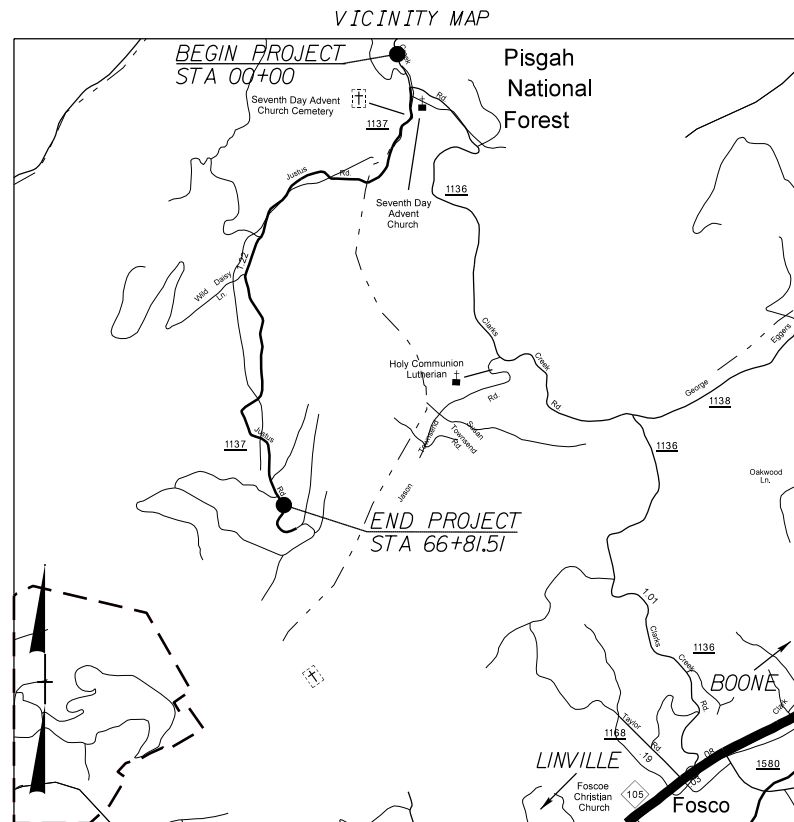


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**WATAUGA COUNTY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	11C.095108	EC-1	29
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



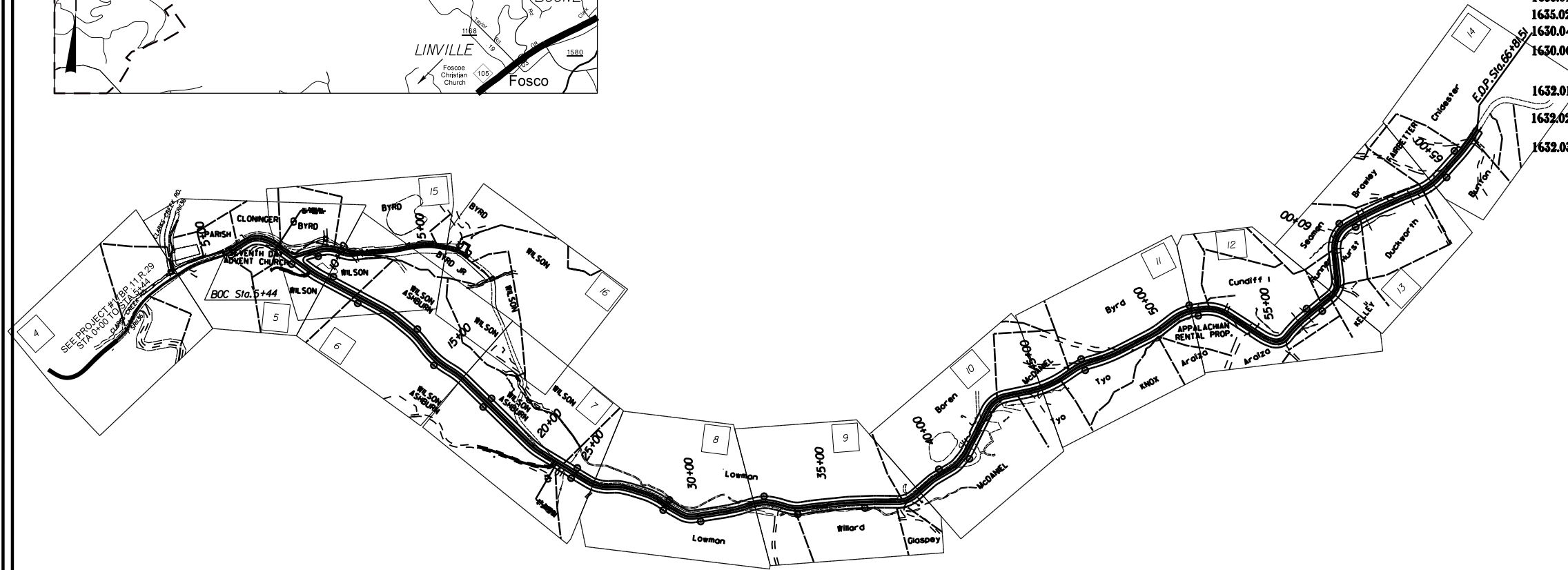
**LOCATION: SR 1137 JUSTUS RD**  
**FROM END OF PAVEMENT 1.27 MILES TO END OF MAINT.**  
**STA 5+44 TO E.O.P. 66+81.51 -L-**  
**STA 00+00 TO E.O.P. 6+90 -YI-**  
**SEE Project#17BP.11.R.29 For Roadway Plans Sta 0+00 to 5+44**

**TYPE OF WORK: GRADING, DRAINAGE, BASE AND PAVING - 1.29 MILES**

**BEGAN SURVEY: 06/29/15**  
**END SURVEY: 04/18/19**

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.05	Temporary Silt Ditch	---
1630.05	Temporary Diversion	---
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	---X---
1622.01	Temporary Berms and Slope Drains	---T---
1630.02	Silt Basin Type B	---B---
1633.01	Temporary Rock Silt Check Type-A	---R---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	---R-P---
1633.02	Temporary Rock Silt Check Type-B	---R-B---
	Wattle / Coir Fiber Wattle	---W---
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	---W-P---
1634.01	Temporary Rock Sediment Dam Type-A	---RSDA---
1634.02	Temporary Rock Sediment Dam Type-B	---RSDB---
1635.01	Rock Pipe Inlet Sediment Trap Type-A	---RPISTA---
1635.02	Rock Pipe Inlet Sediment Trap Type-B	---RPISTB---
1630.04	Stilling Basin	---SB---
1630.06	Special Stilling Basin	---SSB---
	Rock Inlet Sediment Trap:	
1632.01	Type A	---RISTA---
1632.02	Type B	---RISTB---
1632.03	Type C	---RISTC---
	Skimmer Basin	---SKB---
	Tiered Skimmer Basin	---TSKB---
	Infiltration Basin	---IB---

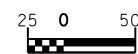


THIS PROJECT CONTAINS  
EROSION CONTROL PLANS  
FOR CLEARING AND  
GRUBBING PHASE OF  
CONSTRUCTION.

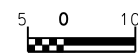
ENVIRONMENTALLY  
SENSITIVE AREA(S) EXIST  
ON THIS PROJECT

**REVISION:**

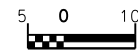
**GRAPHIC SCALE**



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT  
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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

Prepared In the Office of:

**DIVISION OF HIGHWAYS**  
 DIVISION 11, DISTRICT 2 BOONE  
 P.O. BOX 1460, BOONE, N.C. 28607  
**2018 STANDARD SPECIFICATIONS**

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

# 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.

#### 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)

#### 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:

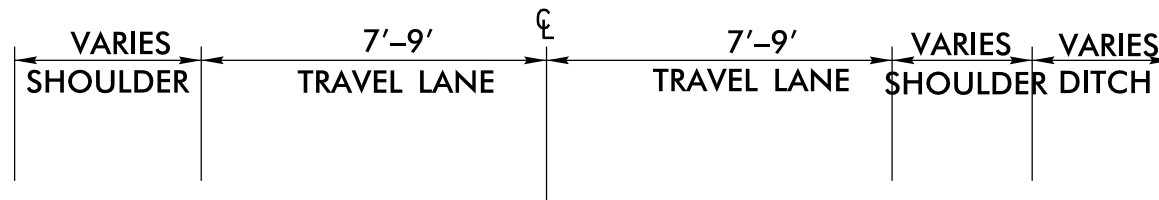
Silt fence backed by woven wire, with a post spacing of 6 feet, shall be used instead of standard silt fence in trout buffer zone. Special sediment control fence shall be used in areas where bedrock is encountered which prohibits the proper anchoring of fabric, and in low points of the silt fence in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

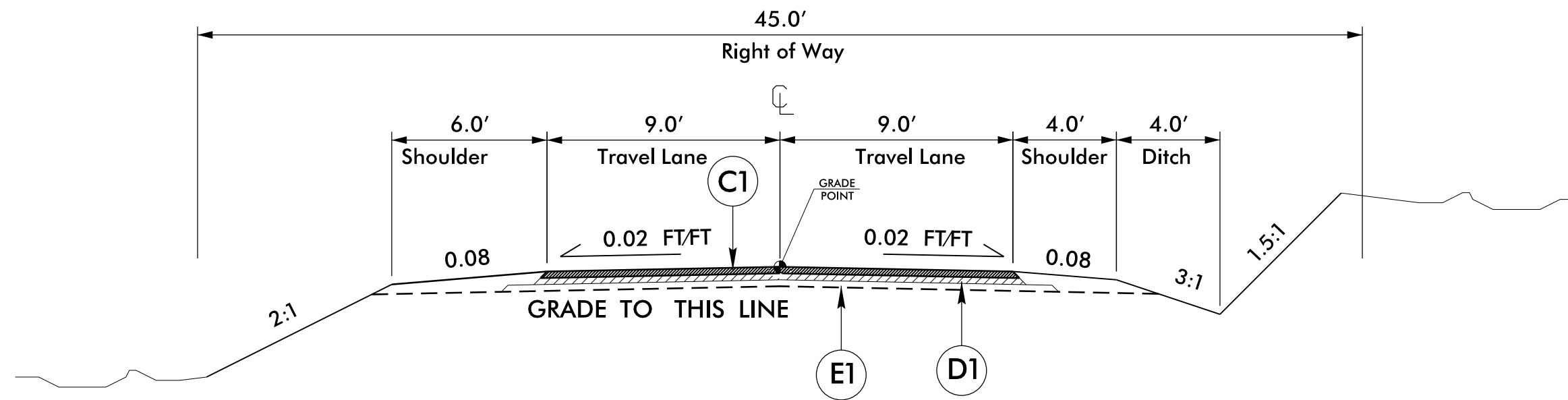
Flyrock protection such as blast mats should be provided for blasting in close proximity to streams.

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.

PROJECT REFERENCE NO. <b>11C.095108</b>	SHEET NO. <b>2</b>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

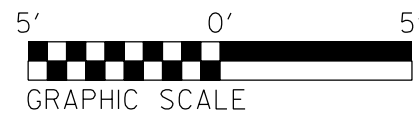


**14'-18' EXISTING TYPICAL SECTION  
SR 1137**

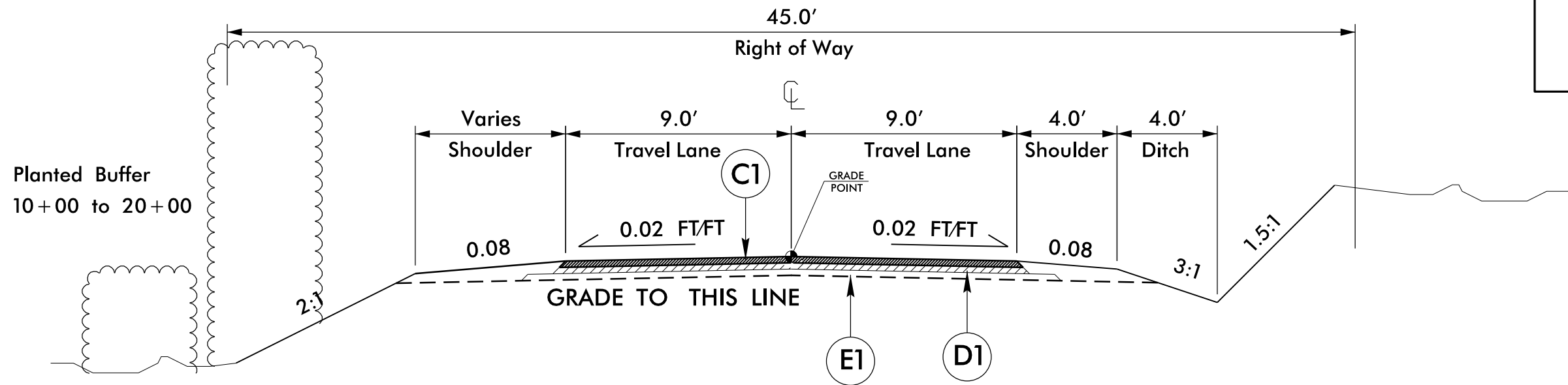


**TYPICAL SECTION NO. 1**

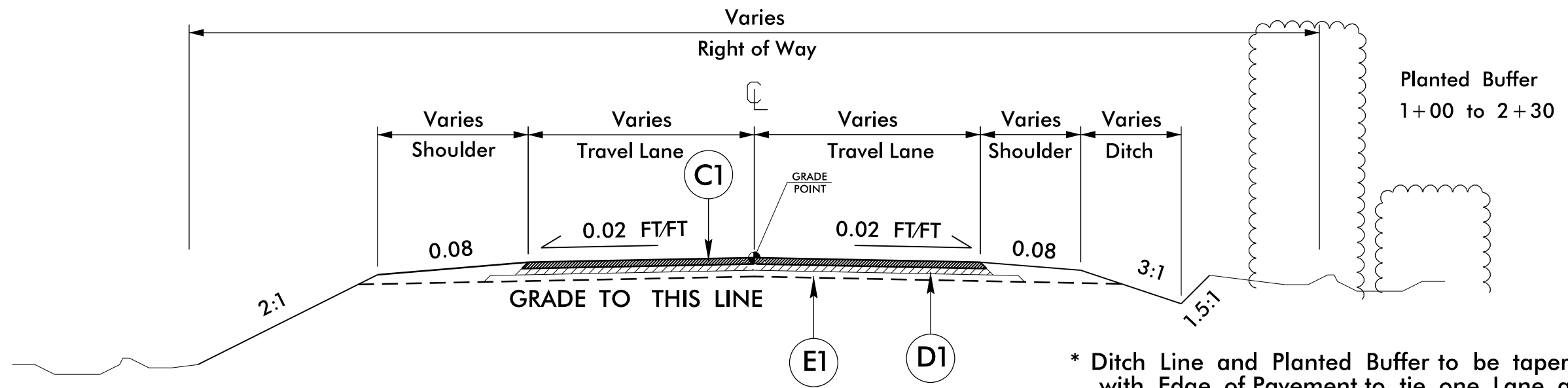
<b>C1</b>	PROP. ASPHALT SURFACE TREATMENT (TRIPLE SEAL).
<b>D1</b>	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
<b>E1</b>	PROP. APPROX. 6" AGGREGATE BASE COURSE.



PROJECT REFERENCE NO. <b>11C.095108</b>	SHEET NO. <b>2-1</b>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



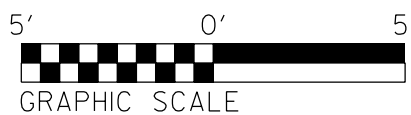
**TYPICAL SECTION NO. 2**  
STATIONS 10+00 to 20+00



\* Ditch Line and Planted Buffer to be tapered parallel with Edge of Pavement to tie one Lane at Bridge.

**TYPICAL SECTION NO. 3**  
-Y- STATIONS 0+00 to 6+80

<b>C1</b>	PROP. ASPHALT SURFACE TREATMENT (TRIPLE SEAL).
<b>D1</b>	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
<b>E1</b>	PROP. APPROX. 6" AGGREGATE BASE COURSE.



6/2/09

22-FEB-2022 11:28  
P:\Road\Projects\Secondary\Watauga\SR1137\_Justus Rd\Dgn\New Wilson Alignment\EC Work\Plan Sheets\W1137-tp-2.dgn



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

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PROJECT REFERENCE NO. <i>11C.095108</i>	SHEET NO. <i>EC-3B</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# *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 (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.



6/21/00  
 22-FEB-2022 11:30  
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COMPUTED BY: J COMBS      DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_      DATE: \_\_\_\_\_

PROJECT REFERENCE NO. 11C.095108      SHEET NO. 3C-1

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

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

STATION	LOCATION (L, RT, OR CL)	TYPE B DRAINAGE PIPE (RCP, CSP, CAAP, HDDE OR PVC) (UNLESS NOTED OTHERWISE)																PIPE REMOVAL LIN.FT.	J.B. STD. 840.31 or 840.32	D.I. STD. 840.14 or 840.15	F & G STD 840.16	REMARKS
		NEW PIPES				EXISTING PIPES																
		12"	15"	18"	24"	30"	36"	42"	72"	12"	15"	18"	24"	30"	36"	48"	72"					
-L- 53+85	LT			30'																		ADD PIPE
-L- 55+46	CL				60'								60'					60'				REPLACE WET PIPE
-L- 57+82	CL											85'						85'				REMOVE PIPE
-L- 58+05	RT			25'														25'				ADD PIPE
-L- 59+42	RT			25'																		ADD PIPE
-L- 59+77	CL				40'								40'					40'				REPLACE WET PIPE
-L- 60+03	LT			35'						33'								33'				REPLACE PIPE
-L- 61+49	CL				45'							40'						40'				REPLACE PIPE
-L- 62+51	CL				60'							50'						50'				REPLACE PIPE
-L- 62+40	LT			20'						16'								16'				REPLACE PIPE
-L- 63+61	RT											40'			40'			40'				DO NOT DISTURB
-L- 64+55	LT			45'						40'								40'				REPLACE PIPE
-L- 65+08	CL				45'					40'								40'				REPLACE PIPE
-L- 66+12	LT			30'								20'						20'				REPLACE PIPE
<b>SHEET TOTALS</b>				210'	150'	100'				49'	165'	90'	160'		40'			489'				
<b>PROJECT TOTALS</b>				425'	761'	430'	50	65		112'	302'	426'	301'	36'	40'	45'		1099'	3	3	3	

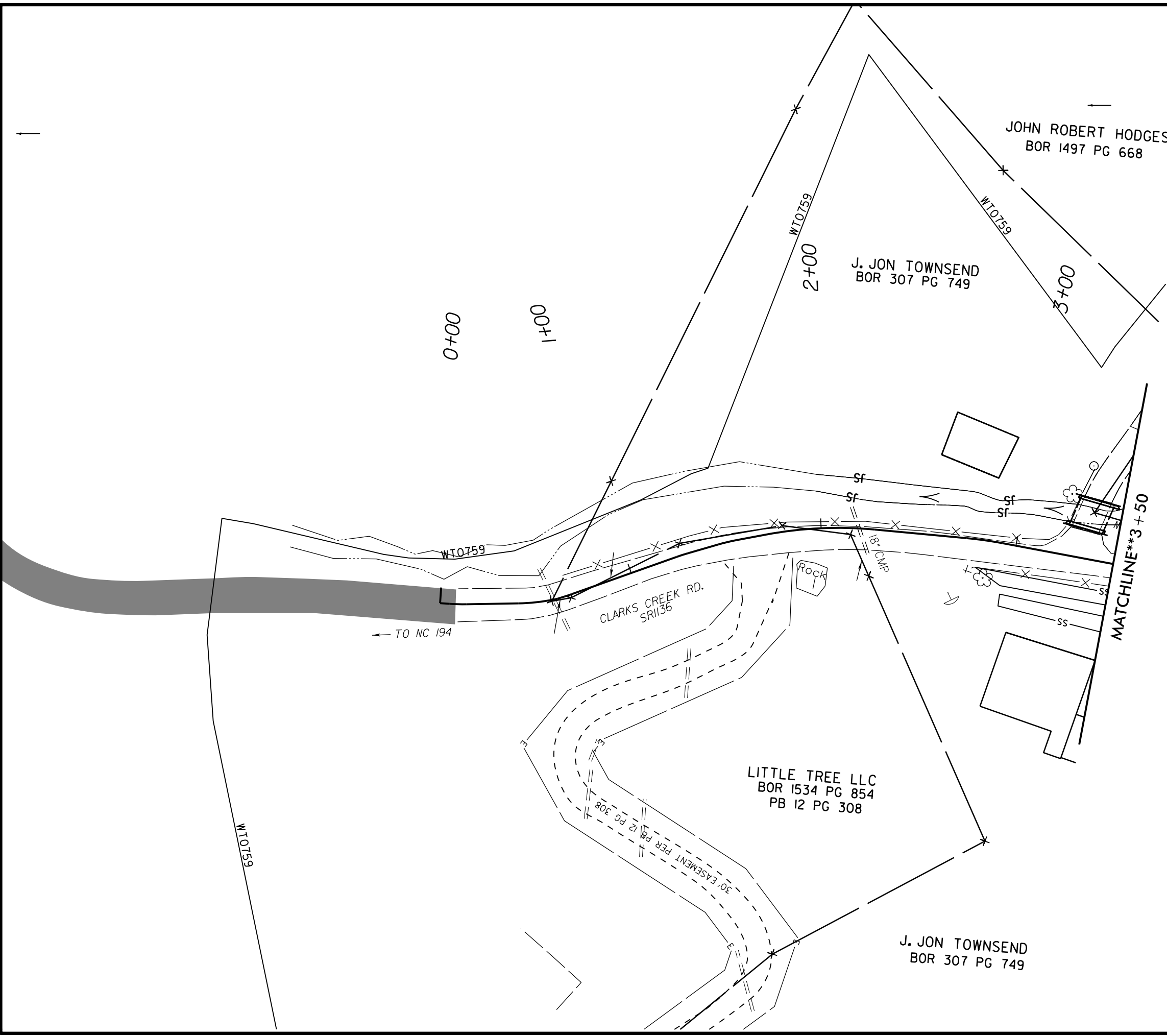


PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

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0+00

1+00

2+00

3+00

MATCHLINE\*\*3+50

JOHN ROBERT HODGES  
BOR 1497 PG 668

J. JON TOWNSEND  
BOR 307 PG 749

CLARKS CREEK RD.  
SR1136

LITTLE TREE LLC  
BOR 1534 PG 854  
PB 12 PG 308

J. JON TOWNSEND  
BOR 307 PG 749

← TO NC 194

WT0759

Rock

8" CMP

WT0759

30' EASEMENT PER PB 12 PG 308

SS

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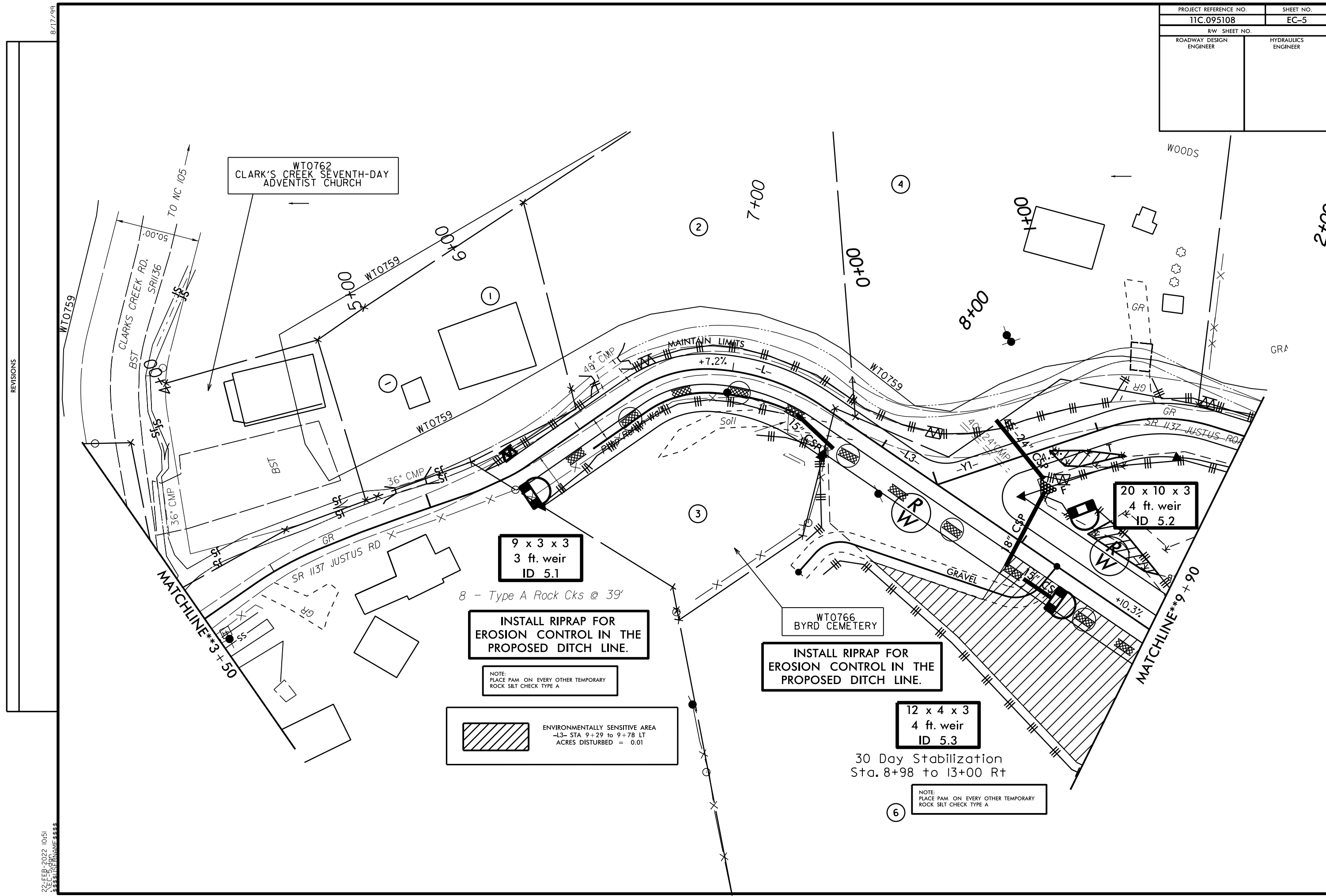
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PROJECT REFERENCE NO. 11C.095108	SHEET NO. EC-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



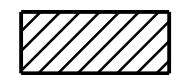
WT0762  
CLARK'S CREEK SEVENTH-DAY  
ADVENTIST CHURCH

9 x 3 x 3  
3 ft. weir  
ID 5.1

8 - Type A Rock Cks @ 39'

**INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.**

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

 ENVIRONMENTALLY SENSITIVE AREA  
-L3- STA 9+29 to 9+78 LT  
ACRES DISTURBED = 0.01

WT0766  
BYRD CEMETERY

**INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.**

12 x 4 x 3  
4 ft. weir  
ID 5.3

30 Day Stabilization  
Sta. 8+98 to 13+00 Rt

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

REVISIONS

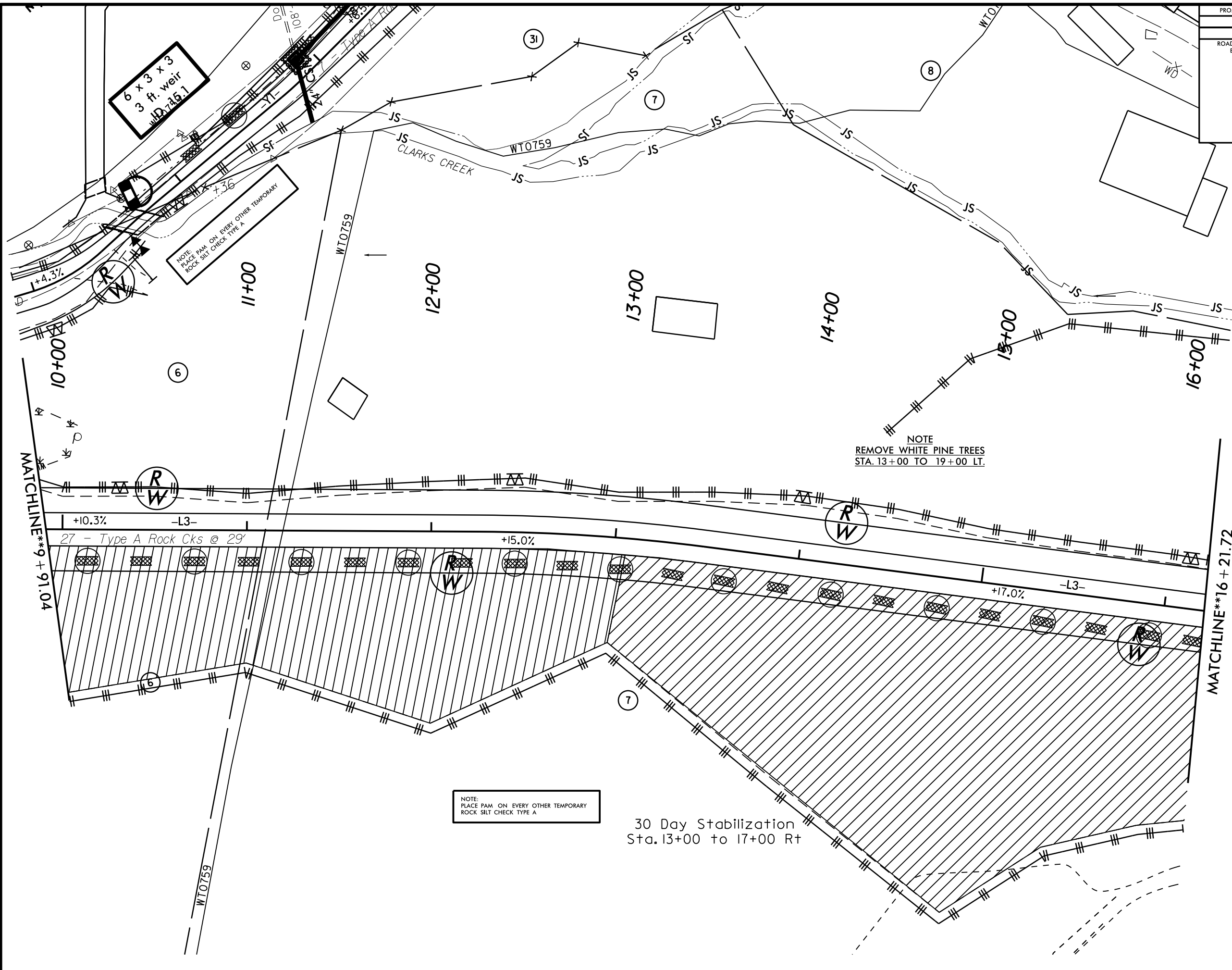
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PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS



6 x 3 x 3  
3 ft. weir  
WT0746.1

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

NOTE  
REMOVE WHITE PINE TREES  
STA. 13+00 TO 19+00 LT.

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

30 Day Stabilization  
Sta. 13+00 to 17+00 Rt

MATCHLINE\*\*9+91.04

MATCHLINE\*\*16+21.72

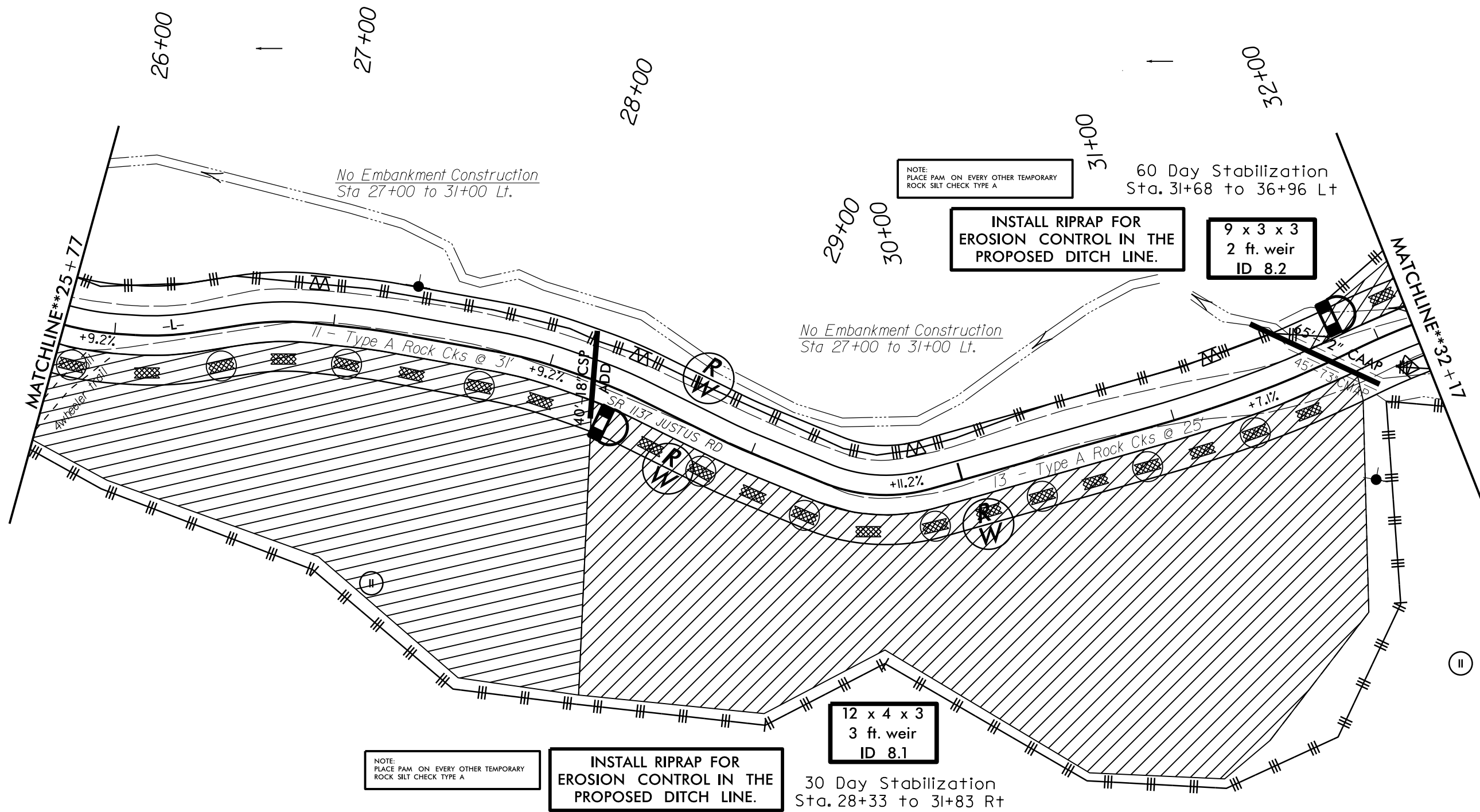
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PROJECT REFERENCE NO.	SHEET NO.
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS



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PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENVIRONMENTALLY SENSITIVE AREA  
 -L- STA. 36+95 to 37+71 LT  
 DISTURBED ACRES = 0.02

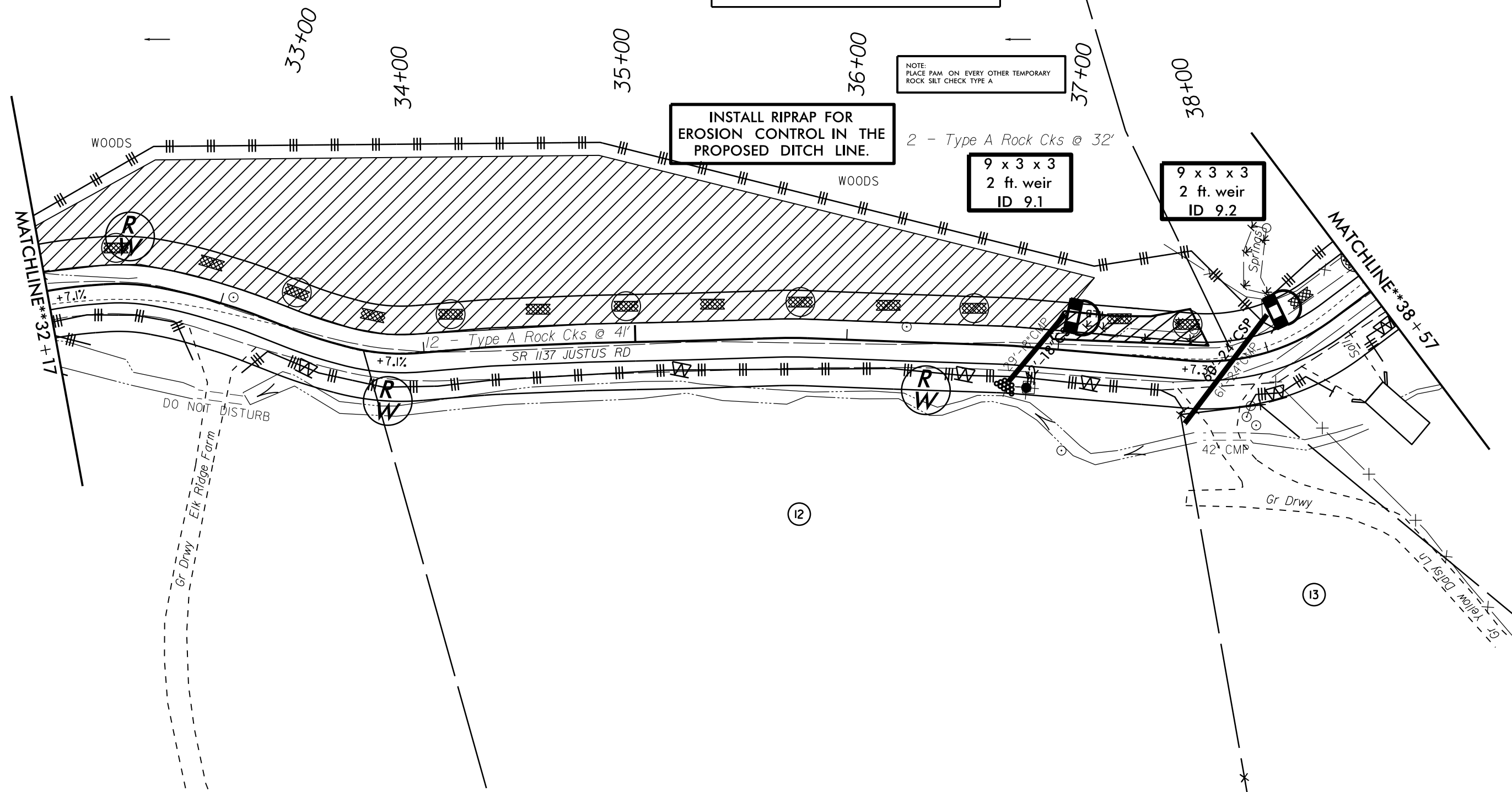
NOTE:  
 PLACE PAM ON EVERY OTHER TEMPORARY  
 ROCK SILT CHECK TYPE A

INSTALL RIPRAP FOR  
 EROSION CONTROL IN THE  
 PROPOSED DITCH LINE.

2 - Type A Rock Cks @ 32'

9 x 3 x 3  
 2 ft. weir  
 ID 9.1

9 x 3 x 3  
 2 ft. weir  
 ID 9.2



REVISIONS

8/17/99

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PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

15A

14

43+00

44+00

39+00

40+00

41+00

42+00

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

9 x 3 x 3  
2 ft. weir  
ID 10.1

MATCHLINE\*\*38+57

MATCHLINE\*\*44+97

SR 1137 JUSTUS RD

18 - Type A Rock Cks @ 34'

+8.5%

+8.5%

+8.5%

+10.1%

15

15

16

REVISIONS

8/17/99

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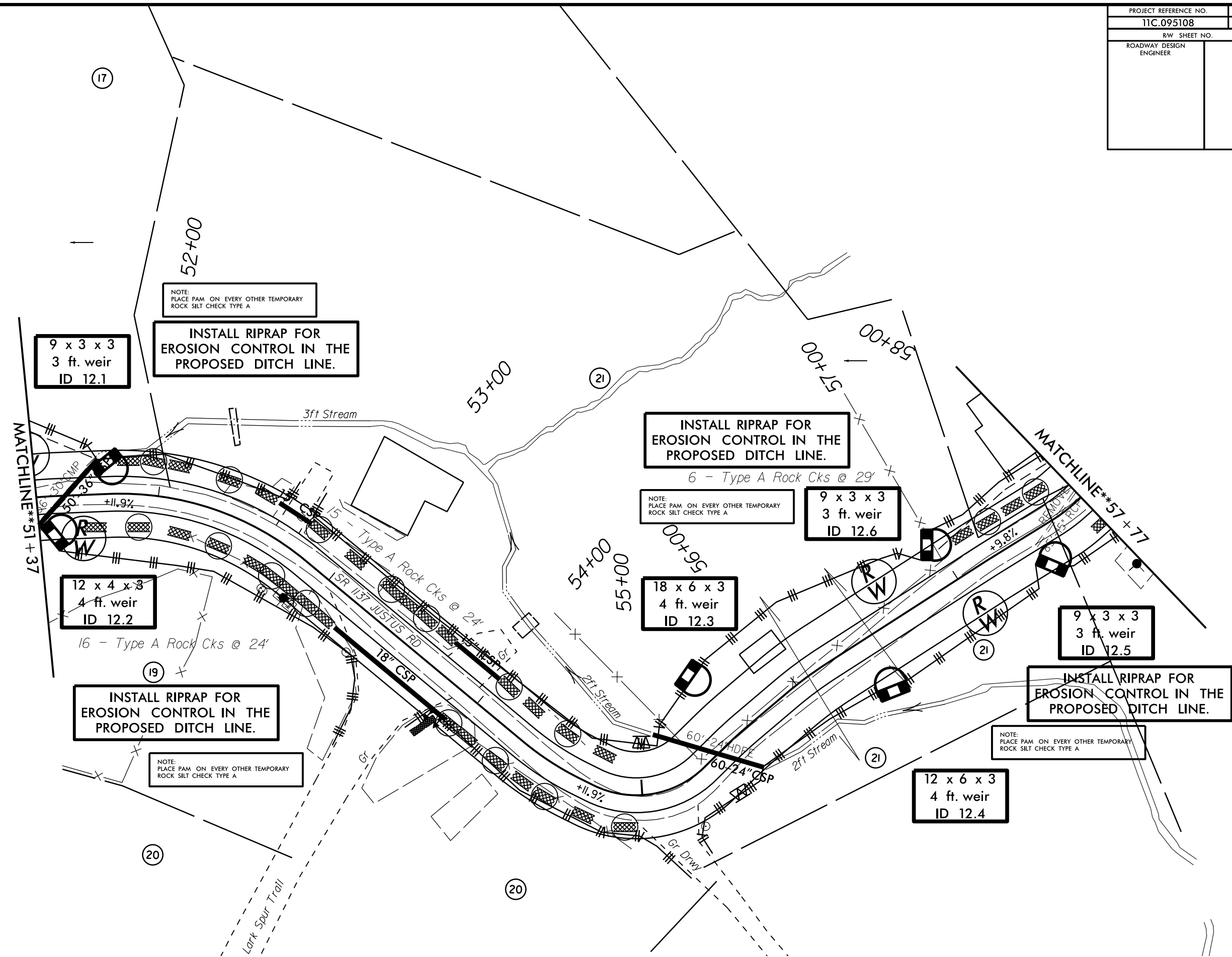


PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

8/17/99

22-FEB-2022 10:59  
AUC-11090  
AUC-11090



NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

9 x 3 x 3  
3 ft weir  
ID 12.1

INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

6 - Type A Rock Cks @ 29'

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

9 x 3 x 3  
3 ft weir  
ID 12.6

12 x 4 x 3  
4 ft weir  
ID 12.2

16 - Type A Rock Cks @ 24'

INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

18 x 6 x 3  
4 ft weir  
ID 12.3

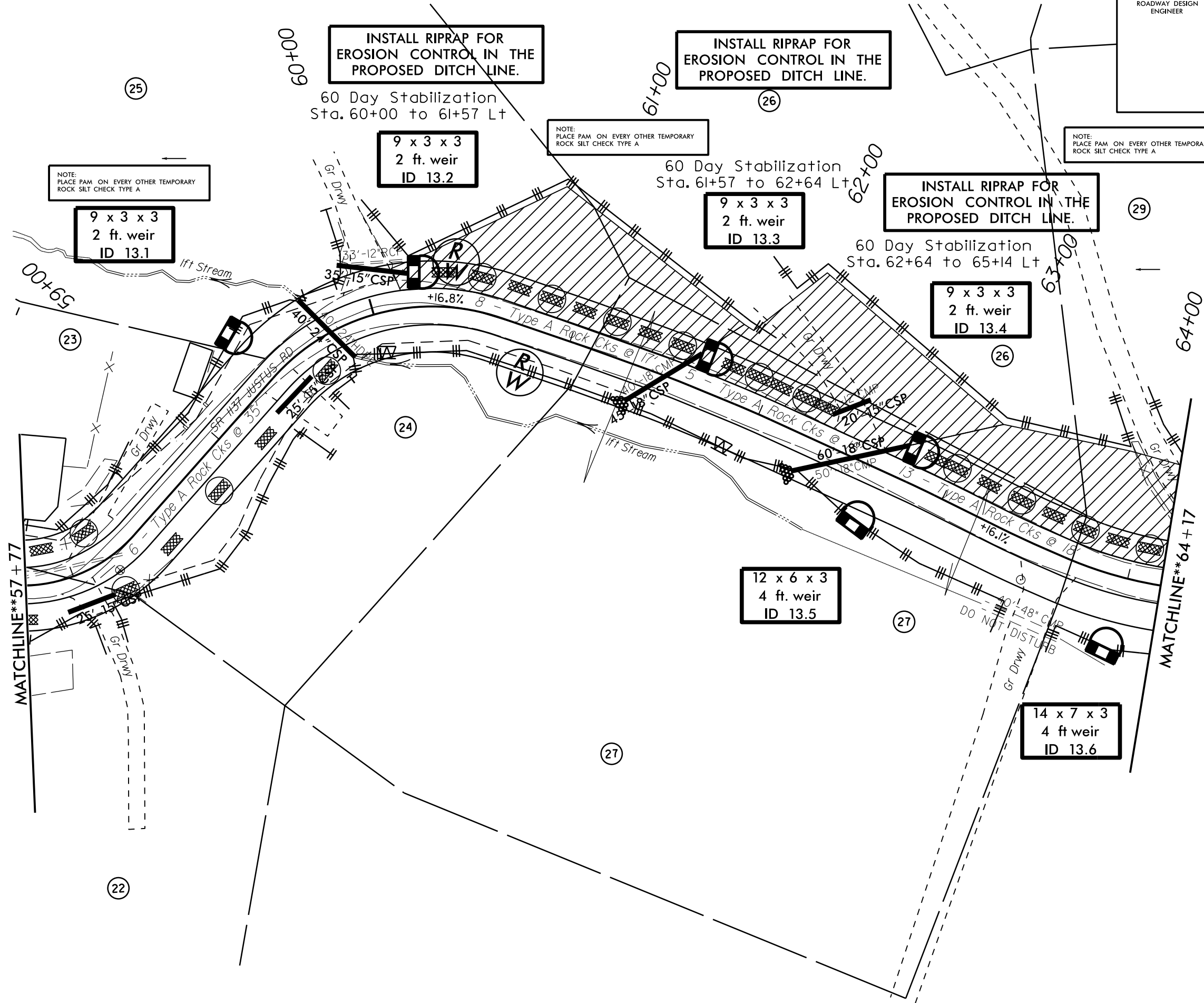
9 x 3 x 3  
3 ft weir  
ID 12.5

INSTALL RIPRAP FOR  
EROSION CONTROL IN THE  
PROPOSED DITCH LINE.

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

12 x 6 x 3  
4 ft weir  
ID 12.4

PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

NOTE:  
PLACE PAM ON EVERY OTHER TEMPORARY  
ROCK SILT CHECK TYPE A

REVISIONS

8/17/99

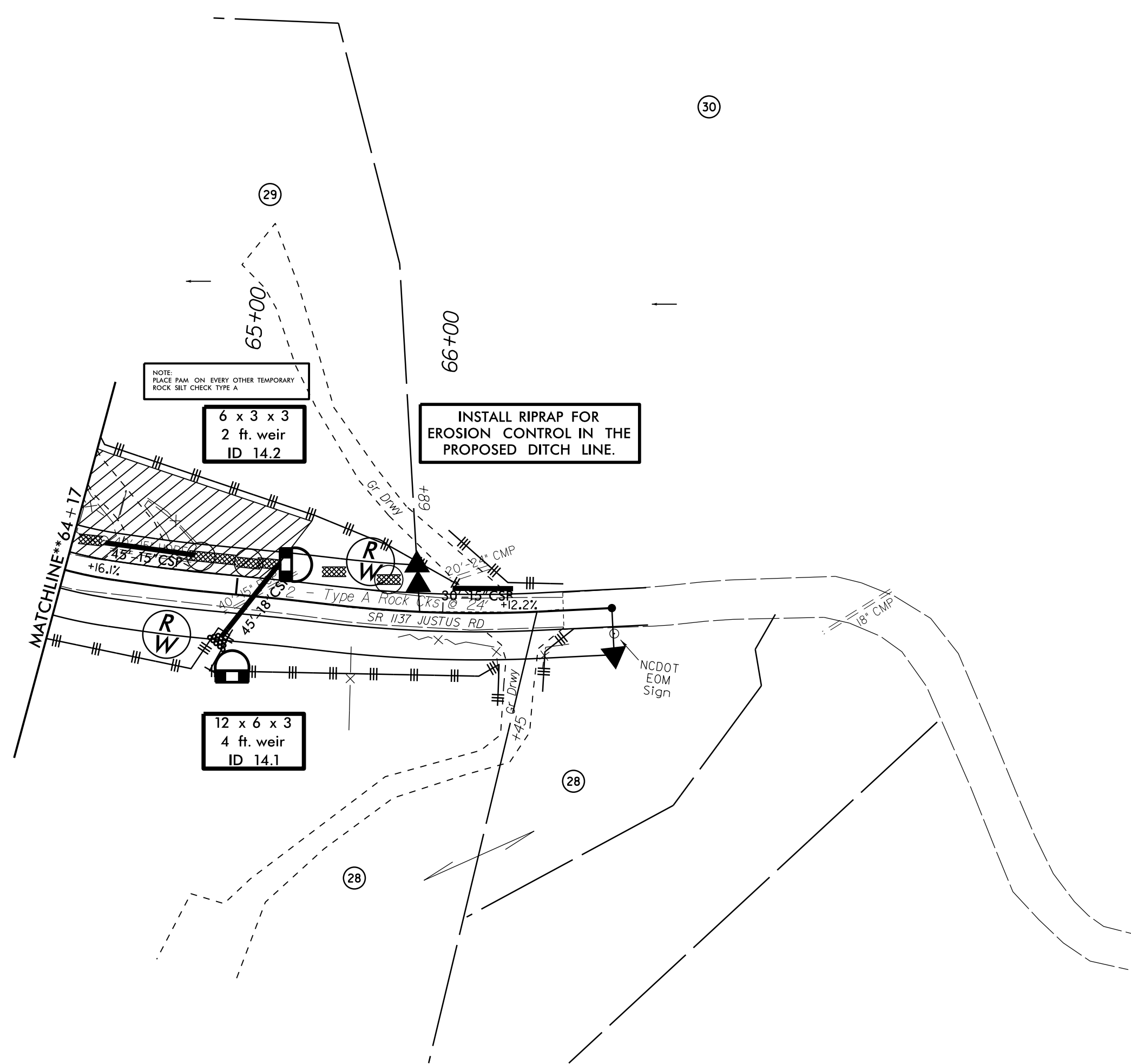
22-FEB-2022 11:00  
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PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

22-FEB-2022 11:01  
 AUC-14-1590  
 \$\$\$SUNSHINEVALE\$\$\$



NOTE:  
 PLACE PAM ON EVERY OTHER TEMPORARY  
 ROCK SILT CHECK TYPE A

6 x 3 x 3  
 2 ft. weir  
 ID 14.2

INSTALL RIPRAP FOR  
 EROSION CONTROL IN THE  
 PROPOSED DITCH LINE.

12 x 6 x 3  
 4 ft. weir  
 ID 14.1

MATCHLINE\*\*64+17

28

28

30

29

66+00

65+00

68+

SR 1137 JUSTUS RD

NCDOT  
 EOM  
 Sign

+16.1%

+12.2%

18" CMP

Gr. Drwy

Gr. Drwy

20'-2 1/2" CMP

45'-15" CSR

30'-15" CSR

40'-15" CSR

45'-18" CSR

40'-15" CSR

45'-18" CSR

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

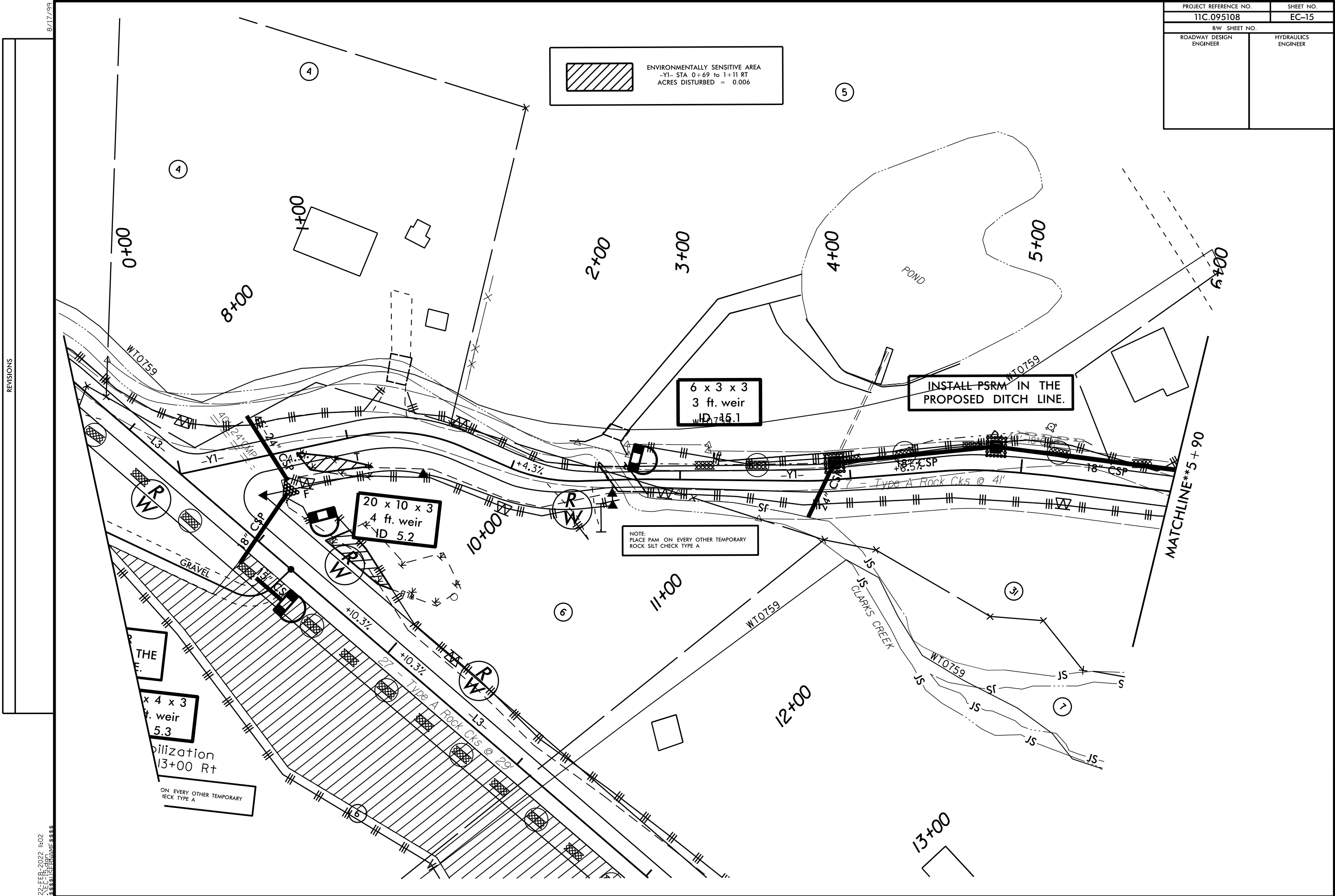
Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

Type A Rock Cks @ 24"

PROJECT REFERENCE NO. 11C.095108	SHEET NO. EC-15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENVIRONMENTALLY SENSITIVE AREA  
 -Y1- STA 0+69 to 1+11 RT  
 ACRES DISTURBED = 0.006



REVISIONS

8/17/99

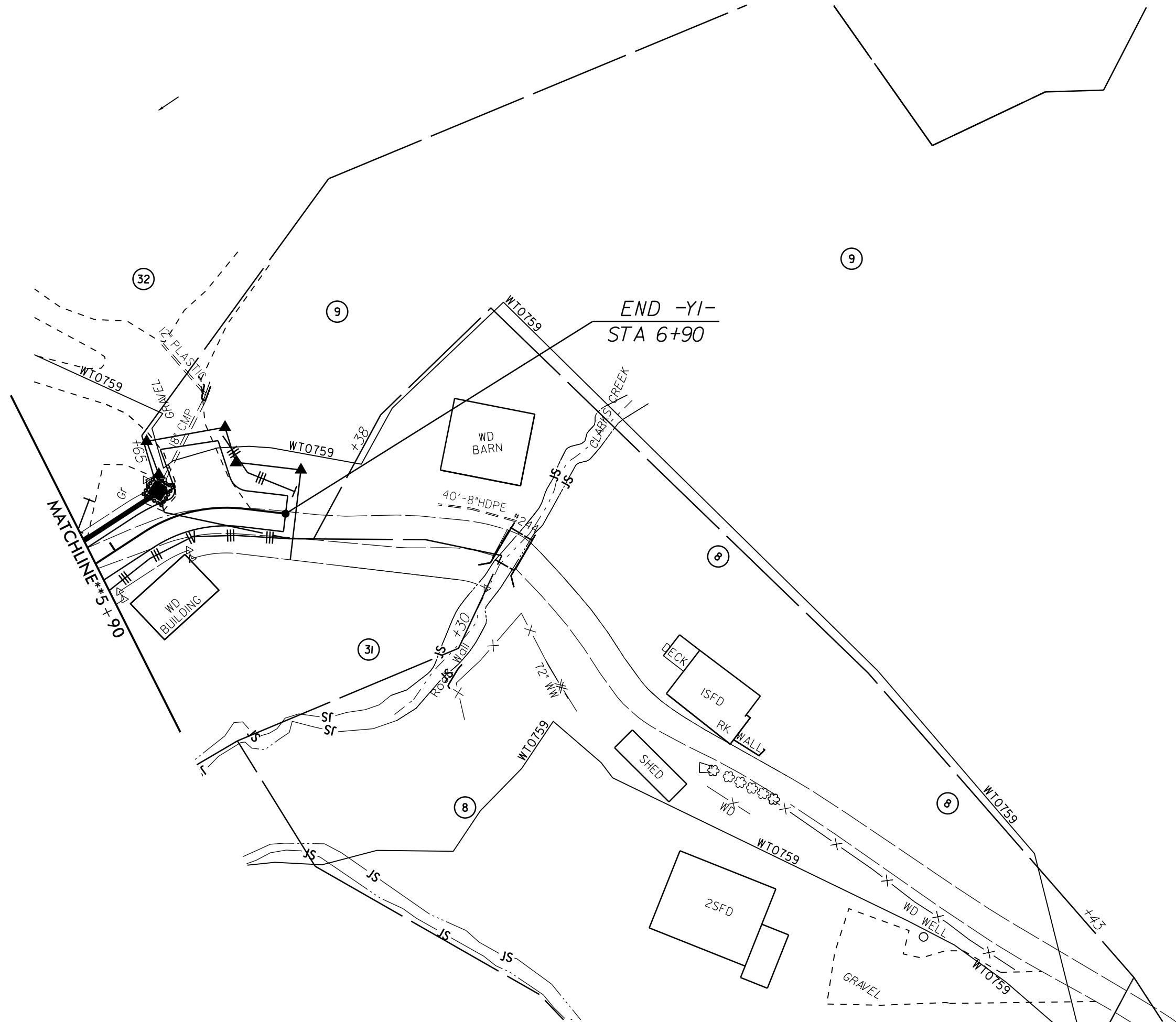
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PROJECT REFERENCE NO.	SHEET NO.
11C.095108	EC-16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

8/17/99

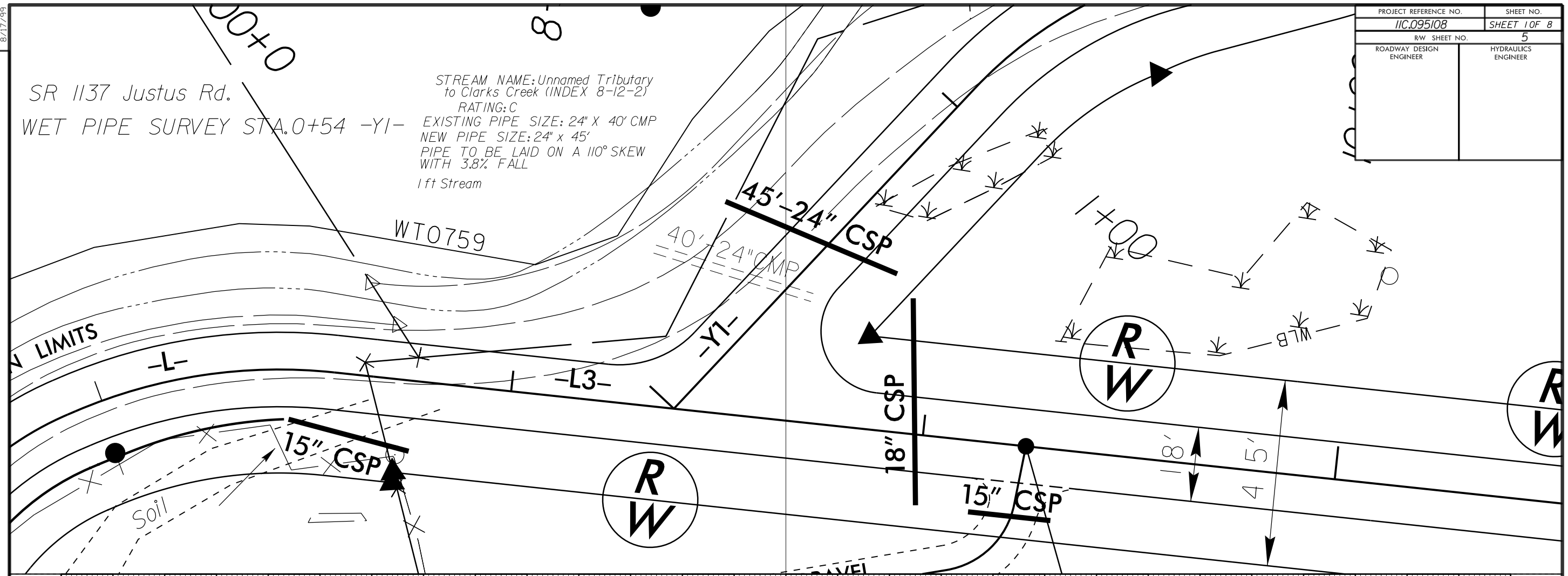
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P:\31151\11C.095108\ME.s48



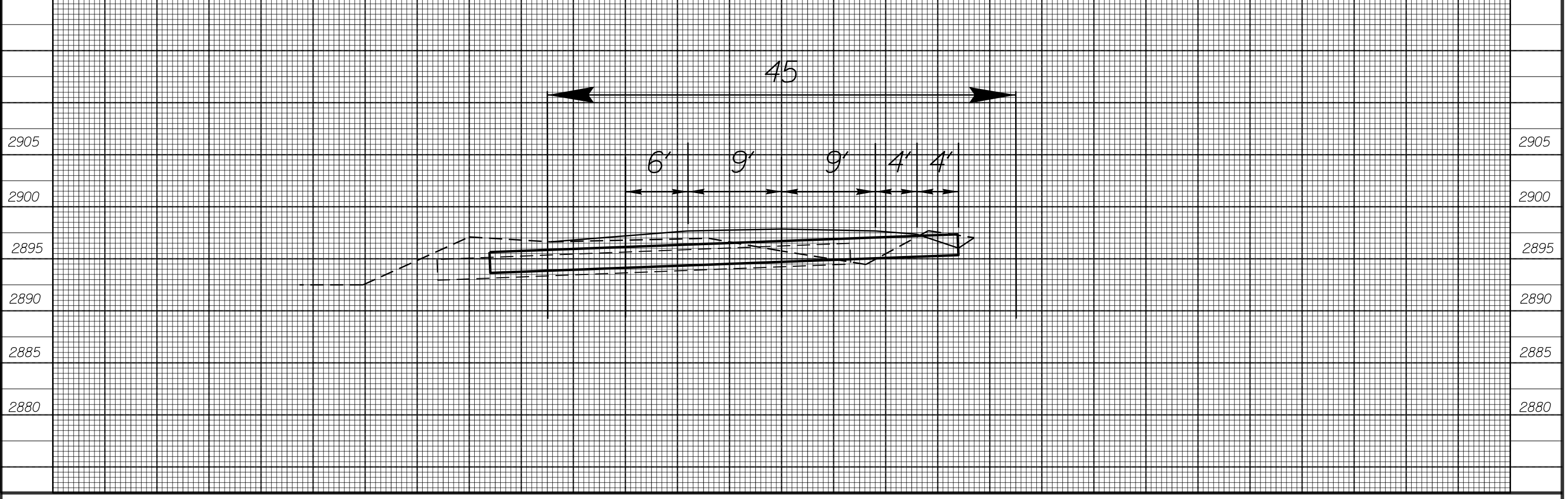
PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 1 OF 8
RW SHEET NO.	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SR 1137 Justus Rd.  
WET PIPE SURVEY STA. 0+54 -Y1-

STREAM NAME: Unnamed Tributary to Clarks Creek (INDEX 8-12-2)  
RATING: C  
EXISTING PIPE SIZE: 24" x 40' CMP  
NEW PIPE SIZE: 24" x 45'  
PIPE TO BE LAID ON A 110° SKEW WITH 3.8% FALL  
1 ft Stream

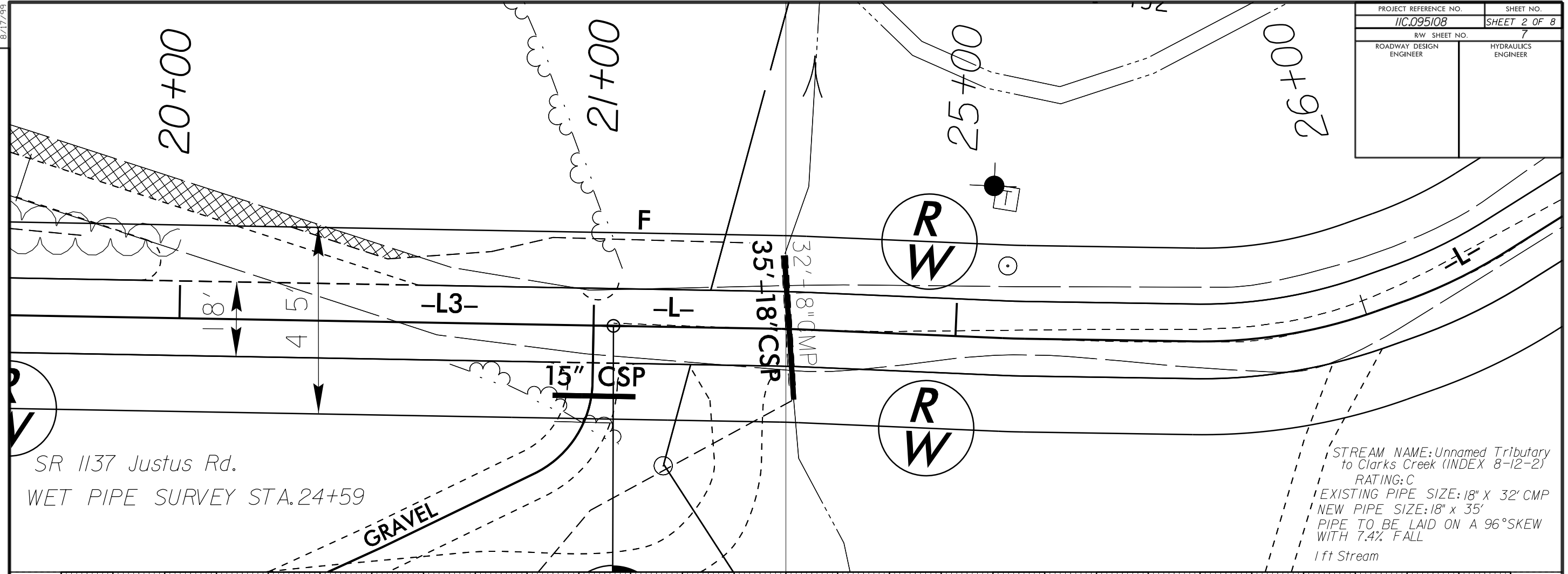


REVISIONS



22-FEB-2022 11:12  
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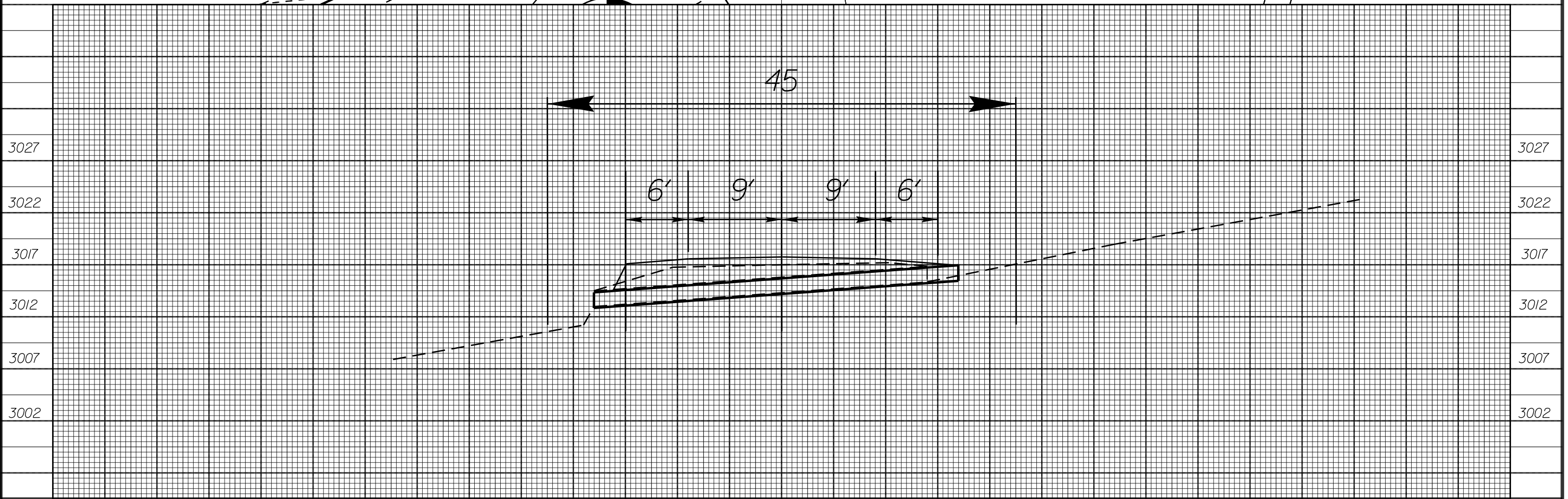
PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 2 OF 8
RW SHEET NO.	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SR 1137 Justus Rd.  
WET PIPE SURVEY STA. 24+59

STREAM NAME: Unnamed Tributary to Clarks Creek (INDEX 8-12-2)  
RATING: C  
EXISTING PIPE SIZE: 18" x 32' CMP  
NEW PIPE SIZE: 18" x 35'  
PIPE TO BE LAID ON A 96° SKEW WITH 7.4% FALL  
1 ft Stream

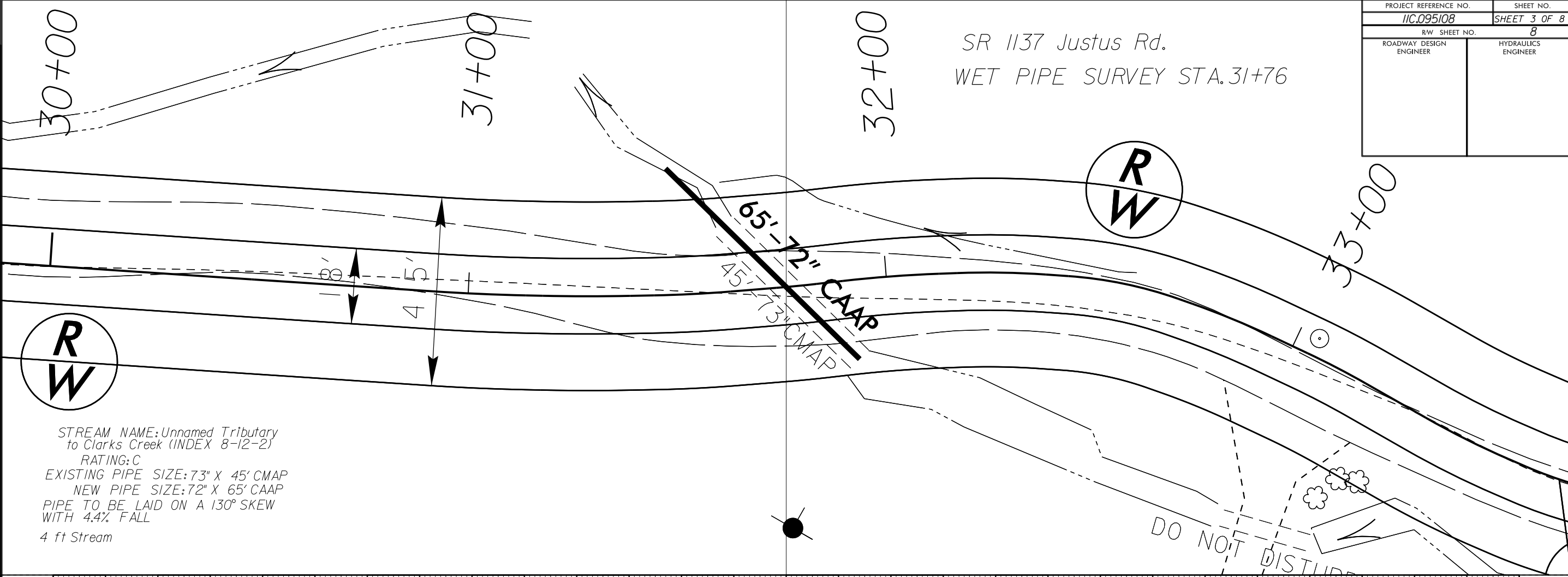
REVISIONS



22-FEB-2022 11:4  
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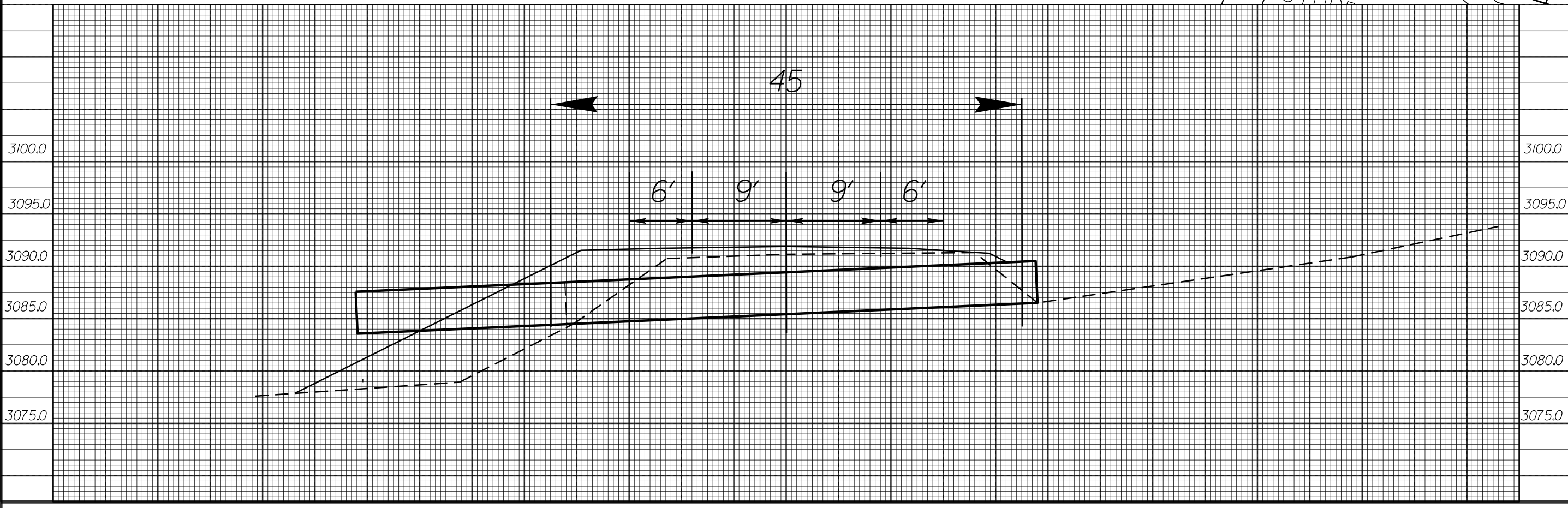
PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 3 OF 8
R/W SHEET NO.	8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SR 1137 Justus Rd.  
WET PIPE SURVEY STA. 31+76



STREAM NAME: Unnamed Tributary  
to Clarks Creek (INDEX 8-12-2)  
RATING: C  
EXISTING PIPE SIZE: 73" X 45' CMAP  
NEW PIPE SIZE: 72" X 65' CAAP  
PIPE TO BE LAID ON A 130° SKEW  
WITH 4.4% FALL  
4 ft Stream

REVISIONS



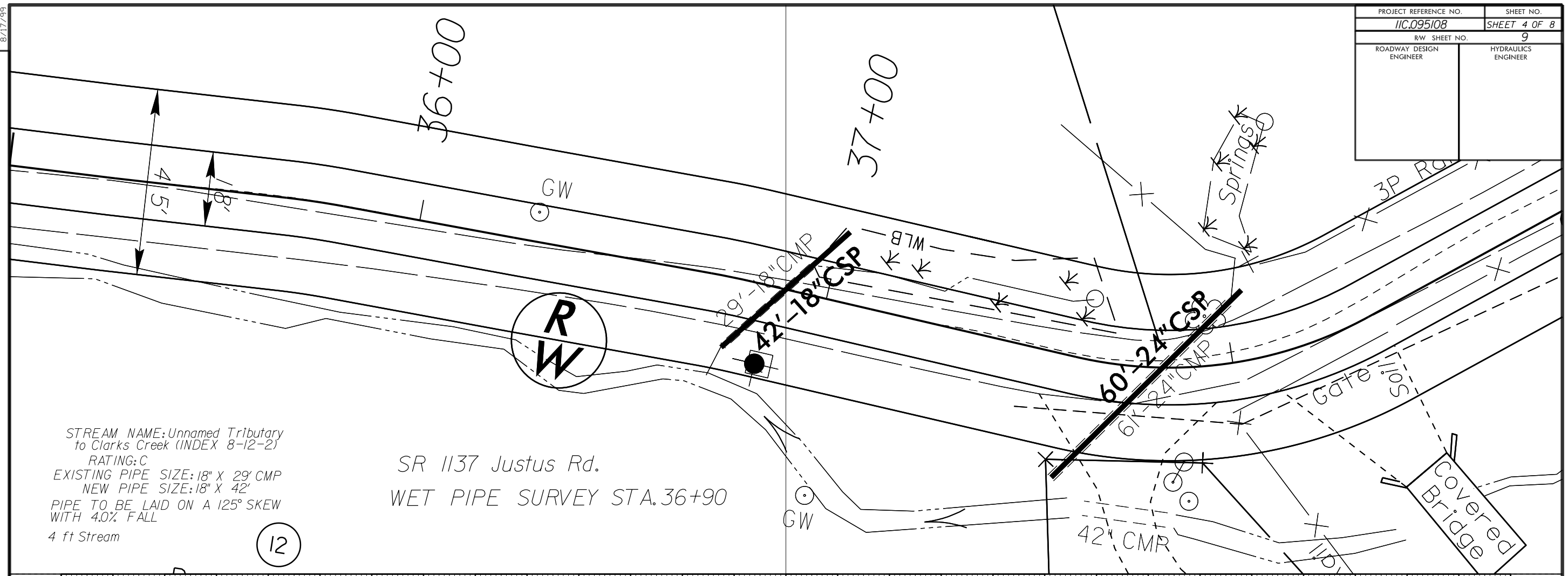
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3/23/22 11:15 AM



PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 4 OF 8
RW SHEET NO.	9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

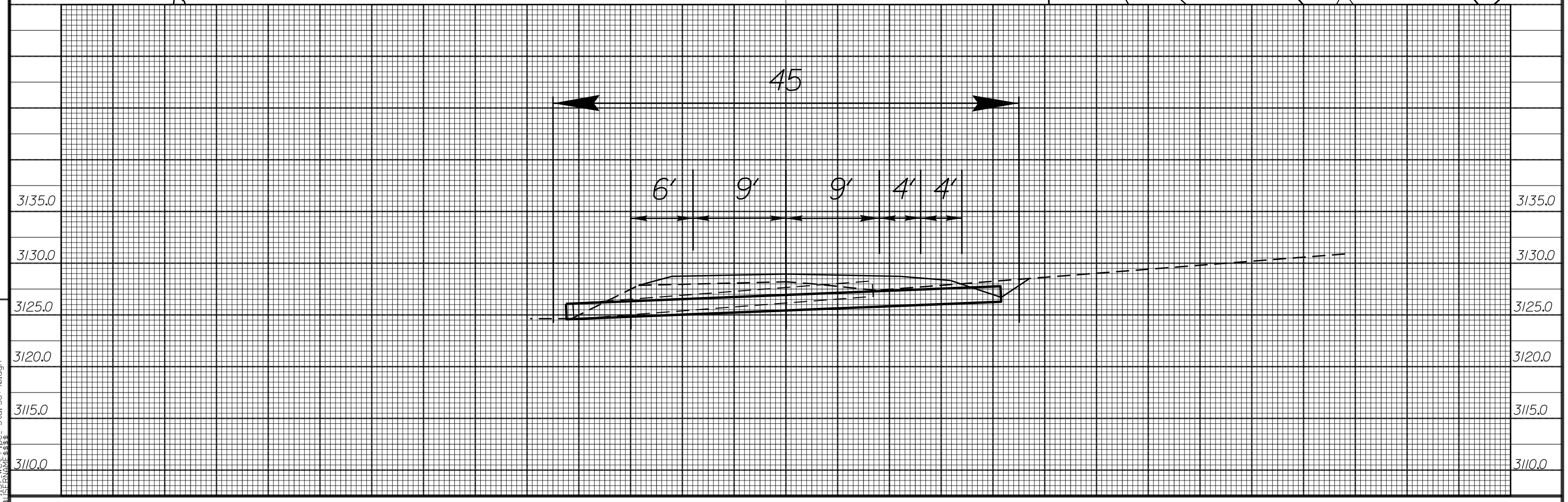
REVISIONS



STREAM NAME: Unnamed Tributary to Clarks Creek (INDEX 8-12-2)  
 RATING: C  
 EXISTING PIPE SIZE: 18" X 29' CMP  
 NEW PIPE SIZE: 18" X 42"  
 PIPE TO BE LAID ON A 125° SKEW WITH 4.0% FALL  
 4 ft Stream

SR 1137 Justus Rd.  
 WET PIPE SURVEY STA. 36+90

12

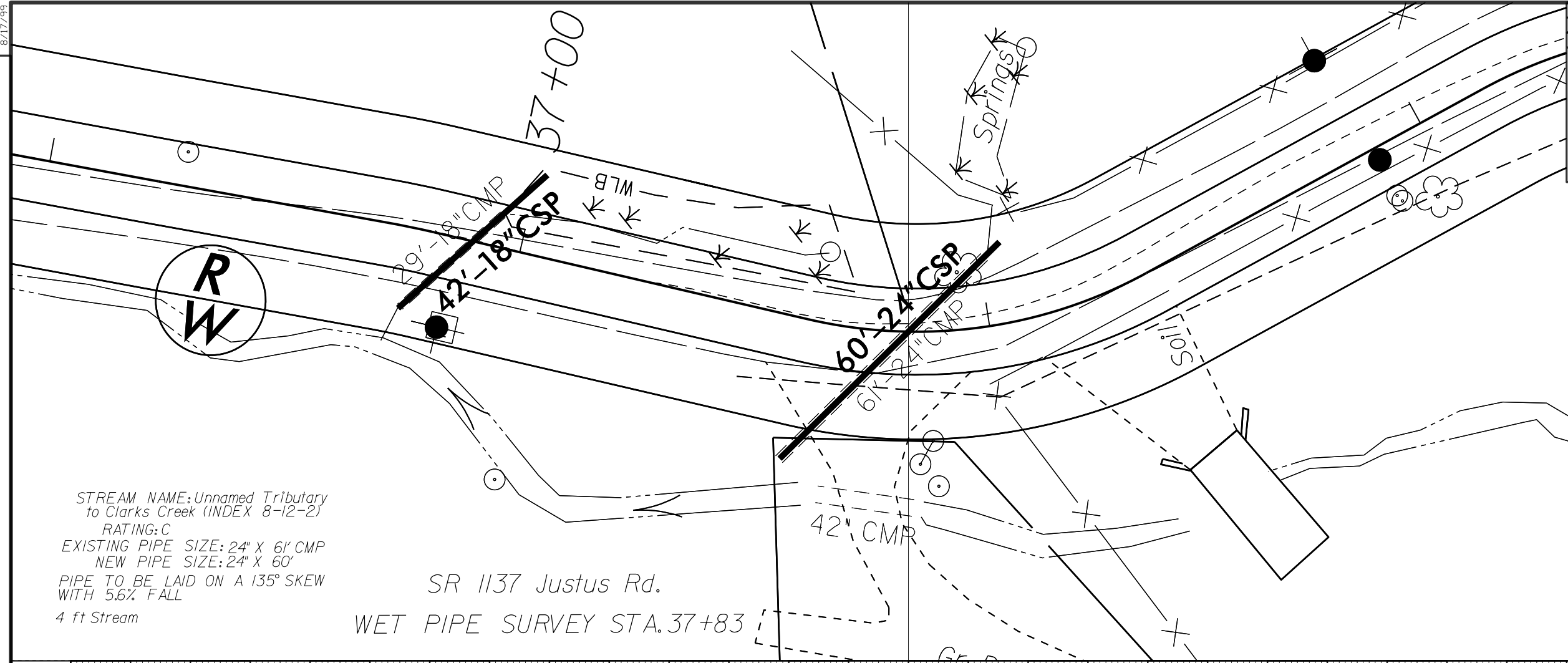


22-FEB-2022 11:16  
 AGR 1137 Wet Pipe - Sta. 36+90.dgn

PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 5 OF 8
R/W SHEET NO.	9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

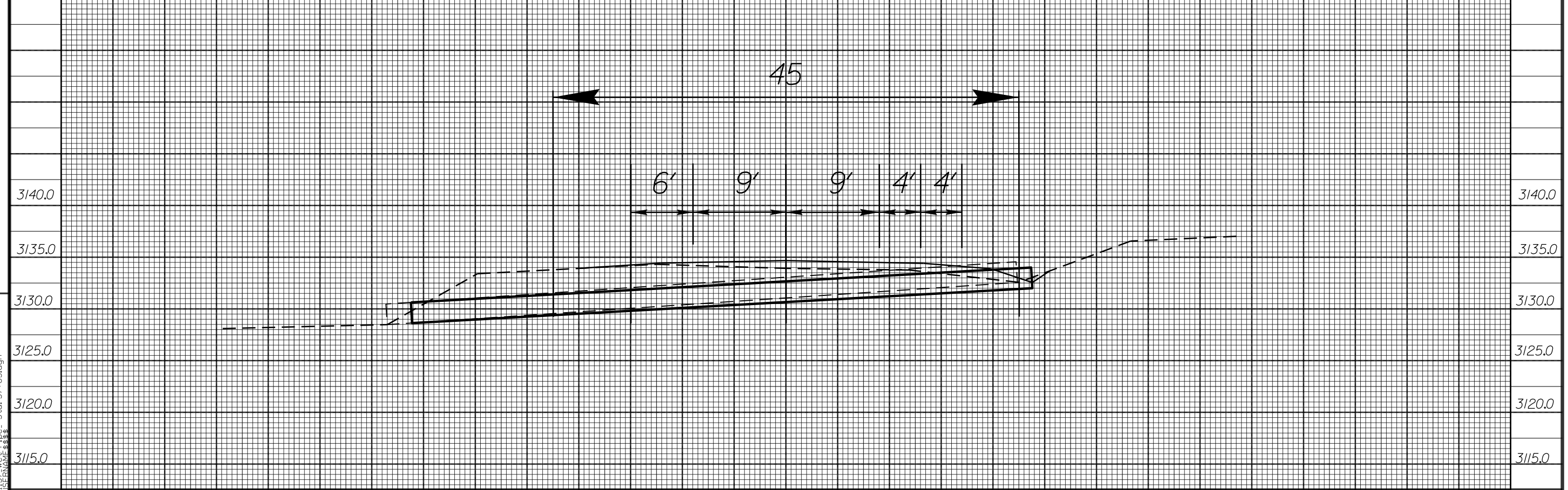
8/17/99

REVISIONS



STREAM NAME: Unnamed Tributary to Clarks Creek (INDEX 8-12-21)  
 RATING: C  
 EXISTING PIPE SIZE: 24" X 6' CMP  
 NEW PIPE SIZE: 24" X 60'  
 PIPE TO BE LAID ON A 135° SKEW WITH 5.6% FALL  
 4 ft Stream

SR 1137 Justus Rd.  
 WET PIPE SURVEY STA. 37+83

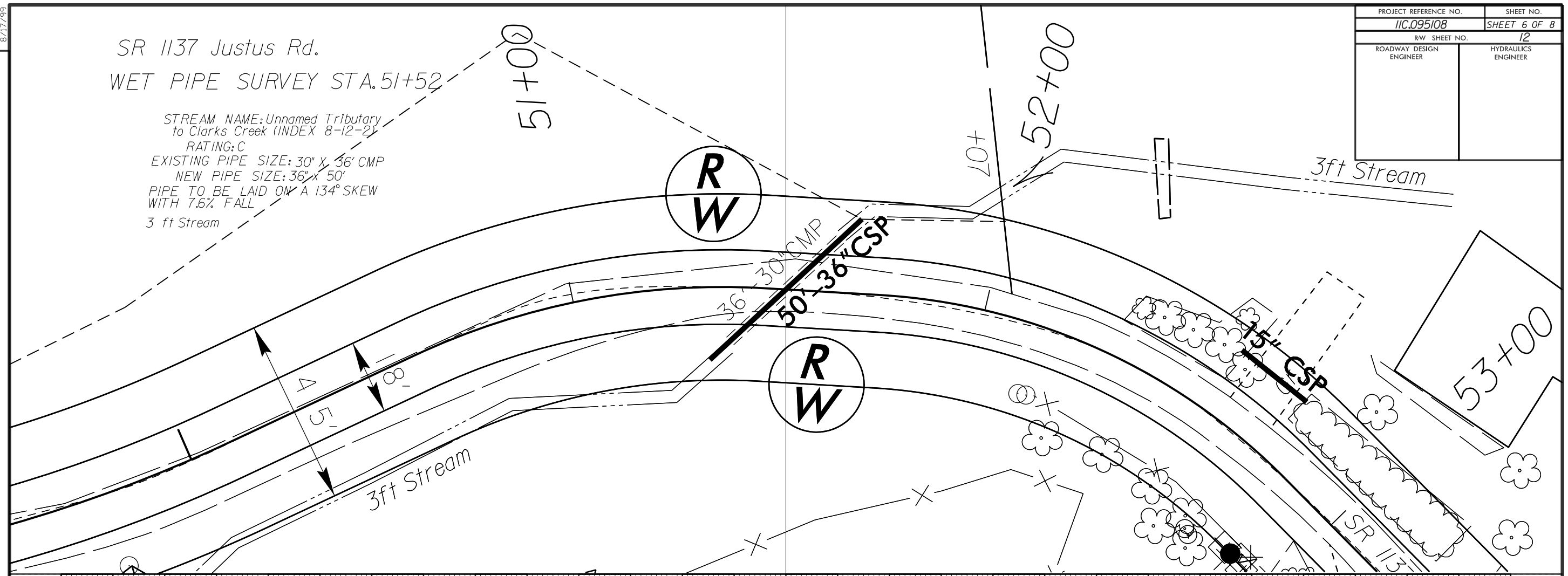


22-FEB-2022 11:18  
 AGR 1137 Wet Pipe - Sta. 37+83.dgn  
 11C.095108

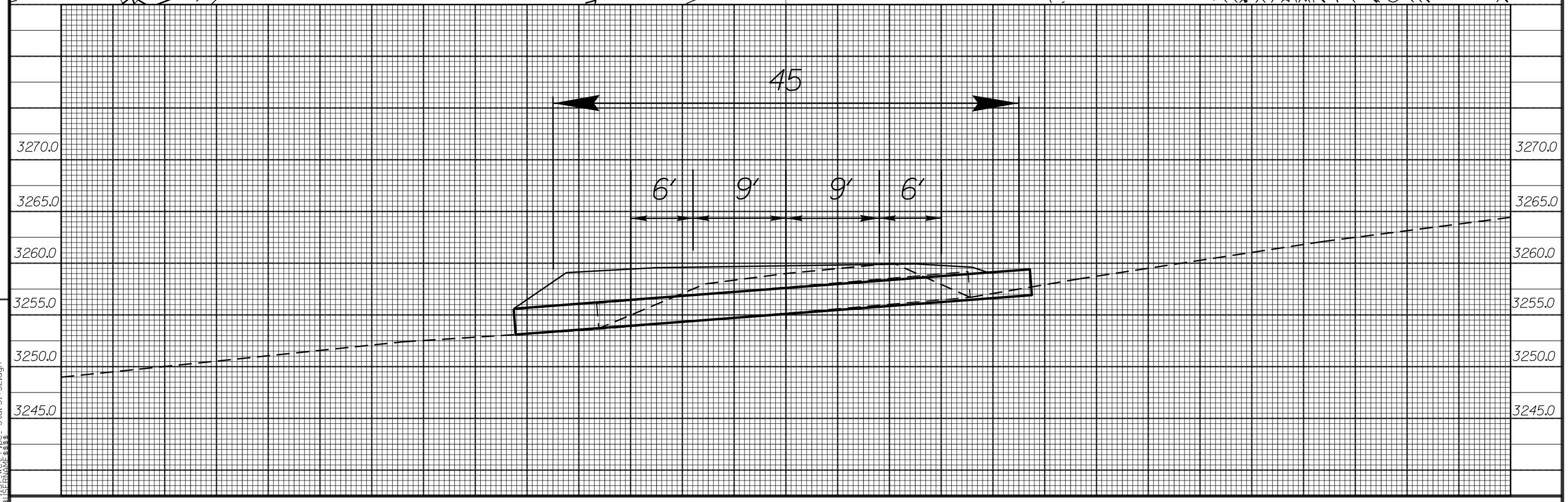
PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 6 OF 8
RW SHEET NO.	12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SR 1137 Justus Rd.  
WET PIPE SURVEY STA. 51+52

STREAM NAME: Unnamed Tributary  
to Clarks Creek (INDEX 8-12-2)  
RATING: C  
EXISTING PIPE SIZE: 30" x 36" CMP  
NEW PIPE SIZE: 36" x 50"  
PIPE TO BE LAID ON A 134° SKEW  
WITH 7.6% FALL  
3 ft Stream



REVISIONS



22-FEB-2022 11:20  
A:\SR 1137 Wet Pipe - Sta. 51+52.dgn

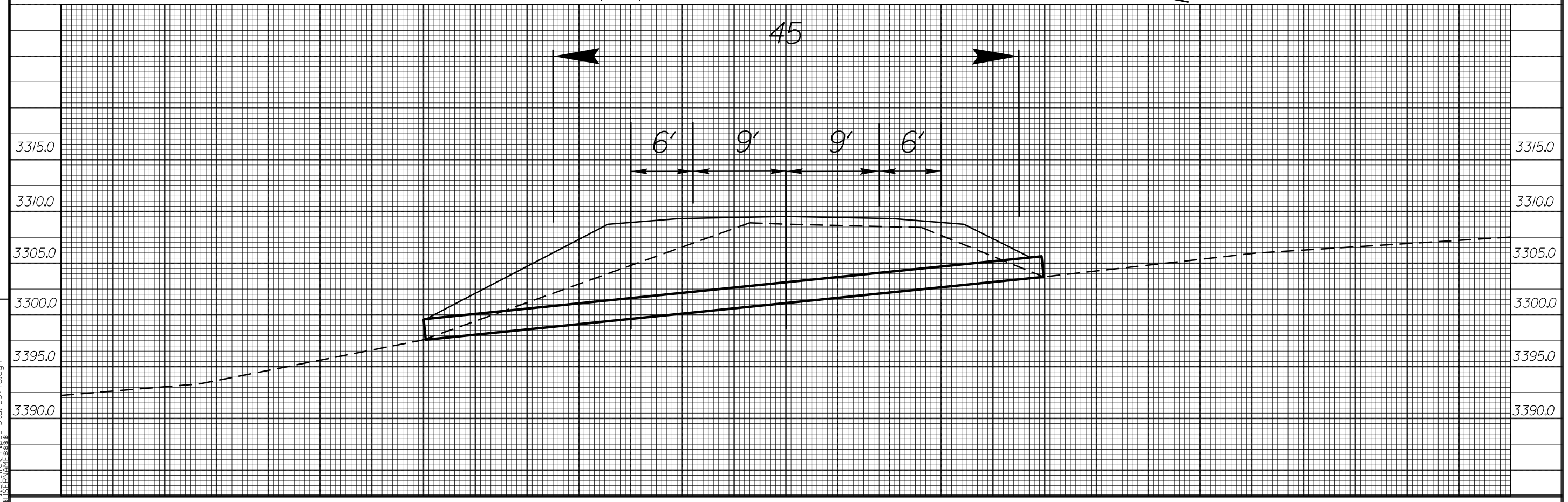
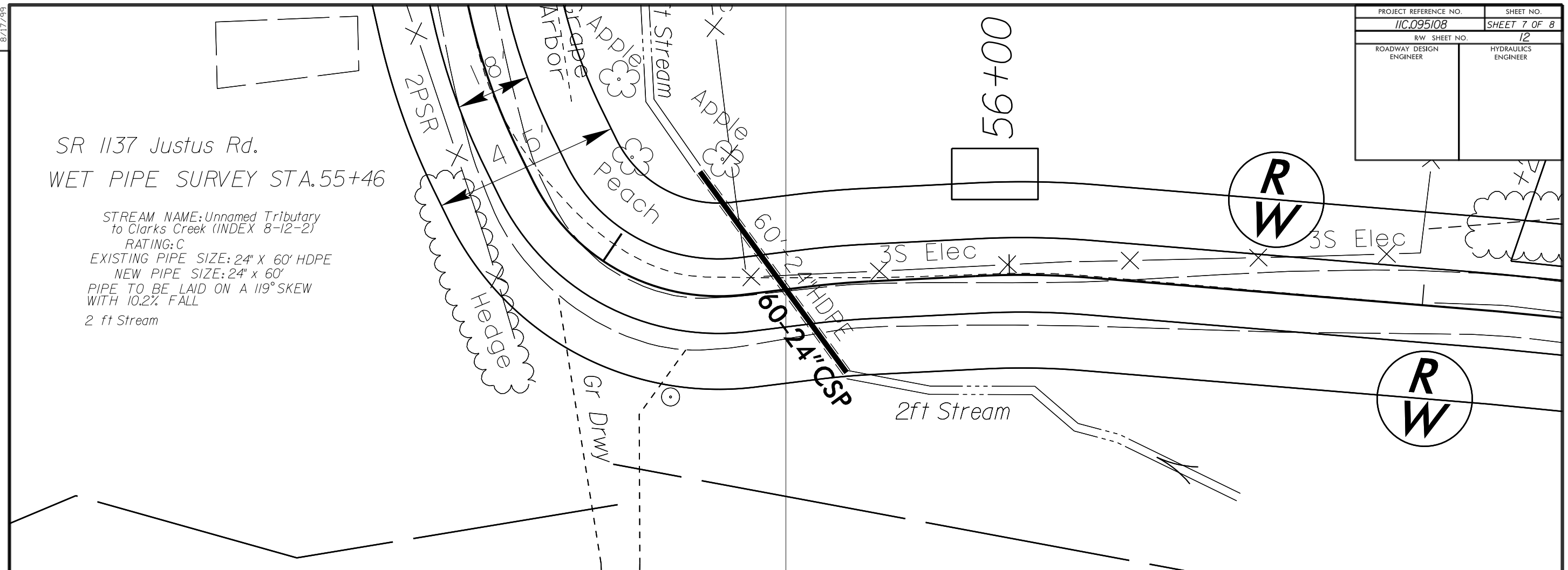
PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 7 OF 8
RW SHEET NO.	12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SR 1137 Justus Rd.  
WET PIPE SURVEY STA. 55+46

STREAM NAME: Unnamed Tributary to Clarks Creek (INDEX 8-12-2)  
RATING: C  
EXISTING PIPE SIZE: 24" x 60' HDPE  
NEW PIPE SIZE: 24" x 60'  
PIPE TO BE LAID ON A 119° SKEW WITH 10.2% FALL  
2 ft Stream

8/17/99

REVISIONS

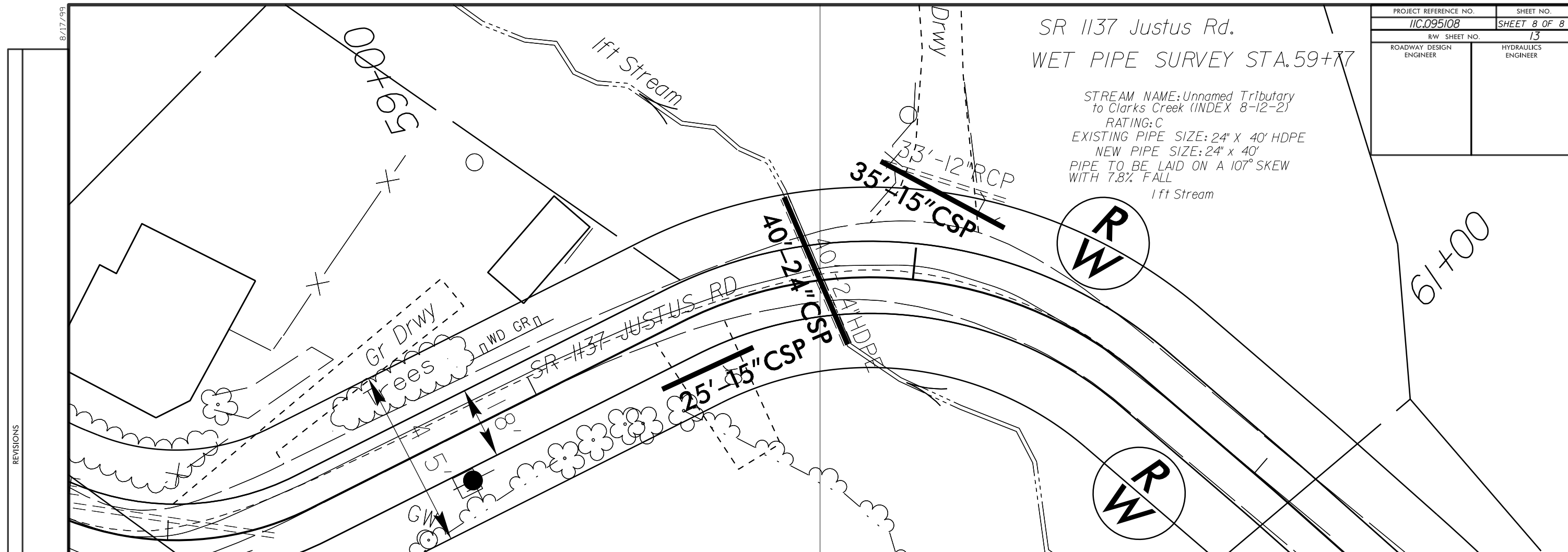


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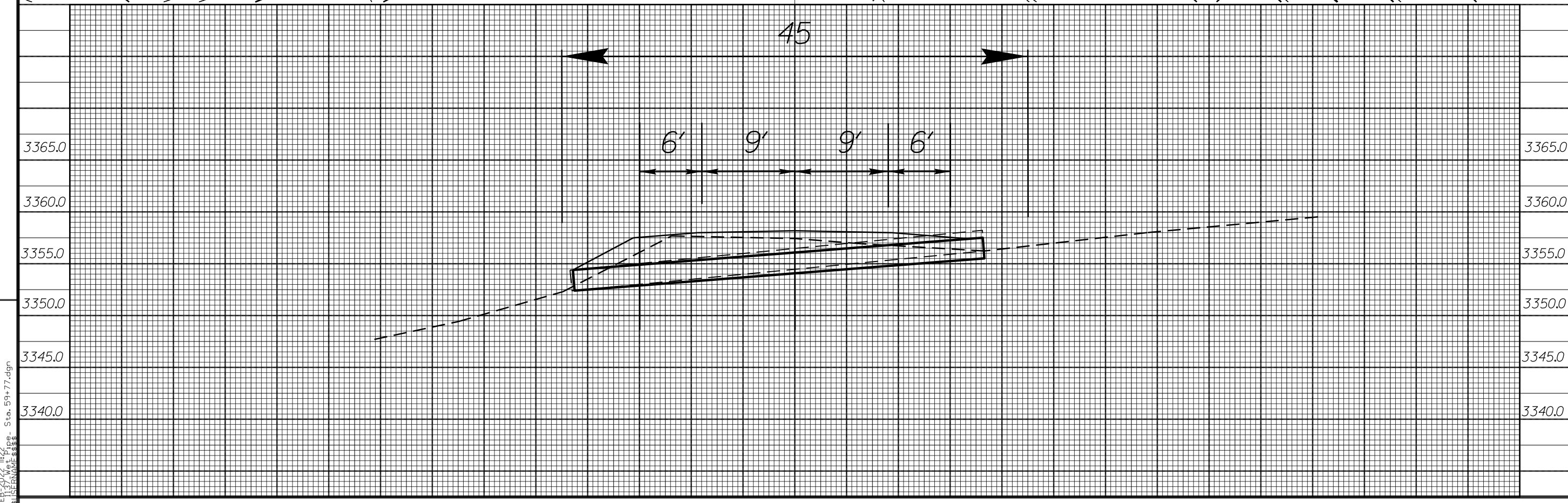
PROJECT REFERENCE NO.	SHEET NO.
11C.095108	SHEET 8 OF 8
R/W SHEET NO.	13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SR 1137 Justus Rd.  
WET PIPE SURVEY STA. 59+77

STREAM NAME: Unnamed Tributary to Clarks Creek (INDEX 8-12-2)  
 RATING: C  
 EXISTING PIPE SIZE: 24" X 40' HDPE  
 NEW PIPE SIZE: 24" X 40'  
 PIPE TO BE LAID ON A 107° SKEW WITH 7.8% FALL  
 1 ft Stream



REVISIONS



22-FEB-2022 11:22  
 AGR 1137 Wet Pipe - Sta. 59+77.dgn