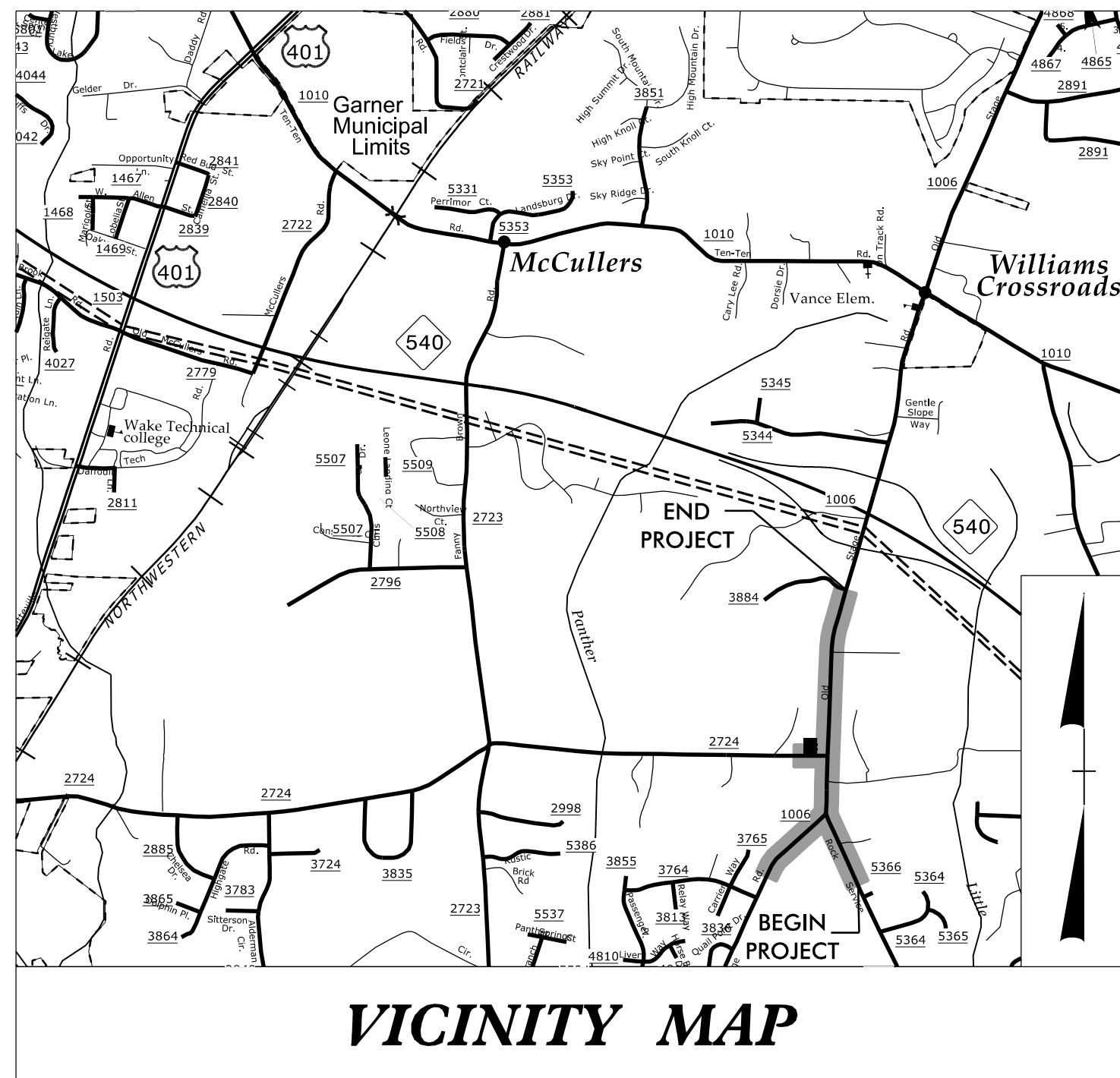


TIP PROJECT: HL-00081



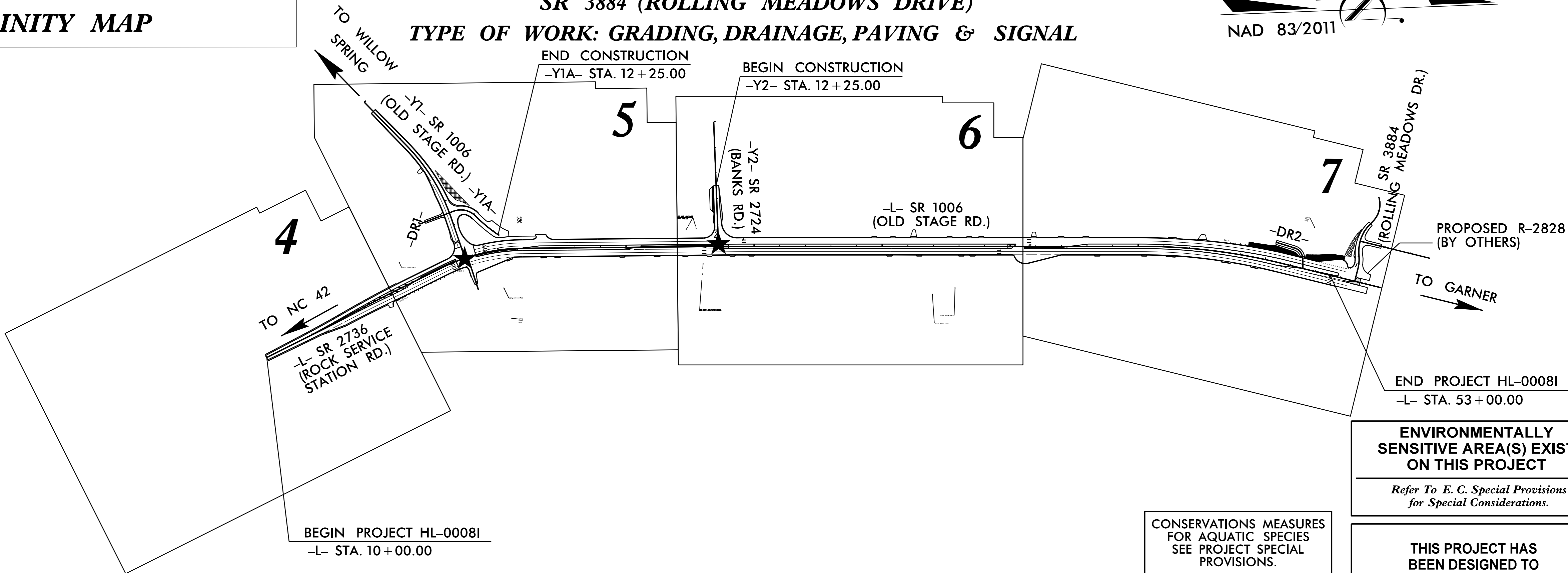
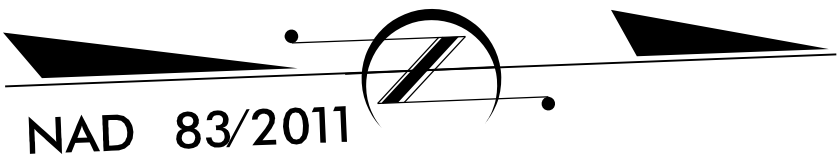
VICINITY MAP

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

WAKE COUNTY

LOCATION: WIDENING SR 1006 (OLD STAGE ROAD) FROM
SR 2736 (ROCK SERVICE STATION ROAD) TO
SR 3884 (ROLLING MEADOWS DRIVE)

TYPE OF WORK: GRADING, DRAINAGE, PAVING & SIGNAL

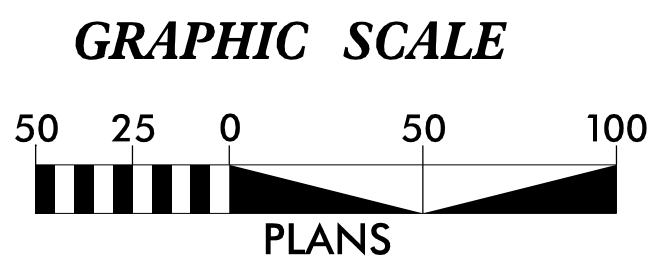


ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT
Refer To E. C. Special Provisions
for Special Considerations.

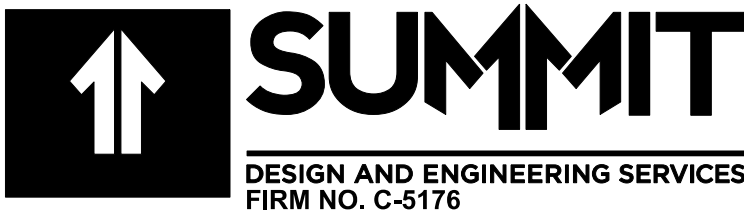
CONSERVATIONS MEASURES
FOR AQUATIC SPECIES
SEE PROJECT SPECIAL
PROVISIONS.

★ PROPOSED SIGNAL

THIS PROJECT HAS
BEEN DESIGNED TO
SENSITIVE WATERSHED
STANDARDS.



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE NCG 010000 GENERAL
STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH
CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION
OF ENERGY, MINERAL, AND LAND RESOURCES.



Prepared in the Office of:
320 Executive Ct.
Hillsborough, NC 27278-8551

Voice: (919)732-3883
Fax: (919)732-6776
www.summitde.com

Designed by:

Devon Hoyle 4545
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C.
Department of Transportation - Raleigh, N. C., dated January 2024
and the latest revision thereto are applicable to this project and by
reference hereby are considered a part of these plans.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
HL-0008I	EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

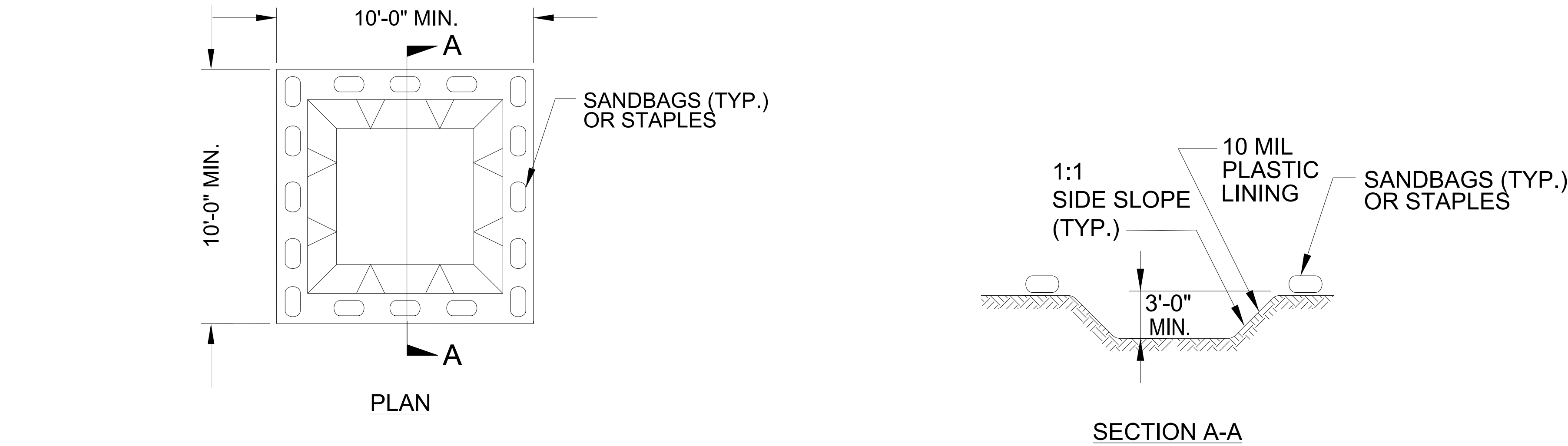
EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol
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	
1630.04	Stilling Basin	
1630.05	Temporary Diversion	
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	

Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
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	
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	
	Silt Fence Coir Fiber Wattle Break	
1636.03	Excelsior Wattle Barrier	
1636.03	Coir Fiber Wattle Barrier	

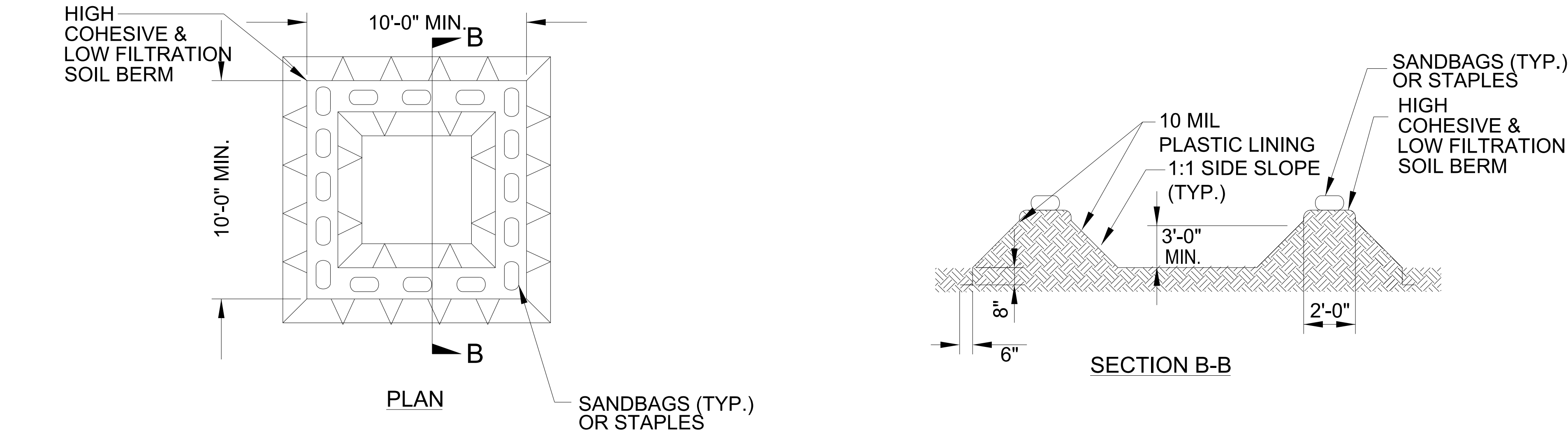
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.	SHEET NO.
HL-00081	EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE



- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.

SHEET NO.

HL-00081

EC-3

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

SOIL STABILIZATION SUMMARY SHEET

DITCH MATTING FOR EROSION CONTROL

[illegible]

SLOPE MATTING FOR EROSION CONTROL

[illegible]

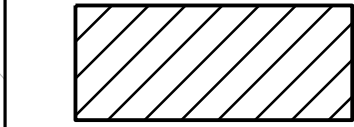
SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

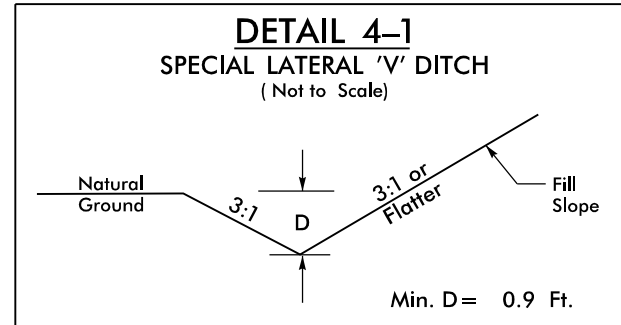
8/17/99

REVISIONS

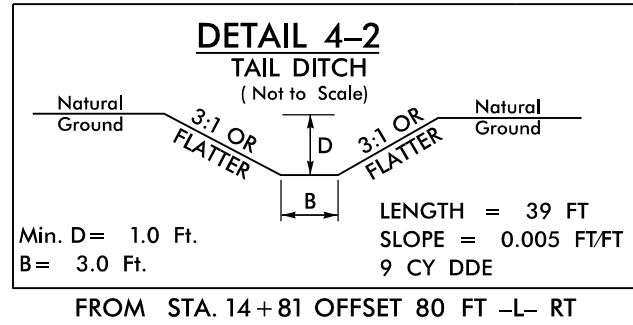
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patrick.hartnett



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS



FROM STA. 10+50 TO STA. 15+50 -L- LT



FROM STA. 14+81 OFFSET 80 FT -L- RT

NAD 83 2011

PROJECT REFERENCE NO. HL-00081		SHEET NO. EC-4/CONST. 4	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
Prepared in the Office of:		NC FIRM LICENSE No. C-5176 320 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX)	

CLEARING AND GRUBBING
EROSION CONTROL SHEET 4

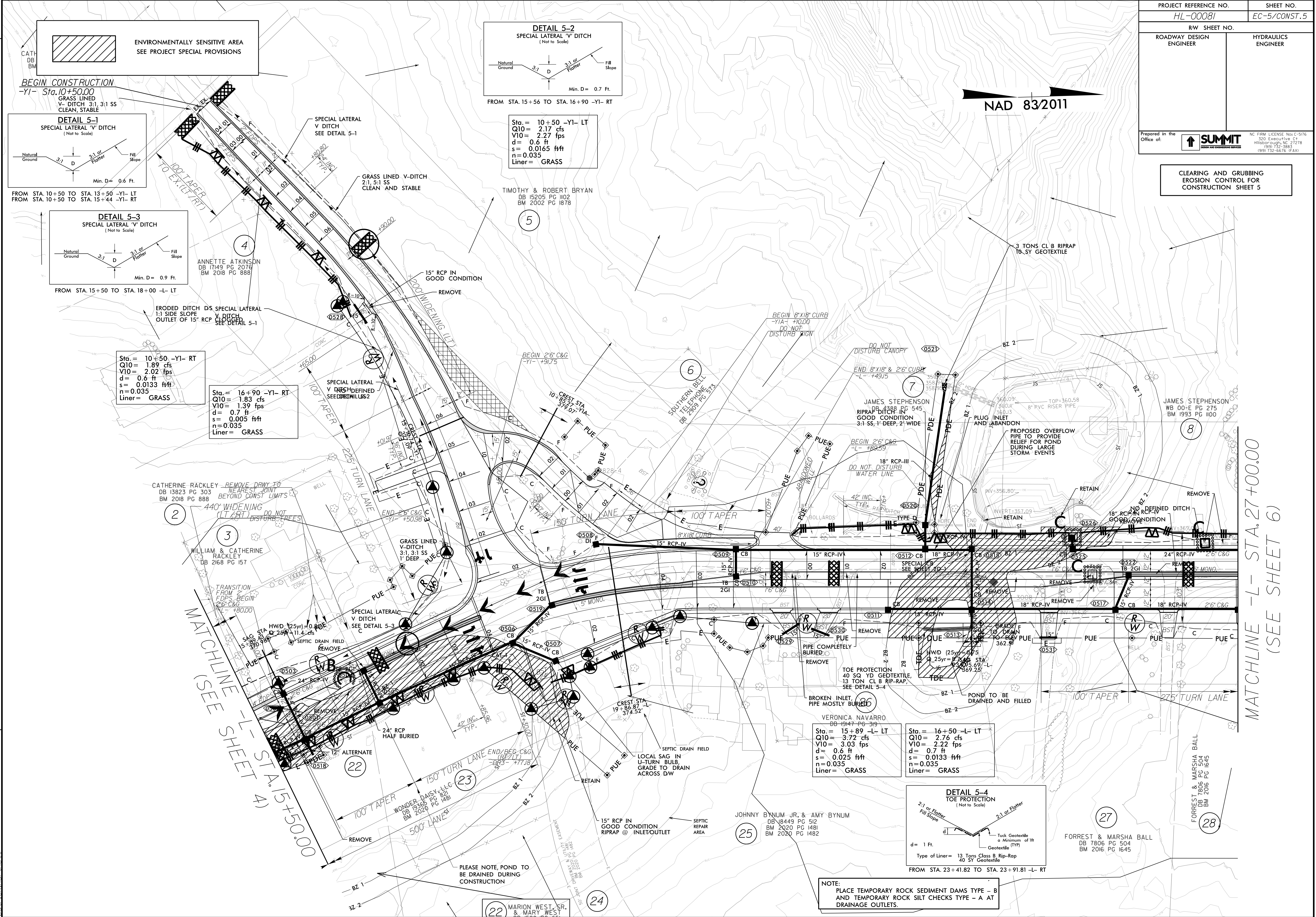
MATCHLINE -L- STA. 15+50.00
(SEE SHEET 5)

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

8/17/99

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HL-00081 EC_psh-5.dgn
patrick.hartnett

REVISIONS



PROJECT REFERENCE NO. HL-00081		SHEET NO. EC-5/CONST.5	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
Prepared in the Office of: 		NC FIRM LICENSE No. C-5176 320 Executive Ct. Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX)	

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

Sta. = 15+89 -L- LT
Q10 = 3.72 cfs
V10 = 3.03 fps
d = 0.6 ft
s = 0.025 f/ft
n = 0.035
Liner = GRASS

Sta. = 16+50 -L- LT
Q10 = 2.76 cfs
V10 = 2.22 fps
d = 0.7 ft
s = 0.0133 f/ft
n = 0.035
Liner = GRASS

DETAIL 5-4
TOE PROTECTION
(Not to Scale)

2:1 or Flatter
Fill Slope

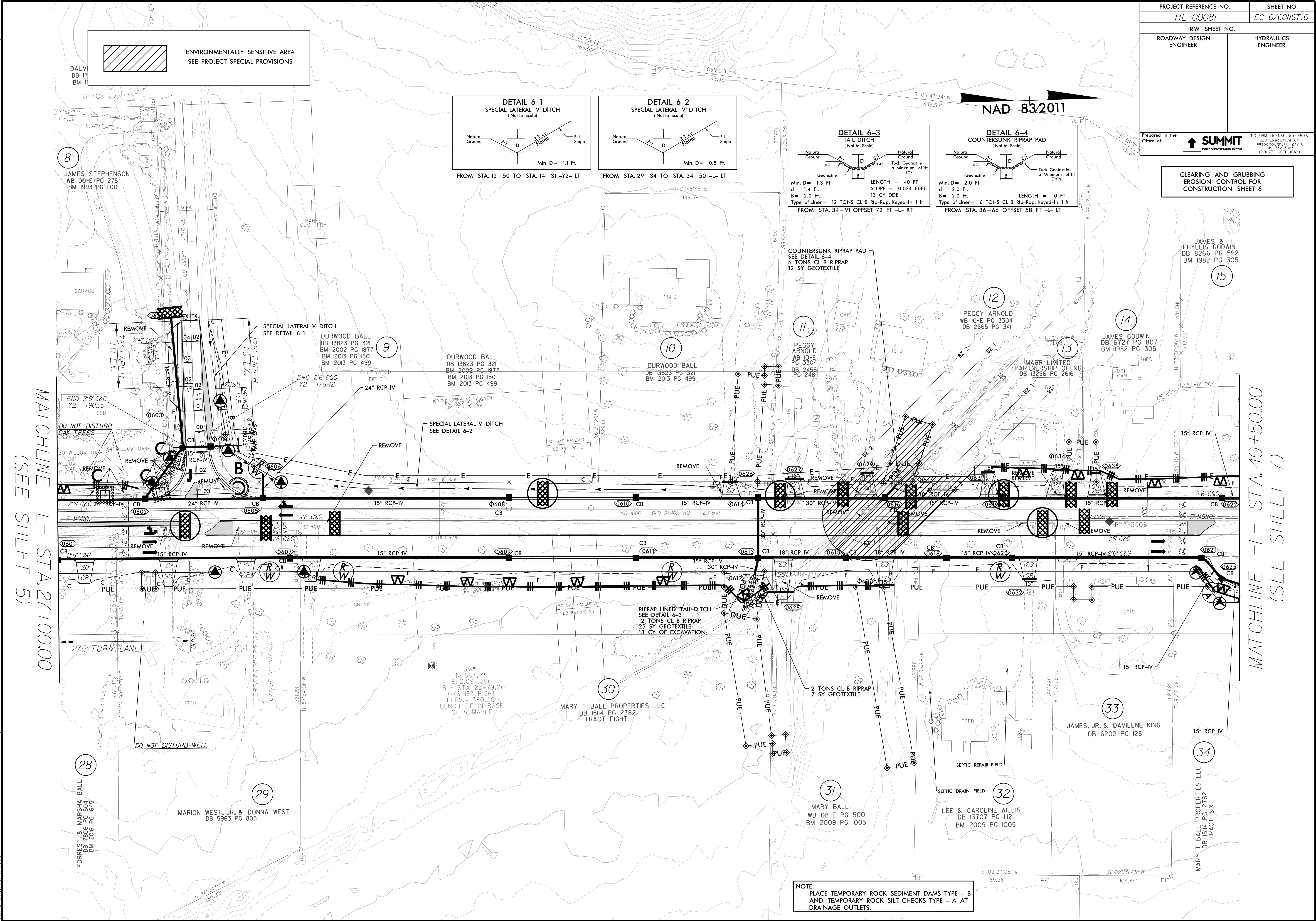
d = 1 Ft.

Type of Liner = 13 Tons Class B Rip-Rap

FROM STA. 23+41.82 TO STA. 23+91.81 -L- RT

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6



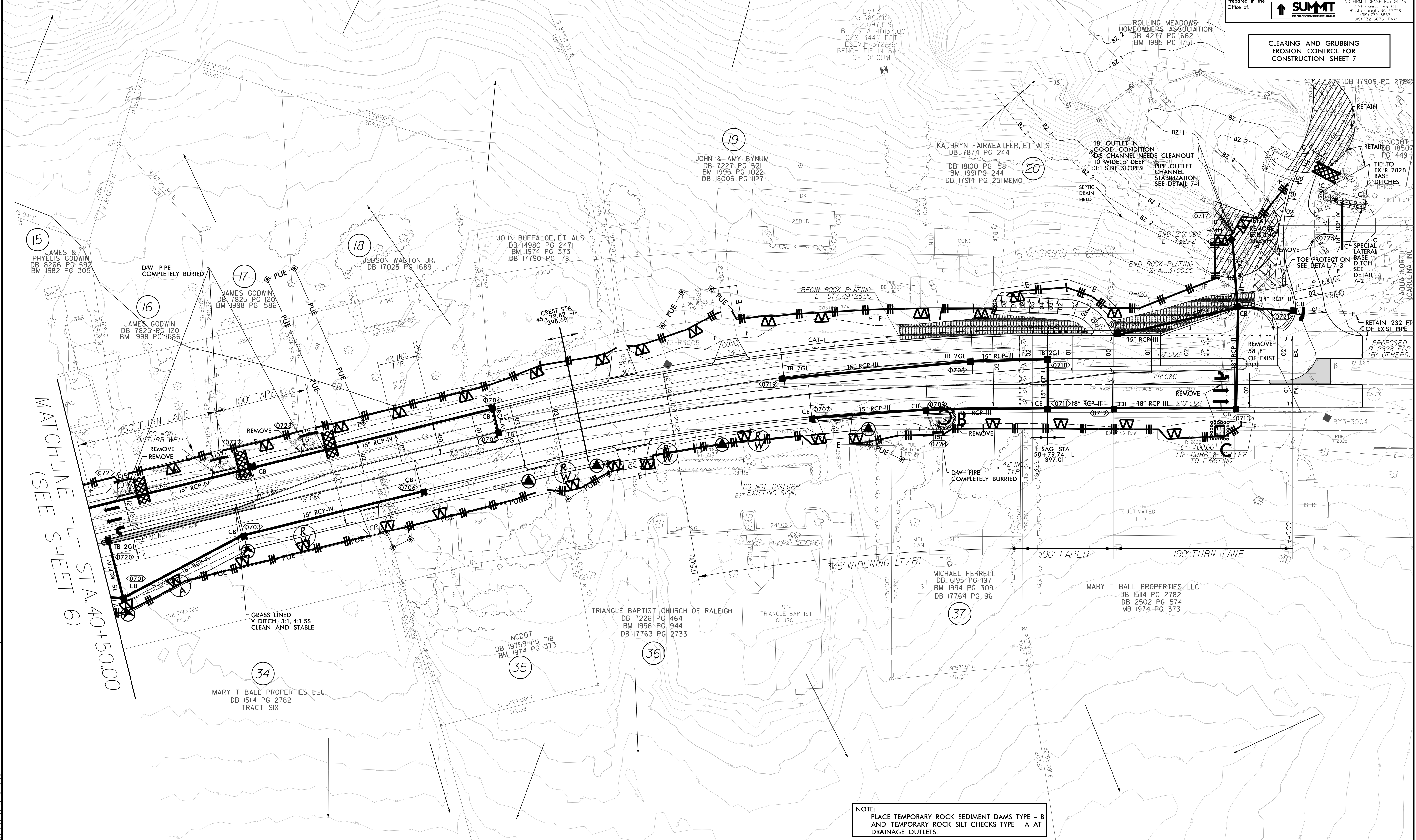
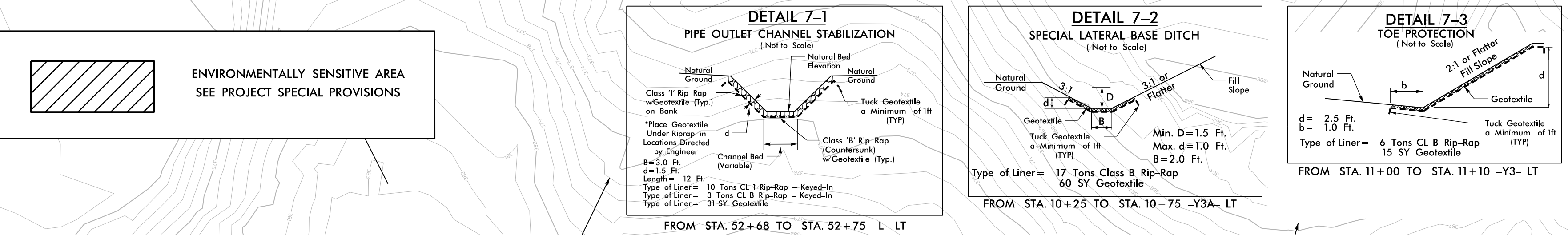
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patrick.hartnett

REVISIONS

MATCHLINE -L- STA. 27+00.00
(SEE SHEET 5)

MATCHLINE -L- STA. 40+50.00
(SEE SHEET 7)

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7



NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

PROJECT REFERENCE NO.		SHEET NO.
HL-00081		EC-8/CONST.7
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
Prepared in the Office of:		 NC FIRM LICENSE NO. C-576 320 Executive Ct. Hillsborough, NC 27278 (919) 732-2883 (919) 732-6676 (FAX)

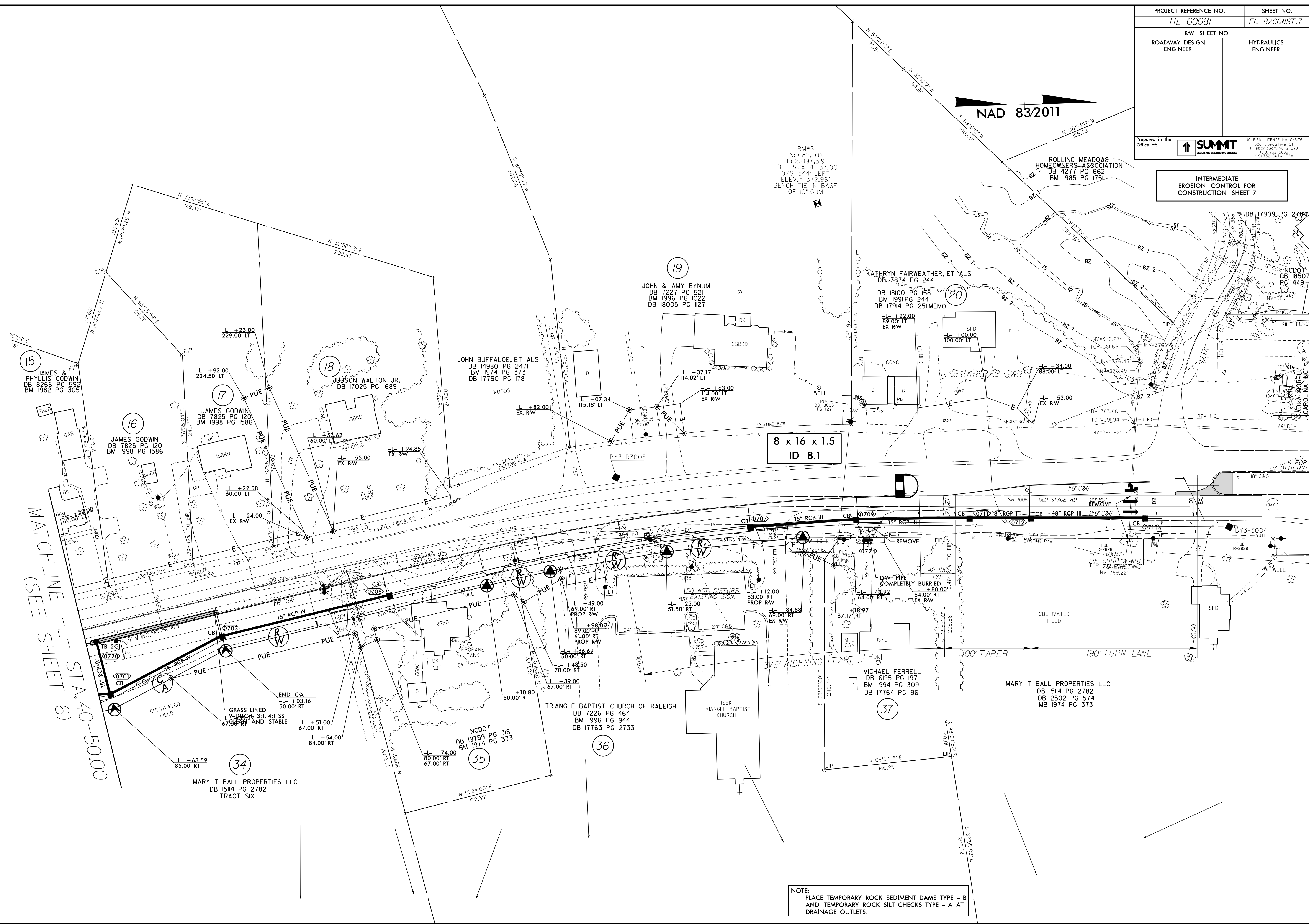
NAD 83/2011

INTERMEDIATE
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

BM#3
N: 689,010
E: 2,097,519
-BL- STA 41+37.00
O/S 344' LEFT
ELEV.: 372.96'
BENCH TIE IN BASE
OF 10' GUM

8 x 16 x 1.5
ID 8.1

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.



MATCHLINE - L- STA. 40+50.00
(SEE SHEET 6)

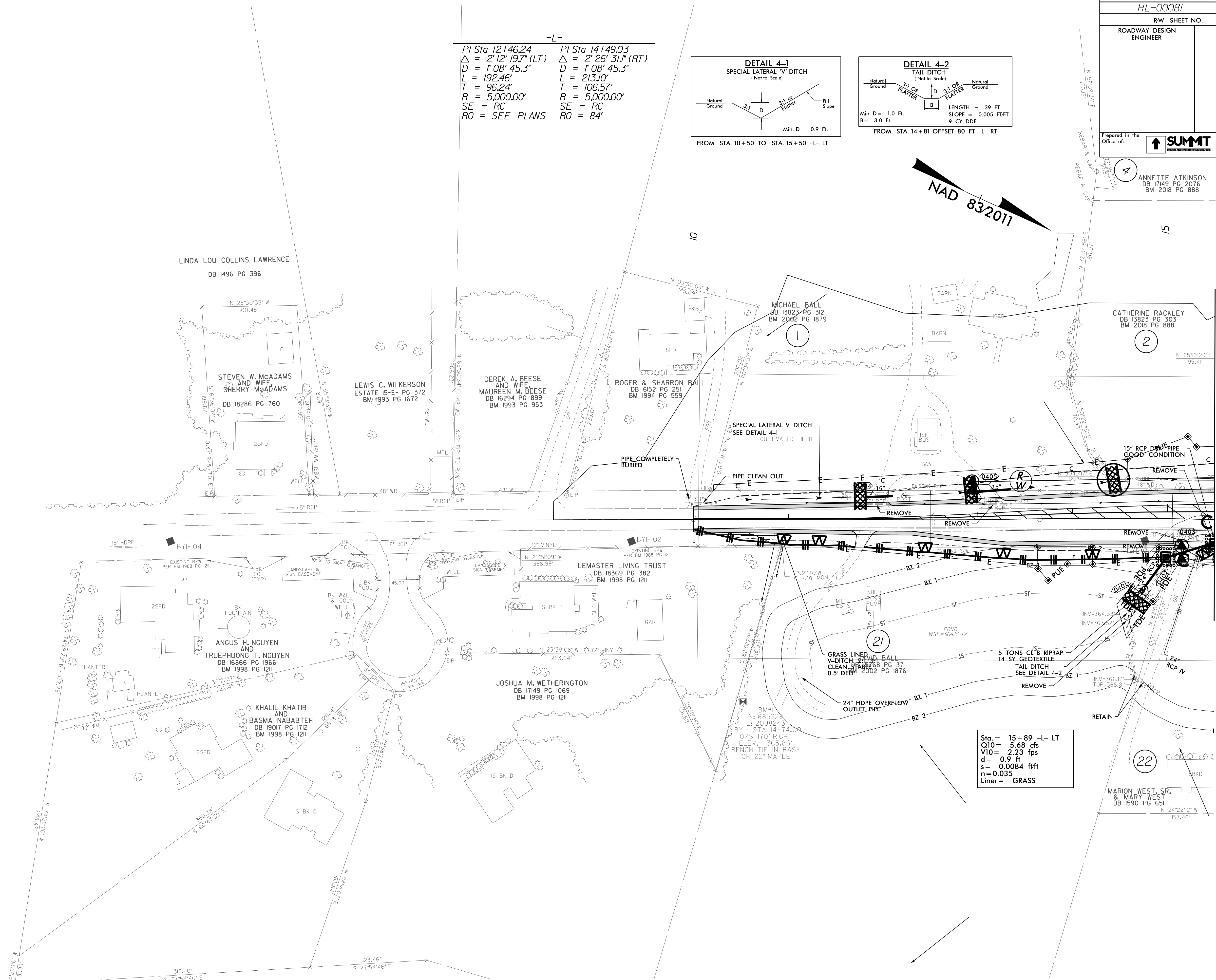
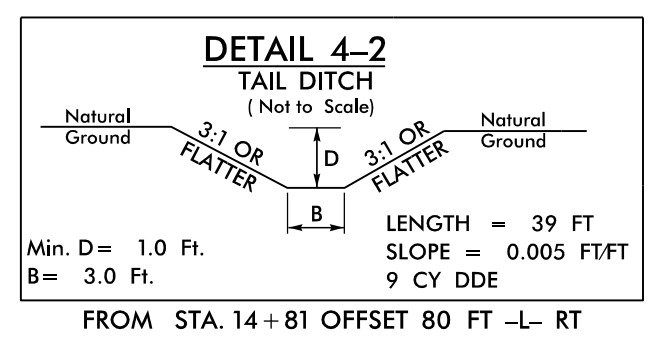
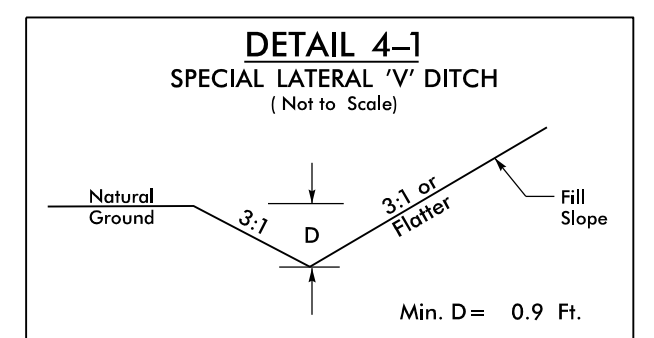
REVISIONS

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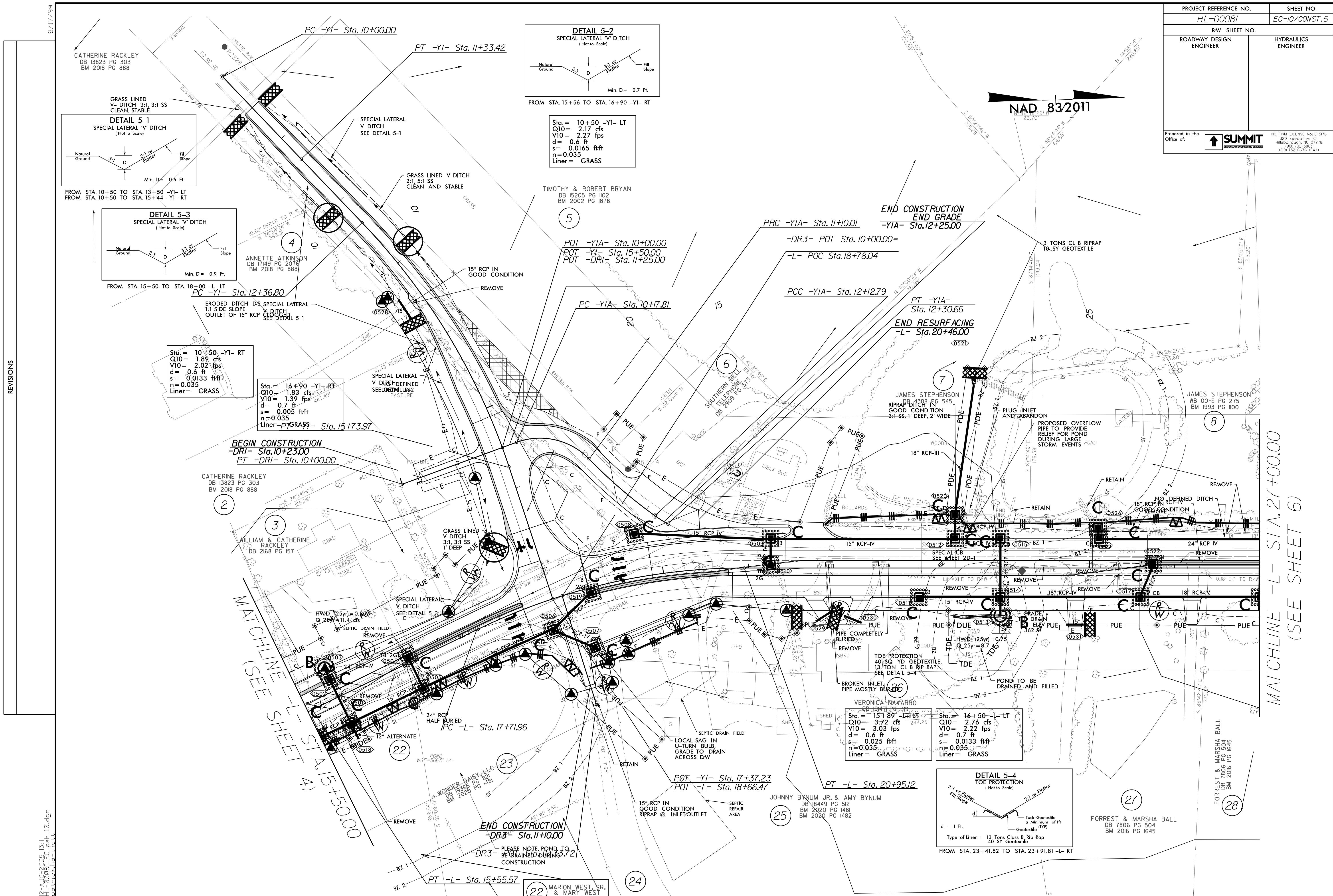
PROJECT REFERENCE NO. HL-00081		SHEET NO. EC-9/CONST.4
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
Prepared in the Office of:		ANNETTE ATKINSON DB 17149 PG 2076 BM 2018 PG 888
SUMMIT DESIGN AND ENGINEERING SERVICES		NC FIRM LICENSE No. C-5176 320 Executive Ct. Hillsborough, NC 27278 (919) 732-2883 (919) 732-6676 (FAX)

-L-	
PI Sta 12+46.24	PI Sta 14+49.03
$\Delta = 2^\circ 12' 19.7''$ (LT)	$\Delta = 2^\circ 26' 31.1''$ (RT)
D = 1'08' 45.3"	D = 1'08' 45.3"
L = 192.46'	L = 213.10'
T = 96.24'	T = 106.57'
R = 5,000.00'	R = 5,000.00'
SE = RC	SE = RC
RO = SEE PLANS	RO = 84'



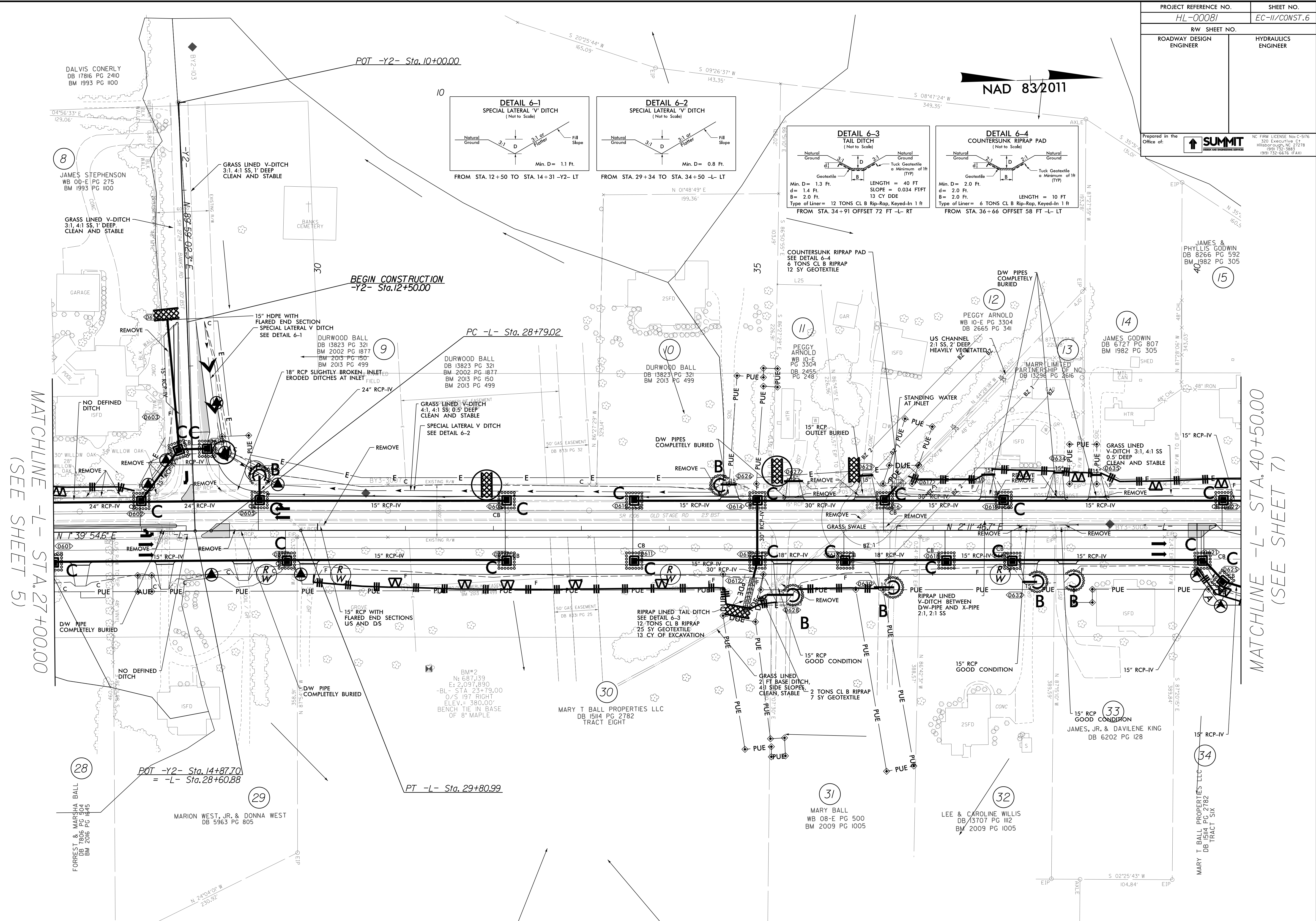
Sta. = 15+89 -L- LT
Q10 = 5.68 cfs
V10 = 2.23 fps
d = 0.9 ft
s = 0.0084 ft/ft
Liner = GRASS

MATCHLINE -L- STA. 15+50.00
(SEE SHEET 5)



MATCHLINE -L- STA. 27+00.00
(SEE SHEET 6)

PROJECT REFERENCE NO.		SHEET NO.
HL-00081		EC-11/CONST.6
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
Prepared in the Office of:		 SUMMIT DESIGN AND ENGINEERING SERVICES
		NC FIRM LICENSE NO. C-9176 320 Executive Ct. Hillsborough, NC 27278 (919) 732-2883 (919) 732-6676 (FAX)



REVISIONS

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8/17/99

-L-
PI Sta 47+88.68
 $\Delta = 13' 46'' 40.1''$ (RT)
D = 2' 29' 28.0"
L = 553.08'
T = 277.88'
R = 2,300.00'
SE = 03
RO = 126'

-DR2-
PI Sta 10+71.08
 $\Delta = 71' 48'' 11.4''$ (LT)
D = 127' 19' 26.2"
L = 56.32'
T = 32.52'
R = 45.00'

-Y3-
PI Sta 10+77.50
 $\Delta = 20' 04'' 19.6''$ (LT)
D = 38' 11' 49.9"
L = 52.55'
T = 26.55'
R = 150.00'
SE = 02
RO = SEE PLANS

PI Sta 11+74.38
 $\Delta = 50' 35'' 12.0''$ (RT)
D = 38' 11' 49.9"
L = 132.44'
T = 70.88'
R = 150.00'
SE = 02
RO = 36'

PI Sta 13+10.38
 $\Delta = 63' 12'' 10.0''$ (LT)
D = 61' 23' 53.1"
L = 102.94'
T = 57.41'
R = 93.32'

