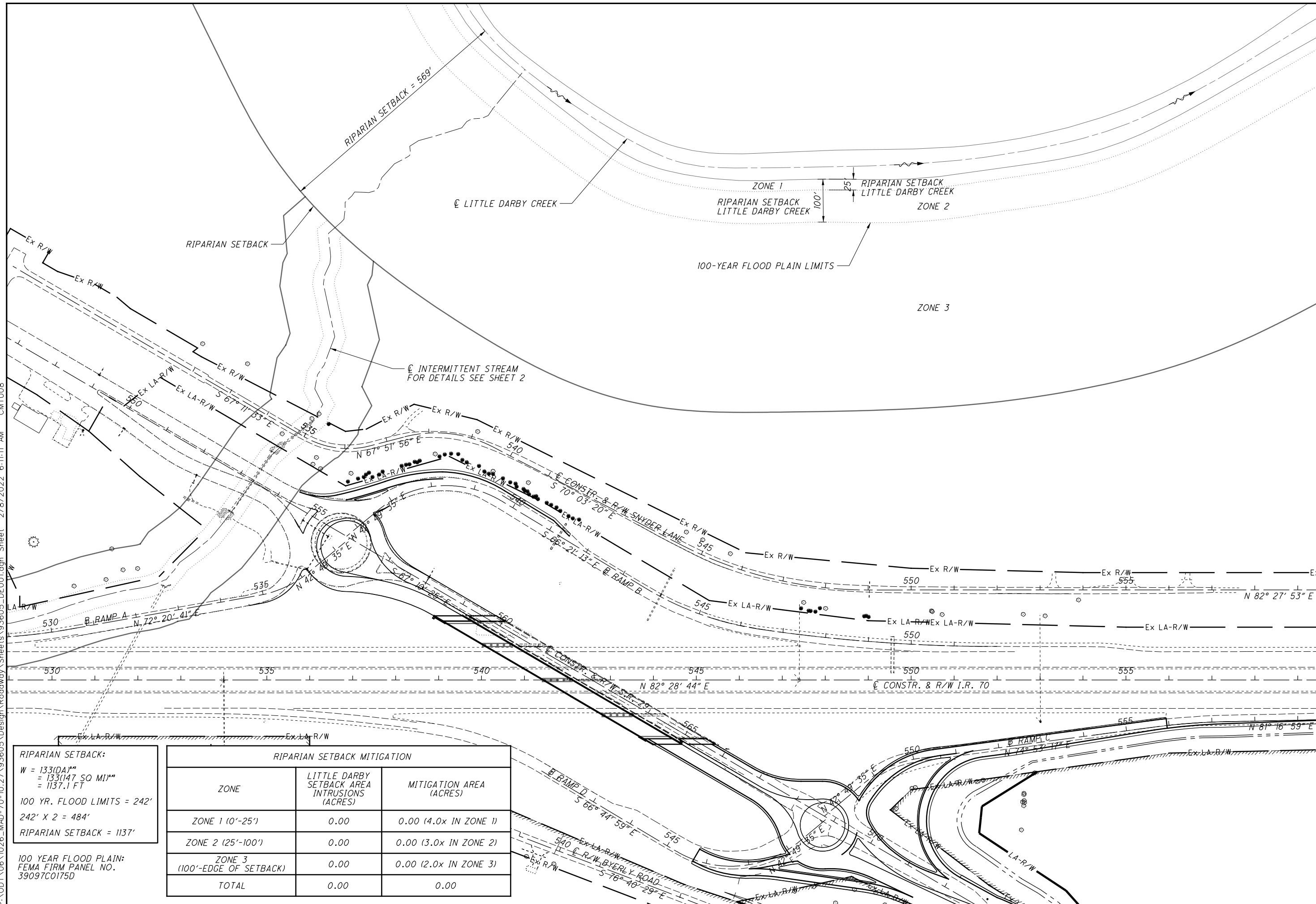


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CALCULATED  
KDW  
CHECKED  
TWG

**STORM WATER SITE PLAN  
RIPARIAN SETBACK - LITTLE DARBY CREEK**

**MAD-70-10.27**

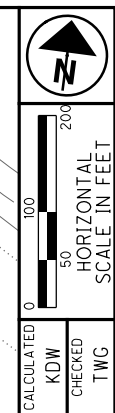


**RIPARIAN SETBACK:**  
 $W = 133(DA)^{0.44}$   
 $= 133(147 \text{ SO MI})^{0.44}$   
 $= 1137.1 \text{ FT}$   
 100 YR. FLOOD LIMITS = 242'  
 242' X 2 = 484'  
 RIPARIAN SETBACK = 1137'

100 YEAR FLOOD PLAIN:  
 FEMA FIRM PANEL NO.  
 39097C0175D

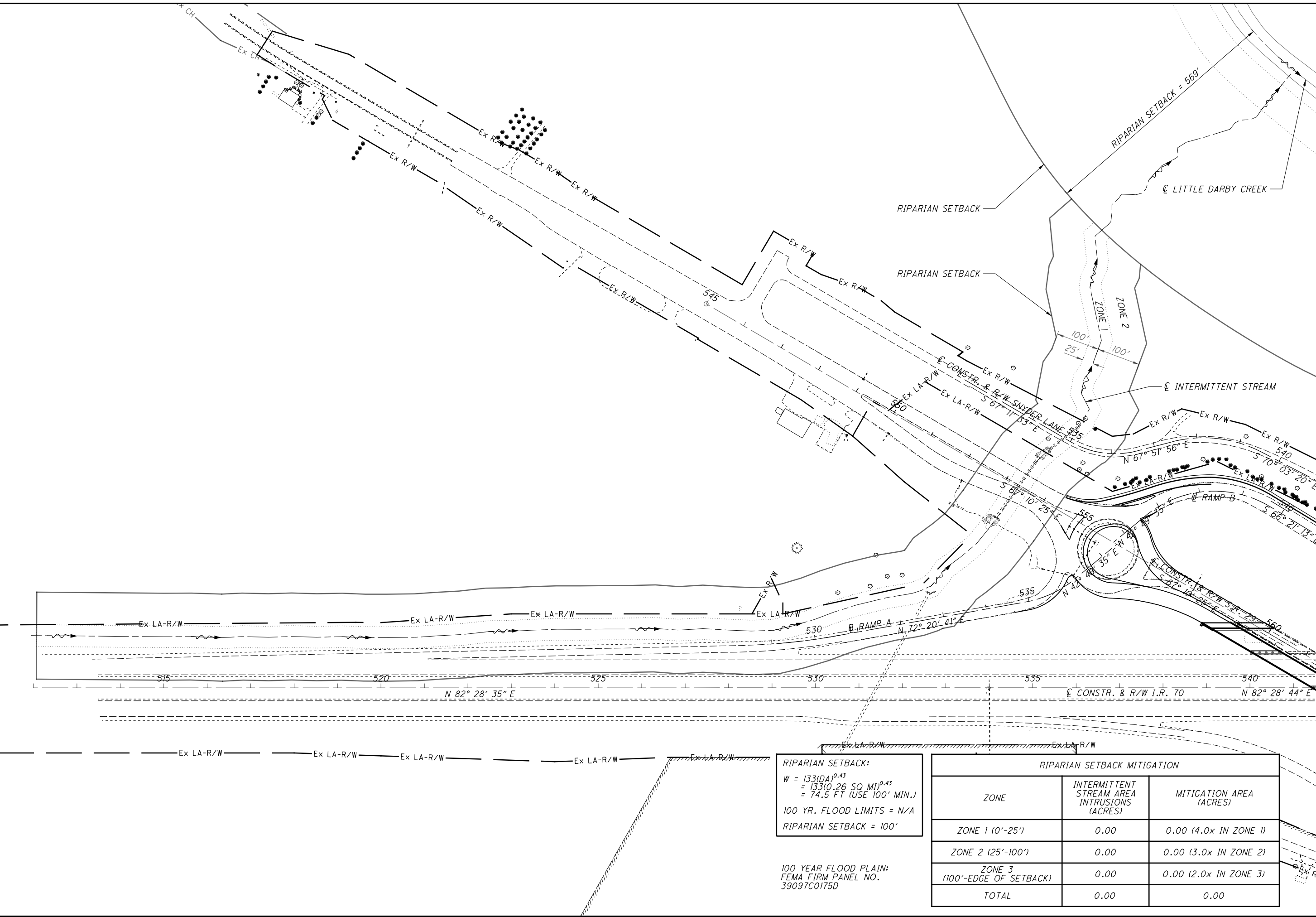
RIPARIAN SETBACK MITIGATION		
ZONE	LITTLE DARBY SETBACK AREA INTRUSIONS (ACRES)	MITIGATION AREA (ACRES)
ZONE 1 (0'-25')	0.00	0.00 (4.0x IN ZONE 1)
ZONE 2 (25'-100')	0.00	0.00 (3.0x IN ZONE 2)
ZONE 3 (100'-EDGE OF SETBACK)	0.00	0.00 (2.0x IN ZONE 3)
TOTAL	0.00	0.00

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**STORM WATER SITE PLAN  
RIPARIAN SETBACK - INTERMITTENT STREAM**

**MAD-70-10.27**

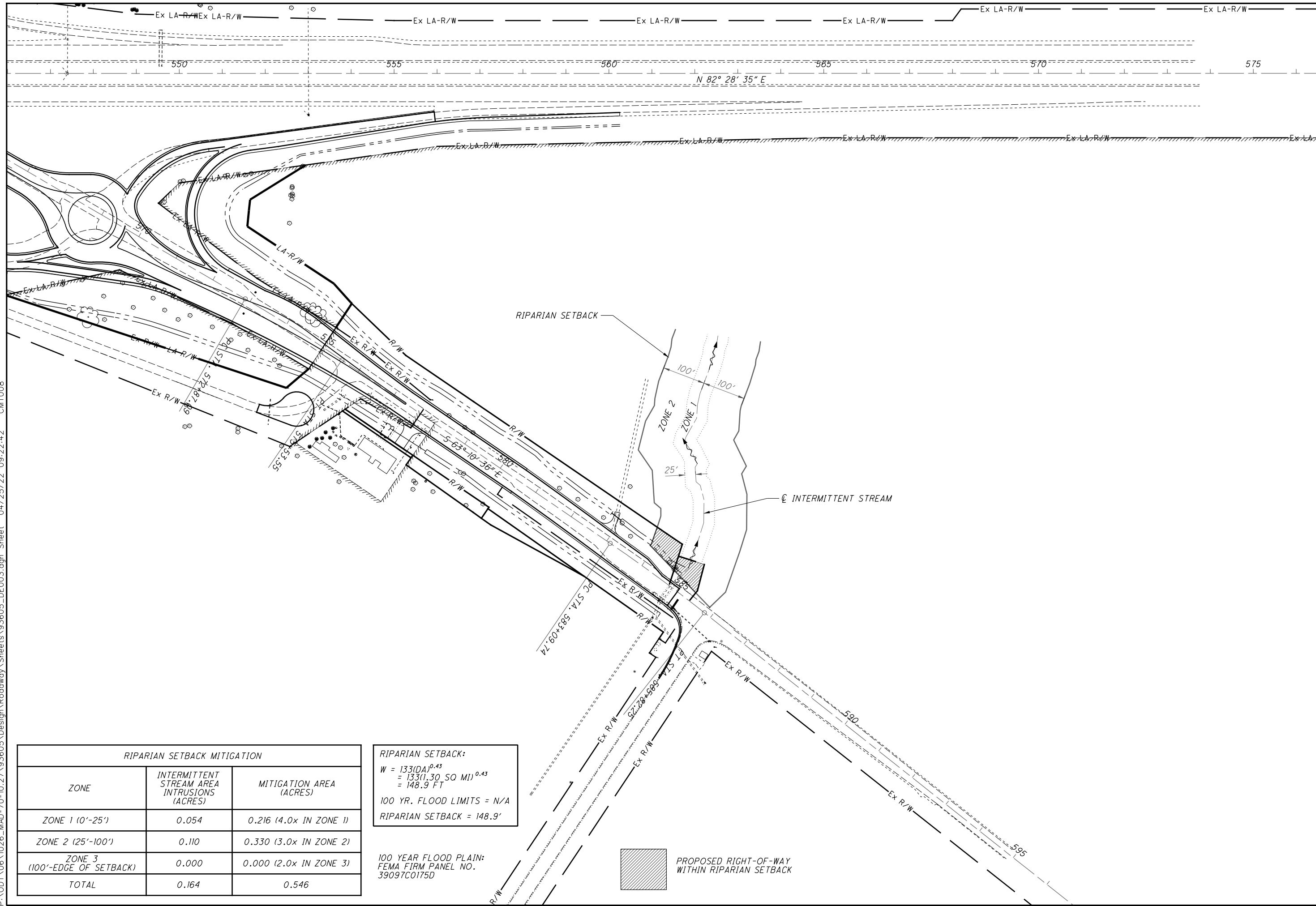


**RIPARIAN SETBACK:**  
 $W = 133(DA)^{0.43}$   
 $= 133(0.26 \text{ SO MI})^{0.43}$   
 $= 74.5 \text{ FT (USE 100' MIN.)}$   
 100 YR. FLOOD LIMITS = N/A  
 RIPARIAN SETBACK = 100'

100 YEAR FLOOD PLAIN:  
 FEMA FIRM PANEL NO.  
 39097C0175D

RIPARIAN SETBACK MITIGATION		
ZONE	INTERMITTENT STREAM AREA INTRUSIONS (ACRES)	MITIGATION AREA (ACRES)
ZONE 1 (0'-25')	0.00	0.00 (4.0x IN ZONE 1)
ZONE 2 (25'-100')	0.00	0.00 (3.0x IN ZONE 2)
ZONE 3 (100'-EDGE OF SETBACK)	0.00	0.00 (2.0x IN ZONE 3)
TOTAL	0.00	0.00

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CALCULATED  
KDW  
CHECKED  
TWG

0 100 200  
HORIZONTAL  
SCALE IN FEET

**STORM WATER SITE PLAN  
RIPARIAN SETBACK - INTERMITTENT STREAM**

RIPARIAN SETBACK MITIGATION		
ZONE	INTERMITTENT STREAM AREA INTRUSIONS (ACRES)	MITIGATION AREA (ACRES)
ZONE 1 (0'-25')	0.054	0.216 (4.0x IN ZONE 1)
ZONE 2 (25'-100')	0.110	0.330 (3.0x IN ZONE 2)
ZONE 3 (100'-EDGE OF SETBACK)	0.000	0.000 (2.0x IN ZONE 3)
TOTAL	0.164	0.546

**RIPARIAN SETBACK:**  
 $W = 133(DA)^{0.43}$   
 $= 133(1.30_{SO MI})^{0.43}$   
 $= 148.9 FT$   
 100 YR. FLOOD LIMITS = N/A  
 RIPARIAN SETBACK = 148.9'

100 YEAR FLOOD PLAIN:  
 FEMA FIRM PANEL NO.  
 39097C0175D

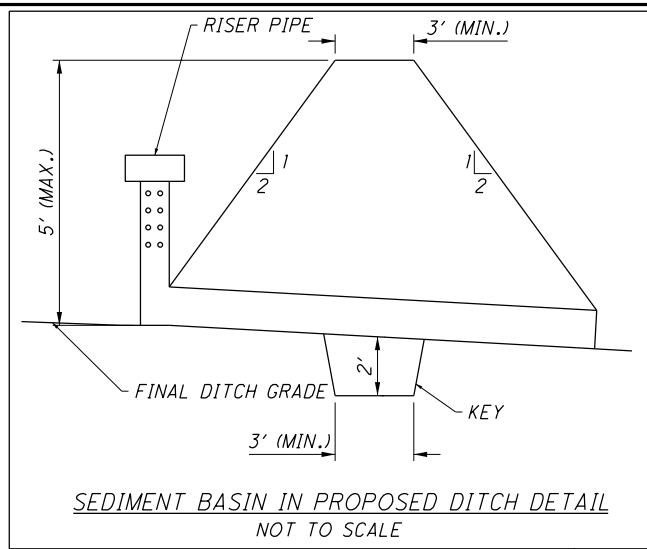
 PROPOSED RIGHT-OF-WAY WITHIN RIPARIAN SETBACK

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY)	25.3 AC	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.51
PROJECT EARTH DISTURBED AREA	23.5 AC	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.61
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	3.0 AC	IMMEDIATE RECEIVING WATERS:	LITTLE DARBY CREEK
NOTICE OF INTENT EARTH DISTURBED AREA	26.5 AC	SUBSEQUENT RECEIVING WATERS:	BIG DARBY CREEK
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	5.7 AC	LATITUDE	N39°57'33"
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	8.6 AC	LONGITUDE	W83°20'37"

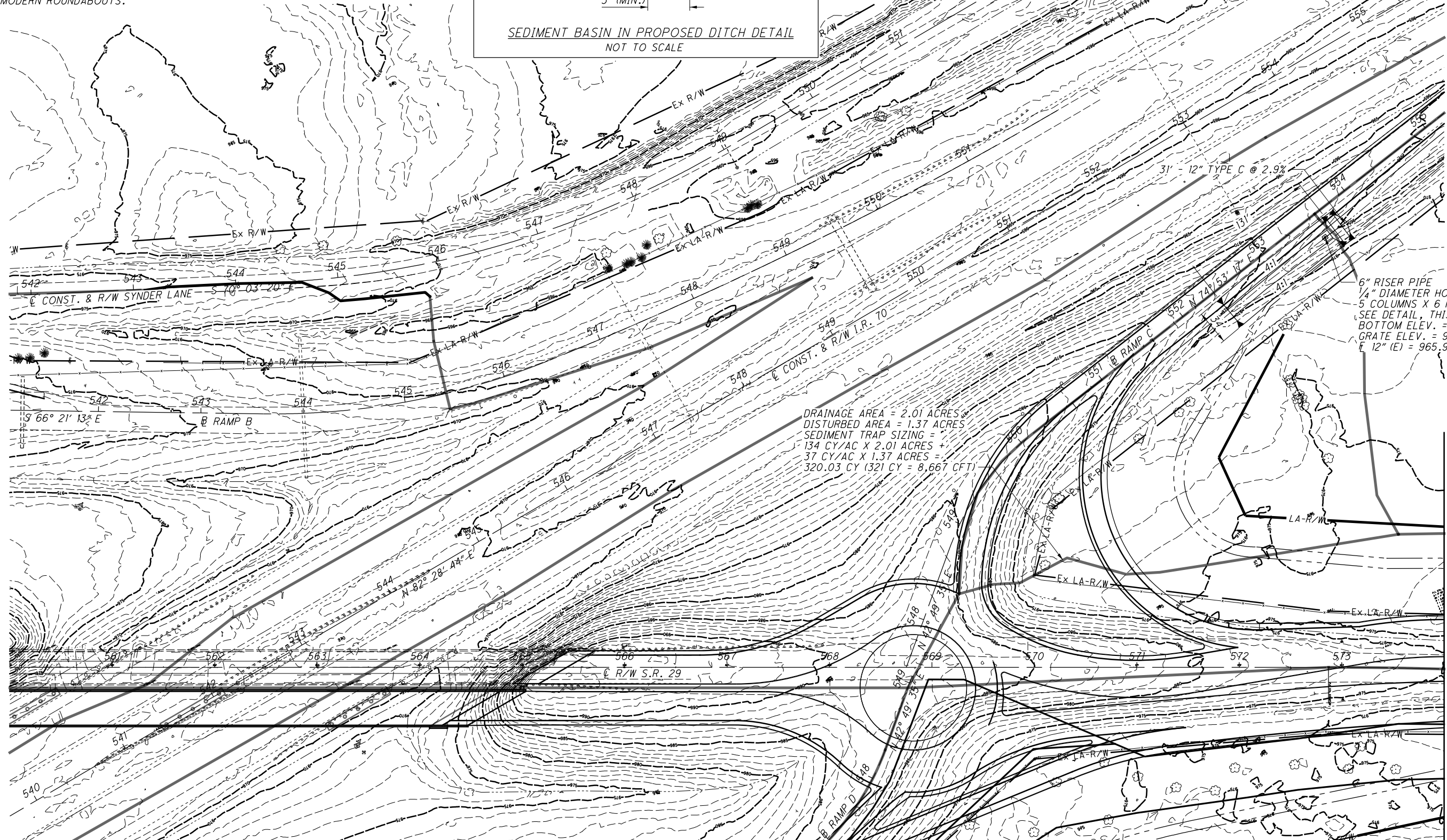
**PROJECT DESCRIPTION**

IMPROVEMENT OF THE INTERSECTION AT I.R.-70 AND S.R.-29 BY REPLACING THE INTERSECTION WITH TWO MODERN ROUNDABOUTS.

USGS QUADRANT NO. N3952.5-W8315/7.5 WEST JEFFERSON, OHIO



**NOTES**  
 1. ALL TEMPORARY PIPES, CATCH BASINS AND MANHOLES USED FOR DEWATERING THE TEMPORARY SEDIMENT BASINS AND FOR BYPASSING OFFSITE DRAINAGE ARE INCIDENTAL TO THE UNIT PRICE PAID UNDER THE SEDIMENT BASINS AND DAMS PER SECTION 832.13.  
 2. INSTALL SEDIMENT AND EROSION CONTROLS AS PER STANDARD CONSTRUCTION DRAWING DM-4.3, DM-4.4, WO-1.1 AND AS SHOWN IN THESE PLANS.

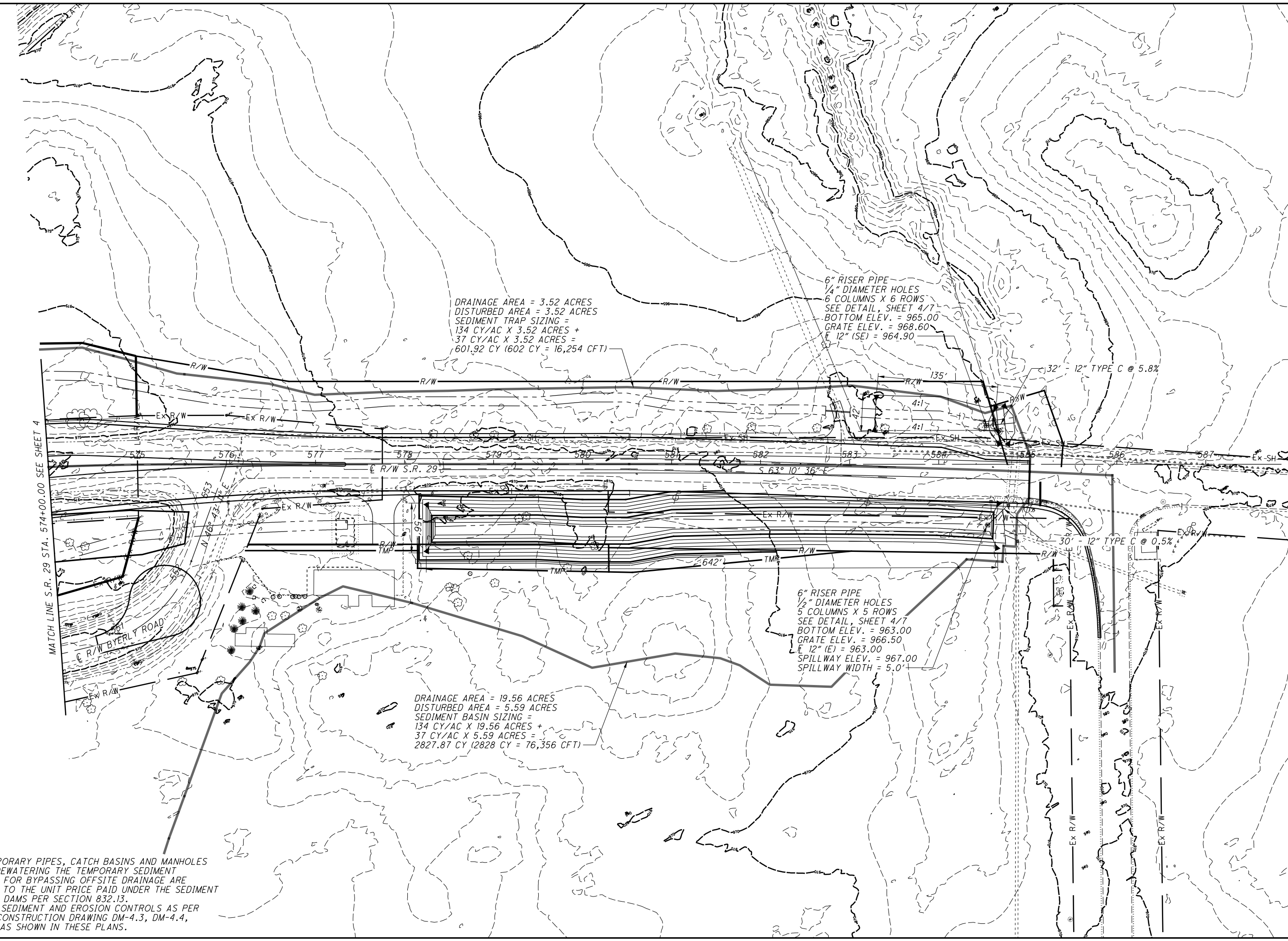


**STORM WATER SITE PLAN**  
**STA. 560+00.00 TO STA. 574+00.00**

**MAD-70-10.27**

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MATCH LINE S.R. 29 STA. 574+00.00 SEE SHEET 5



DRAINAGE AREA = 3.52 ACRES  
DISTURBED AREA = 3.52 ACRES  
SEDIMENT TRAP SIZING =  
134 CY/AC X 3.52 ACRES +  
37 CY/AC X 3.52 ACRES =  
601.92 CY (602 CY = 16,254 CFT)

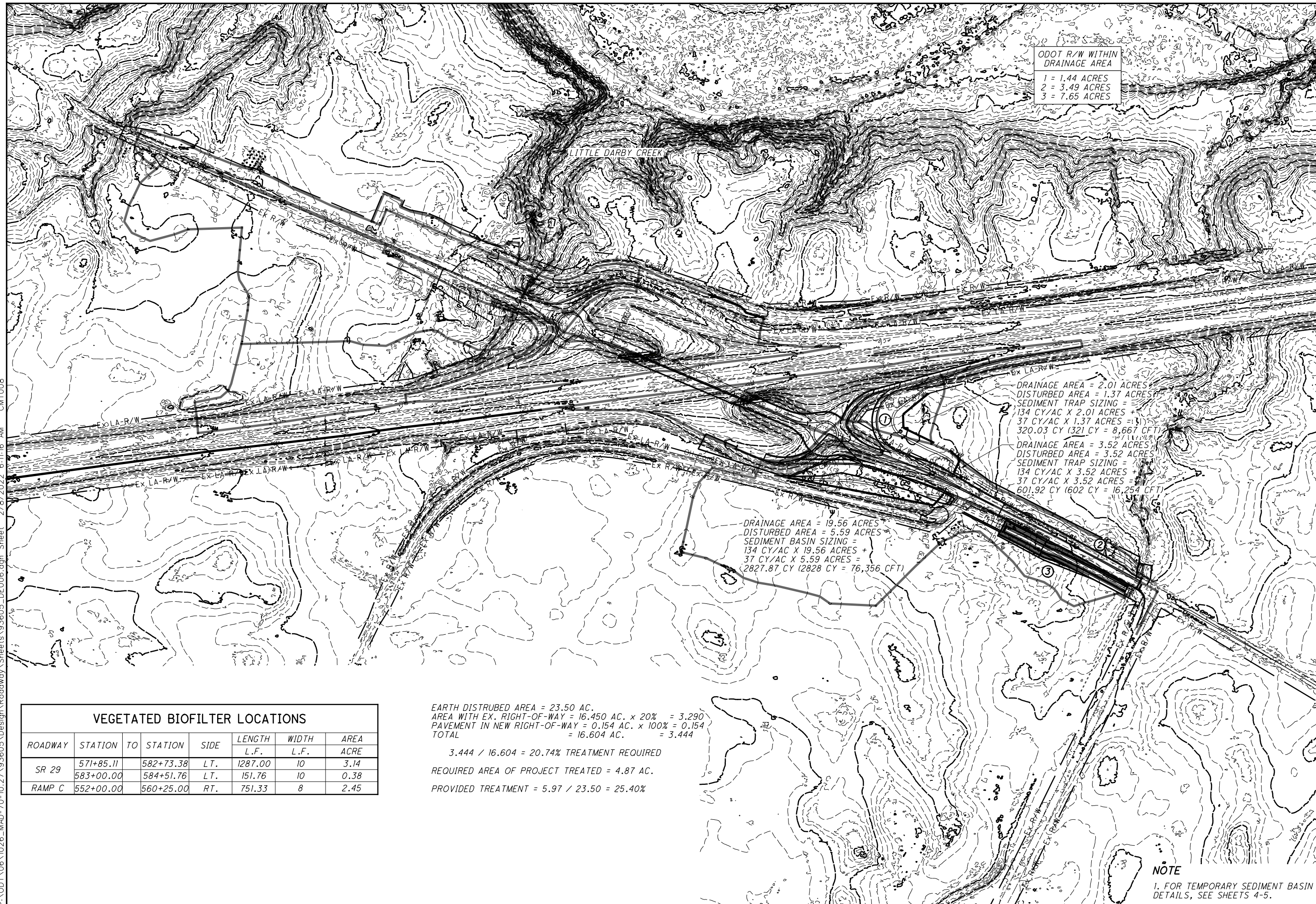
6" RISER PIPE  
1/4" DIAMETER HOLES  
6 COLUMNS X 6 ROWS  
SEE DETAIL, SHEET 4/7  
BOTTOM ELEV. = 965.00  
GRATE ELEV. = 968.60  
E 12" (SE) = 964.90

6" RISER PIPE  
1/2" DIAMETER HOLES  
5 COLUMNS X 5 ROWS  
SEE DETAIL, SHEET 4/7  
BOTTOM ELEV. = 963.00  
GRATE ELEV. = 966.50  
E 12" (E) = 963.00  
SPILLWAY ELEV. = 967.00  
SPILLWAY WIDTH = 5.0'

DRAINAGE AREA = 19.56 ACRES  
DISTURBED AREA = 5.59 ACRES  
SEDIMENT BASIN SIZING =  
134 CY/AC X 19.56 ACRES +  
37 CY/AC X 5.59 ACRES =  
2827.87 CY (2828 CY = 76,356 CFT)

**NOTES**  
1. ALL TEMPORARY PIPES, CATCH BASINS AND MANHOLES USED FOR DEWATERING THE TEMPORARY SEDIMENT BASINS AND FOR BYPASSING OFFSITE DRAINAGE ARE INCIDENTAL TO THE UNIT PRICE PAID UNDER THE SEDIMENT BASINS AND DAMS PER SECTION 832.13.  
2. INSTALL SEDIMENT AND EROSION CONTROLS AS PER STANDARD CONSTRUCTION DRAWING DM-4.3, DM-4.4, WO-1.1 AND AS SHOWN IN THESE PLANS.

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ODOT R/W WITHIN DRAINAGE AREA  
 1 = 1.44 ACRES  
 2 = 3.49 ACRES  
 3 = 7.65 ACRES

DRAINAGE AREA = 2.01 ACRES  
 DISTURBED AREA = 1.37 ACRES  
 SEDIMENT TRAP SIZING =  
 134 CY/AC X 2.01 ACRES = +  
 37 CY/AC X 1.37 ACRES = +  
 320.03 CY (321 CY = 8,667 CFT)

DRAINAGE AREA = 3.52 ACRES  
 DISTURBED AREA = 3.52 ACRES  
 SEDIMENT TRAP SIZING =  
 134 CY/AC X 3.52 ACRES = +  
 37 CY/AC X 3.52 ACRES = +  
 601.92 CY (602 CY = 16,254 CFT)

DRAINAGE AREA = 19.56 ACRES  
 DISTURBED AREA = 5.59 ACRES  
 SEDIMENT BASIN SIZING =  
 134 CY/AC X 19.56 ACRES +  
 37 CY/AC X 5.59 ACRES =  
 2827.87 CY (2828 CY = 76,356 CFT)

VEGETATED BIOFILTER LOCATIONS							
ROADWAY	STATION	TO	STATION	SIDE	LENGTH	WIDTH	AREA
					L.F.	L.F.	ACRE
SR 29	571+85.11	582+73.38		LT.	1287.00	10	3.14
	583+00.00	584+51.76		LT.	151.76	10	0.38
RAMP C	552+00.00	560+25.00		RT.	751.33	8	2.45

EARTH DISTURBED AREA = 23.50 AC.  
 AREA WITH EX. RIGHT-OF-WAY = 16.450 AC. x 20% = 3.290  
 PAVEMENT IN NEW RIGHT-OF-WAY = 0.154 AC. x 100% = 0.154  
 TOTAL = 16.604 AC. = 3.444

3.444 / 16.604 = 20.74% TREATMENT REQUIRED

REQUIRED AREA OF PROJECT TREATED = 4.87 AC.

PROVIDED TREATMENT = 5.97 / 23.50 = 25.40%

NOTE  
 1. FOR TEMPORARY SEDIMENT BASIN DETAILS, SEE SHEETS 4-5.

0 200 400

100' HORIZONTAL SCALE IN FEET

CALCULATED	KDW	CHECKED	TWG
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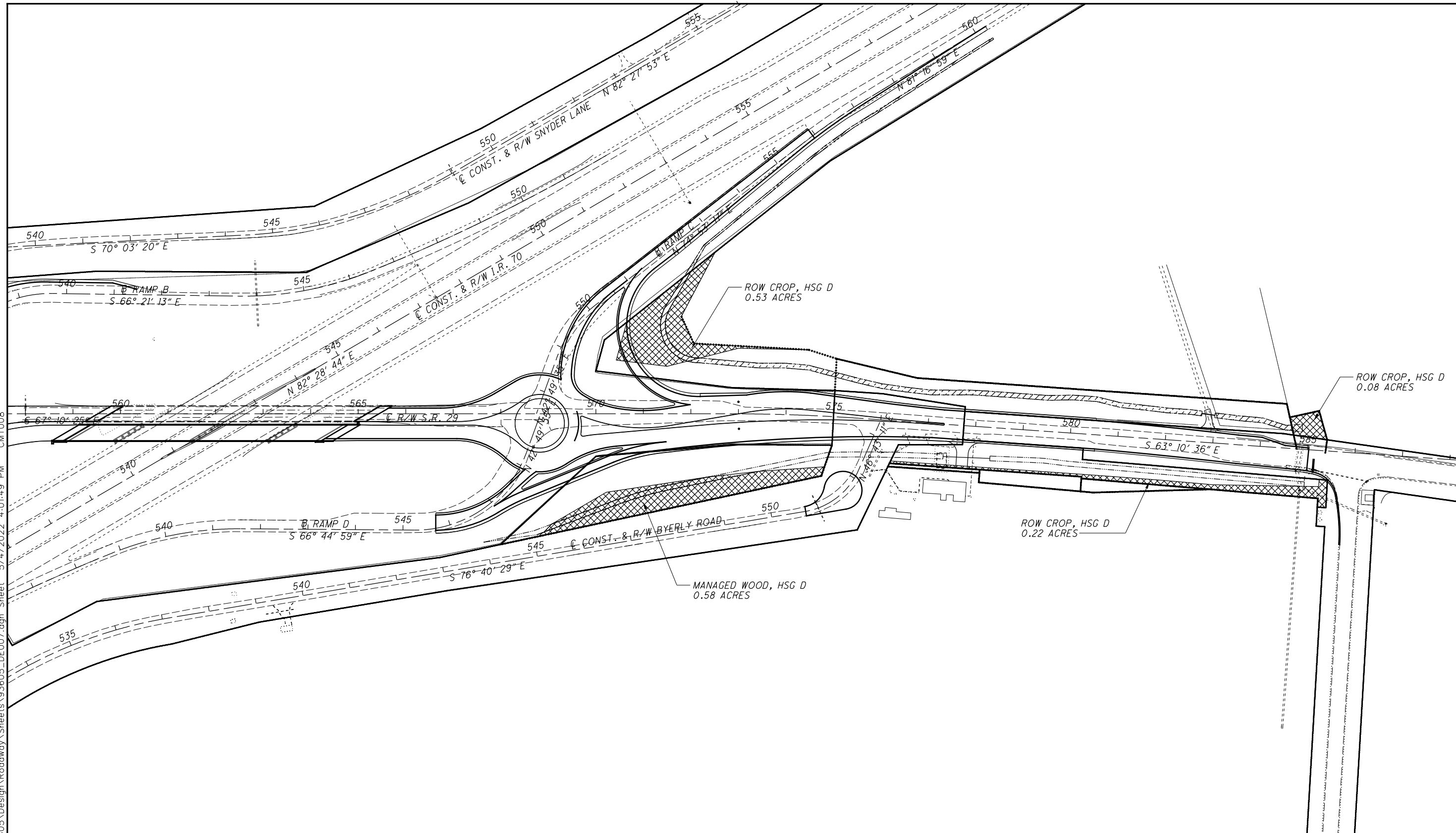
STORM WATER SITE PLAN

DRAINAGE AREAS

MAD-70-10.27

6  
7

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**LEGEND**

- GROUNDWATER MITIGATION AREA
- PROVIDE VEGETATIVE BIOFILTER

USE TABLE 2: SOIL GROUP C/D	RECHARGE D <sub>re</sub> (INCHES)	NEW R/W AREA	V <sub>re</sub> (AC-FT) NEW R/W
<b>PRE-CONSTRUCTION</b>			
MANAGED WOOD, HSG D	9.1	0.58	0.44
ROW CROP, HSG D	6.2	0.53	0.27
ROW CROP, HSG D	6.2	0.22	0.11
ROW CROP, HSG D	6.2	0.08	0.04
			<u>0.86</u>
<b>POST-CONSTRUCTION "COMMERCIAL" ALL HSG TYPES</b>			
	2.9	1.41	0.34
<b>MITIGATION REQUIRED (PRE MINUS POST)</b>			
	-	-	0.52

CALCULATED  
KDW  
CHECKED  
TWG

HORIZONTAL  
SCALE IN FEET

**STORM WATER SITE PLAN  
GROUNDWATER RECHARGE MITIGATION**

**MAD-70-10.27**