

EROSION CONTROL & PIPE INSTALLATION SCHEDULE

TROUT BUFFER ZONE SEQUENCE

GENERAL E&SC NOTES

GROUND STABILIZATION CHART

Erosion Control Schedule and Notes

1. Generally, the order of installation of the erosion control measures will be as follows:
 - A. Temporary silt basins shall be installed before clearing and grubbing begins.
 - B. Silt fences and temporary silt ditches shall be installed after clearing and before grading.
 - C. Temporary stone ditch checks with PAM or wattles with PAM shall be installed in all disturbed areas as soon as the disturbance begins.
 - D. Final stone ditch checks or wattles shall be installed as soon as ditch line is established.
 - E. Pipe outlet and inlet protection will be done as soon as the pipe is installed.
 - F. Other permanent erosion control measures are to be implemented as soon as practical.
2. Temporary rock silt checks, type B will be spaced by percent grade as shown in the erosion control plan.
3. No. 5 stone, or equivalent, will be used in conjunction with the temporary rock silt checks in locations where water is leaving the project or entering a pipe.
4. All devices are to be cleaned out when half full.
5. Establish permanent vegetation per ground stabilization chart.

Notes:

For silt basin size see the attached erosion control plans.

PAM is to be placed on all Type A checks and wattles in the erosion control chain except for the final device in HWQ and Trout projects.

Wet Pipe Installation Schedule and Notes

1. Prior to installing any E&SC measures identify permit conditions and impact area limits.
2. Install erosion control devices.
3. Manage the water course. The pipe must be placed in the dry. Install dewatering measures.
4. Remove material and existing pipe while limiting material and sediment from entering stream and escaping the project.
5. Excavation of stream channel shall not exceed 10' on either side of new pipe or culvert unless indicated on permit.
6. Per permit conditions for Corps of Engineers and the Wildlife Resources Commission, all pipes in streams 48" or greater must be buried 12" below streambed elevation. Pipes less than 48" must be buried with 20% of the diameter below streambed elevation.
7. Place the new pipe and compact backfill.
8. Install slope protection on the outlet and inlet ends of the pipe. Also complete installation of erosion control measures and perform maintenance as needed on existing measures.
9. Establish permanent vegetation per ground stabilization chart.
10. More information on wet pipe installation can be found in the BMP manual section 4.2 "Pipe & Culvert installation"

General Erosion Control Sequence & Notes for NC DOT Projects in Trout Buffer Zones

1. Prior to installing any E&SC measures identify permit conditions and impact area limits. Review trout buffer variance approval conditions for any special provisions.
2. All materials should be on the hand before work is commenced.
3. Install EC devices
4. Work within the buffer zone should be sequenced to minimize the length of time that disturbed areas are exposed. Stream bank stabilization, which includes the area from the edge of water to the top of bank, should be phased so that each day's work is a completed work, including provision of adequate ground cover.
5. Graded slopes and fills within the trout buffer zone will within 7 calendar days of completion of any phase of grading be planted or otherwise provided with temporary or permanent ground cover, devices, or structures sufficient to restrain erosion.
6. Graded slopes and fills within the trout buffer zone (excluding road shoulders) shall be protected with rolled erosion control product, bonded fiber matrix, or flexible growth medium after seeding.

Notes:

Silt fence backed by woven wire, with a post spacing of 6 feet, shall be used instead of standard silt fence in trout buffer zone. Special sediment control fence shall be used in areas where bedrock is encountered which prohibits the proper anchoring of fabric, and in low points of the silt fence in 3-foot sections to allow for concentrated flows.

The disturbed areas within the stream buffer shall be restored to native vegetation characteristic of an undisturbed buffer to the extent practical upon completion of construction.

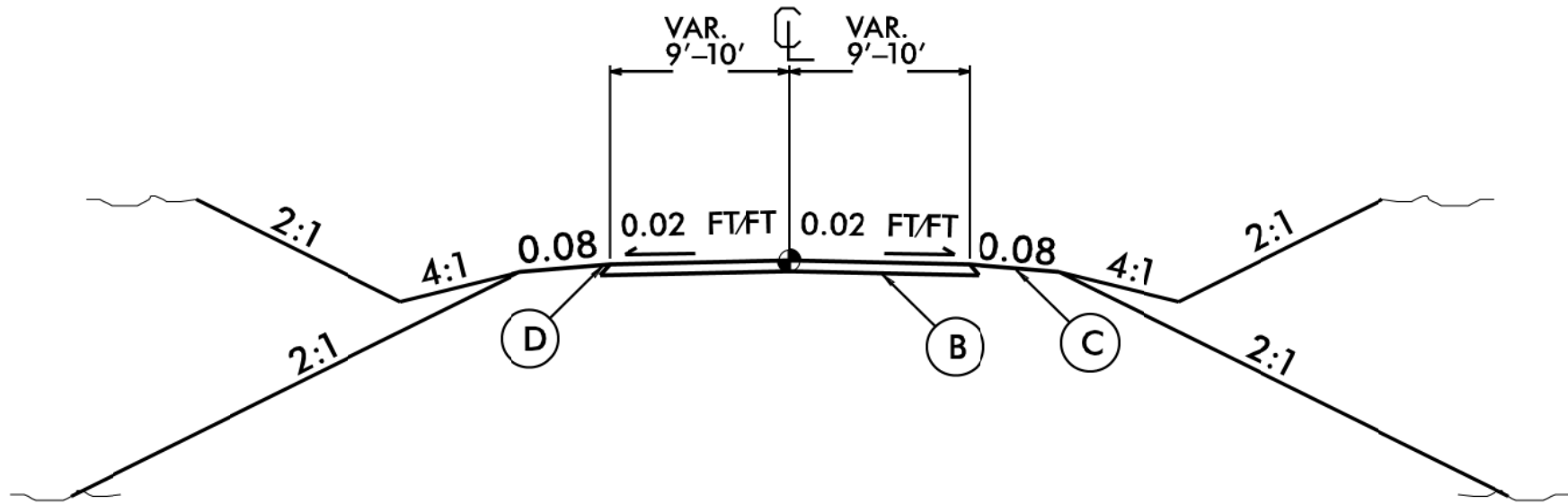
Flyrock protection such as blast mats should be provided for blasting in close proximity to streams.

PAM is to be placed on all Type A checks and wattles in the erosion control chain except for the final device in HWQ and Trout projects.

GROUND STABILIZATION CHART

Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10 ft. 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 flatter than 4:1	14 days	None (except for perimeters and HQW zones)

<u>Std. #</u>	<u>Description</u>	<u>Symbol</u>
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	Temporary Rock Silt Check Type-B	
	Wattle	
	Infiltration Basin	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	



B 8" (compacted) ABC

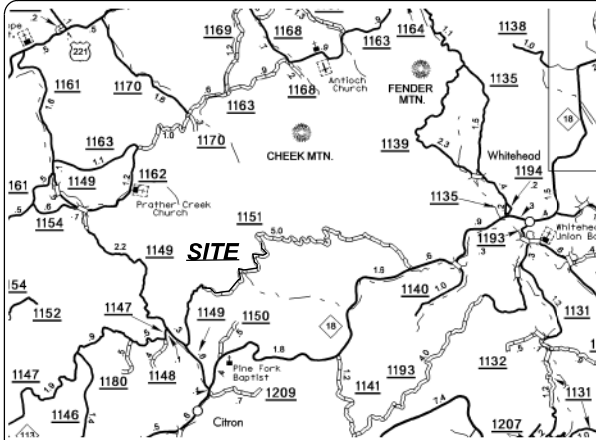
C Shoulder varies: Cut side = 4' shoulder on .08 ft/ft
 transition to a 4:1 slope for a distance of 4'
 to center of the ditch line
 Fill side = 6' to shoulder break

D Base should be 1' wider than
 overall proposed road width

PROPOSED 20' TAR & GRAVEL

TYPICAL SECTION

SR: 1511
 NAME: "CHEEK MOUNTAIN ROAD"
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY



VICINITY MAP (no scale)

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS PLAN FOR PROPOSED HIGHWAY EROSION CONTROL

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	11C.003013	ECS 1	16

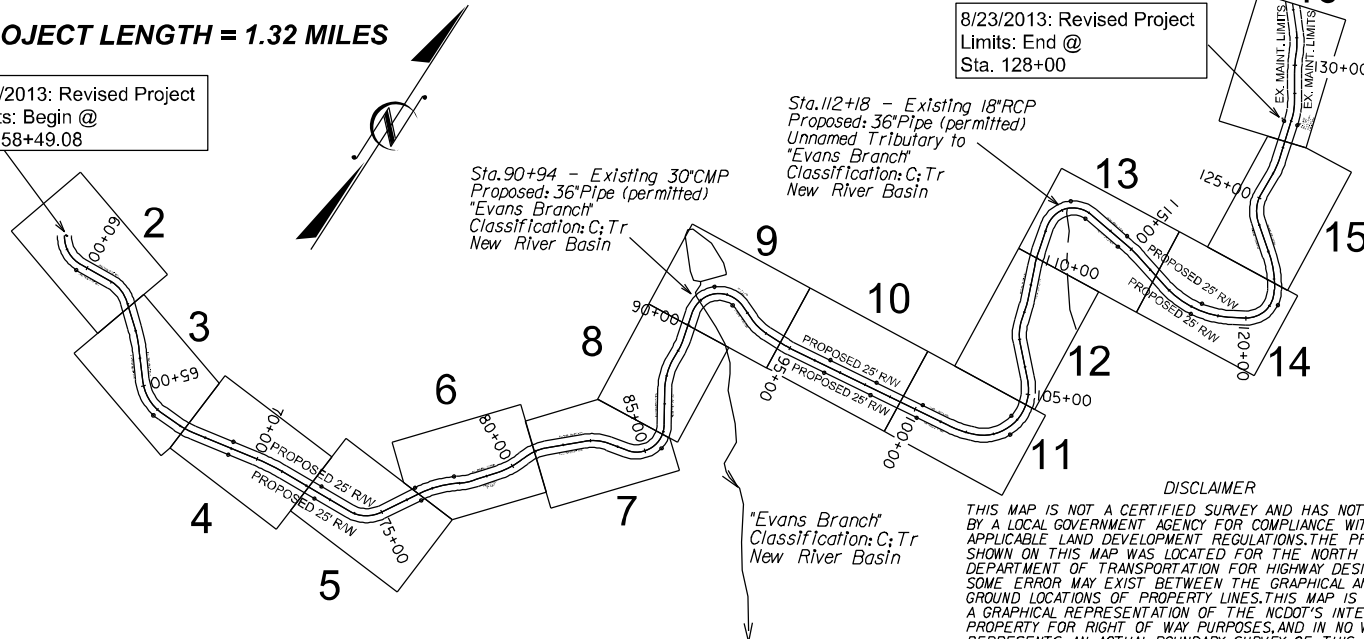
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1650.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle/Cair Fiber Wattle	
	Wattle/Cair Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

PROJECT LENGTH = 1.32 MILES

8/23/2013: Revised Project Limits: Begin @ Sta. 58+49.08

8/23/2013: Revised Project Limits: End @ Sta. 128+00



DISCLAIMER
THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS. THE PROPERTY SHOWN ON THIS MAP WAS LOCATED FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FOR HIGHWAY DESIGN PURPOSES. SOME ERROR MAY EXIST BETWEEN THE GRAPHICAL AND ACTUAL GROUND LOCATIONS OF PROPERTY LINES. THIS MAP IS TO BE USED AS A GRAPHICAL REPRESENTATION OF THE NCDOT'S INTENT TO ACQUIRE PROPERTY FOR RIGHT OF WAY PURPOSES, AND IN NO WAY REPRESENTS AN ACTUAL BOUNDARY SURVEY OF THIS PROPERTY.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT (TROUT WATERS)

Refer To E. C. Special Provisions for Special Considerations.

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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.

Prepared in the Office of:
DIVISION OF HIGHWAYS
419 OAKLAND DRIVE, ELKIN, NC 28621

Prepared By: Stan B. Darnell
Date Prepared: 10/23/2013 12/12/13
Level III A #: _____
Level III A Expiration: _____
Reviewed By: Scott Pipes
Date Reviewed: 12/19/2013
Level III A #: 237
Level III A Expiration: 12/31/2013

REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 02

8/23/2013: Revised Project Limits
 Begin @ Sta. 58+49.08
 End @ Sta. 128+00

BEGIN PROJECT
 POT Sta. 58+49.08

SECTION 59+77 - 61+64 Left
 30-day option used

RIPRAP Ditch Liner Required



1 Baffle Required
 8 x 4 x 3
 ID 2.3

STA. 61+64
 Existing 18" CMP
 REPLACE

1 Baffle Required
 8 x 4 x 3
 ID 2.1

End Existing Tar & Gravel
 STA. 60+00

BEGIN CONSTRUCTION
 LONG. = 81.2198'
 LAT. = 26.4549'

PC Sta. 58+52.57

25' EXISTING R/W
 20' Tar & Gravel
 25' EXISTING R/W

S 33° 49' 58" E

PROPOSED 25' RW
 10.8%

PROPOSED 25' RW
 N 86° 49' 14" E

1 Baffle Required
 8 x 4 x 3
 ID 2.4

PC Sta. 60+98.20
 PT Sta. 61+96.01

1 Baffle Required
 8 x 4 x 3
 ID 2.2

SECTION 59+77 - 61+64 Right
 30-day option used

PI Sta 59+20.95
 $\Delta = 59^\circ 20' 47.6" (LT)$
 $D = 47' 44' 47.3"$
 $L = 124.30'$
 $T = 68.37'$
 $R = 120.00'$

EC NOTES:
 1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.

PI Sta 61+49.67
 $\Delta = 44^\circ 07' 38.1" (RT)$
 $D = 45' 06' 53.2"$
 $L = 97.81'$
 $T = 51.48'$
 $R = 127.00'$

WATCHLINE SEE SHEET #1

WATCHLINE SEE SHEET #3

GRAPHIC SCALE



SR: 1151

NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL

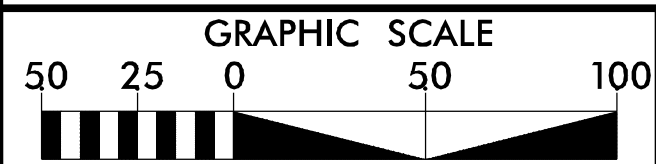
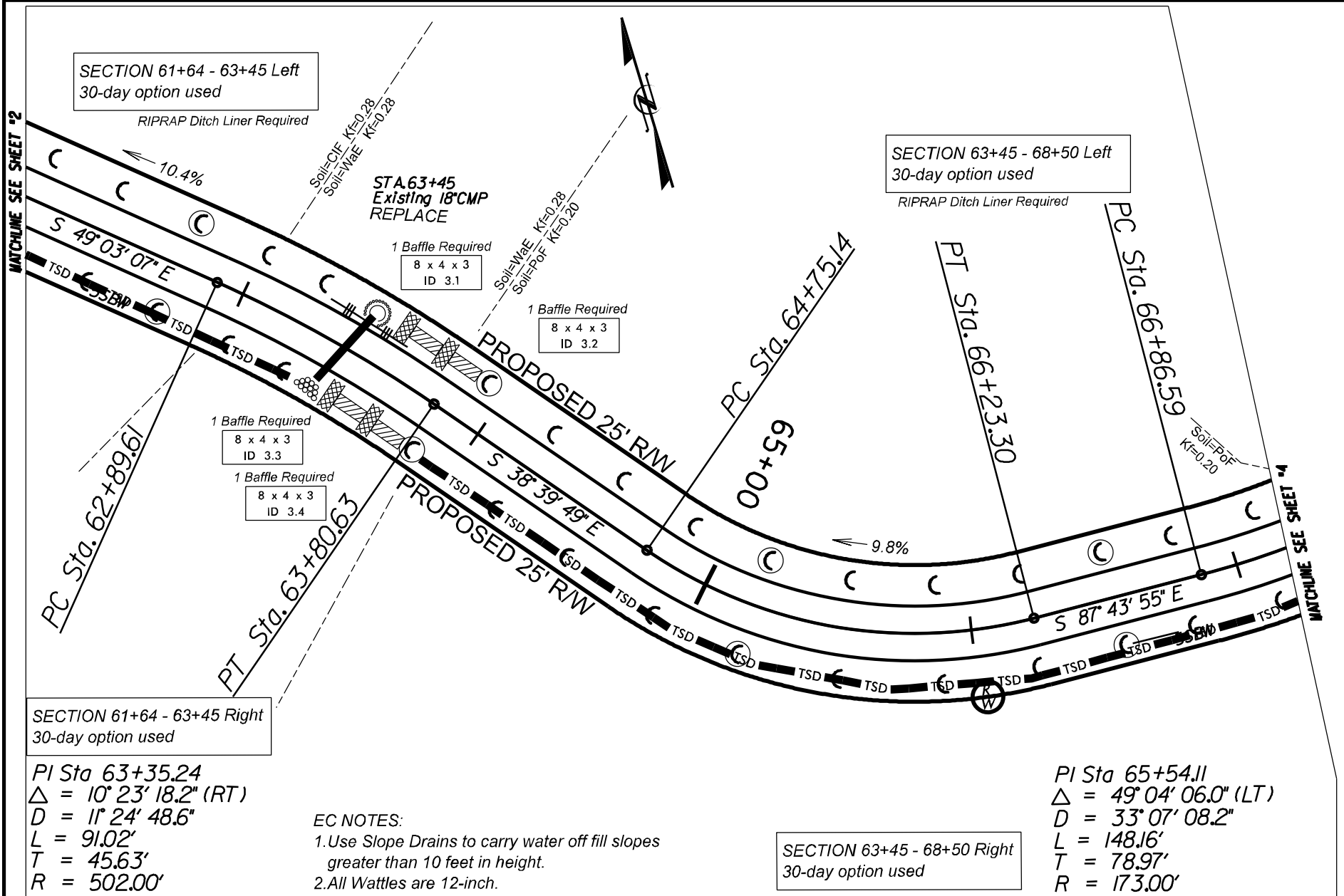
CHECK BY: CS PIPES

DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO
11C.033013

SHEET NO.
ECS 03



SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

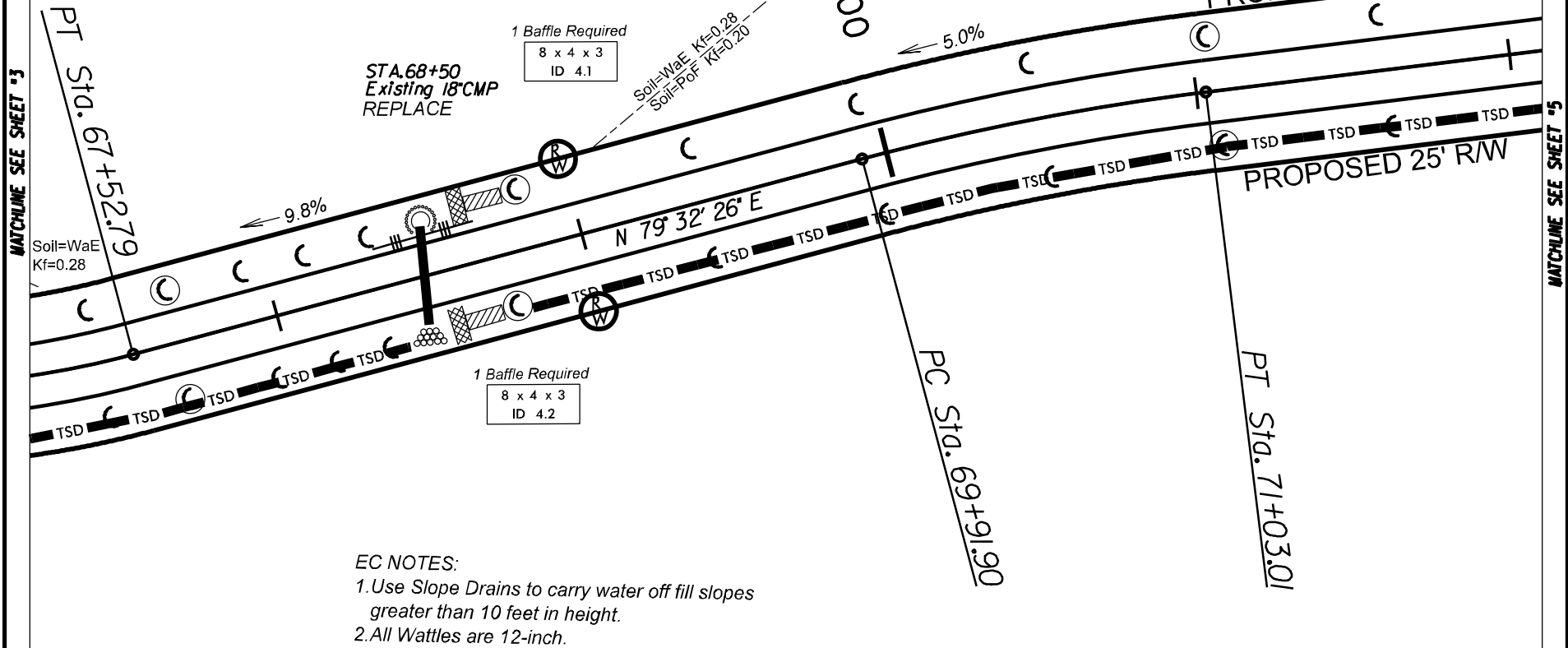
PROJECT REFERENCE NO.	SHEET NO.
11C.033013	ECS 04

PI Sta 67+19.83
 $\Delta = 12^\circ 43' 38.5''$ (LT)
 $D = 19' 13' 36.4''$
 $L = 66.20'$
 $T = 33.23'$
 $R = 298.00'$

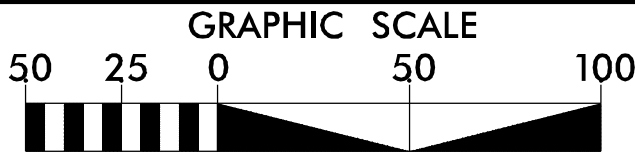
PI Sta 70+47.54
 $\Delta = 7^\circ 57' 27.6''$ (RT)
 $D = 7' 09' 43.1''$
 $L = 111.11'$
 $T = 55.64'$
 $R = 800.00'$

SECTION 68+50 - 74+70 Left
 30-day option used

PSRM Ditch Liner Required

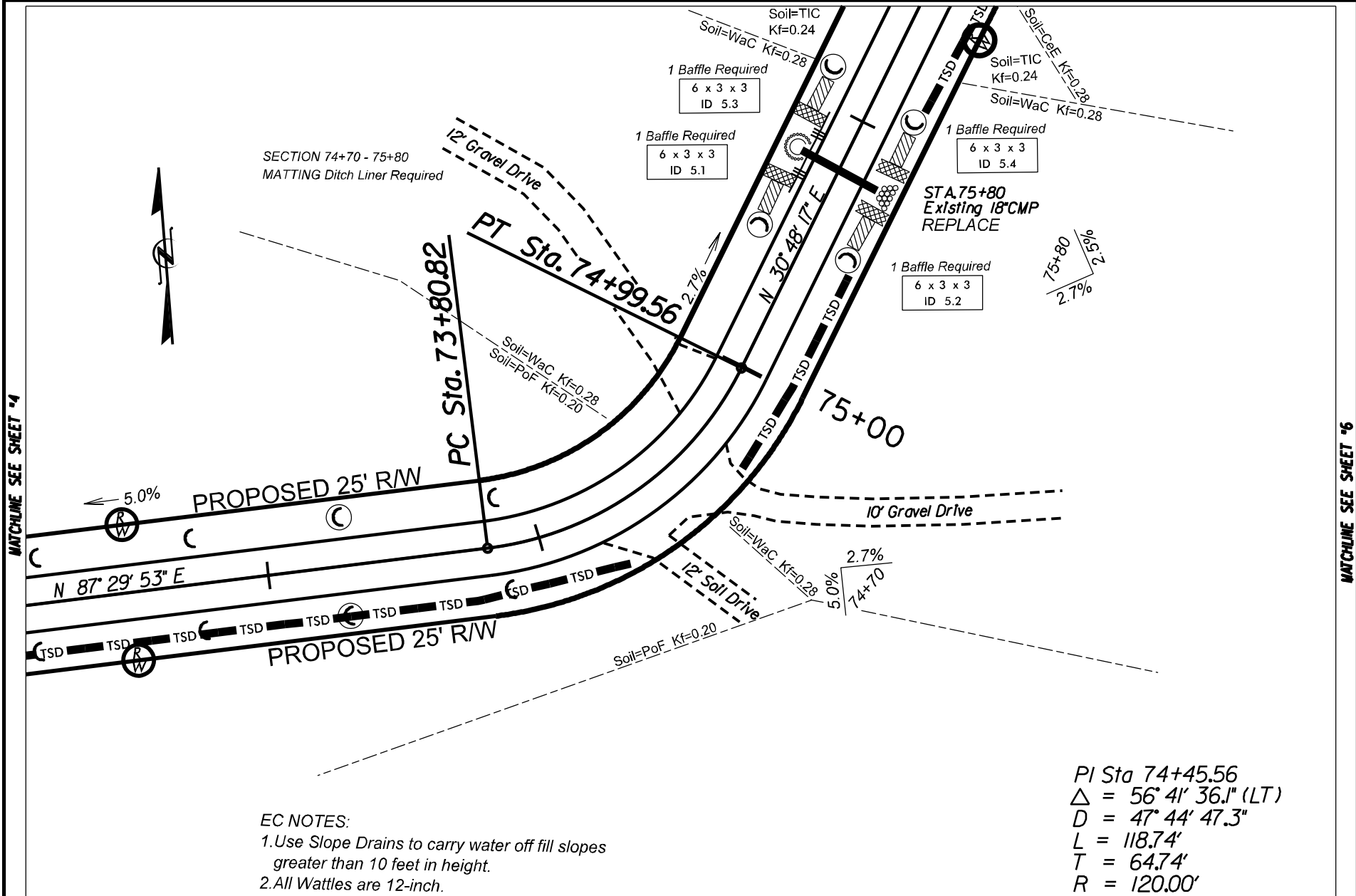


EC NOTES:
 1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.



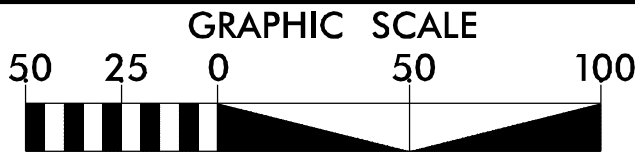
SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013



MATCHLINE SEE SHEET '4

MATCHLINE SEE SHEET '6



SR: 1151
NAME: CHEEK MOUNTAIN ROAD
TOWNSHIP: CRANBERRY
COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
CHECK BY: CS PIPES
DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 06

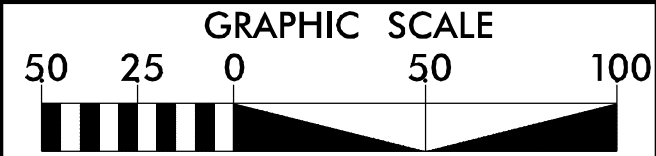
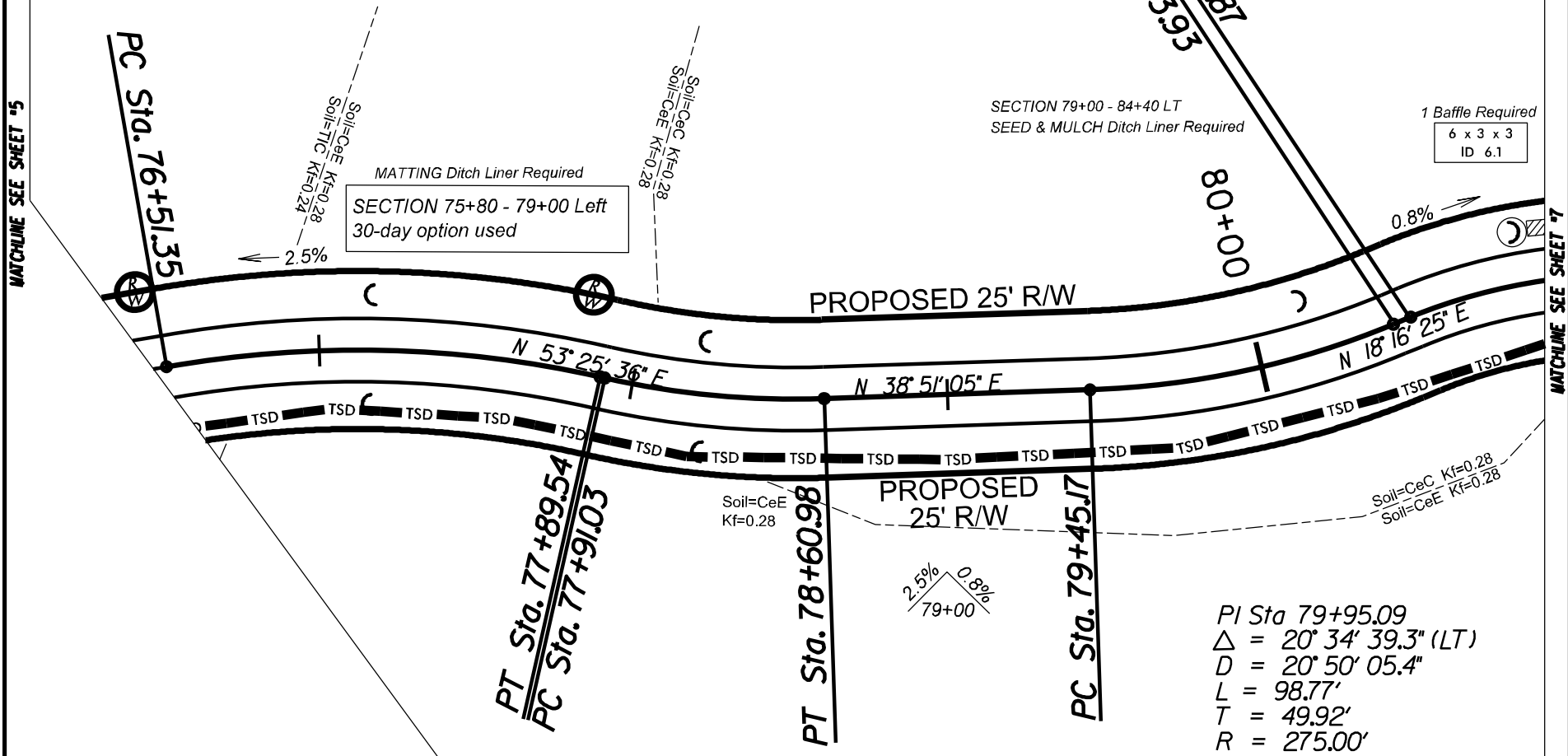
PI Sta 77+21.36
 $\Delta = 22^\circ 37' 18.8''$ (RT)
 $D = 16^\circ 22' 12.8''$
 $L = 138.19'$
 $T = 70.01'$
 $R = 350.00'$

PI Sta 78+26.20
 $\Delta = 14^\circ 34' 31.4''$ (LT)
 $D = 20^\circ 50' 05.4''$
 $L = 69.96'$
 $T = 35.17'$
 $R = 275.00'$

PI Sta 80+94.64
 $\Delta = 28^\circ 41' 57.3''$ (RT)
 $D = 32^\circ 44' 25.6''$
 $L = 87.66'$
 $T = 44.77'$
 $R = 175.00'$

EC NOTES:

1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
2. All Wattles are 12-inch.

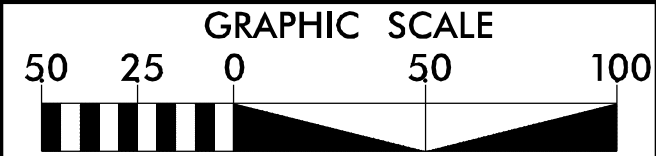
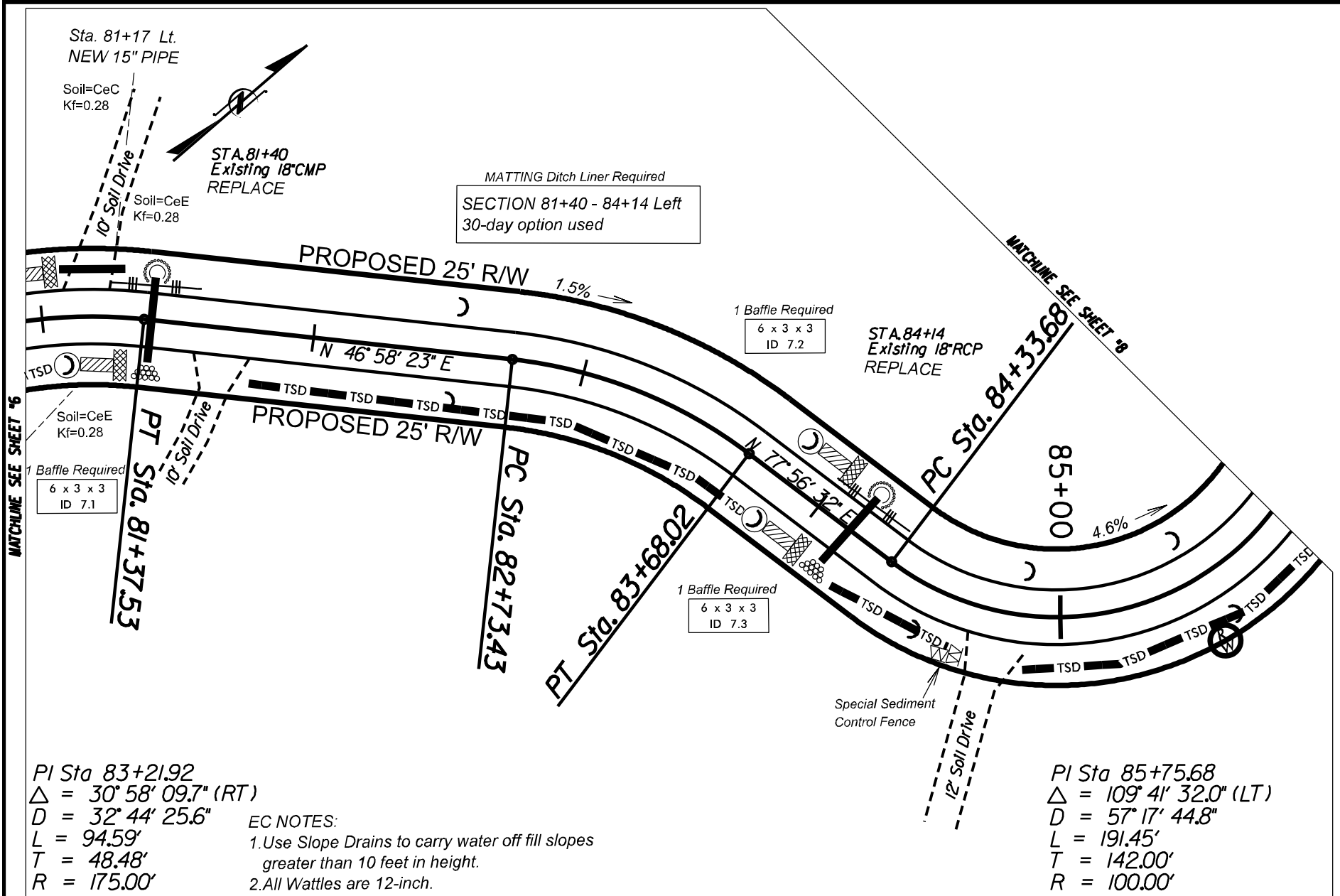


SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO 11C.033013	SHEET NO. ECS 07
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SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

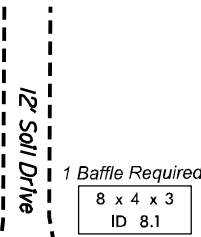
DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 08

PI Sta 88+09.55
 $\Delta = 28^\circ 59' 19.1''$ (RT)
 $D = 28^\circ 38' 52.4''$
 $L = 101.19'$
 $T = 51.70'$
 $R = 200.00'$

Sta. 88+46 Lt.
 NEW 15" PIPE



PC Sta. 89+04.47

PT Sta. 89+44.33



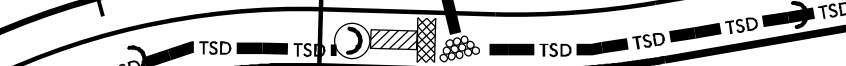
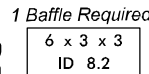
SECTION 84+14 - 88+90 Left
 30-day option used
 PSRM Ditch Liner Required

4.6%

N 2° 45' 40.1" W

PT Sta. 88+59.03

STA. 88+90
 Existing 18" CMP
 REPLACE



PROPOSED 25' RW

N 3° 44' 59" W

PROPOSED 25' RW

PC Sta. 87+57.84

PI Sta 89+24.46
 $\Delta = 11^\circ 25' 08.4''$ (LT)
 $D = 28^\circ 38' 52.4''$
 $L = 39.86'$
 $T = 20.00'$
 $R = 200.00'$

EC NOTES:
 1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.

MATCHLINE SEE SHEET '7'

MATCHLINE SEE SHEET '9'

Soil=CeE
 K/F=0.28



SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

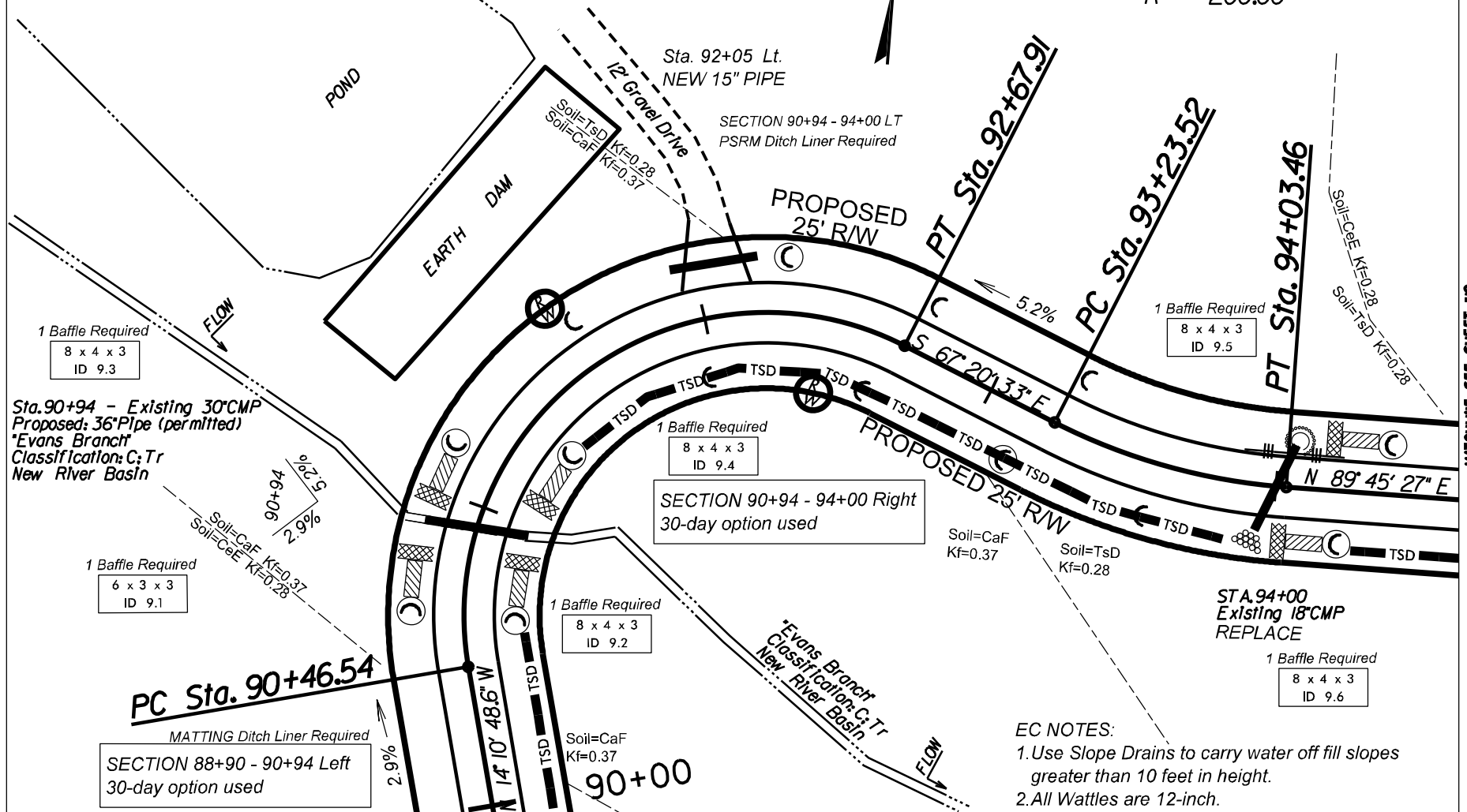
DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 09

PI Sta 92+46.40
 $\Delta = 126^\circ 50' 15.5''$ (RT)
 $D = 57^\circ 17' 44.8''$
 $L = 221.37'$
 $T = 199.86'$
 $R = 100.00'$

PI Sta 93+64.03
 $\Delta = 22^\circ 53' 59.6''$ (LT)
 $D = 28^\circ 38' 52.4''$
 $L = 79.94'$
 $T = 40.51'$
 $R = 200.00'$



MATCHLINE SEE SHEET #0

EC NOTES:
 1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.

MATCHLINE SEE SHEET #8



SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO.	SHEET NO.
11C.033013	ECS 10

PI Sta 94+92.19
 $\Delta = 6^\circ 36' 51.0''$ (LT)
 $D = 28^\circ 38' 52.4''$
 $L = 23.09'$
 $T = 11.56'$
 $R = 200.00'$



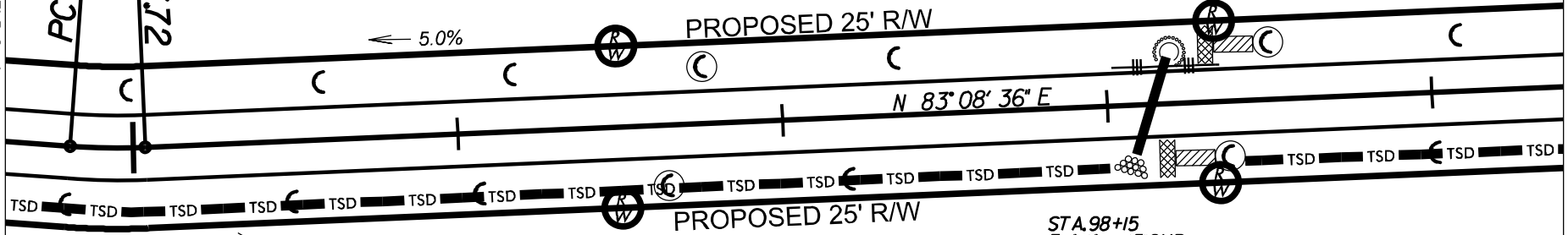
MATCHLINE SEE SHEET '9

PC Sta. 94+80.63
 PT Sta. 95+03.72

PSRM Ditch Liner Required

SECTION 94+00 - 98+15 Left
30-day option used

1 Baffle Required
9 x 4.5 x 3
ID 10.1



MATCHLINE SEE SHEET '11

95+00

$\frac{\text{Soil}=\text{CeE}}{\text{Soil}=\text{Tsd}} \quad K_f=0.28$
 $\frac{\text{Soil}=\text{Tsd}}{\text{Soil}=\text{Tsd}} \quad K_f=0.28$

SECTION 94+00 - 98+15 Right
30-day option used

STA. 98+15
 Existing 15" CMP
 REPLACE

1 Baffle Required
9 x 4.5 x 3
ID 10.2

EC NOTES:
 1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.



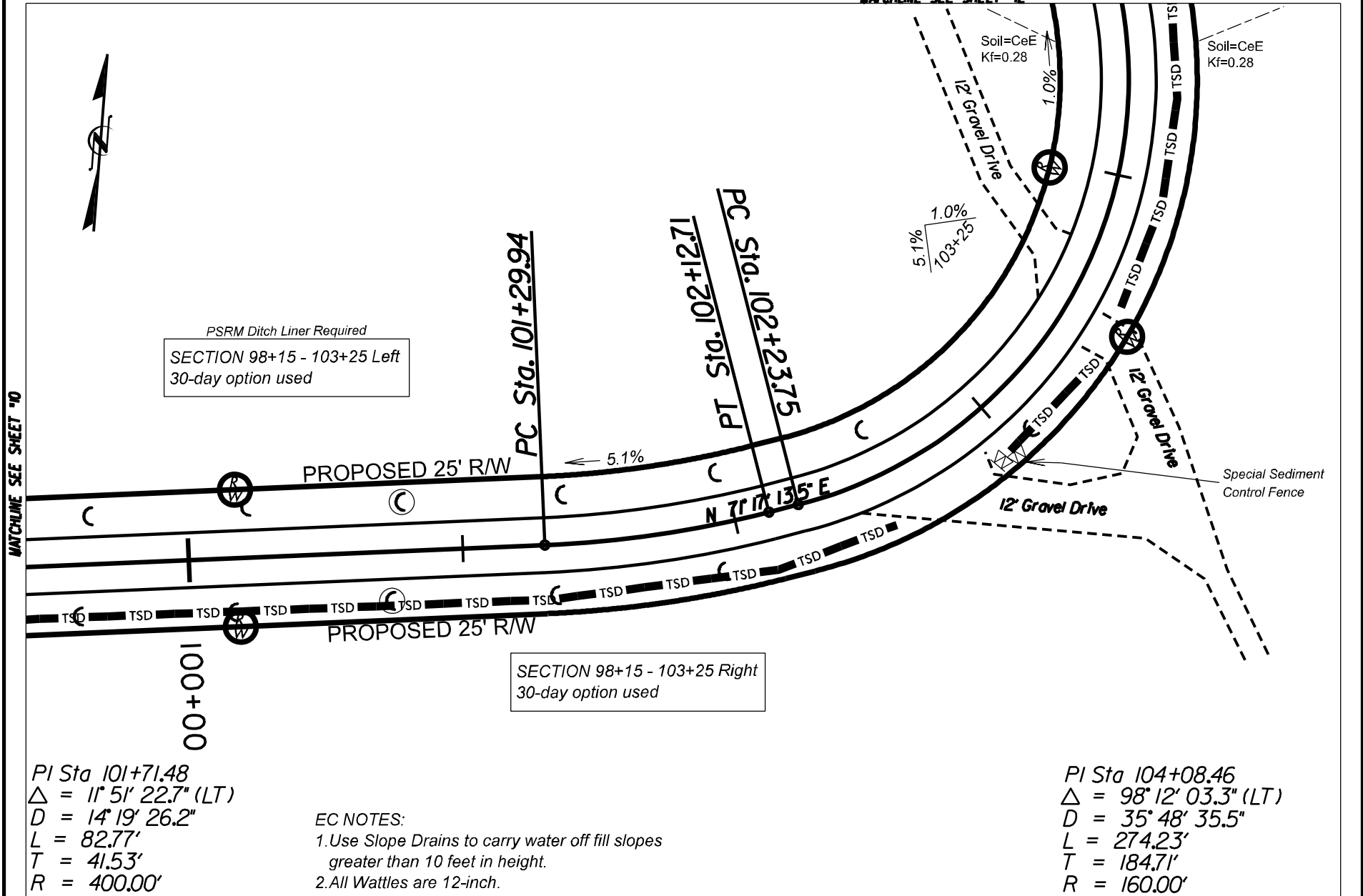
SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 11

MATCHLINE SEE SHEET #12



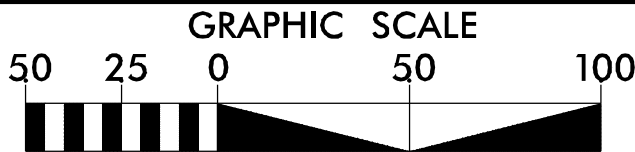
PSRM Ditch Liner Required
SECTION 98+15 - 103+25 Left
30-day option used

SECTION 98+15 - 103+25 Right
30-day option used

PI Sta 101+71.48
 $\Delta = 11^\circ 51' 22.7''$ (LT)
 $D = 14' 19' 26.2''$
 $L = 82.77'$
 $T = 41.53'$
 $R = 400.00'$

EC NOTES:
 1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.

PI Sta 104+08.46
 $\Delta = 98^\circ 12' 03.3''$ (LT)
 $D = 35' 48' 35.5''$
 $L = 274.23'$
 $T = 184.71'$
 $R = 160.00'$



SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 12

PI Sta 105+32.52 Δ = 17° 22' 51.8" (LT) D = 28° 38' 52.4" L = 60.67' T = 30.57' R = 200.00'	PI Sta 107+28.10 Δ = 28° 51' 50.6" (RT) D = 38° 11' 49.9" L = 75.57' T = 38.60' R = 150.00'
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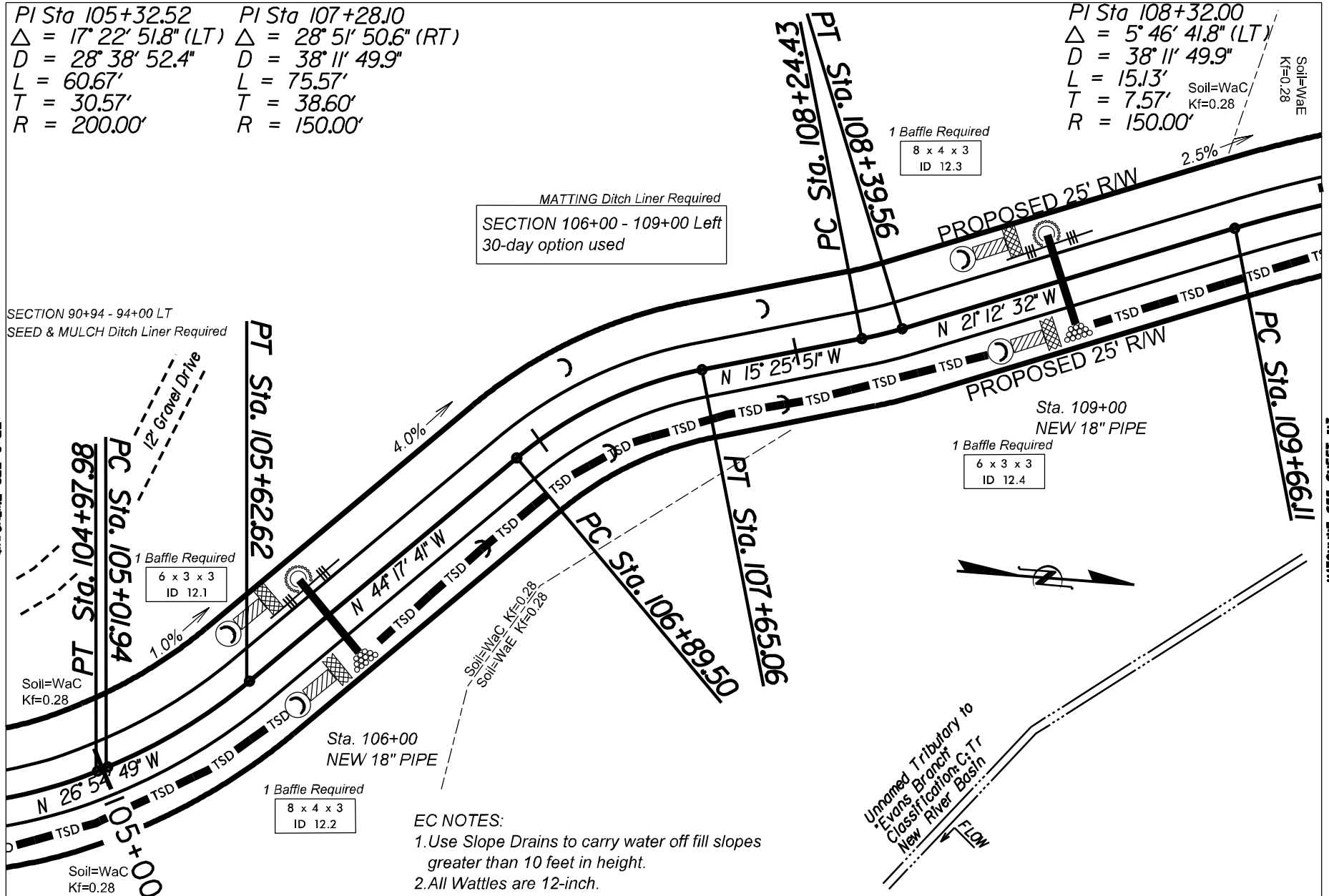
PI Sta 108+32.00 Δ = 5° 46' 41.8" (LT) D = 38° 11' 49.9" L = 15.13' T = 7.57' R = 150.00'	Soil=WaE Kf=0.28
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MATTING Ditch Liner Required
SECTION 106+00 - 109+00 Left
30-day option used

SECTION 90+94 - 94+00 LT
SEED & MULCH Ditch Liner Required

MATCHLINE SEE SHEET 11

MATCHLINE SEE SHEET 13



Unnamed Tributary to
Evans Branch
New River Basin
FLOW

EC NOTES:
1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
2. All Wattles are 12-inch.

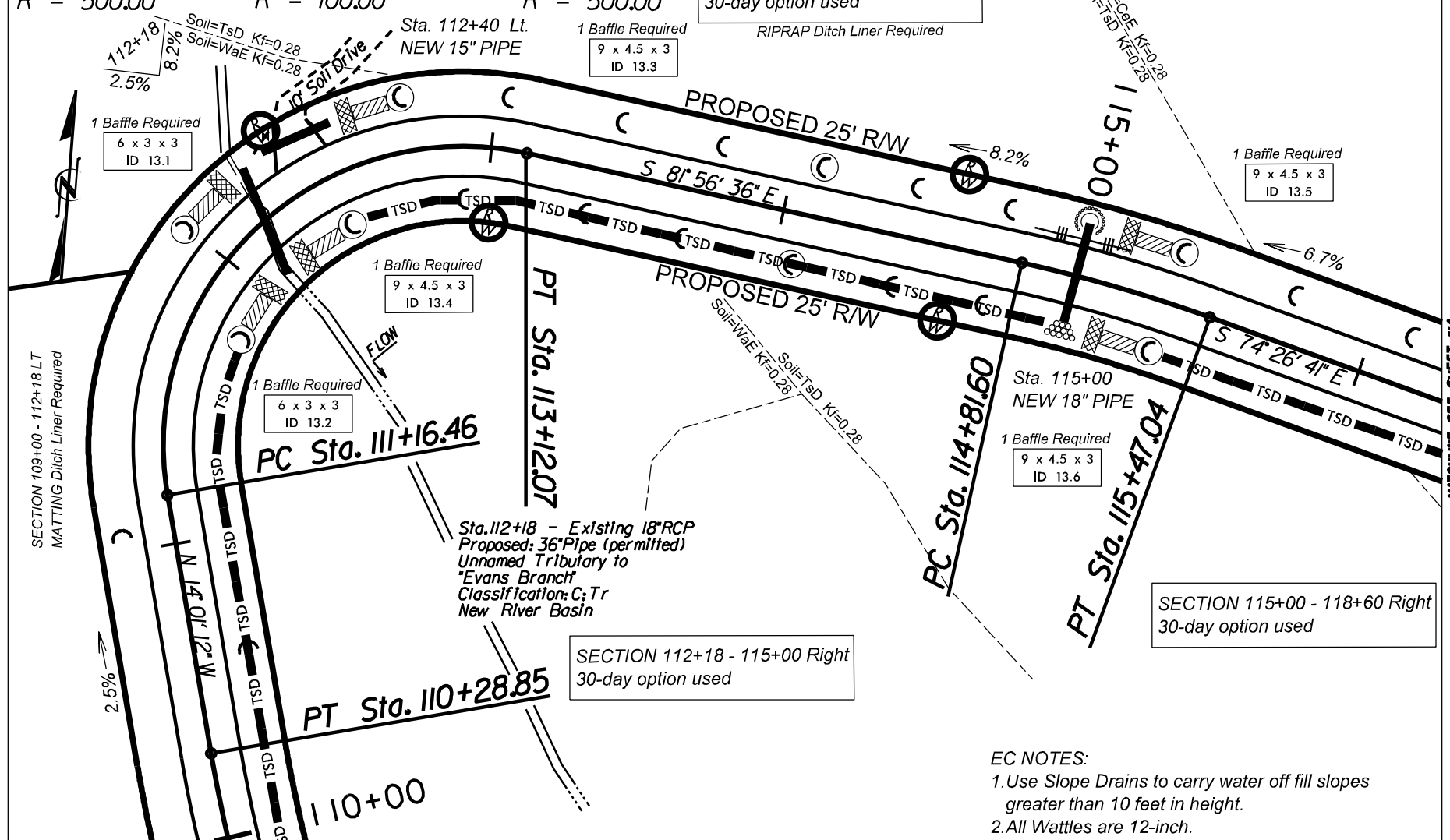


SR: 1151
NAME: CHEEK MOUNTAIN ROAD
TOWNSHIP: CRANBERRY
COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
CHECK BY: CS PIPES
DATE: DECEMBER, 2013

<p>PI Sta 109+97.52 $\Delta = 7^{\circ} 11' 20.6" (RT)$ $D = 11^{\circ} 27' 33.0"$ $L = 62.74'$ $T = 31.41'$ $R = 500.00'$</p>	<p>PI Sta 112+64.93 $\Delta = 112^{\circ} 04' 35.9" (RT)$ $D = 57^{\circ} 17' 44.8"$ $L = 195.61'$ $T = 148.47'$ $R = 100.00'$</p>	<p>PI Sta 115+14.36 $\Delta = 7^{\circ} 29' 55.0" (RT)$ $D = 11^{\circ} 27' 33.0"$ $L = 65.44'$ $T = 32.77'$ $R = 500.00'$</p>
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SECTION 112+18 - 115+00 Left
 30-day option used
 RIPRAP Ditch Liner Required



SECTION 109+00 - 112+18 LT
 MATTING Ditch Liner Required

MATCHLINE SEE SHEET "14"

SECTION 115+00 - 118+60 Right
 30-day option used

SECTION 112+18 - 115+00 Right
 30-day option used

Sta. 112+18 - Existing 18" RCP
 Proposed: 36" Pipe (permitted)
 Unnamed Tributary to
 "Evans Branch"
 Classification: C; Tr
 New River Basin

- EC NOTES:
1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.



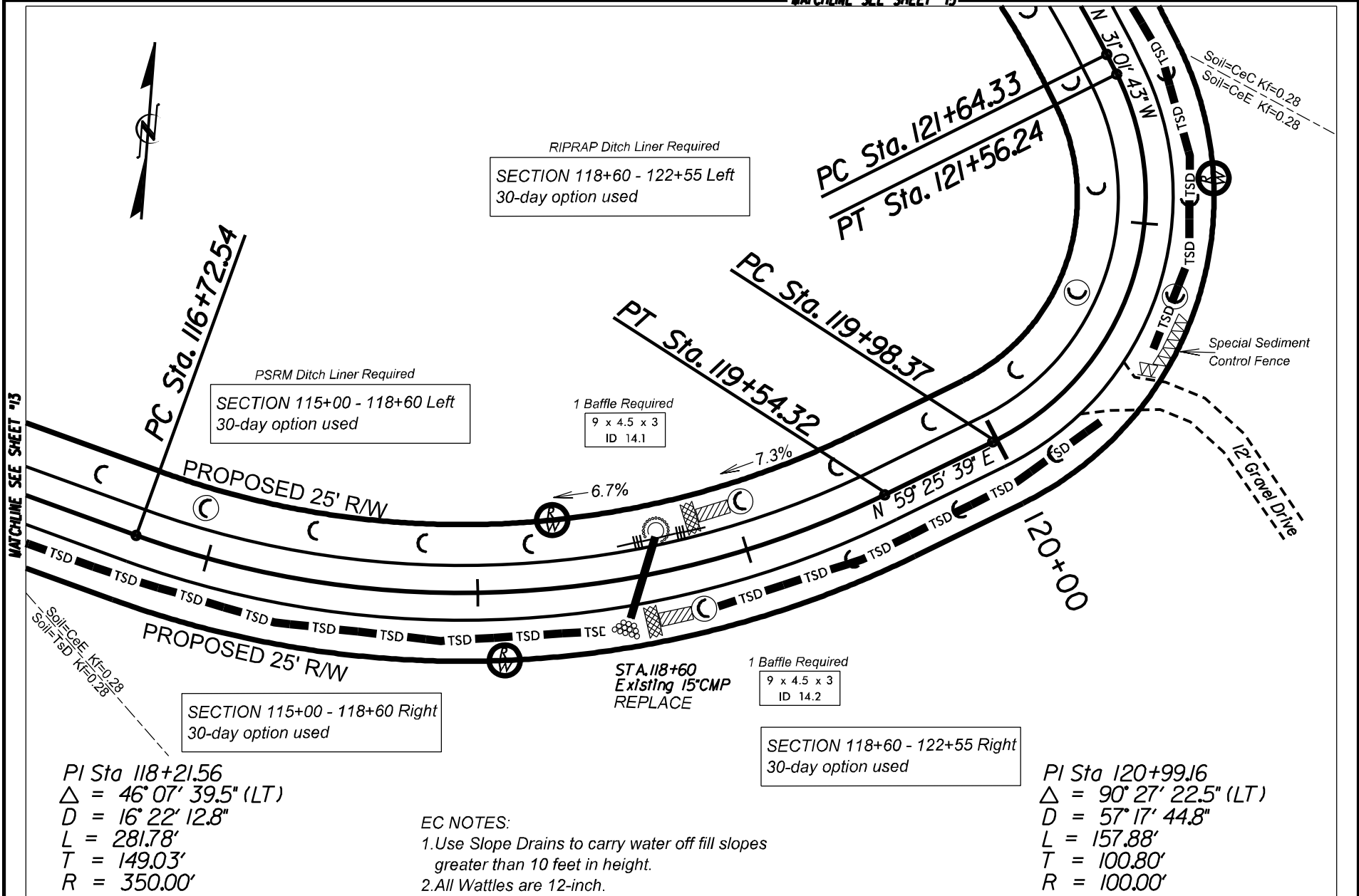
SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

DESIGN BY: SB DARNELL
 CHECK BY: CS PIPES
 DATE: DECEMBER, 2013

REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 14

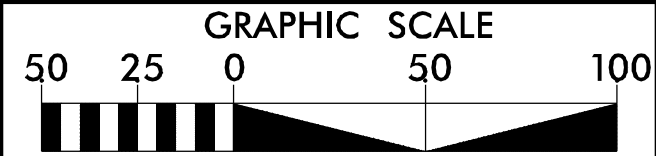
MATCHLINE SEE SHEET "15"



PI Sta 118+21.56
 $\Delta = 46^\circ 07' 39.5"$ (LT)
 $D = 16^\circ 22' 12.8"$
 $L = 281.78'$
 $T = 149.03'$
 $R = 350.00'$

EC NOTES:
 1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
 2. All Wattles are 12-inch.

PI Sta 120+99.16
 $\Delta = 90^\circ 27' 22.5"$ (LT)
 $D = 57^\circ 17' 44.8"$
 $L = 157.88'$
 $T = 100.80'$
 $R = 100.00'$

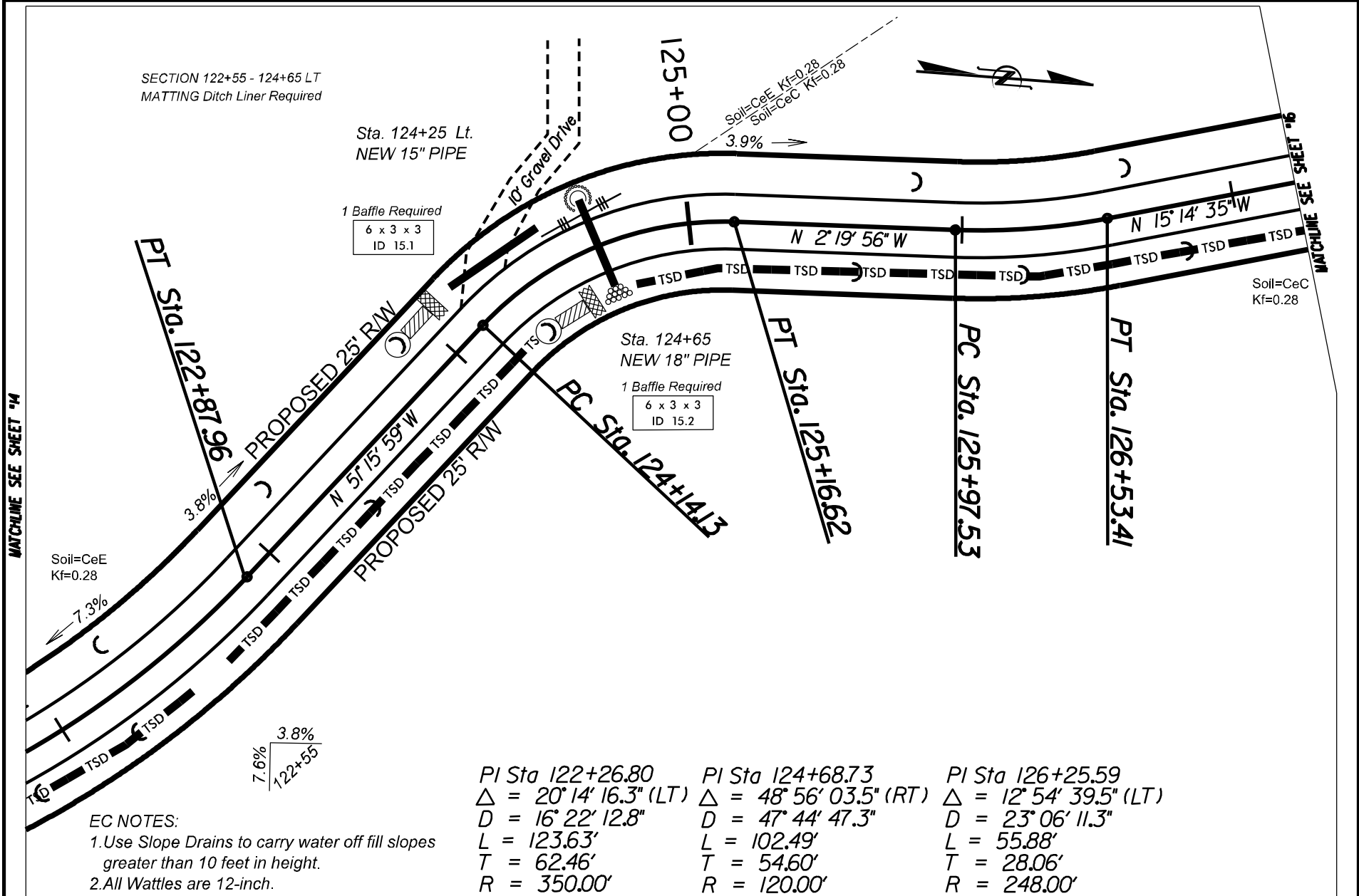


SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

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REVISIONS:

PROJECT REFERENCE NO	SHEET NO.
11C.033013	ECS 15



SECTION 122+55 - 124+65 LT
MATTING Ditch Liner Required

Sta. 124+25 Lt.
NEW 15" PIPE

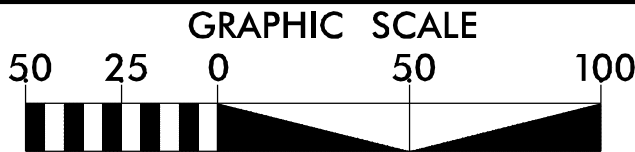
1 Baffle Required
6 x 3 x 3
ID 15.1

Sta. 124+65
NEW 18" PIPE
1 Baffle Required
6 x 3 x 3
ID 15.2

EC NOTES:

1. Use Slope Drains to carry water off fill slopes greater than 10 feet in height.
2. All Wattles are 12-inch.

<p>PI Sta 122+26.80 $\Delta = 20^\circ 14' 16.3"$ (LT) $D = 16^\circ 22' 12.8"$ $L = 123.63'$ $T = 62.46'$ $R = 350.00'$</p>	<p>PI Sta 124+68.73 $\Delta = 48^\circ 56' 03.5"$ (RT) $D = 47^\circ 44' 47.3"$ $L = 102.49'$ $T = 54.60'$ $R = 120.00'$</p>	<p>PI Sta 126+25.59 $\Delta = 12^\circ 54' 39.5"$ (LT) $D = 23^\circ 06' 11.3"$ $L = 55.88'$ $T = 28.06'$ $R = 248.00'$</p>
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SR: 1151
 NAME: CHEEK MOUNTAIN ROAD
 TOWNSHIP: CRANBERRY
 COUNTY: ALLEGHANY

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REVISIONS:

PROJECT REFERENCE NO.	SHEET NO.
11C.033013	ECS 16

PI Sta 128+40.21	PI Sta 130+04.23
$\Delta = 17^\circ 43' 53.3"$ (LT)	$\Delta = 7^\circ 26' 49.1"$ (RT)
$D = 23^\circ 06' 11.3"$	$D = 11^\circ 24' 48.6"$
$L = 76.75'$	$L = 65.25'$
$T = 38.68'$	$T = 32.67'$
$R = 248.00'$	$R = 502.00'$

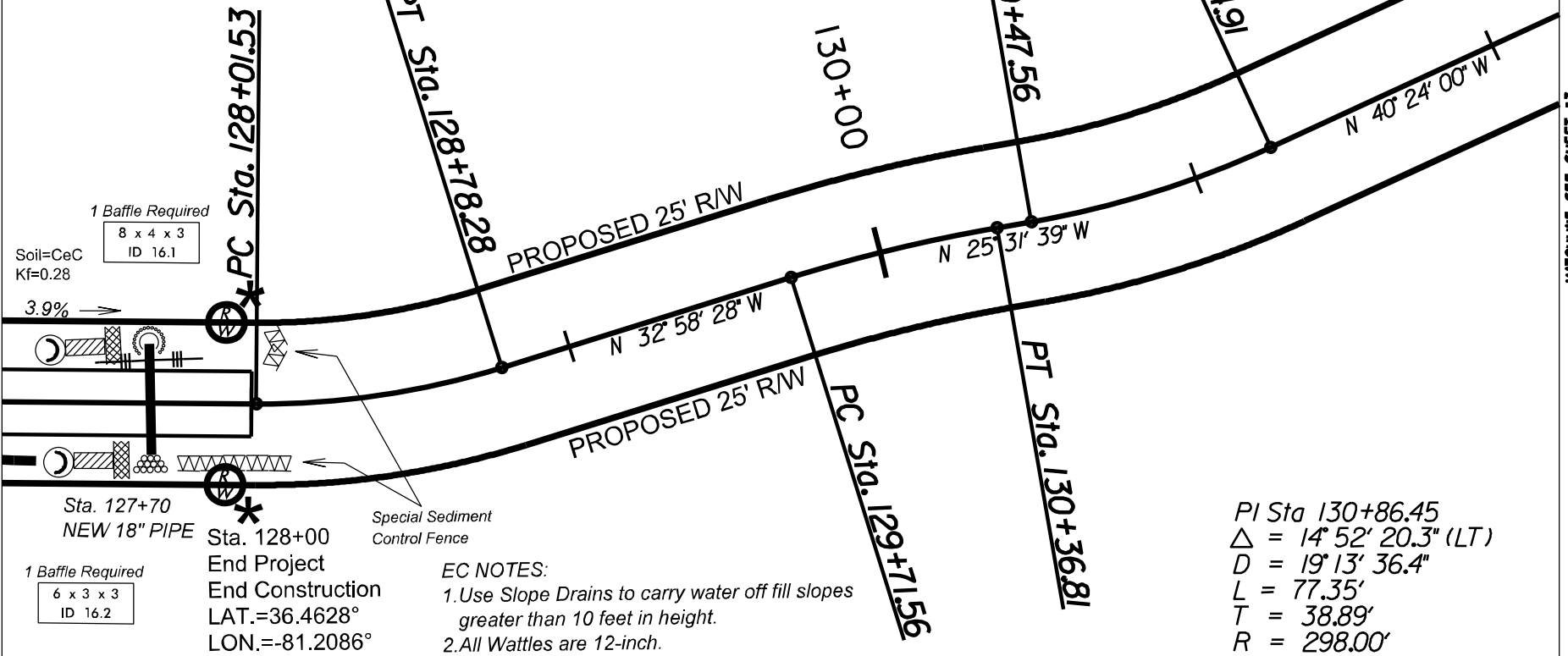
8/23/2013: Revised Project Limits
 Begin @ Sta. 58+49.08
 End @ Sta. 128+00



MATTING Ditch Liner Required
 SECTION 124+65 - 127+70 Left
 30-day option used

WATCHLINE SEE SHEET #

WATCHLINE SEE SHEET #3



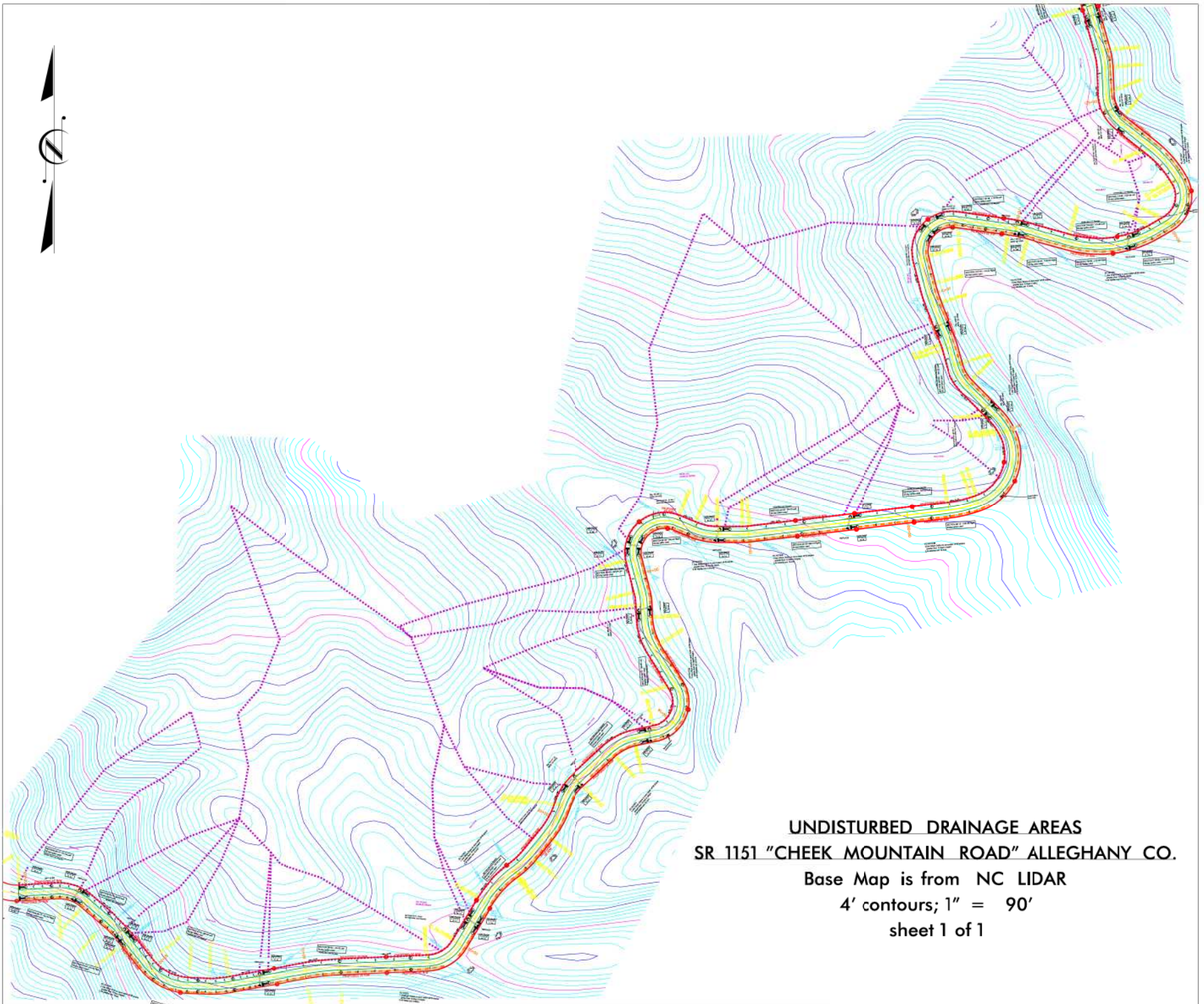
GRAPHIC SCALE

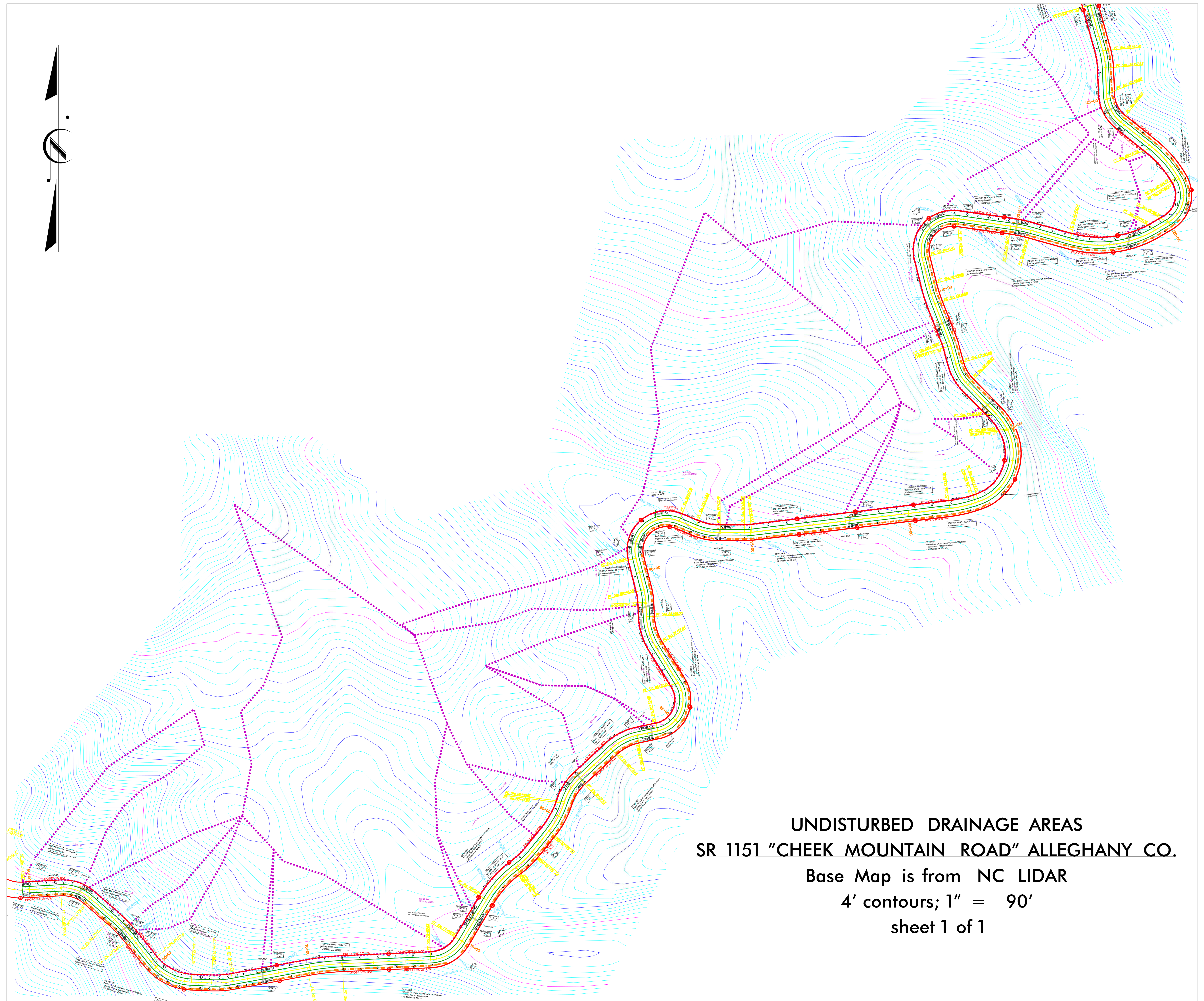


SR: 1151
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Actual Ditch Depth (ft.)											
Frontslope Grade (i.e. 2 for 2:1)											
Backslope Grade (i.e. 2 for 2:1)											
Base Width (ft., 0 for V-Ditches)											
Measured Ditchline Length (ft.)											
Ditch Grade (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Velocity (ft/s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shear Stress in Ditch (lb/ft ²)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ditch Liner Requirement	None	None	None	None	None	None	None	None	None	None	None
Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0
PSRM Matting Quantity (yd ²)	0	0	0	0	0	0	0	0	0	0	0
Total Matting Quantity (yd²) =	0	0	0	0	80	225	0	195	0	145	0
Total Ditchline Matting Quantity =	1445.00	yd²									
Total PSRM Quantity (yd²) =	0	0	0	435	0	0	0	0	335	0	215
Total Ditchline PSRM Quantity =	1895.00	yd²									





UNDISTURBED DRAINAGE AREAS
SR 1151 "CHEEK MOUNTAIN ROAD" ALLEGHANY CO.
Base Map is from NC LIDAR
4' contours; 1" = 90'
sheet 1 of 1