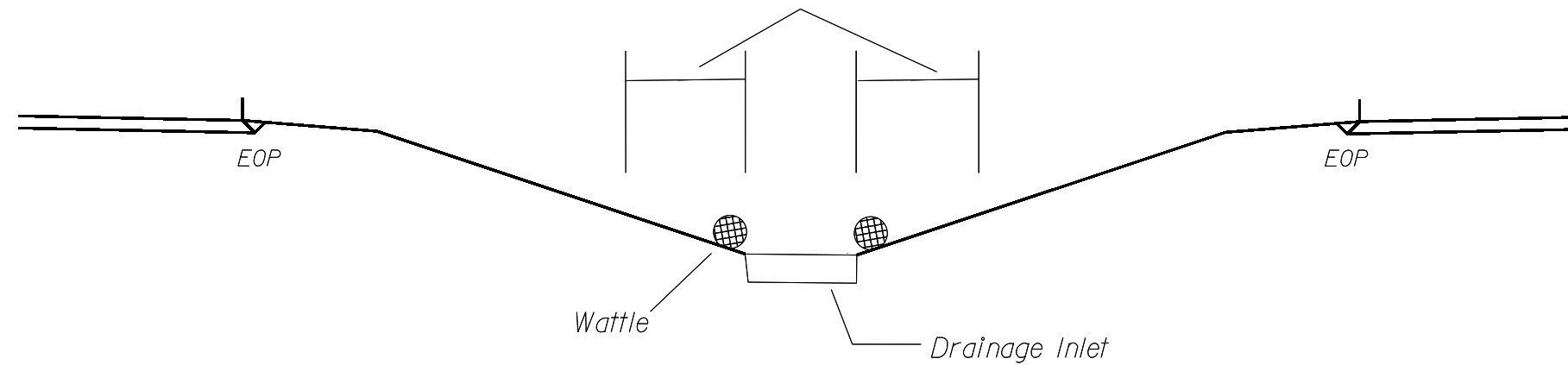
# EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

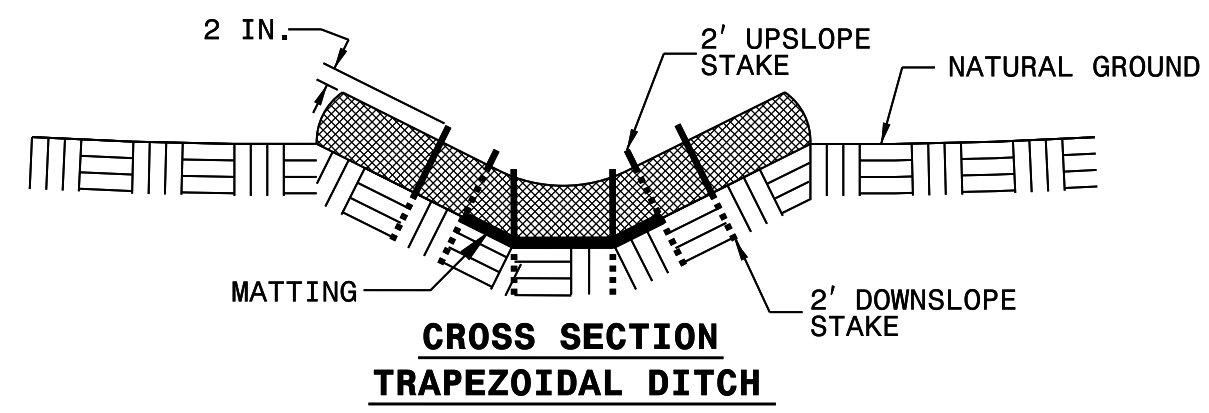
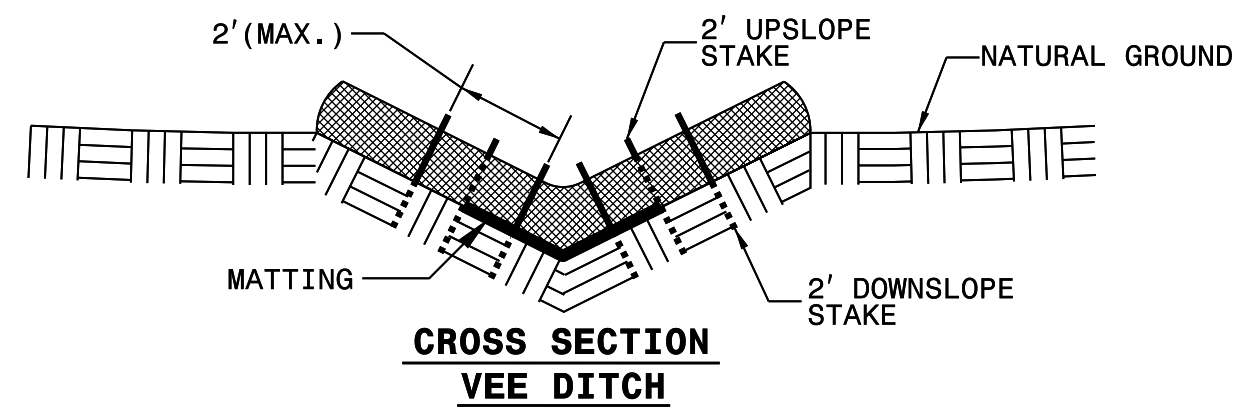
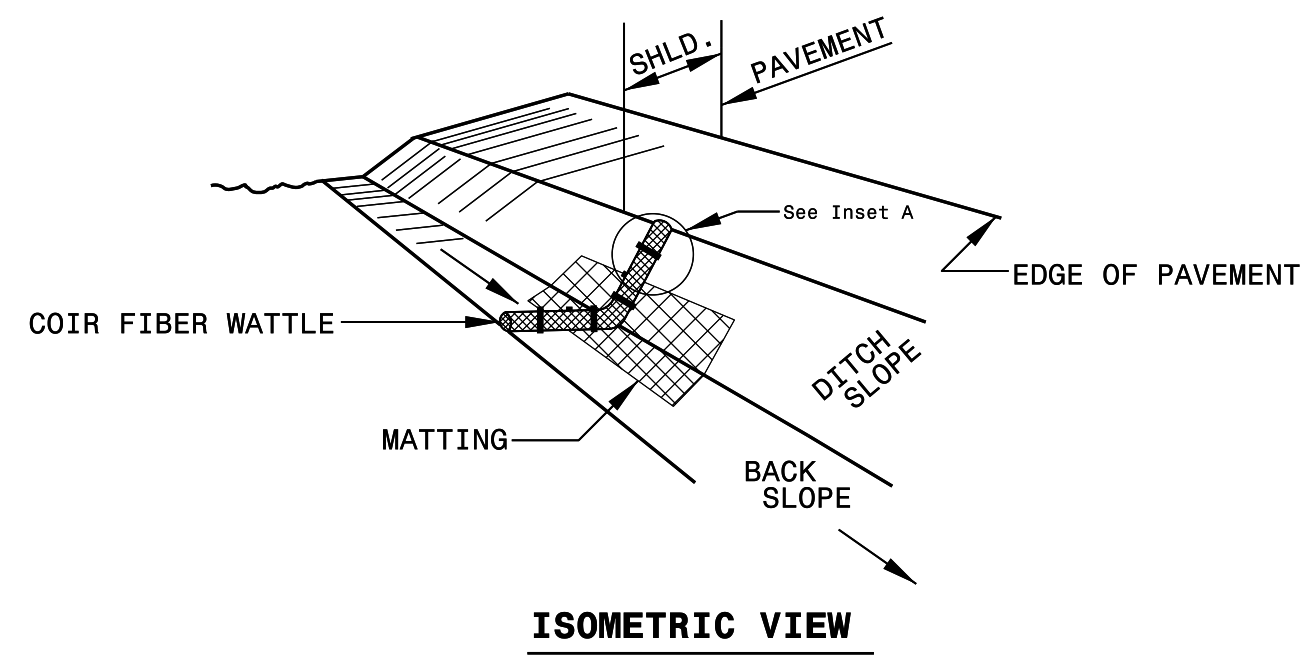


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

# COIR FIBER WATTLE DETAIL



**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.

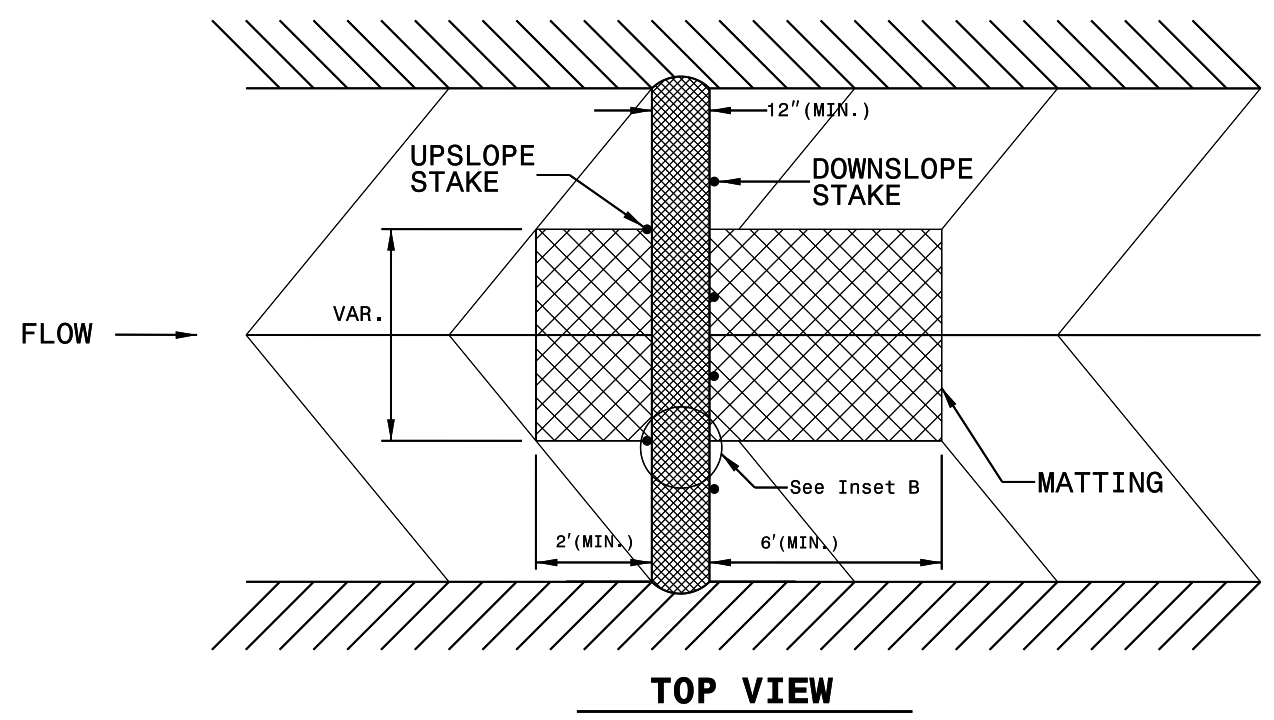
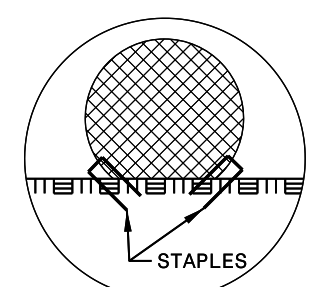
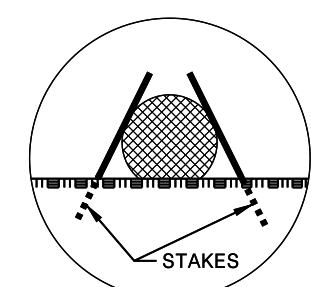
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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.



**DIVISION OF HIGHWAYS**  
**STATE OF NORTH CAROLINA**

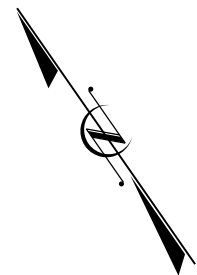
***SOIL STABILIZATION TIMEFRAMES***

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) 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 HOW ZONES.

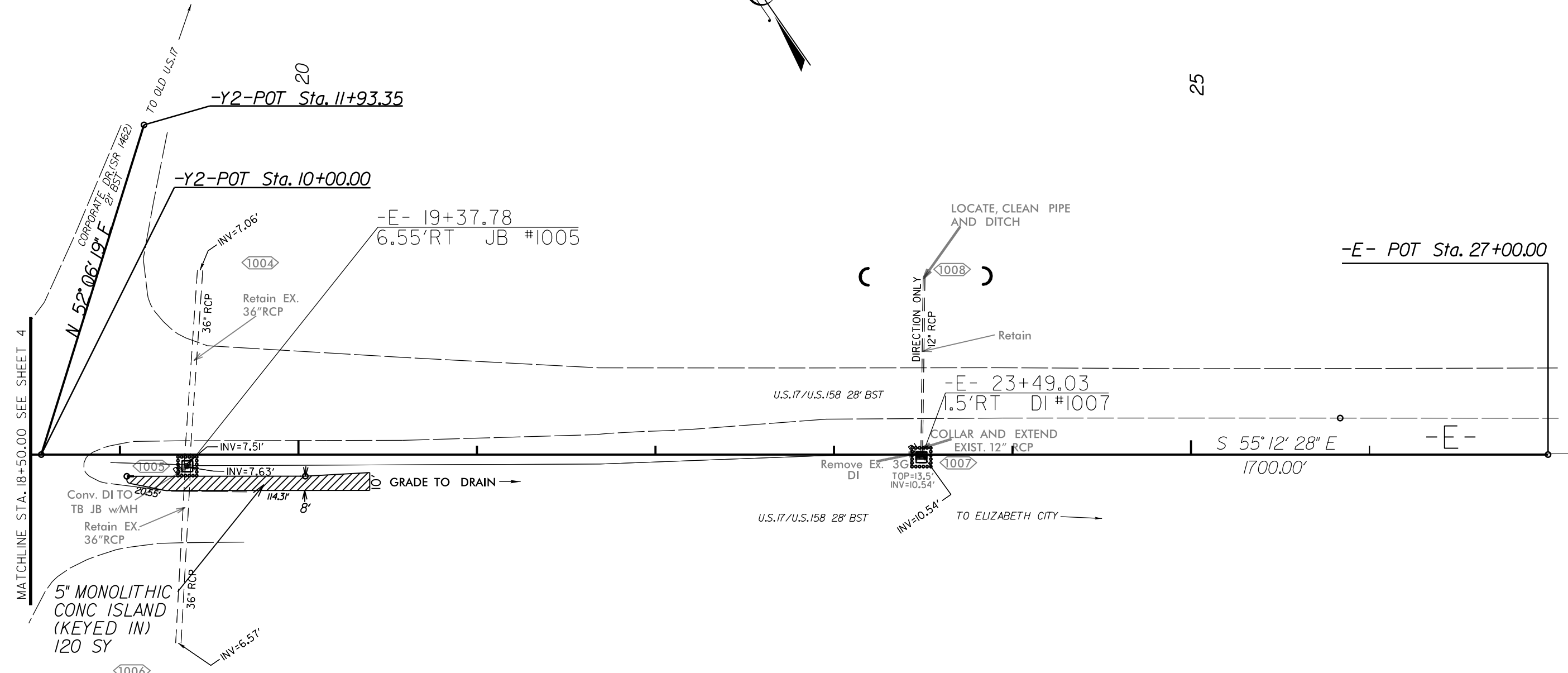




# HIGHWAY EROSION CONTROL



25





REVISIONS

MATCHLINE STA. 18+50.00 SEE SHEET 4

**RATIONAL METHOD**  
 DA=0.71 ACRES  
 C=0.36, I=6.4 IN/HR  
 Q<sub>10</sub>=1.6 CFS  
 s=0.008 FT./FT.  
 n=0.045  
 SS=3:1 SS=3:1  
 BASE=0 FT.  
 V<sub>10</sub>=1.3 FPS  
 d<sub>10</sub>=0.6 FT.  
 SPECIAL LATERAL V DITCH  
 -E- STA. 21+00 TO 23+25 CL

**LEGEND**

-  \*\*\*\*\* COIR FIBER WATTLE
-  \*\*\*\*\* ROCK INLET SEDIMENT TRAP

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 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 Jerms 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	

8/17/99  
 17-JUN-2020 11:15:15 D:\DC-200617\_psh EC-5.dgn  
 V:\SP-1070115 D:\DC-200617\_psh EC-5.dgn  
 17-JUN-2020 11:15:15 D:\DC-200617\_psh EC-5.dgn

<b>PROJ. REFERENCE NO.</b>	<b>SHEET NO.</b>
SS-4901BI	X-1A

**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 lump sum price for "Grading".**

**STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS**

**CROSS-SECTION SUMMARY**

Station	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
-E-		
11+29.64	0	0
12+00.00	5	6
12+50.00	4	9
13+00.00	4	18
13+50.00	5	27
14+00.00	5	33
14+50.00	4	33
15+00.00	5	33
15+50.00	4	35
16+00.00	3	31
16+50.00	3	24
17+09.40	5	21
17+50.00	6	8
18+00.00	7	2
18+09.40	1	0
19+00.00	1	1
19+50.00	4	14
20+03.86	5	27
20+50.00	3	24
21+00.00	2	27
21+50.00	3	25
22+00.00	4	23
22+50.00	4	25
23+00.00	4	32
23+50.00	4	37
24+00.00	5	32
24+50.00	5	22
25+00.00	5	13
25+83.56	4	8



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

20 20

15 15

10 10

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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

12+50.00

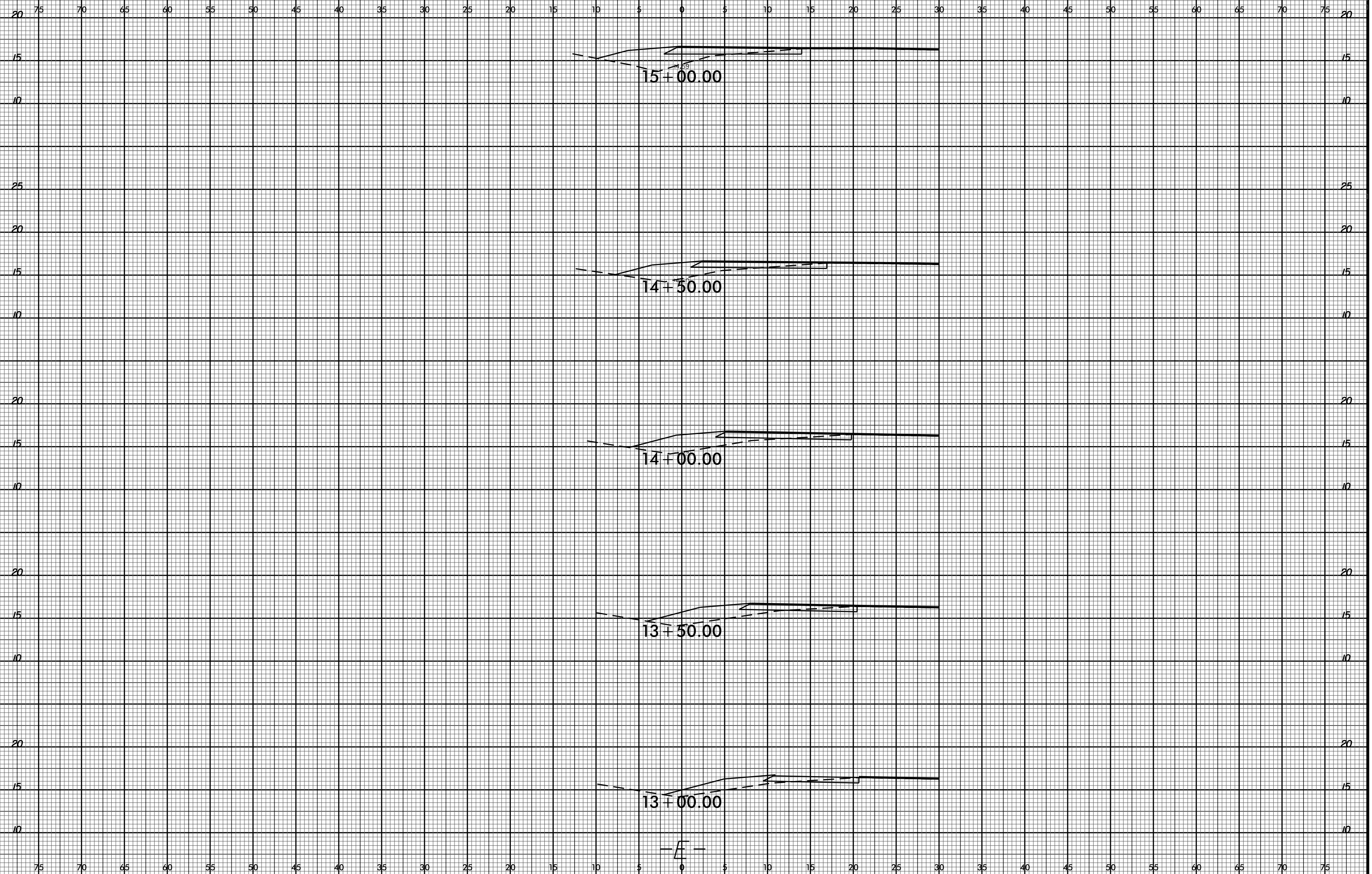
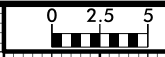
12+00.00

11+50.00

11+29.64

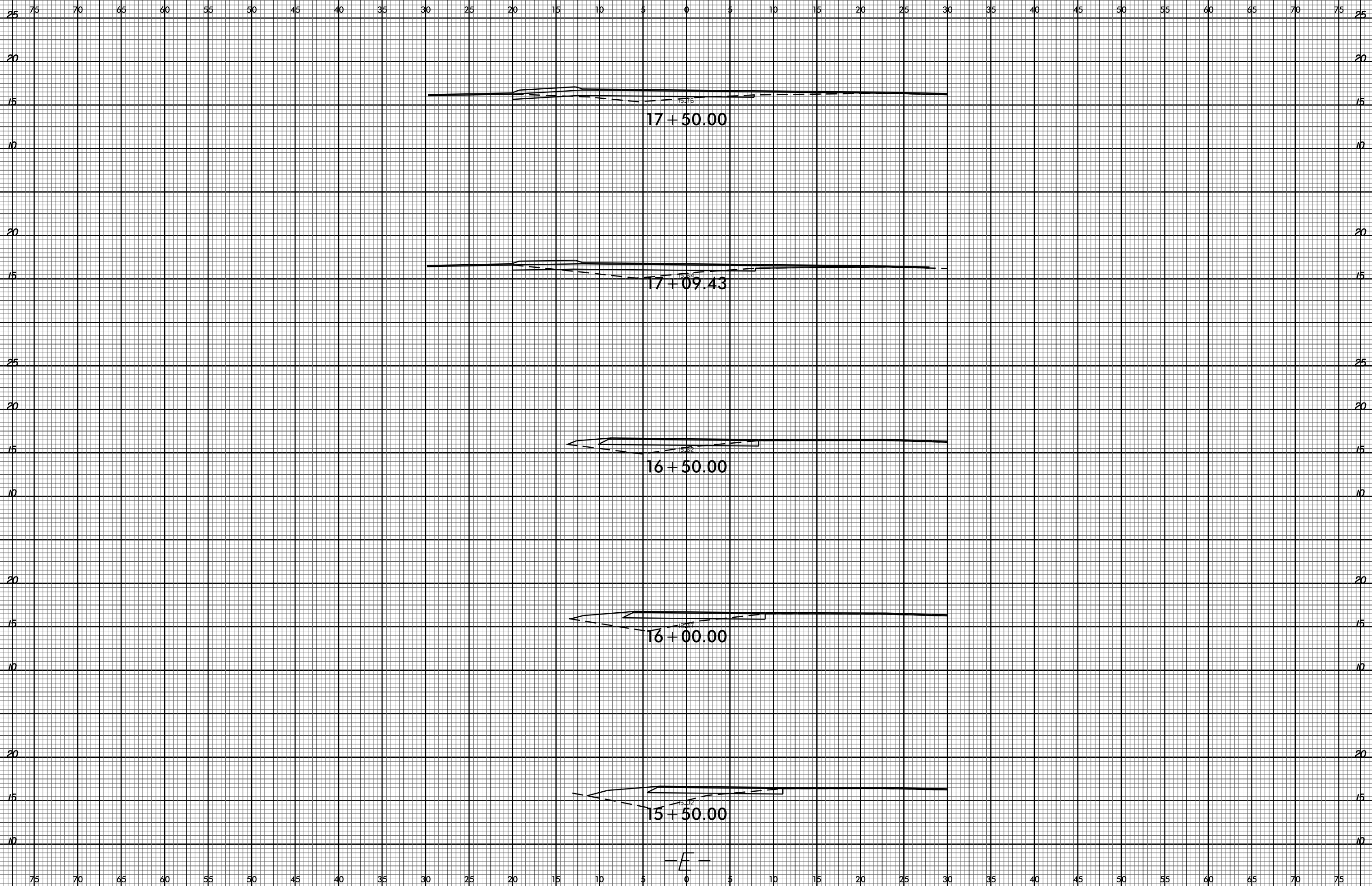
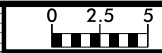
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-E-



08-JUL-2020 19:07  
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\$\$\$\$USERNAME\$\$\$

-E-





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

20

20

15

15

18+75.00

20

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15

15

18+50.00

20

20

15

15

18+25.00

20

20

15

15

18+09.43

10

10

20

20

15

15

18+00.00

20

20

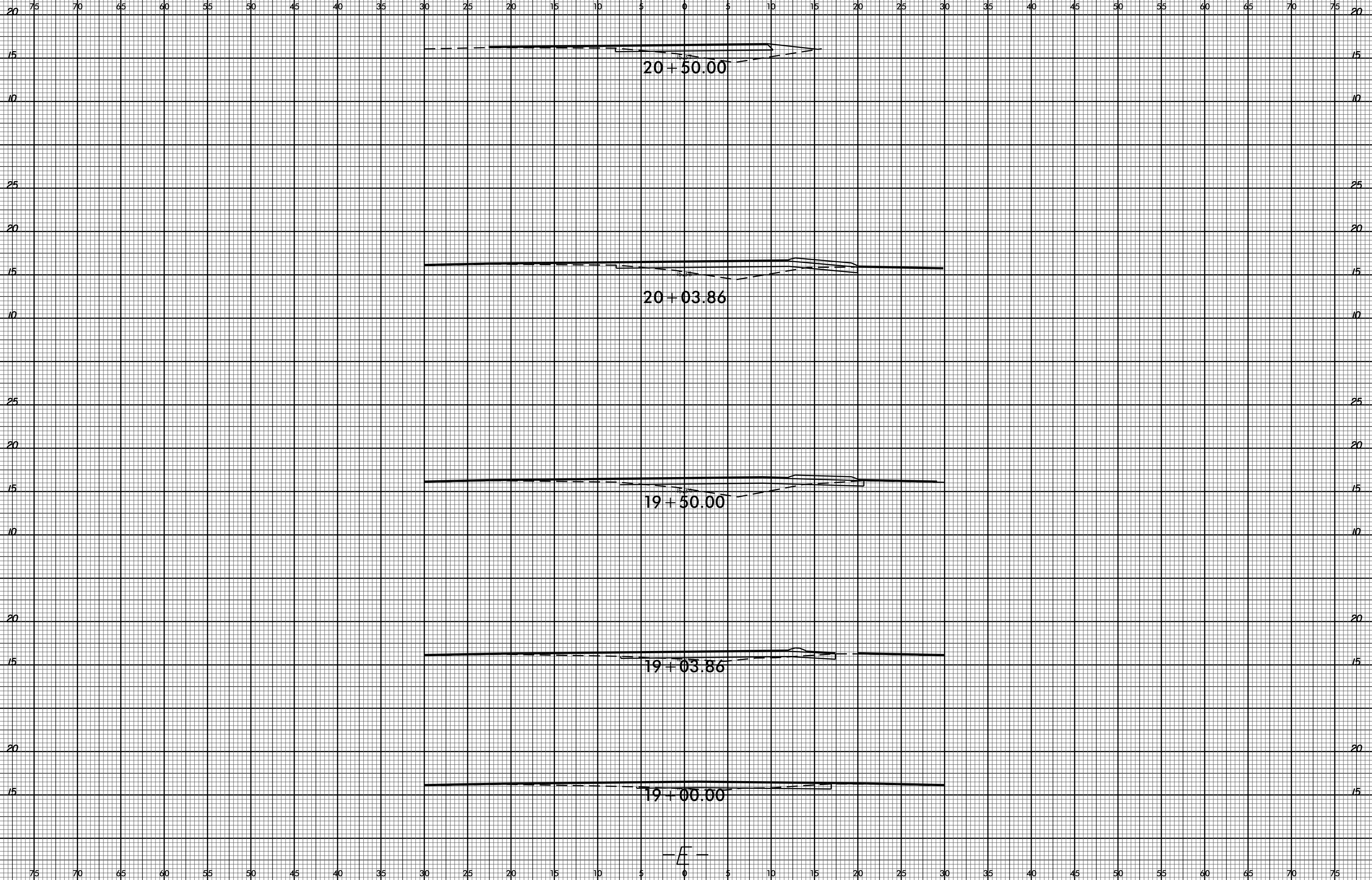
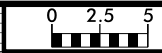
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15

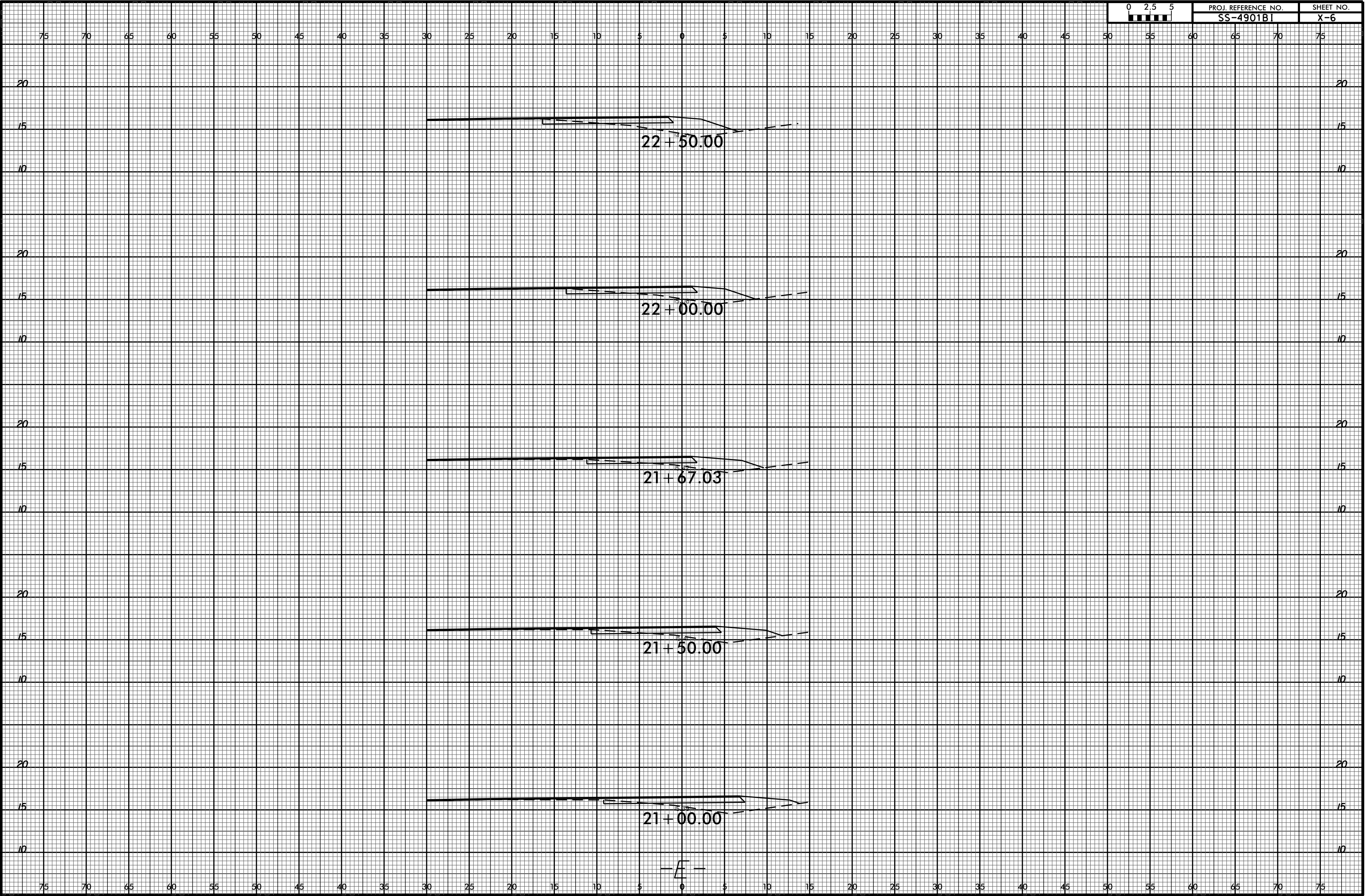
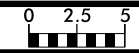
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-E-

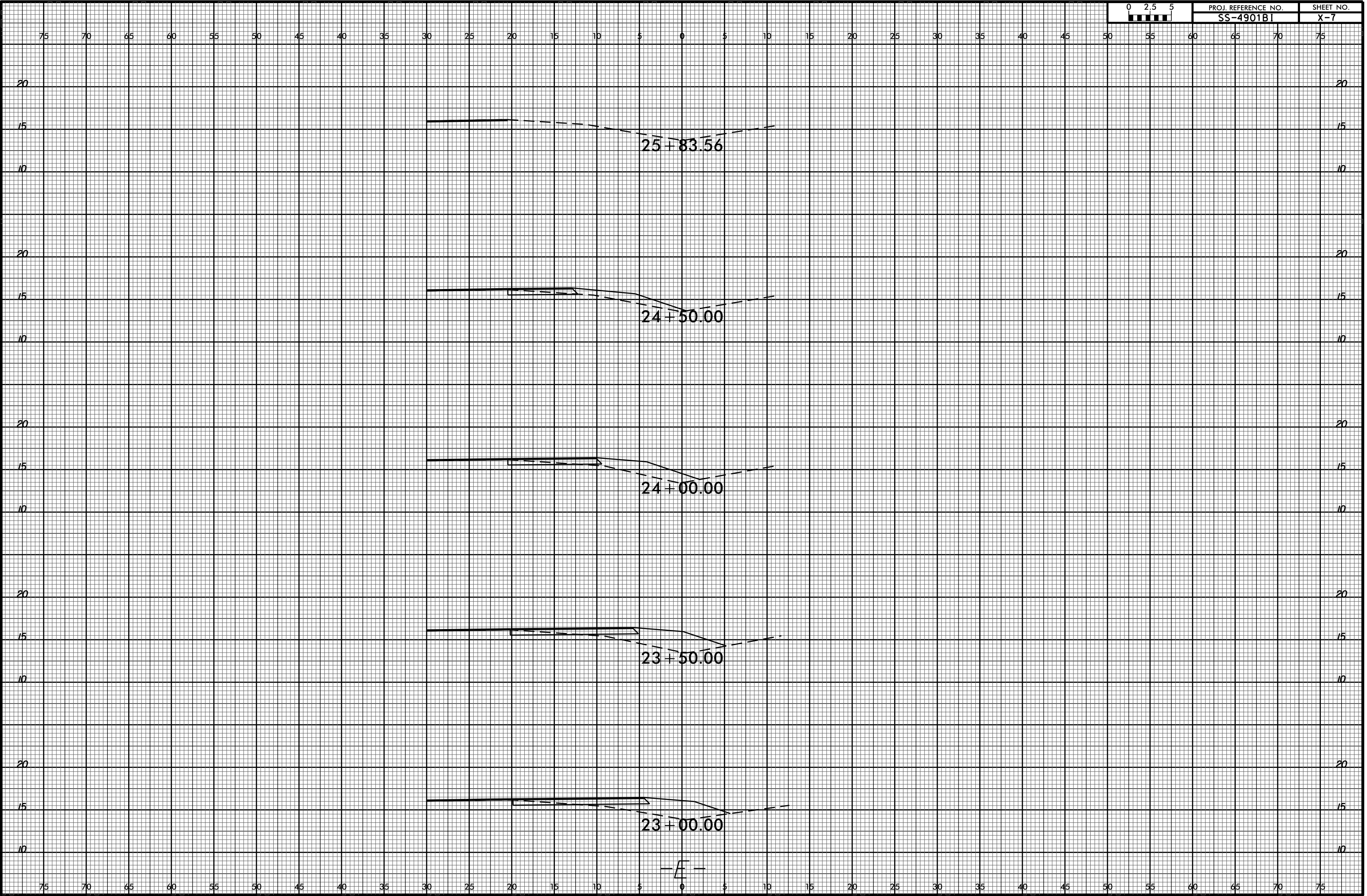
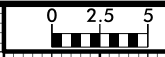
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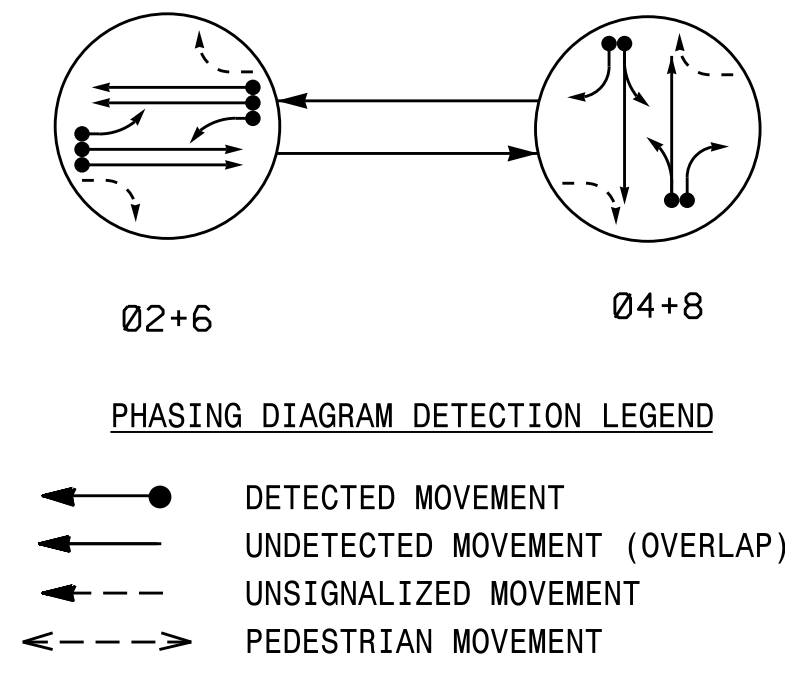
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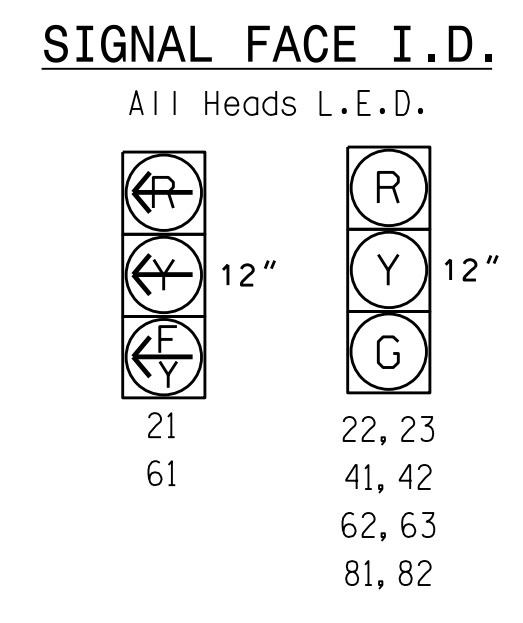


**PHASING DIAGRAM**

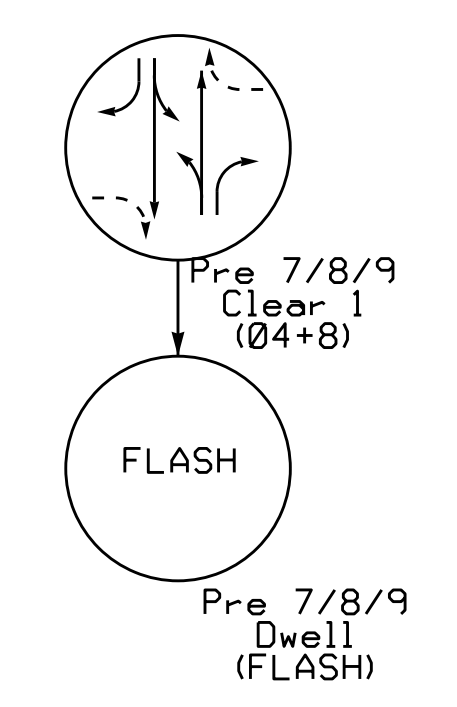


**TABLE OF OPERATION**

SIGNAL FACE	PHASE				
	02+6	04+8	PRE 7/8/9	PRE 7/8/9	FLASH
21	F	R	R	Y	Y
22, 23	G	R	R	Y	Y
41, 42	R	G	G	R	R
61	F	R	R	Y	Y
62, 63	G	R	R	Y	Y
81, 82	R	G	G	R	R



**FAILURE PREEMPT (High Priority)**



**LONG VEHICLE OVERSPEED DETECTION SYSTEM NORTHSTAR NQ4 LOOP & DETECTION INSTALLATION CHART**

INDUCTIVE LOOPS					DETECTOR UNITS						
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW EXISTING	LOOP NO.	SIZE (ft)	CHANNEL	NEMA PHASE	TIMING	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN?
LV1	6X6	4	1015	- X	1	1	1	6*	NONE - SEC.	ALL	NO
LV2	6X6	4	999	- X	1	1	2	6*	NONE - SEC.	ALL	NO
LV3	6X6	4	1015	- X	2	2	1	6*	NONE - SEC.	ALL	NO
LV4	6X6	4	999	- X	2	2	2	6*	NONE - SEC.	ALL	NO
LV5	6X6	4	1015	- X	1	1	1	2*	NONE - SEC.	ALL	NO
LV6	6X6	4	999	- X	1	1	2	2*	NONE - SEC.	ALL	NO
LV7	6X6	4	1015	- X	2	2	1	2*	NONE - SEC.	ALL	NO
LV8	6X6	4	999	- X	2	2	2	2*	NONE - SEC.	ALL	NO
LVODS THRESHOLD SPEED (MPH)					55					2/6	
LVODS EXTEND TIME					12 SEC.					2/6	

\* Phase hold output to controller

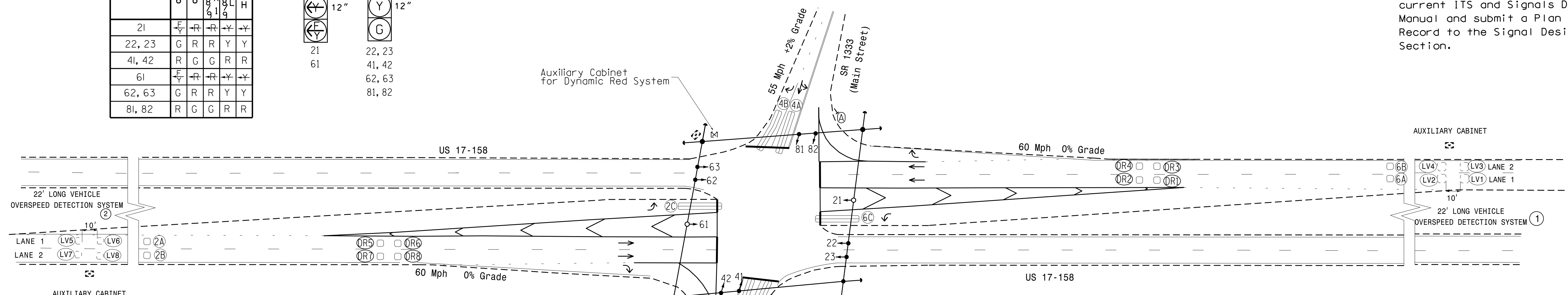
**OASIS 2070 LOOP & DETECTOR INSTALLATION**

INDUCTIVE LOOPS				DETECTOR PROGRAMMING								
LOOP	SIZE (FT)	TURNS	DISTANCE FROM STOPBAR (FT)	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME	NEW CARD
2A	6X6	6	520	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	6	520	Y	2	Y	Y	-	-	-	-	Y
2C	6X40	2-4-2	+5	Y	2	Y	Y	-	-	-	3	Y
4A	6X40	2-4-2	+5	Y	4	Y	Y	-	-	-	3	Y
4B	6X40	2-4-2	+5	Y	4	Y	Y	-	-	-	10	Y
6A	6X6	6	520	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	6	520	Y	6	Y	Y	-	-	-	-	Y
6C	6X40	2-4-2	+5	Y	6	Y	Y	-	-	-	3	Y
8A	6X40	2-4-2	0	Y	8	Y	Y	-	-	-	3	Y
8B	6X40	2-4-2	0	Y	8	Y	Y	-	-	-	10	Y

2 Phase Fully Actuated Isolated

**NOTES**

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.



**FAILURE PREEMPT**

FUNCTION	PRE 7	PRE 8	PRE 9
Interval 1 - Green Clear	15	15	15
Interval 1 - Yellow Clear	0.0*	0.0*	0.0*
Interval 1 - Red Clear	0.0*	0.0*	0.0*
Interval 2 - Green Clear	15	15	15
Interval 2 - Yellow Clear	0.0*	0.0*	0.0*
Interval 2 - Red Clear	0.0*	0.0*	0.0*
Interval 3 - Dwell Green	255	255	255
Interval 3 - Dwell Yellow	0.0*	0.0*	0.0*
Interval 3 - Dwell Red	0.0*	0.0*	0.0*
Interval 5 - Exit Green	1	1	1
Interval 5 - Yellow	0.0	0.0	0.0
Interval 5 - Red	0.0	0.0	0.0
Exit Phase(s)	2,6	2,6	2,6
Priority	High	High	High
Delay Time	0	0	0
Min Green Before Pre	14	14	14
Ped Clear Before Pre	0	0	0
Yellow Clear Before Pre	0.0*	0.0*	0.0*
Red Clear Before Pre	0.0*	0.0*	0.0*
Dwell Min Time	14	14	14
Flash Dwell Interval?	Y	Y	Y
Enable Backup Protection	N	N	N
Ped Clear Through Yellow	N	N	N
Omit Overlaps	-	-	-

\* Time defaults to time used for phase during normal operation

**OASIS 2070 TIMING CHART**

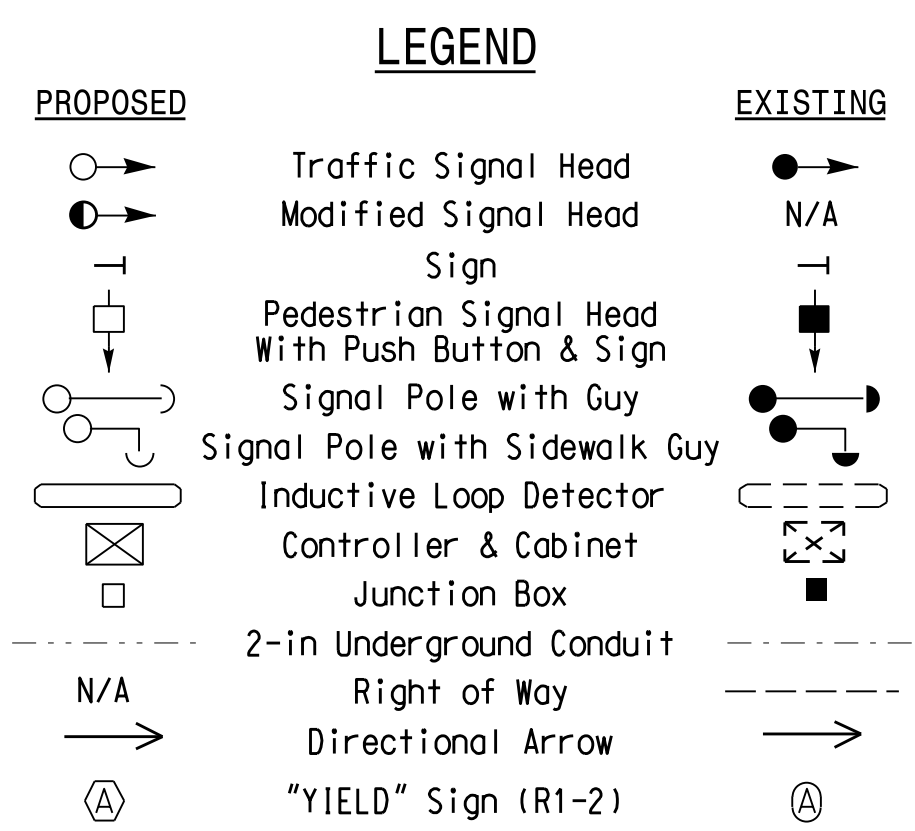
FEATURE	PHASE			
	2	4	6	8
Min Green 1 *	14	7	14	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	60	30	60	30
Yellow Clearance	5.5	5.0	5.5	5.0
Red Clearance	1.0	1.5	1.0	1.5
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	1.5	-	1.5	-
Max Variable Initial *	56	-	56	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	30	-	30	-
Minimum Gap	3.6	-	3.6	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

\* 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.

**DYNAMIC RED EXTENSION SYSTEM NORTHSTAR NQ4 LOOP & DETECTION INSTALLATION CHART**

INDUCTIVE LOOPS					DETECTOR UNITS						
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW EXISTING	LOOP NO.	SIZE (ft)	CHANNEL	NEMA PHASE	TIMING	PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN?
DR1	6X6	5	306	X -	1	1	1	6	NONE - SEC.	ALL	NO
DR2	6X6	5	290	X -	1	1	2	6	NONE - SEC.	ALL	NO
DR3	6X6	5	306	X -	2	2	1	6	NONE - SEC.	ALL	NO
DR4	6X6	5	290	X -	2	2	2	6	NONE - SEC.	ALL	NO
DR5	6X6	5	306	X -	1	1	1	2	NONE - SEC.	ALL	NO
DR6	6X6	5	290	X -	1	1	2	2	NONE - SEC.	ALL	NO
DR7	6X6	5	306	X -	2	2	1	2	NONE - SEC.	ALL	NO
DR8	6X6	5	290	X -	2	2	2	2	NONE - SEC.	ALL	NO
SET SPEED (MPH)					55					2/6	
SET LENGTH (FT)					1					2/6	
ALARM TIME (SEC)					5*					2/6	

\* If output is present during associated phase's red clear, place stop time on red clearance interval.



Signal Upgrade Corr. File No. 01-17-48512

US 17-158 at SR 1333 (Main Street Extension)

Division 1 Pasquotank County Elizabeth City

Prepared by: Jeff Spence Reviewed by: MEL

DATE: October 2018

Scale: 1"=50'

Seal: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042608

DocuSigned by: Megan Elmore 12/12/2018

SIG. INVENTORY NO. 01-0658

13-1485-2018 10/23  
 10/26/2018 10:59:59 AM  
 10/26/2018 10:59:59 AM  
 10/26/2018 10:59:59 AM