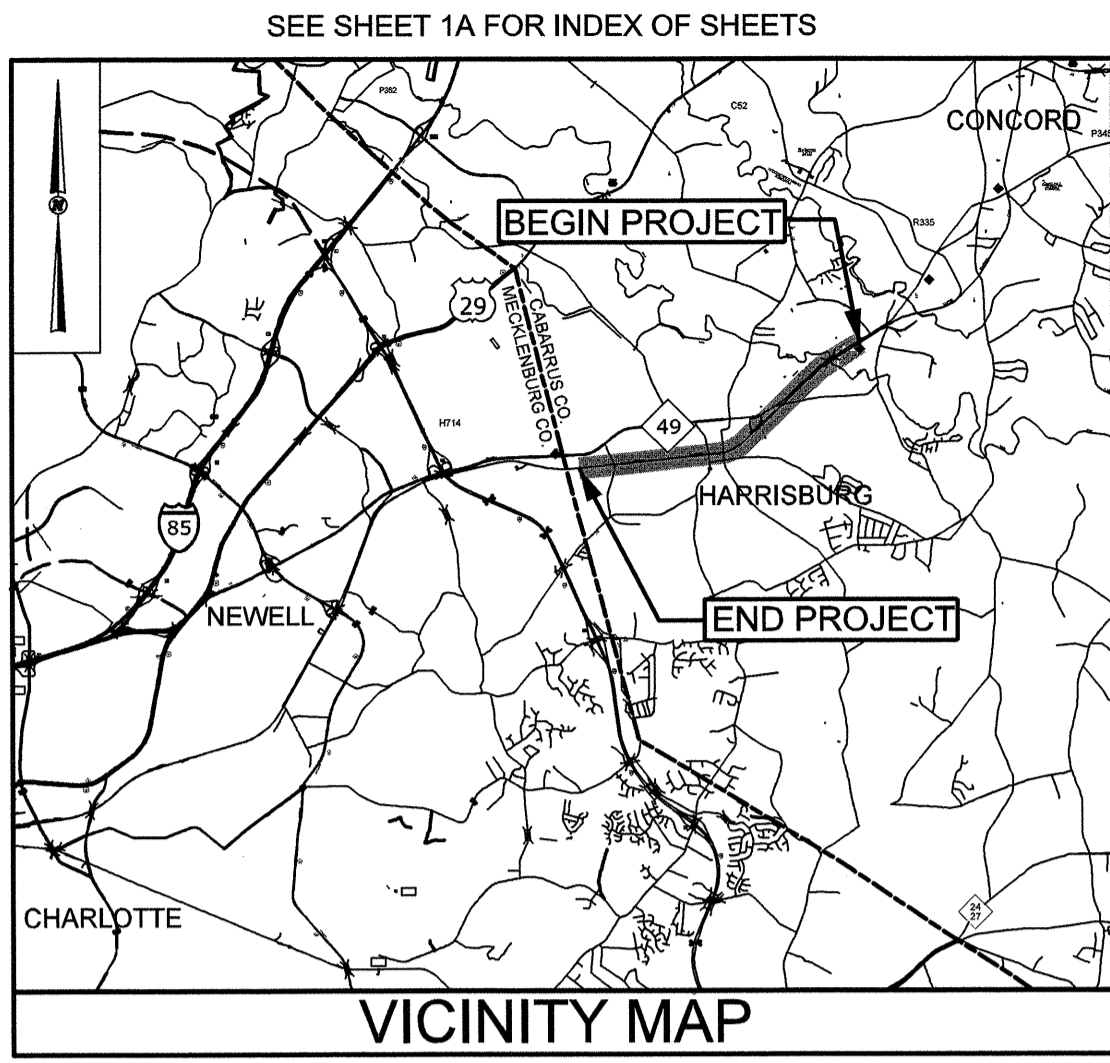


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0001AD2_P10a1

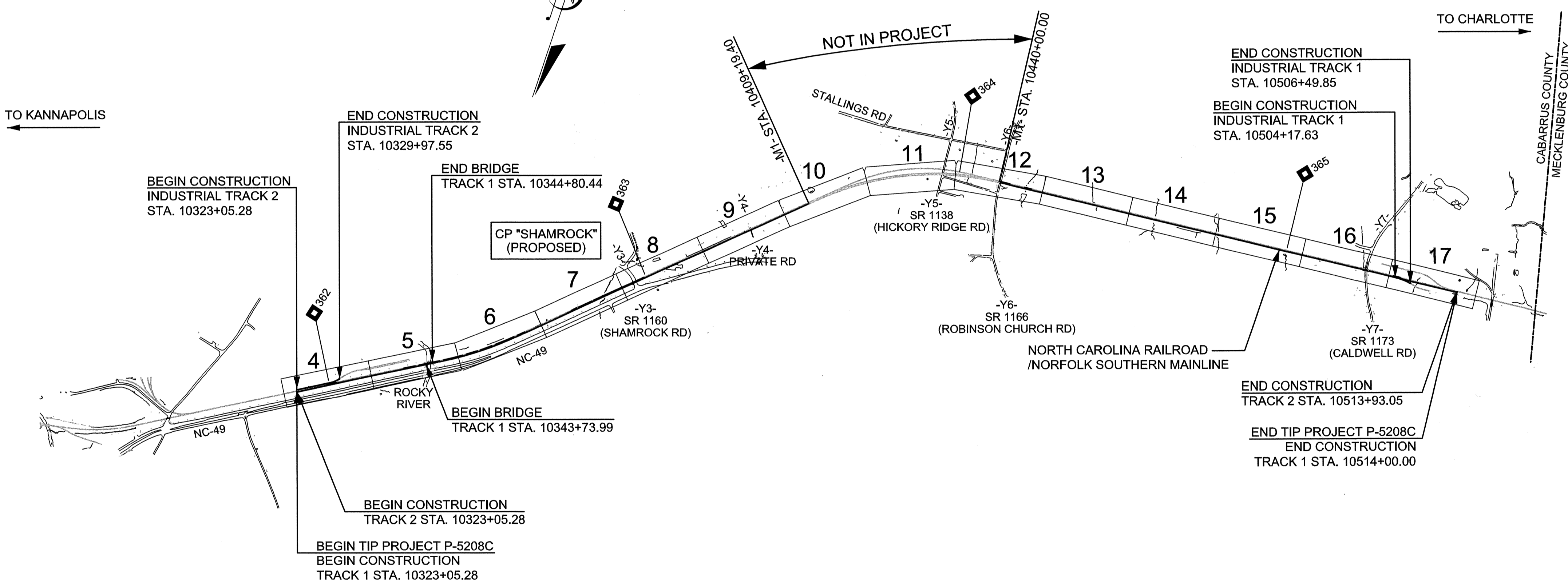
TIP PROJECT: P-5208C



STATE OF NORTH CAROLINA
RAIL DIVISION
PLAN FOR PROPOSED
RAILROAD EROSION CONTROL
CABARRUS COUNTY



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5208C	EC-01	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1607.01	Temp. Gravel Const. Entrance	[Symbol]
1630.03	Temporary Silt Ditch	[Symbol]
1630.05	Temporary Diversion	[Symbol]
1605.01	Temporary Silt Fence	[Symbol]
1606.01	Special Sediment Control Fence	[Symbol]
1622.01	Temporary Berms and Slope Drains	[Symbol]
1630.02	Silt Basin Type B	[Symbol]
1633.01	Temporary Rock Silt Check Type-A	[Symbol]
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	[Symbol]
1633.02	Temporary Rock Silt Check Type-B	[Symbol]
	Wattle/Coir Fiber Wattle	[Symbol]
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	[Symbol]
1634.01	Temporary Rock Sediment Dam Type-A	[Symbol]
1634.02	Temporary Rock Sediment Dam Type-B	[Symbol]
1635.01	Rock Pipe Inlet Sediment Trap Type-A	[Symbol]
1635.02	Rock Pipe Inlet Sediment Trap Type-B	[Symbol]
Rock Inlet Sediment Trap:		
1632.01	Type A	[Symbol]
1632.02	Type B	[Symbol]
1632.03	Type C	[Symbol]
	Skimmer Basin	[Symbol]
	Tiered Skimmer Basin	[Symbol]
	Infiltration Basin	[Symbol]

303(d) IMPAIRED WATER(S) EXIST ON THIS PROJECT
303(d) Impaired Water Zone(s) Exist
From Sta. 10343+80 to Sta. 10344+70
Refer To E. C. Special Provisions for Special Considerations.

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

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:
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
2012 STANDARD SPECIFICATIONS
EROSION CONTROL
LEVEL 111
CERTIFICATION #3185
RICARDO A. CINTRON, P.E.

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
1605.01 Temporary Silt Fence
1606.01 Special Sediment Control Fence
1607.01 Gravel Construction Entrance
1622.01 Temporary Berms and Slope Drains
1630.01 Riser Basin
1630.02 Silt Basin Type B
1630.03 Temporary Silt Ditch
1630.04 Stilling Basin
1630.05 Temporary Diversion
1630.06 Special Stilling Basin
1631.01 Matting Installation
1632.01 Rock Inlet Sediment Trap Type A
1632.02 Rock Inlet Sediment Trap Type B
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A
1633.02 Temporary Rock Silt Check Type B
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
1640.01 Coir Fiber Baffle
1645.01 Temporary Stream Crossing

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PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-2
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) 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.

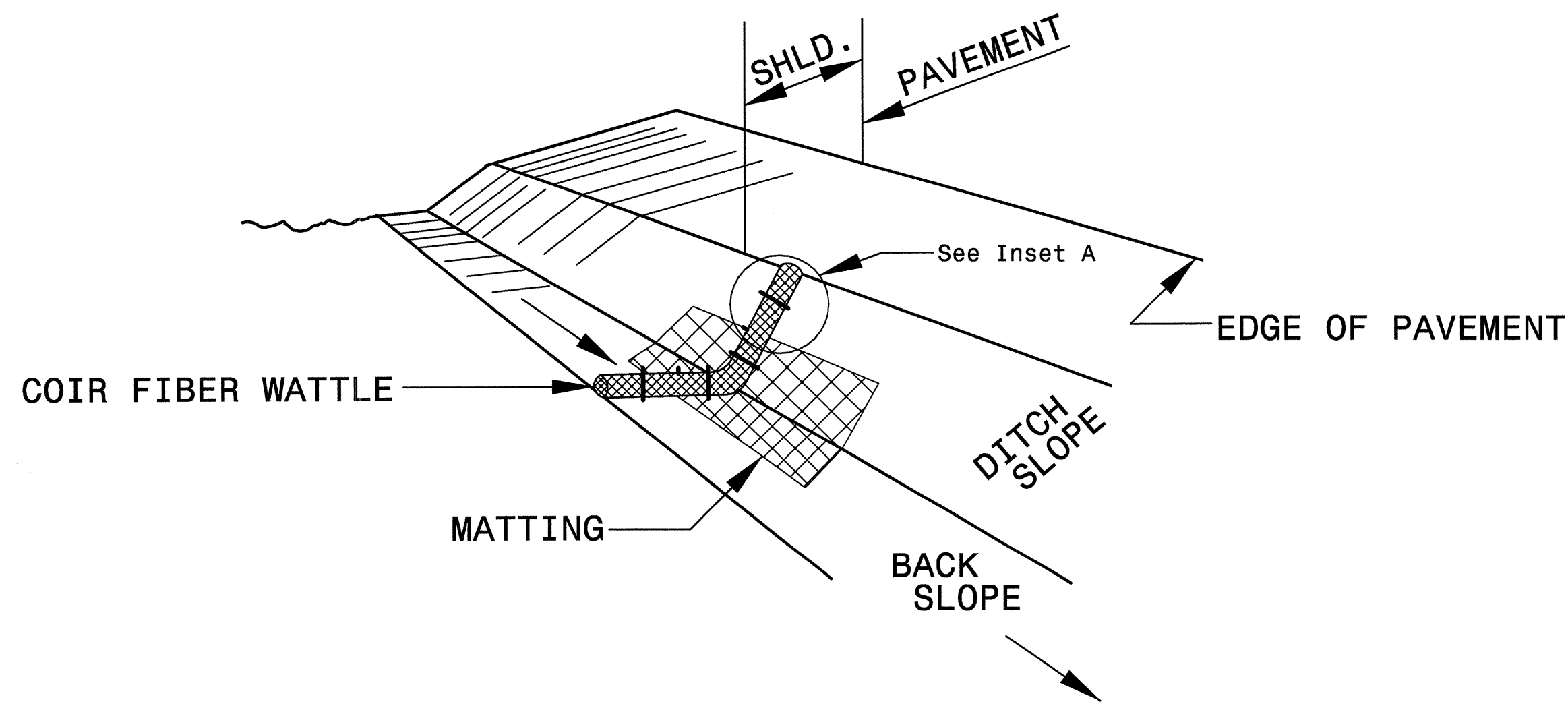
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

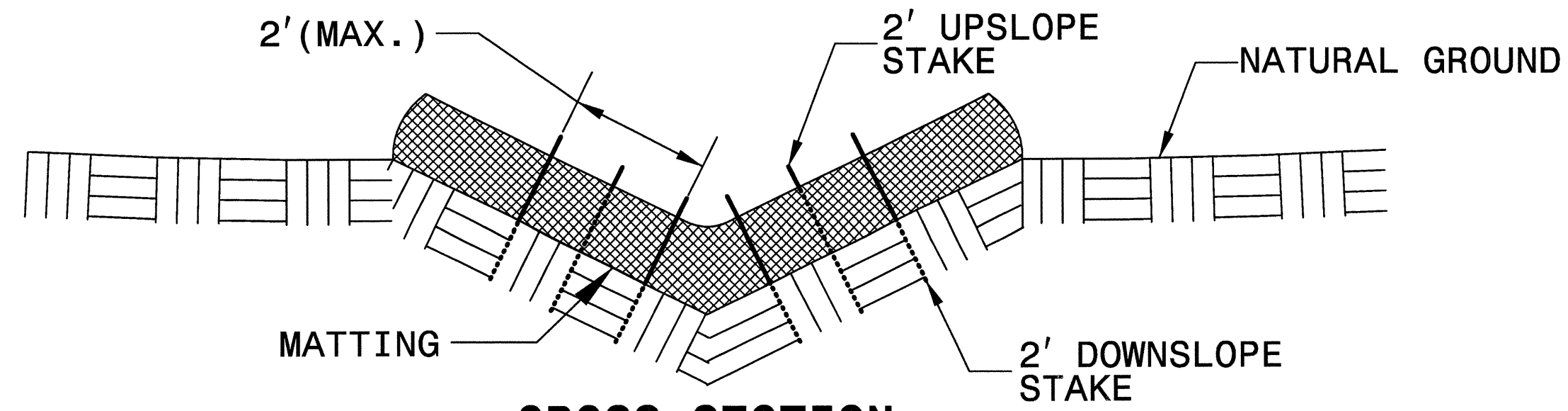
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

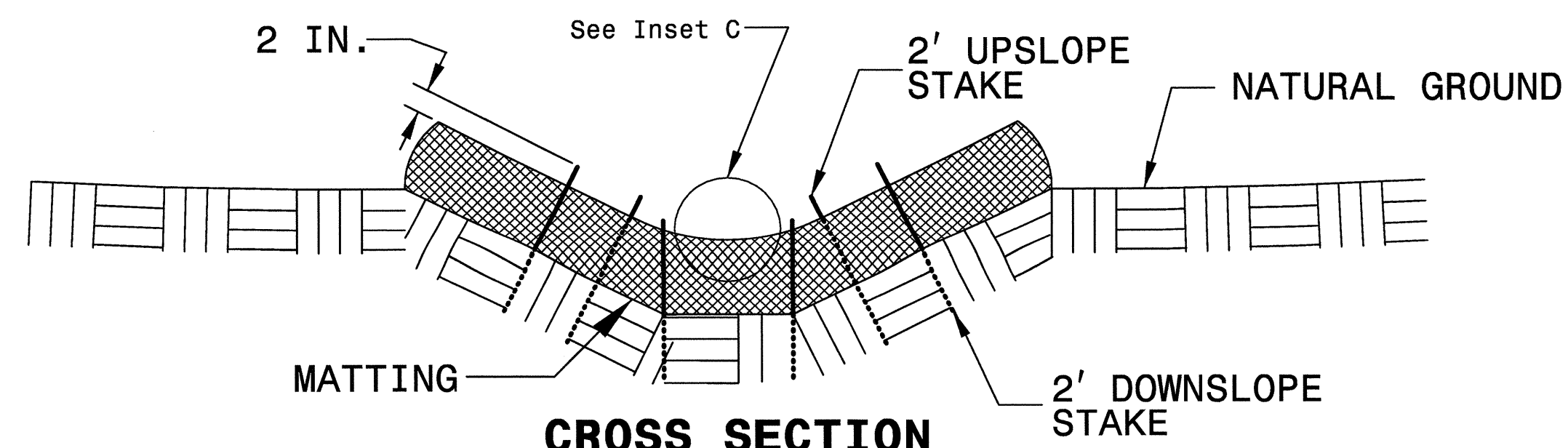
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



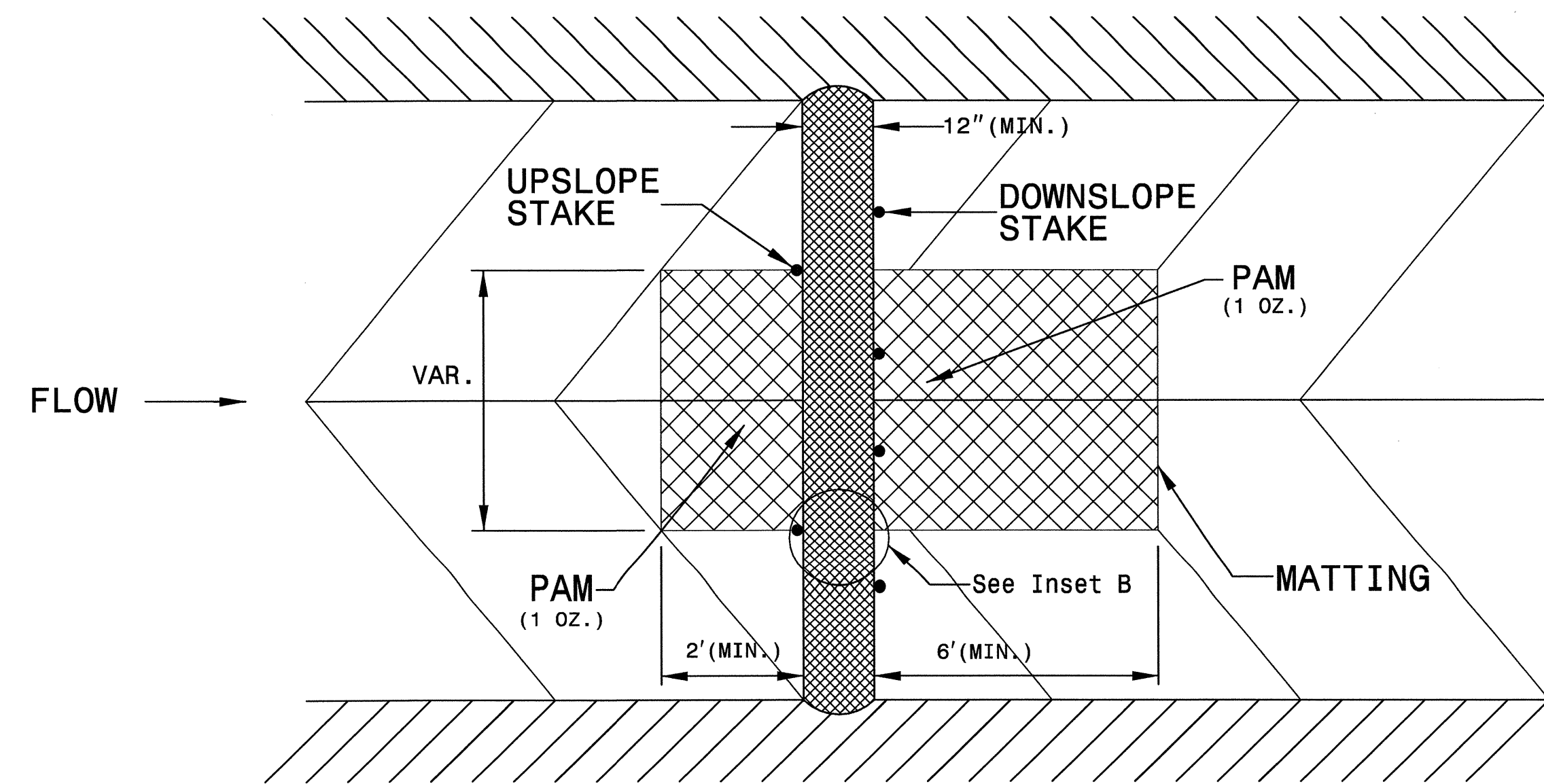
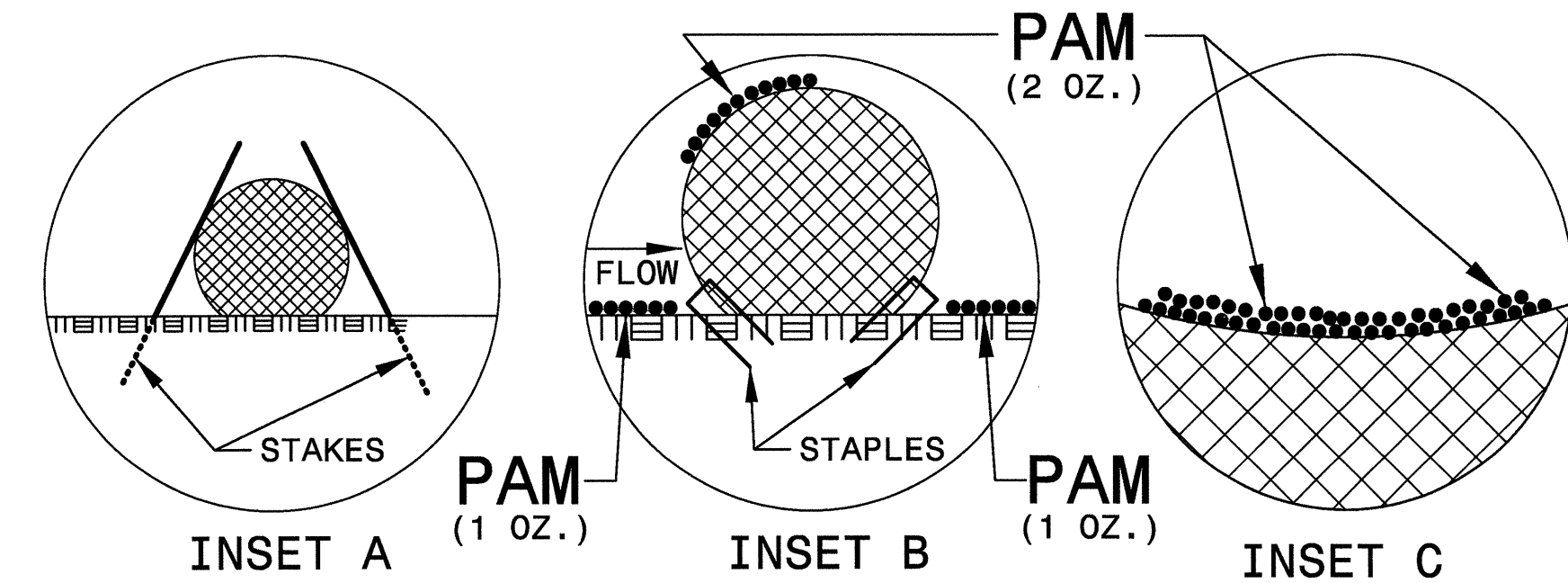
ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH



TOP VIEW

NOT TO SCALE

0041DEL_P10a1

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3:38:58 PM CC 02.dgn

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-2A
	DATE: APRIL 5, 2013	
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER

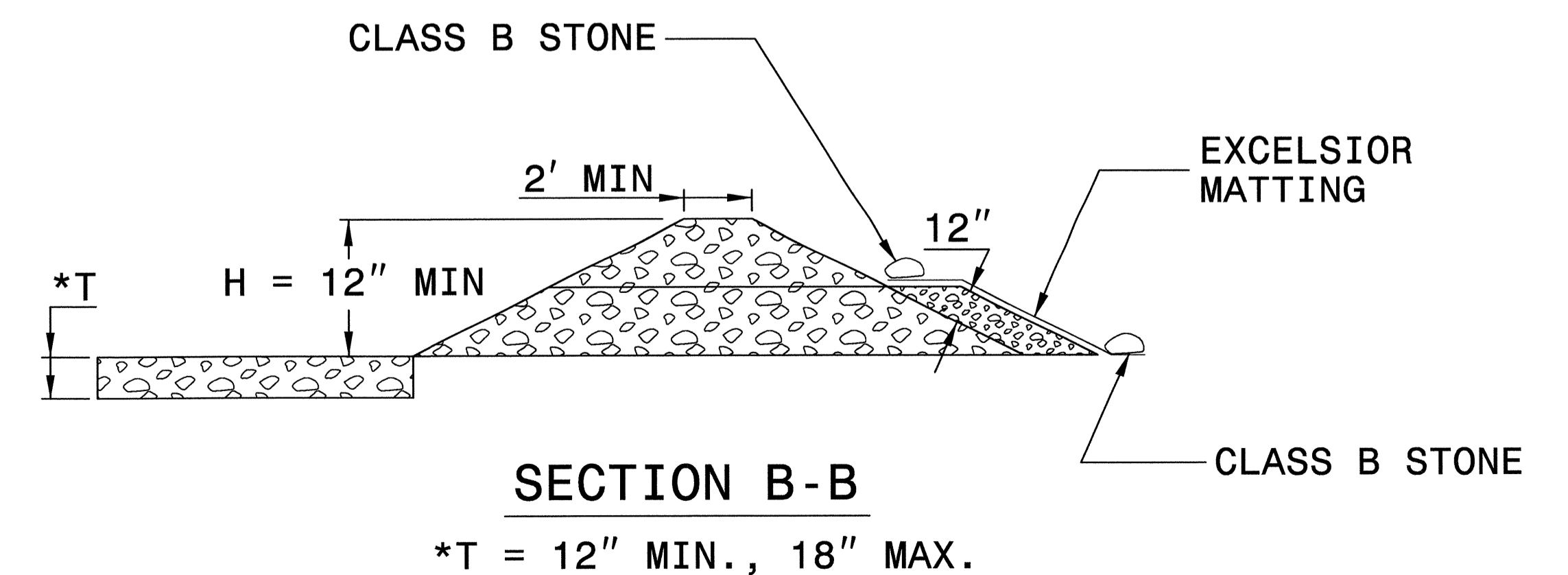
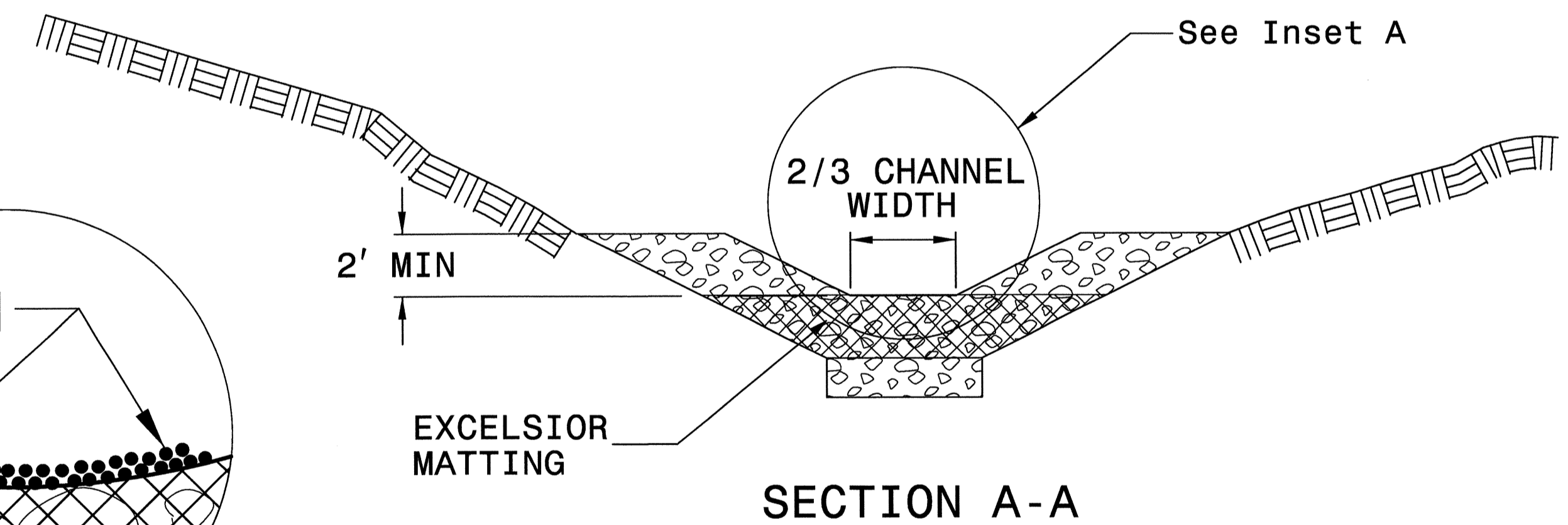
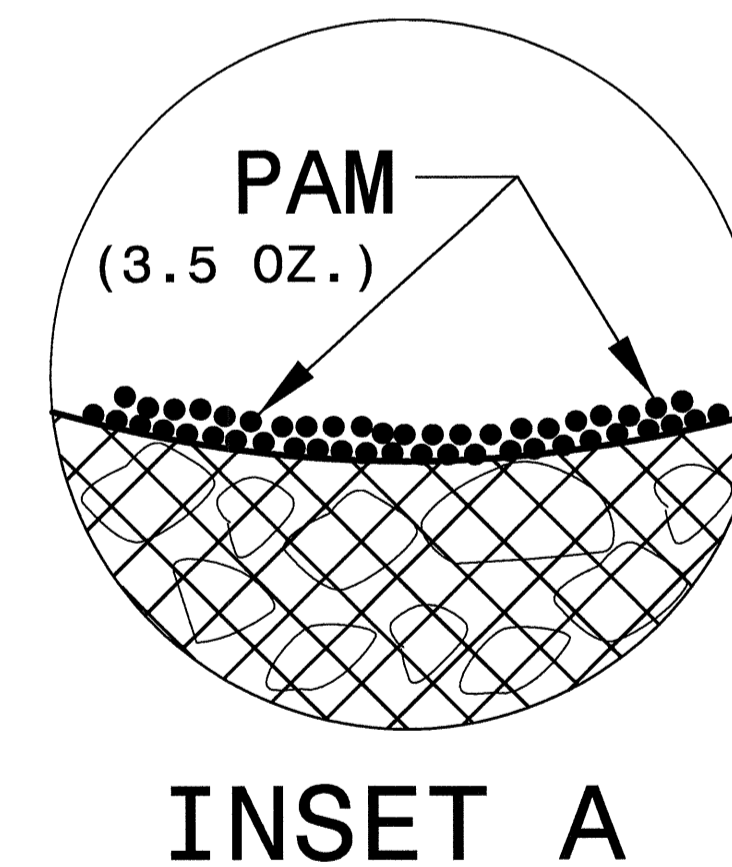
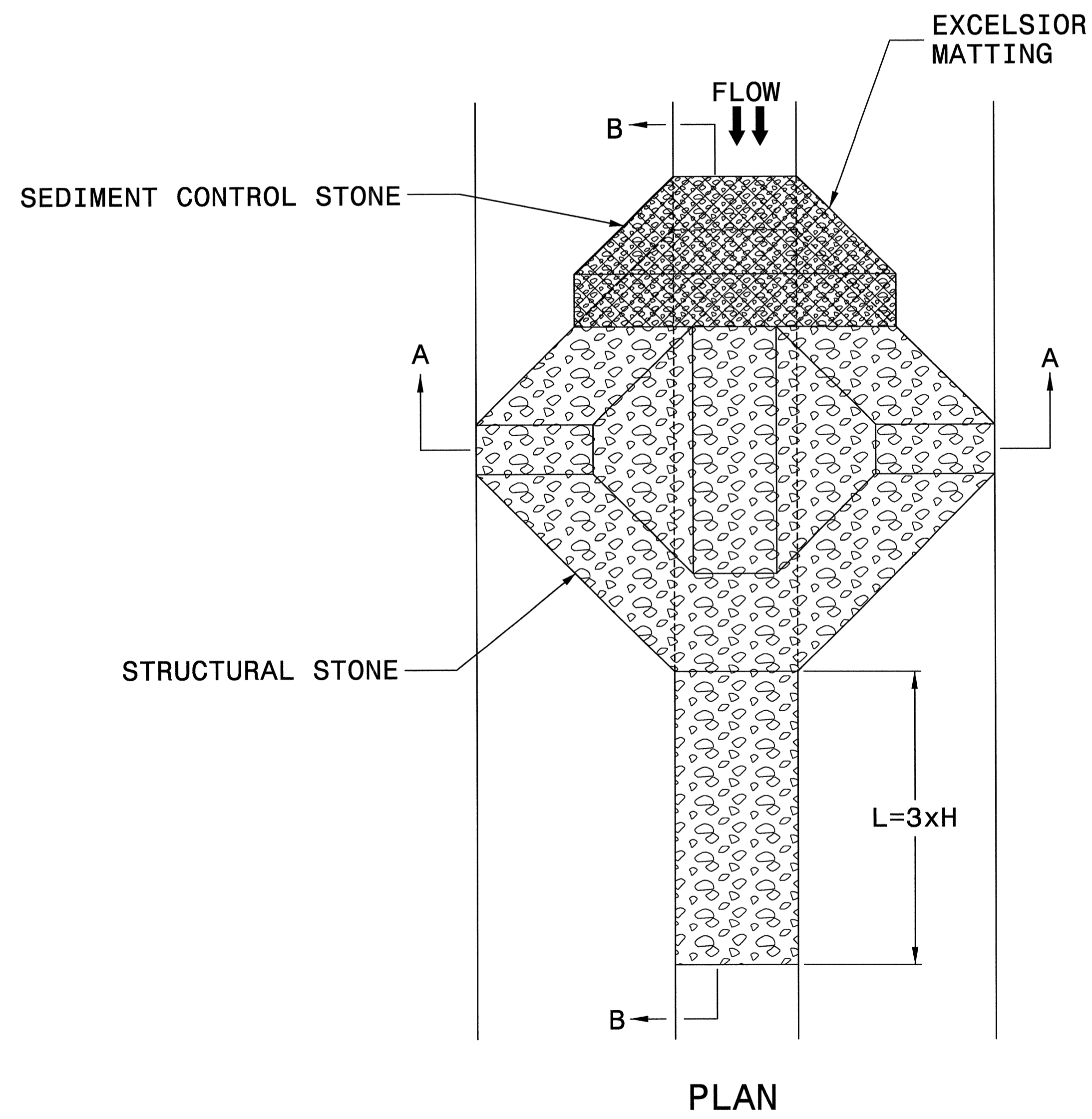
TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM) STD. 1633.01

NOTES

USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

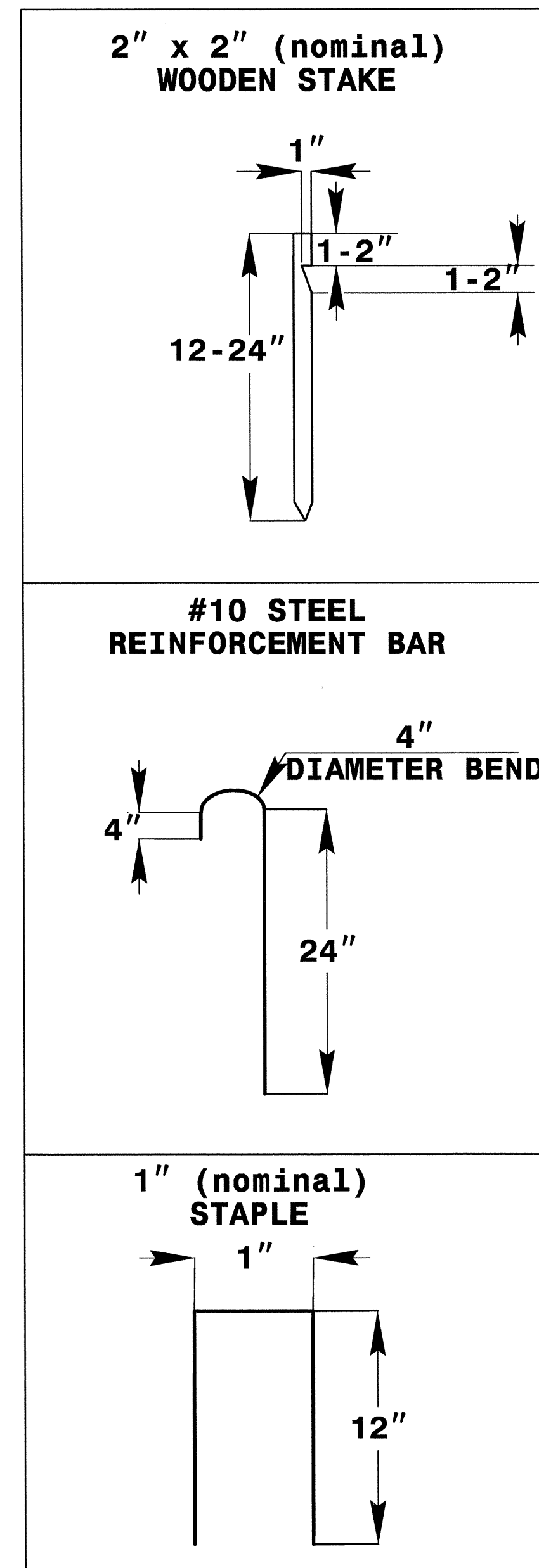
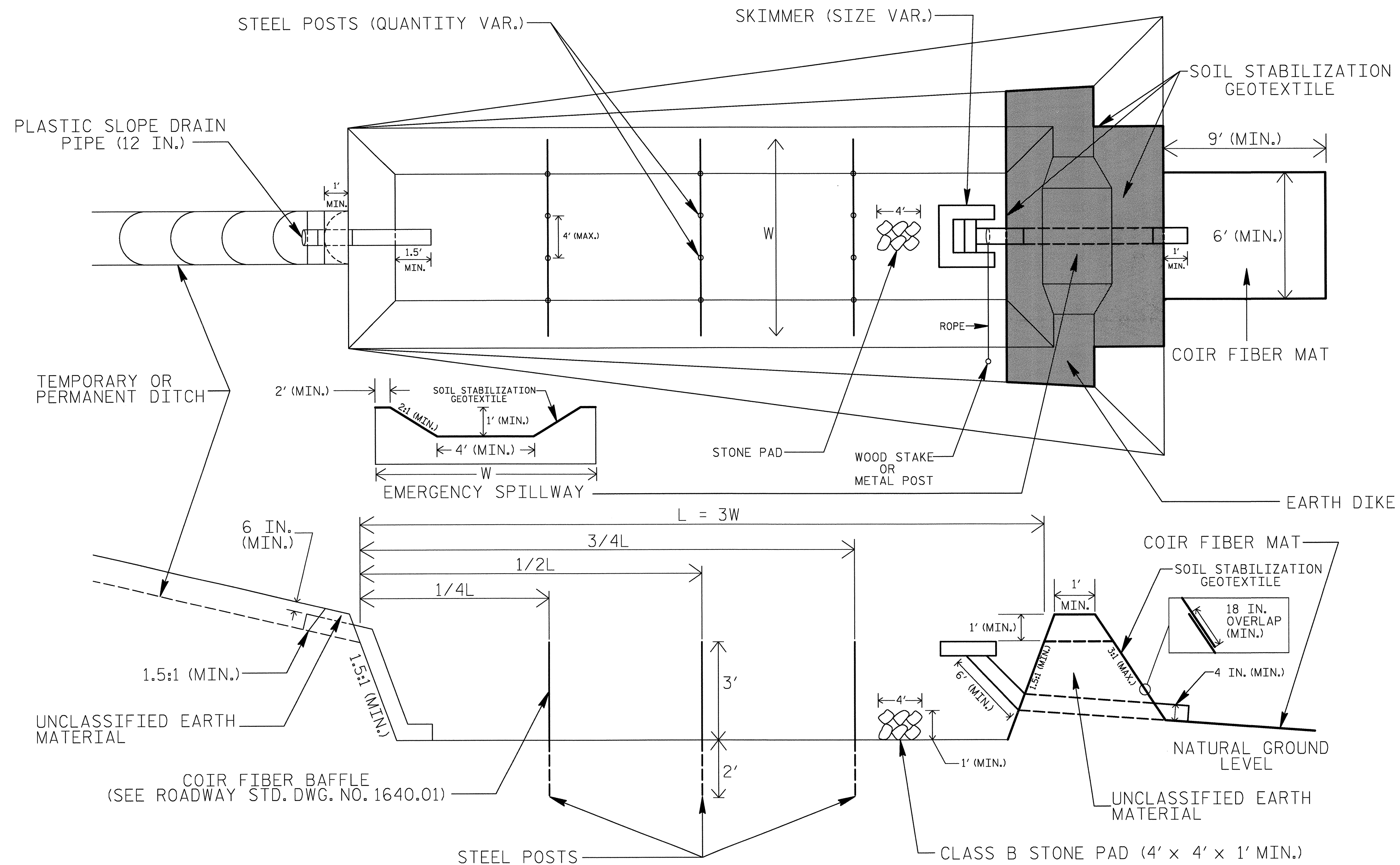
INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-2B
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL



COIR FIBER MAT ANCHOR OPTIONS

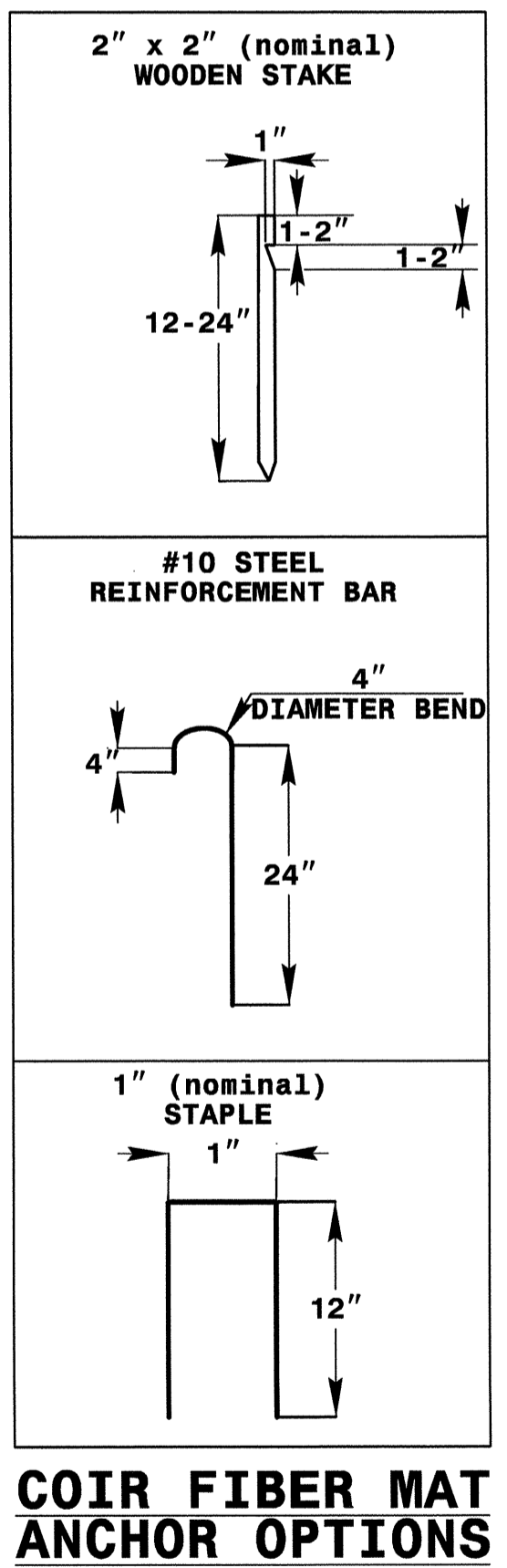
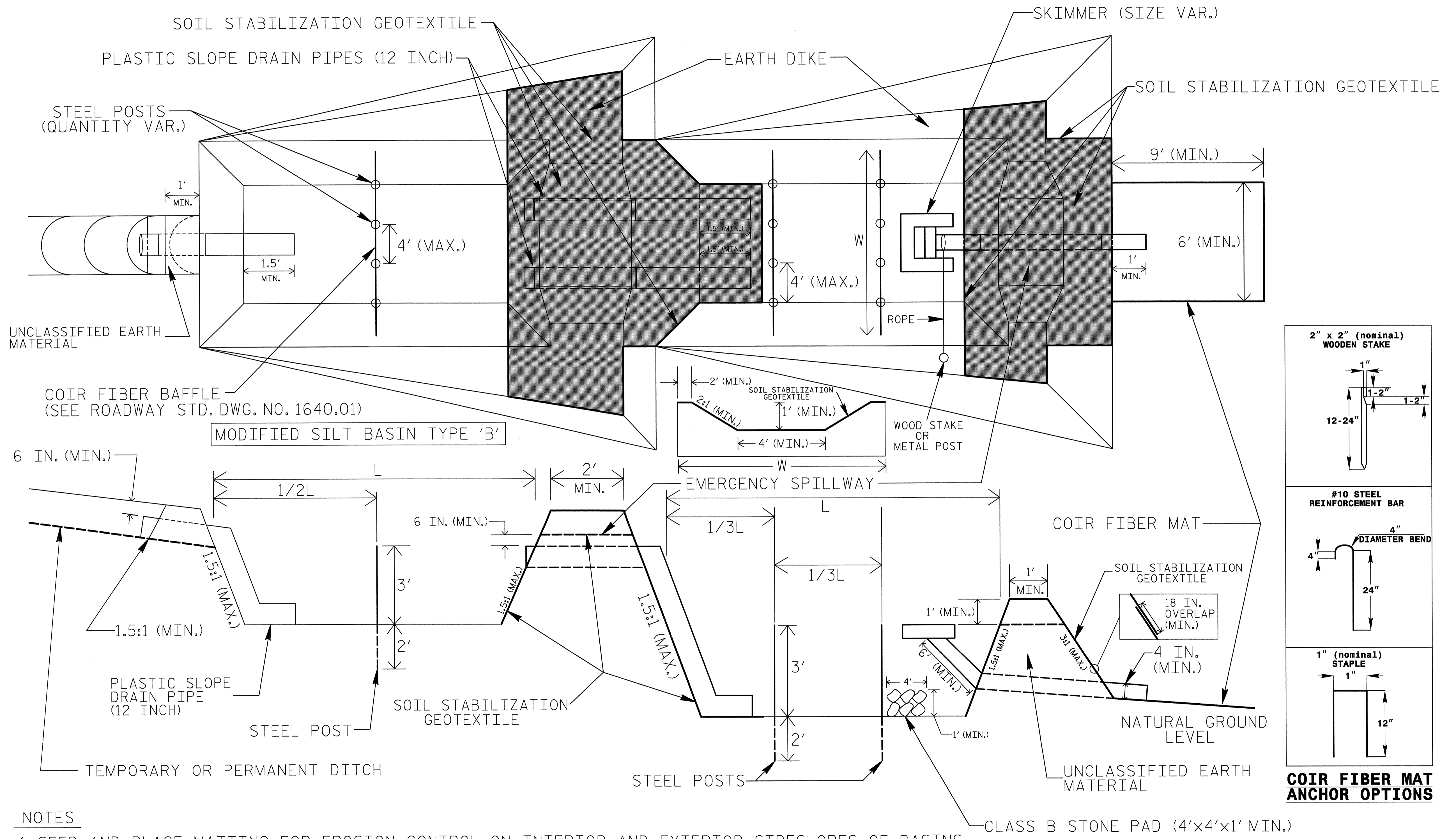
NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING $Q/0.8$, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-2C
	RW SHEET NO.	
DATE: APRIL 5, 2013	RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

TIERED SKIMMER BASIN DETAIL



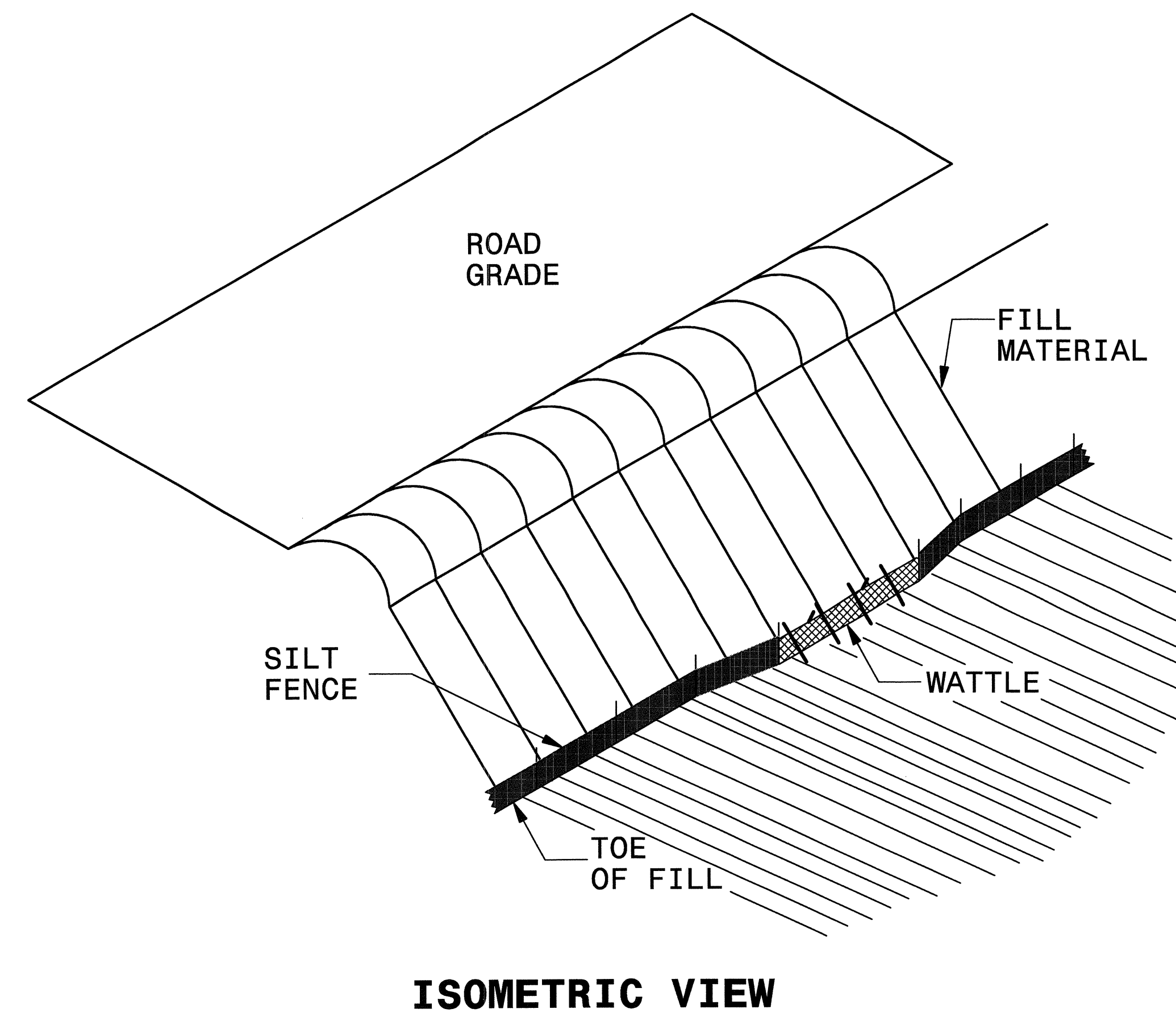
- NOTES**
1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES OF BASINS.
 2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
 3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
 4. FOR BASIN DEPTHS OF 3FT., THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
 5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.
 6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAYS SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).
- NOT TO SCALE

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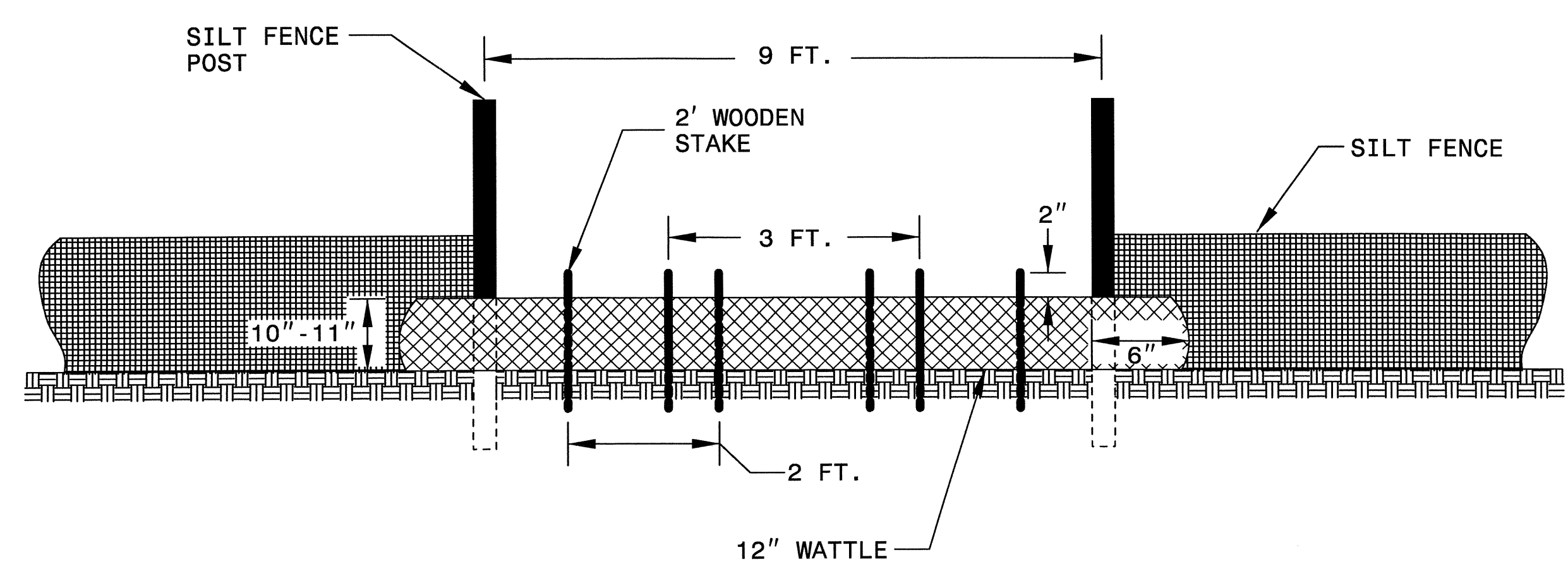
PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-2D
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DATE: APRIL 5, 2013

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW

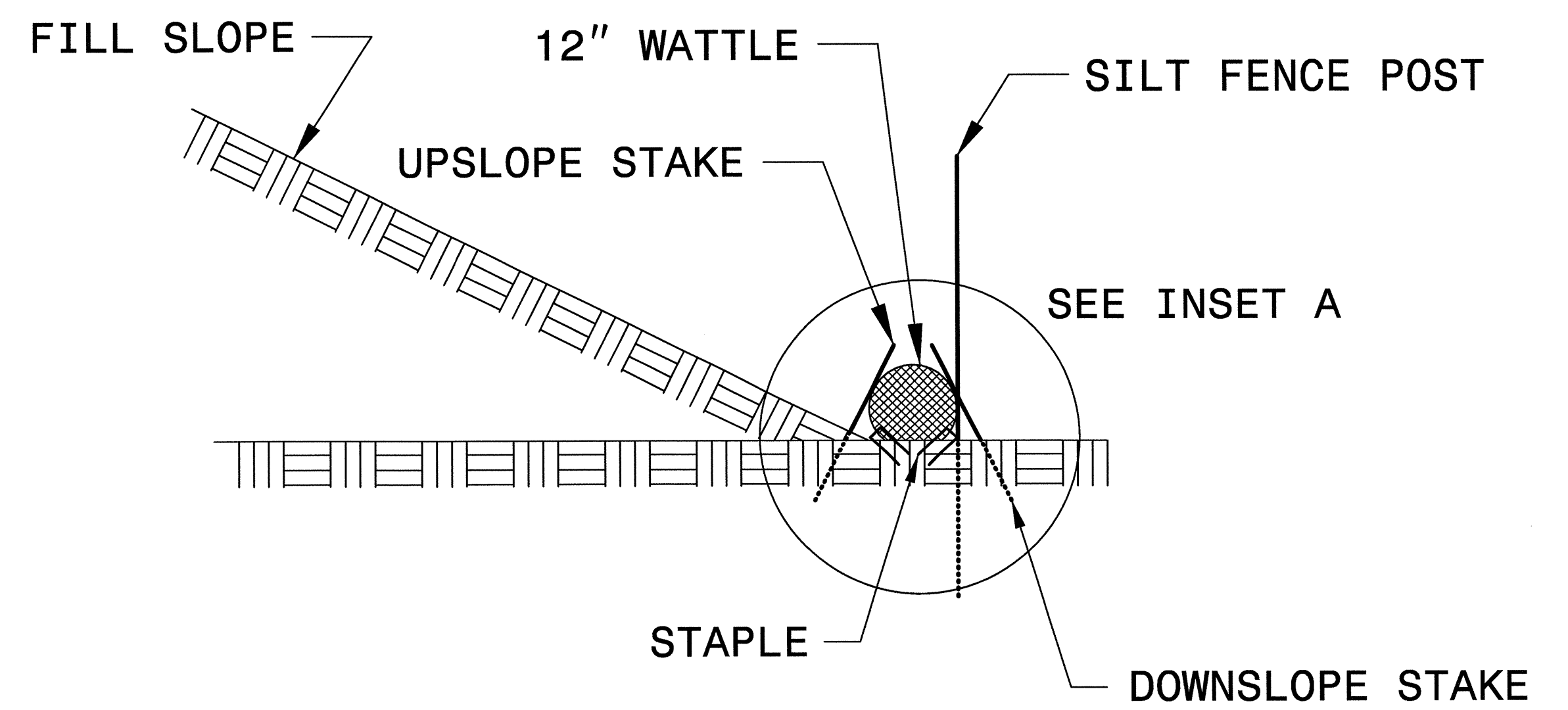
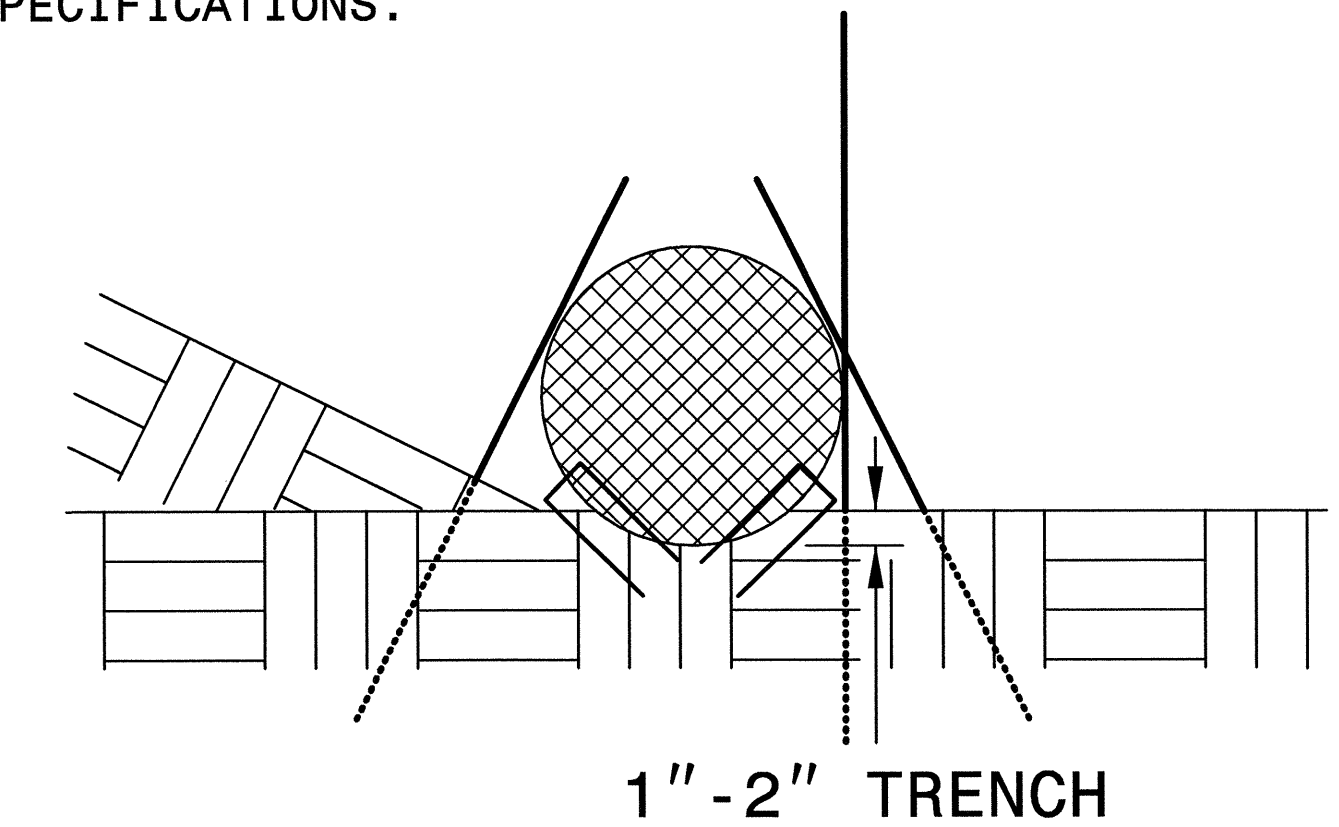


VIEW FROM SLOPE

NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- 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.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



SIDE VIEW

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1534
DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-3
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

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 (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.

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PLAN

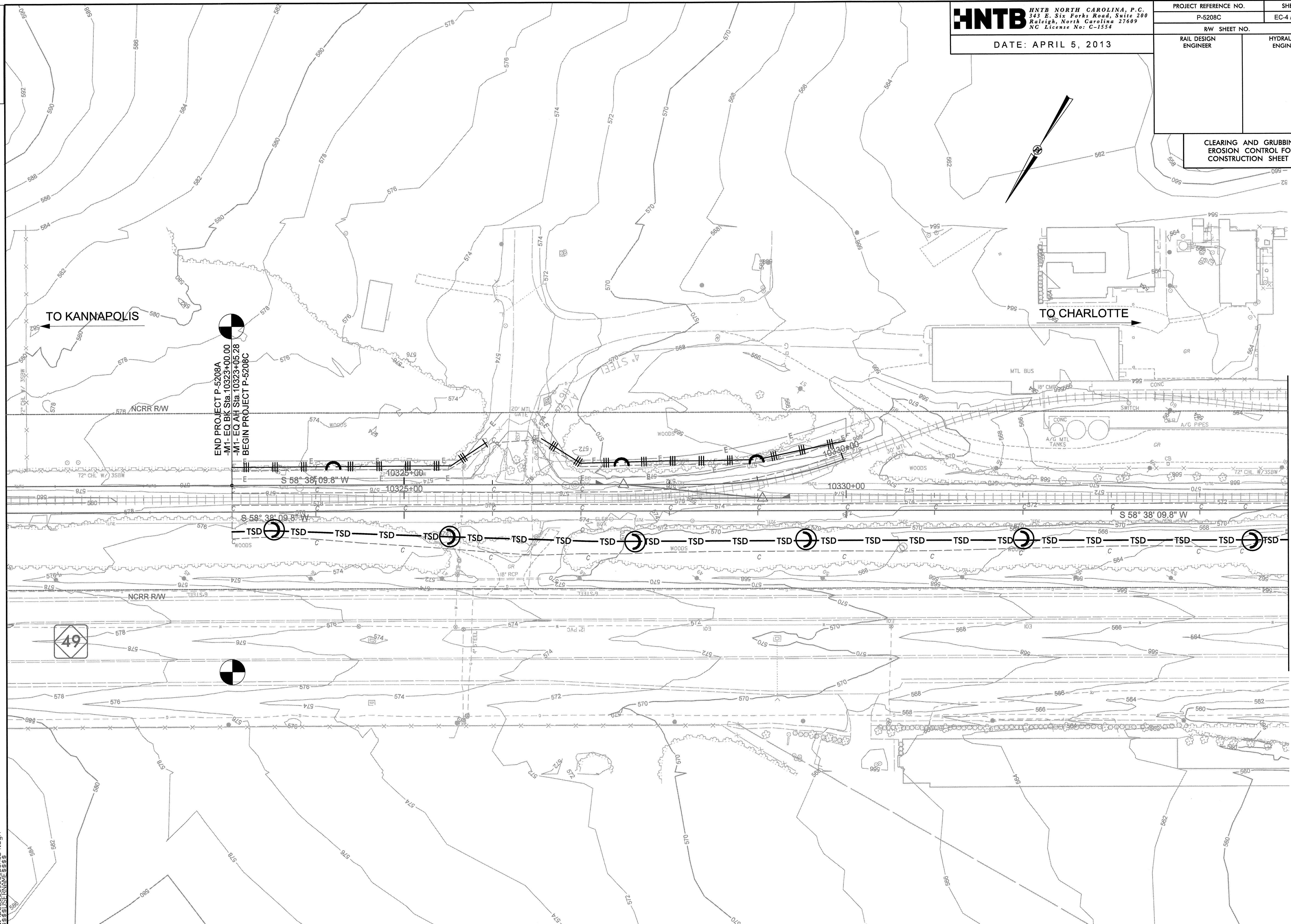
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HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C		SHEET NO. EC-4/CONST. 4
RW SHEET NO.		HYDRAULICS ENGINEER
RAIL DESIGN ENGINEER		

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



TO KANNAPOLIS

TO CHARLOTTE

END PROJECT P-5208A
-M1- EQ BK Sta. 10323+00.00
-M1- EQ AH Sta. 10323+05.28
BEGIN PROJECT P-5208C

MATCHLINE STA. 10335+00
SEE SHEET NO. 5

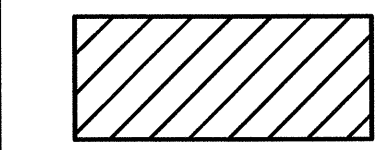
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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-5/CONST. 5
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DATE: APRIL 5, 2013

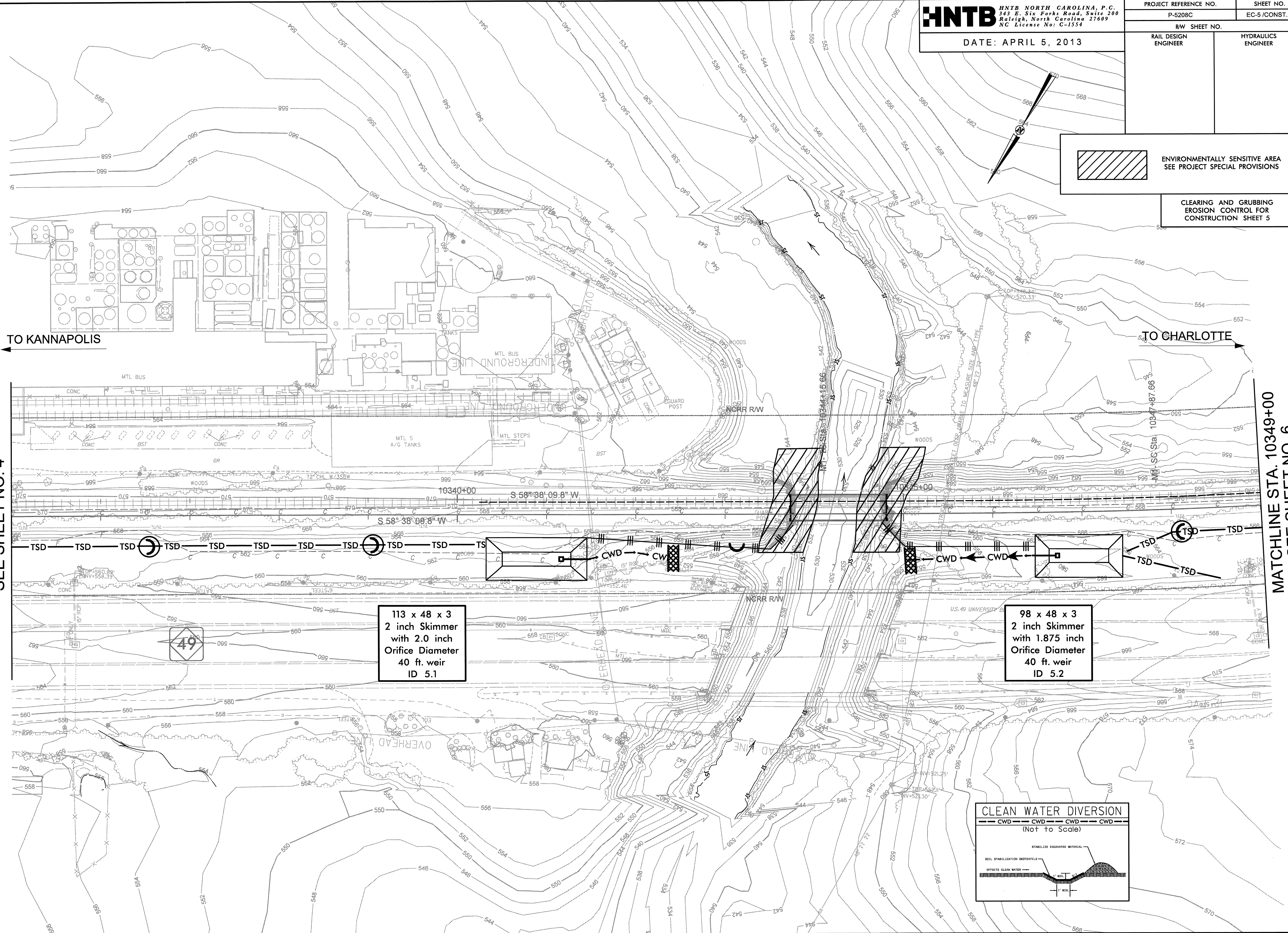


 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

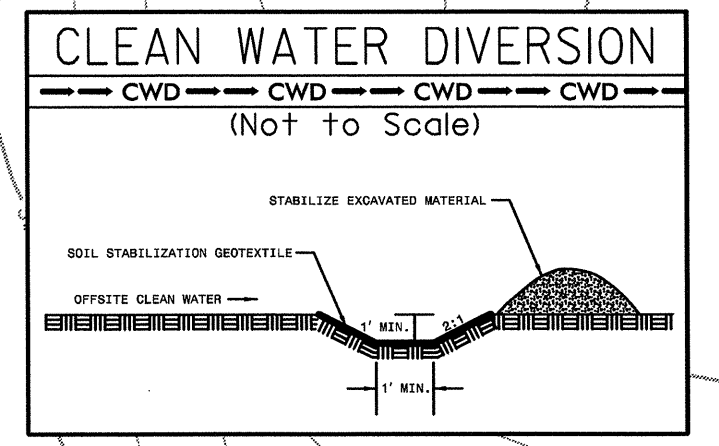
MATCHLINE STA. 10335+00
SEE SHEET NO. 4

MATCHLINE STA. 10349+00
SEE SHEET NO. 6



113 x 48 x 3
2 inch Skimmer
with 2.0 inch
Orifice Diameter
40 ft. weir
ID 5.1

98 x 48 x 3
2 inch Skimmer
with 1.875 inch
Orifice Diameter
40 ft. weir
ID 5.2



0041DEL_P10a1

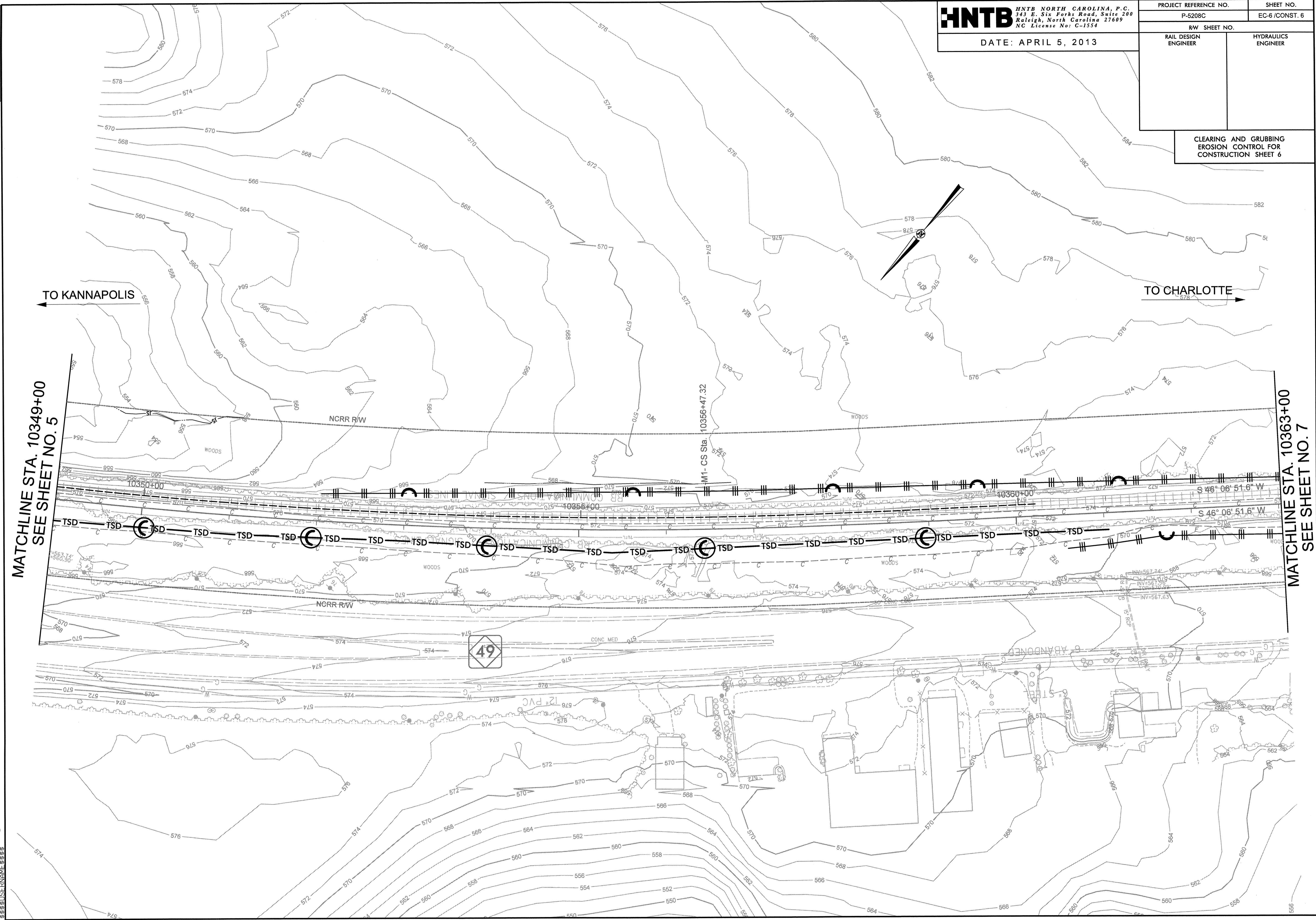
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143 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. SHEET NO.
P-5208C EC-6/CONST. 6

DATE: APRIL 5, 2013

RW SHEET NO. HYDRAULICS ENGINEER
RAIL DESIGN ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6



TO KANNAPOLIS

TO CHARLOTTE

MATCHLINE STA. 10349+00
SEE SHEET NO. 5

MATCHLINE STA. 10363+00
SEE SHEET NO. 7

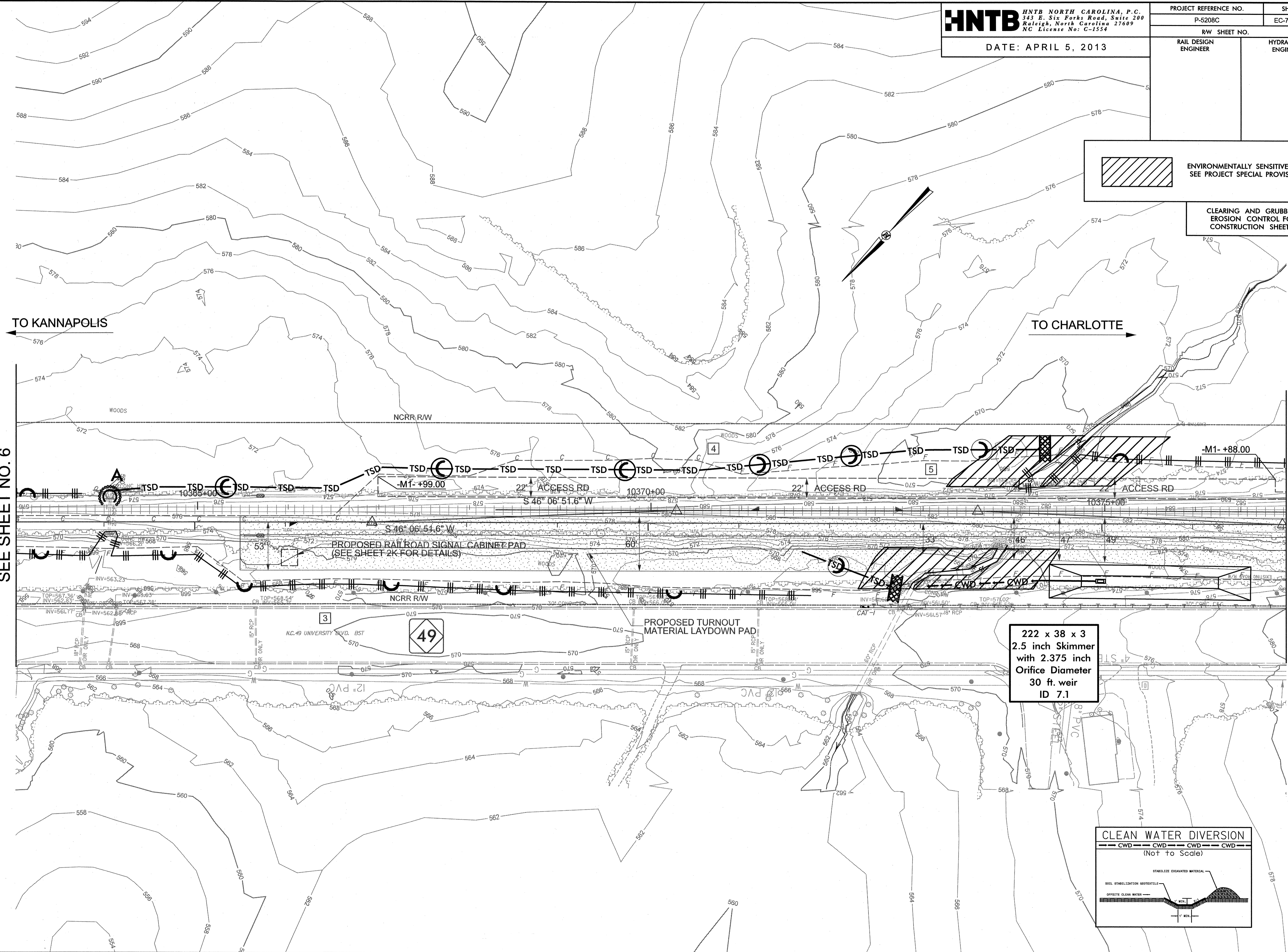
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ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7



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REVISIONS

REVISION #1 (7/5/2013): SUBSURFACE DRAIN ADDED. REVISED -Y6- SADDLE CREEK RD ALIGNMENT.

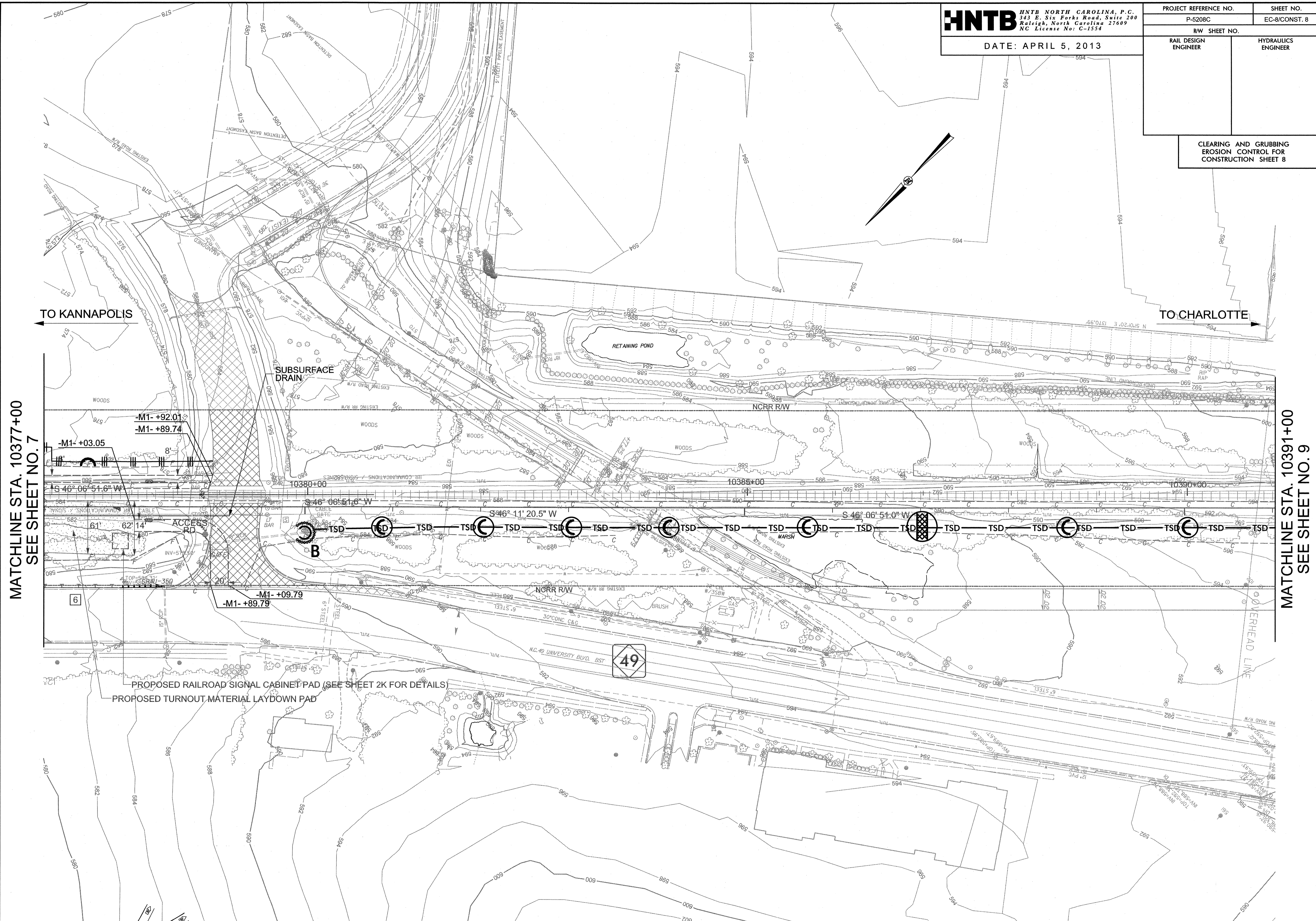
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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-8/CONST. 8
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 8



MATCHLINE STA. 10377+00
SEE SHEET NO. 7

MATCHLINE STA. 10391+00
SEE SHEET NO. 9

0041DEL_P10a1

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. P-5208C SHEET NO. EC-9/CONST. 9

RW SHEET NO.

RAIL DESIGN ENGINEER HYDRAULICS ENGINEER

DATE: APRIL 5, 2013

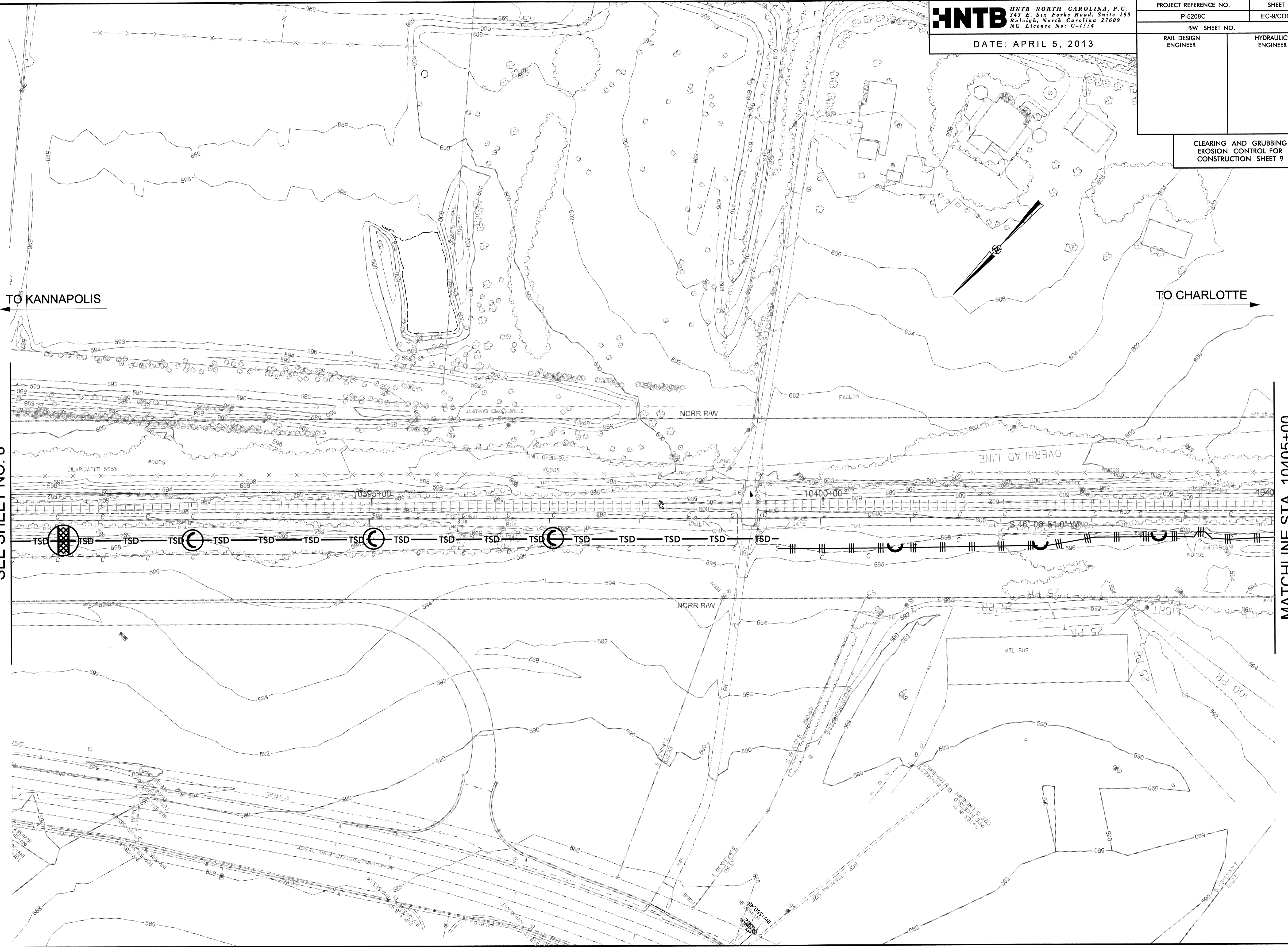
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

TO KANNAPOLIS

TO CHARLOTTE

MATCHLINE STA. 10391+00
SEE SHEET NO. 8

MATCHLINE STA. 10405+00
SEE SHEET NO. 10



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CG_09.dwg

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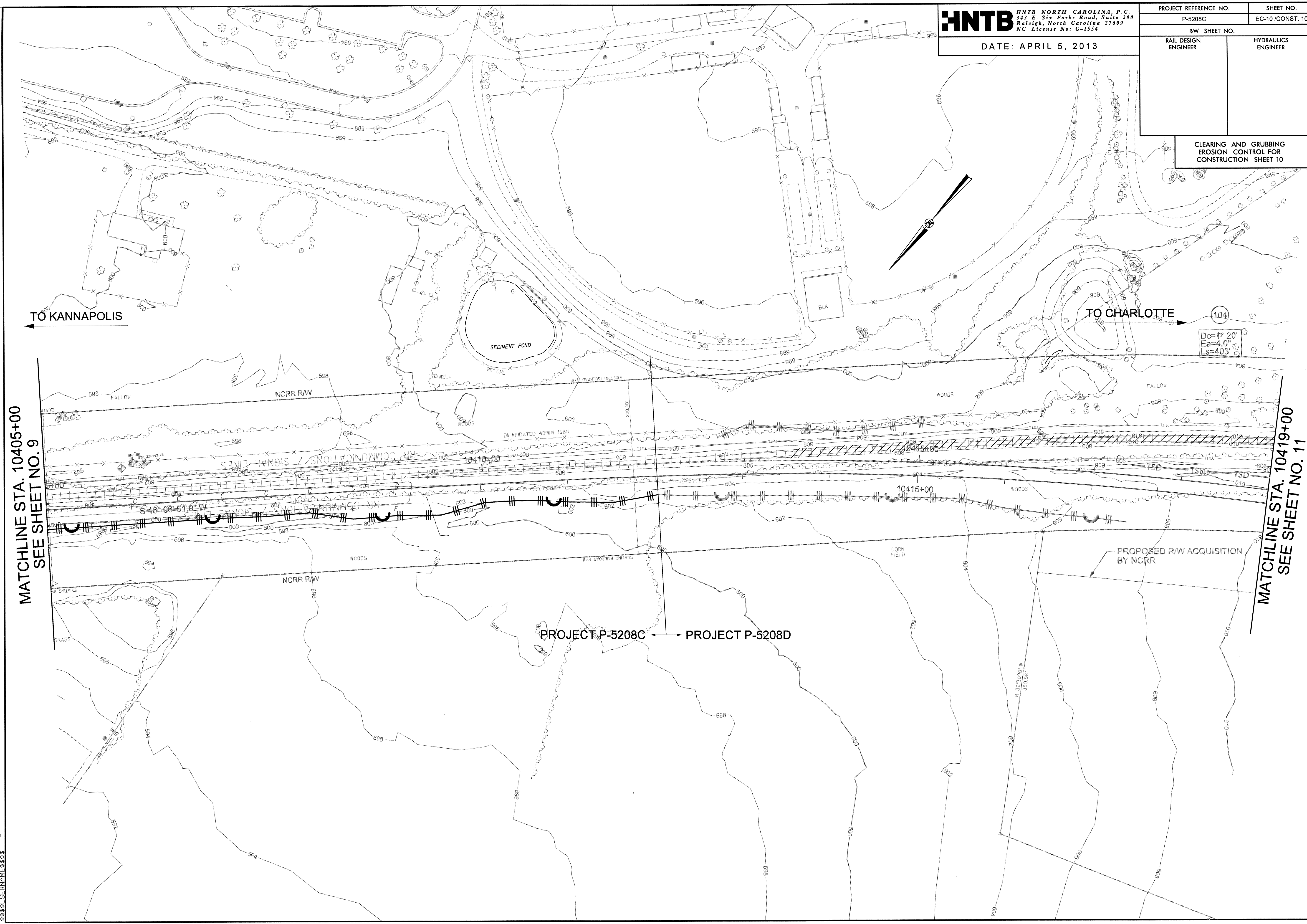
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HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1534

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-10/CONST. 10
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10



MATCHLINE STA. 10405+00
SEE SHEET NO. 9

MATCHLINE STA. 10419+00
SEE SHEET NO. 11

PROJECT P-5208C ← PROJECT P-5208D

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Ea=4.0°
Ls=403'

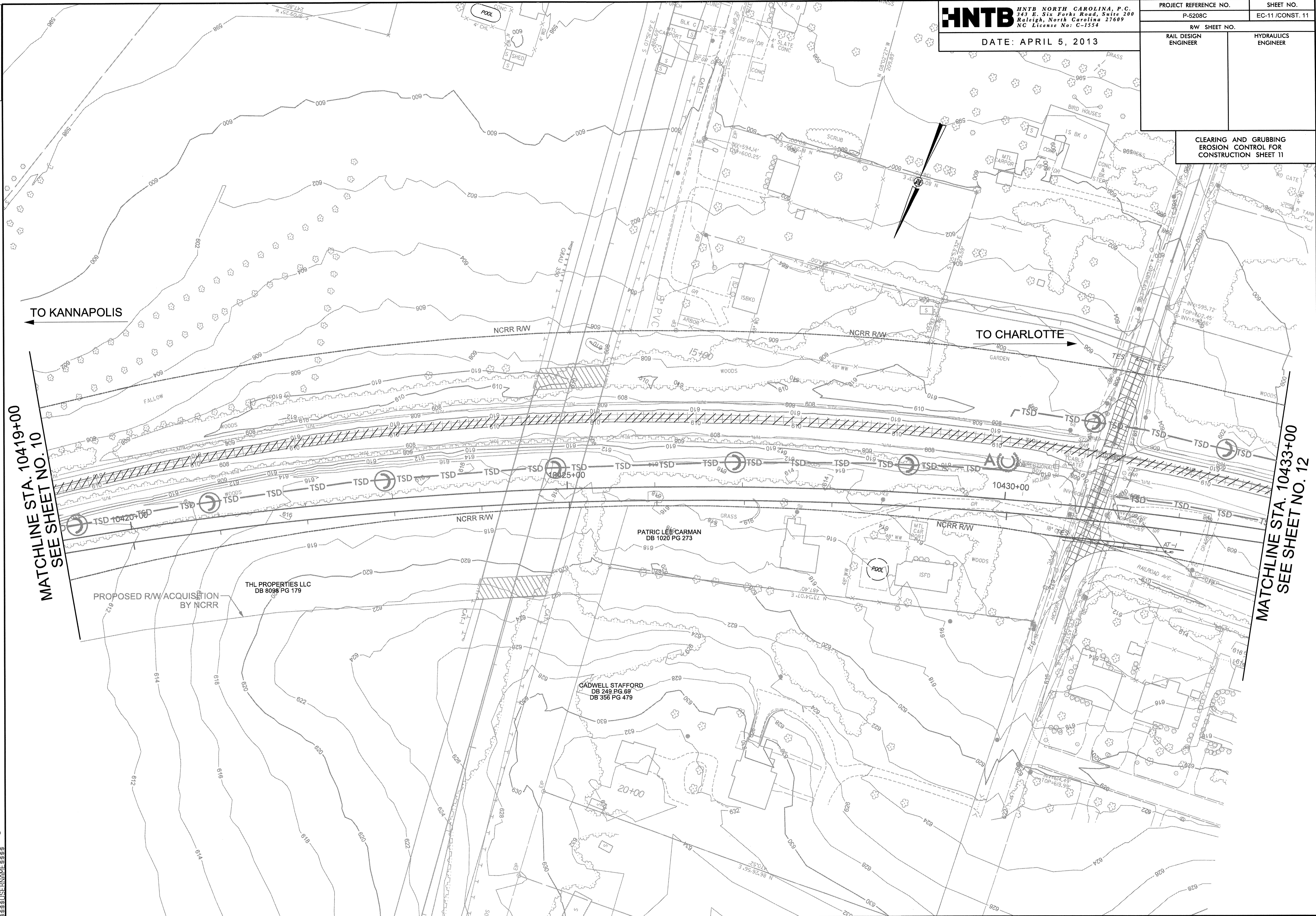
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HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-11/CONST. 11
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11



MATCHLINE STA. 10419+00
SEE SHEET NO. 10

MATCHLINE STA. 10433+00
SEE SHEET NO. 12

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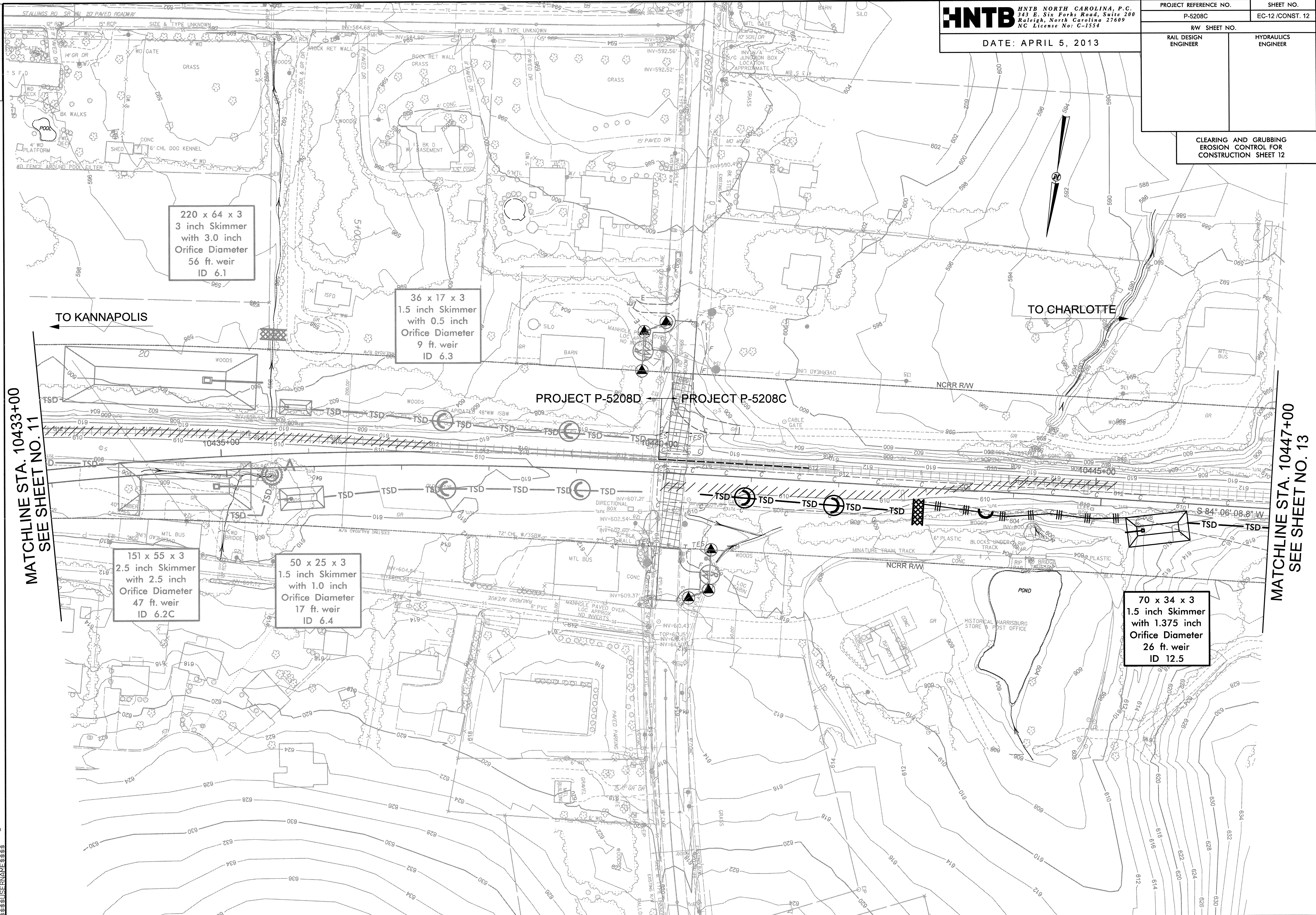
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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-12/CONST. 12
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12



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3:33:53 PM HNTB

0041DEL_P10a1

2:35:56 PM CG resh.13.dgn
3:33:51 USER:GMAK

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

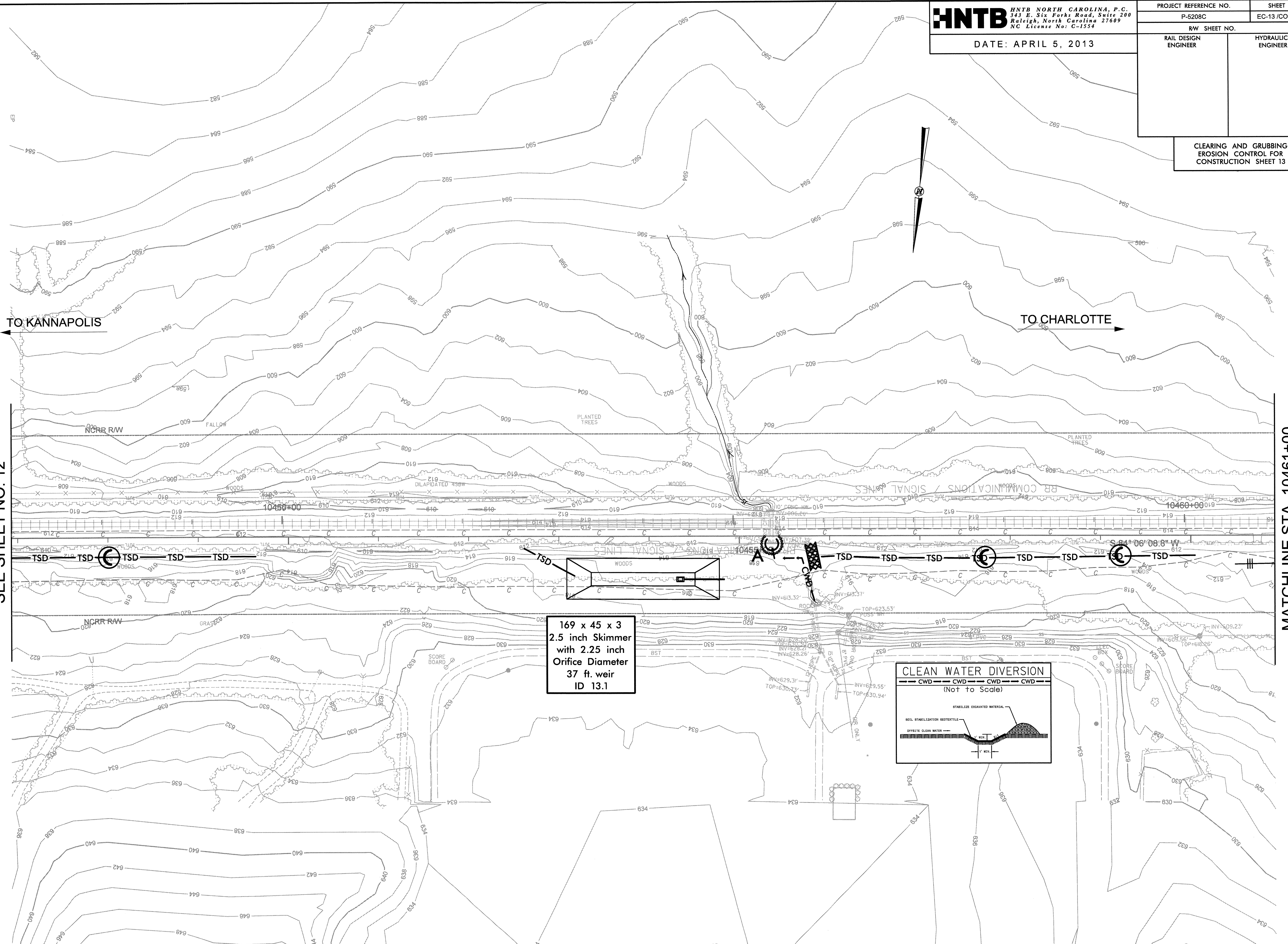
DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-13/CONST. 13
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

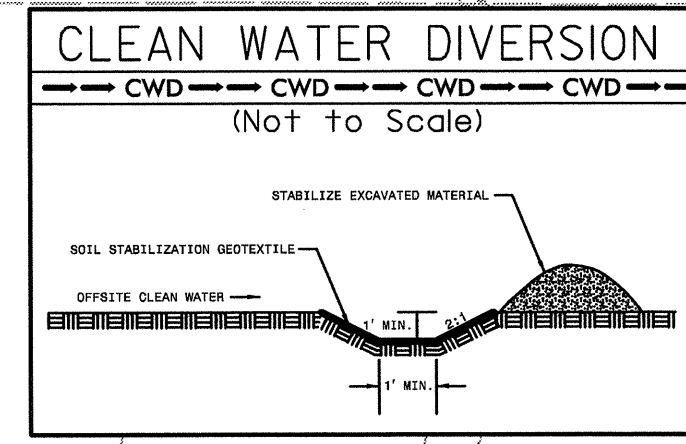
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

MATCHLINE STA. 10447+00
SEE SHEET NO. 12

MATCHLINE STA. 10461+00
SEE SHEET NO. 14



169 x 45 x 3
2.5 inch Skimmer
with 2.25 inch
Orifice Diameter
37 ft. weir
ID 13.1



0041DEL_P10a1

2:35:55 PM
3/28/11 11:55 AM
DC 14.dgn

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Raleigh, North Carolina 27609
NC License No: C-1554

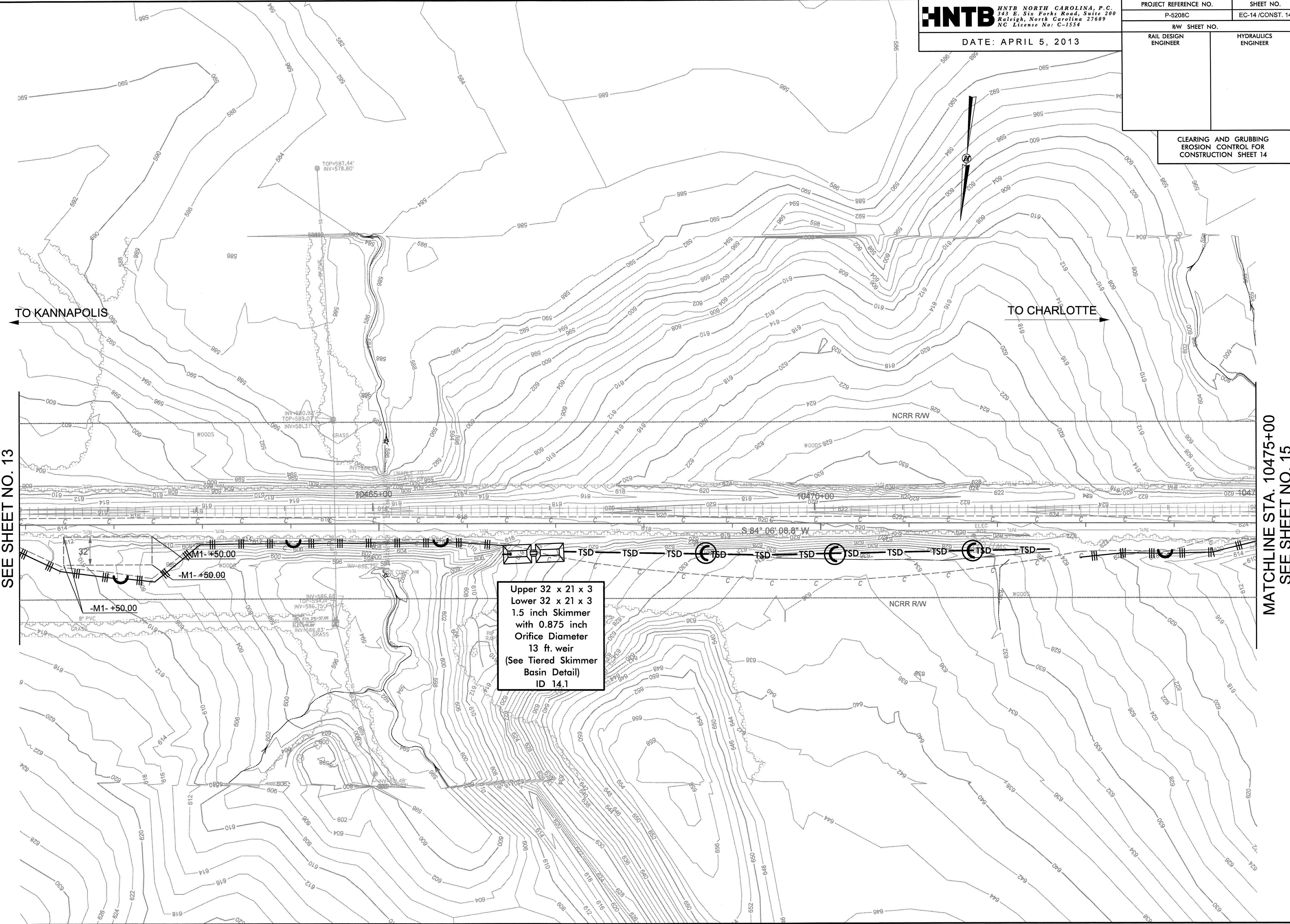
PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-14/CONST. 14
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DATE: APRIL 5, 2013

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 14

MATCHLINE STA. 10461+00
SEE SHEET NO. 13

MATCHLINE STA. 10475+00
SEE SHEET NO. 15



0041DEL_P10a1

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-15/CONST. 15
	RAW SHEET NO.	
DATE: APRIL 5, 2013	RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 15



MATCHLINE STA. 10475+00
SEE SHEET NO. 14

MATCHLINE STA. 10489+00
SEE SHEET NO. 16

64 x 32 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
24 ft. weir
ID 15.1

2:36 PM 06/15/13
2:36 PM 06/15/13
2:36 PM 06/15/13

0041DEL_P10a1

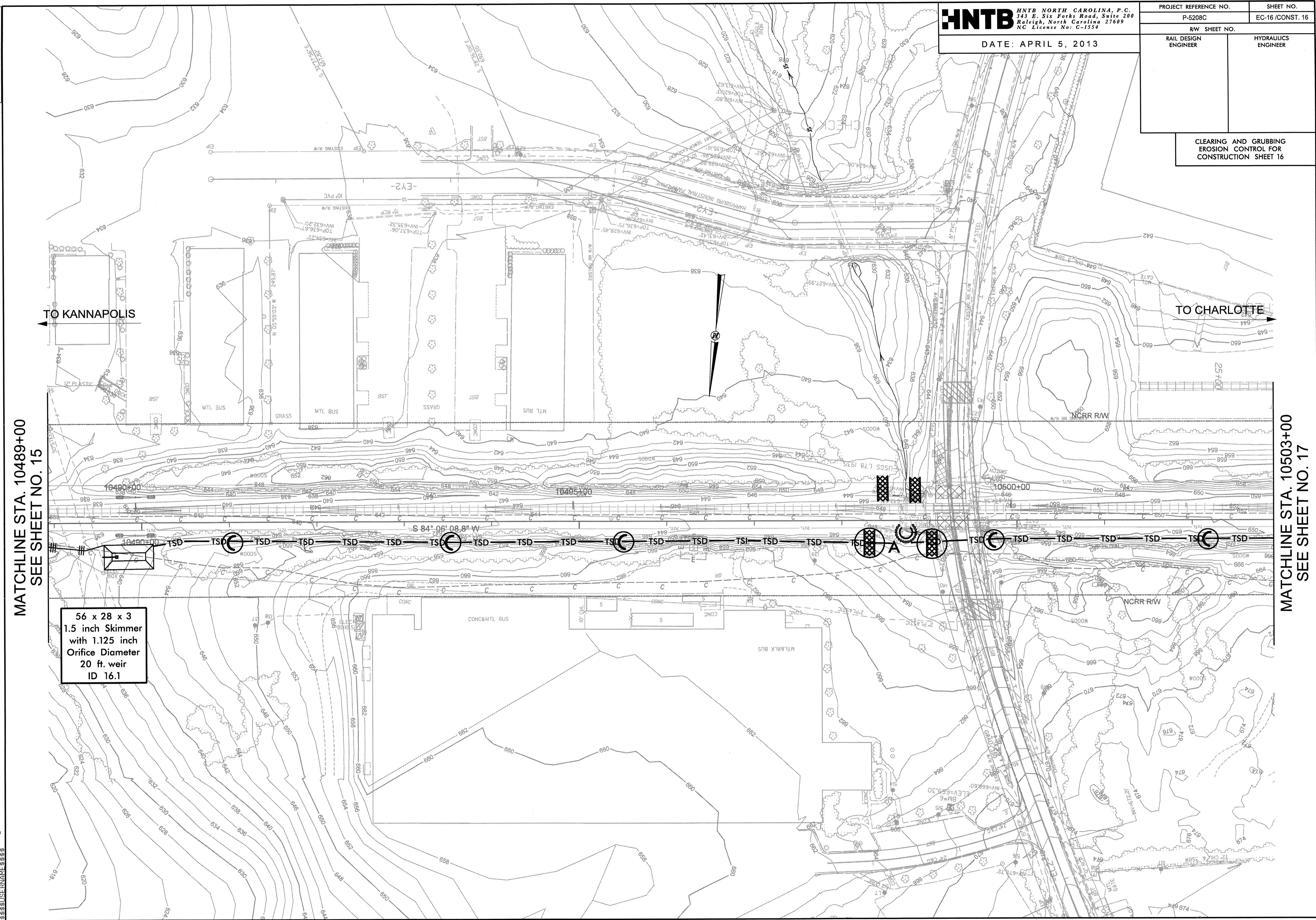
HNTB HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. P-5208C SHEET NO. EC-16/CONST. 16

DATE: APRIL 5, 2013

R/W SHEET NO.
RAIL DESIGN ENGINEER
HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 16



MATCHLINE STA. 10489+00
SEE SHEET NO. 15

MATCHLINE STA. 10503+00
SEE SHEET NO. 17

56 x 28 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
20 ft. weir
ID 16.1

2:36:15 PM CC Rev. 16.dgn
3:55:55 PM USER:GOME

0041DEL_P10a1

PCX

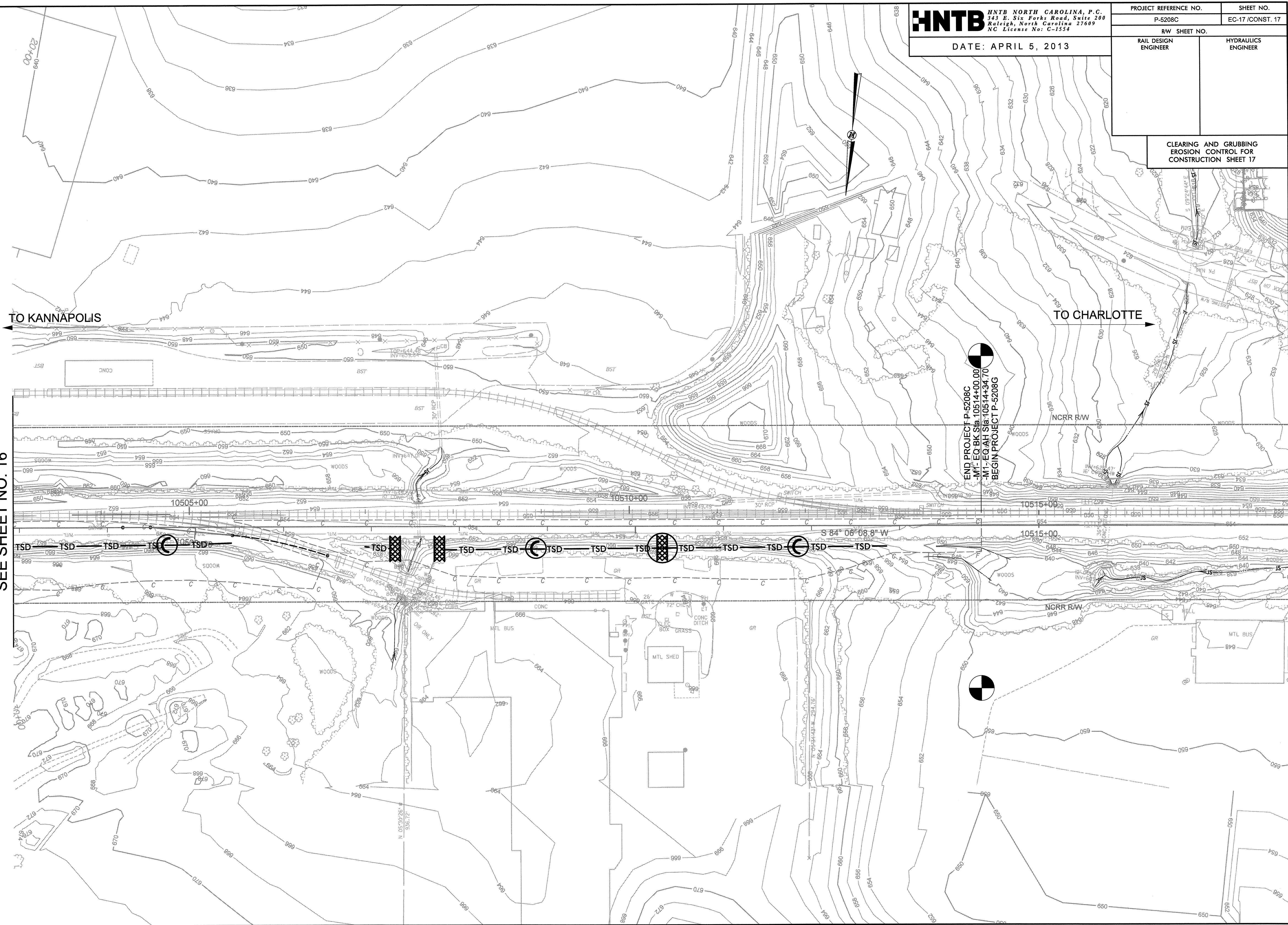
HNTB HNTB NORTH CAROLINA, P.C.
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NC License No: C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO.		SHEET NO.	
P-5208C		EC-17/CONST. 17	
RW SHEET NO.			
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER	

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 17

MATCHLINE STA. 10503+00
SEE SHEET NO. 16



END PROJECT P-5208C
MT-EQ-BK Sta: 10514+00.00
MT-EQ-AH Sta: 10514+94.70
BEGIN PROJECT P-5208G

S 84° 06' 08.8\"/>

2:36:21 PM
11/05/2012
13:33:33
CC
17.dgn

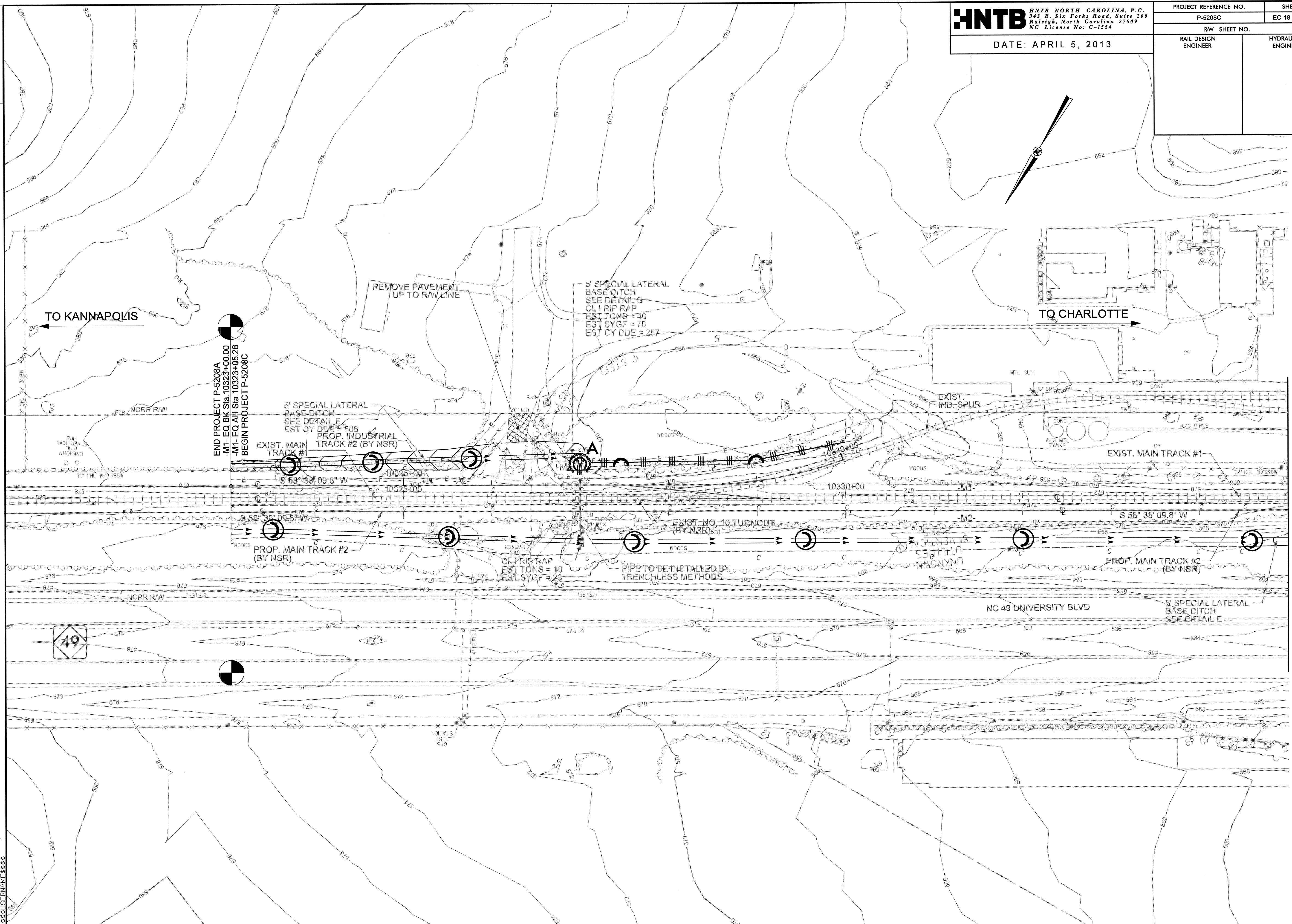
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3:38:33 PM EC Sub 04.dgn

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DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C		SHEET NO. EC-18/CONST. 4
RW SHEET NO.		
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER	



TO KANNAPOLIS

TO CHARLOTTE

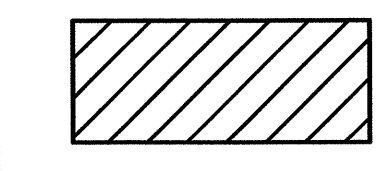
MATCHLINE STA. 10335+00
SEE SHEET NO. 5

0041DEL_P10a1

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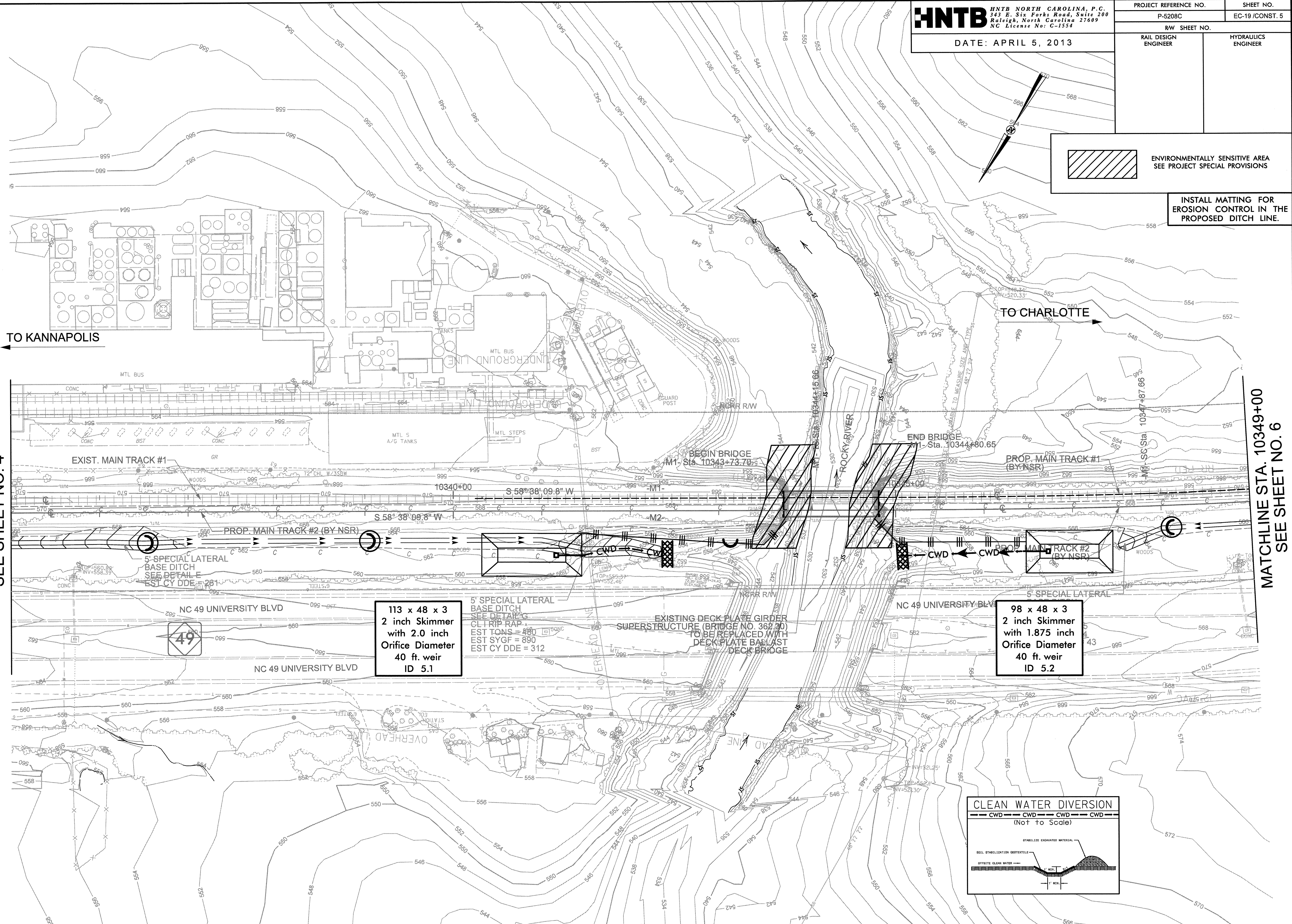
PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-19/CONST. 5
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DATE: APRIL 5, 2013



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.



MATCHLINE STA. 10335+00
SEE SHEET NO. 4

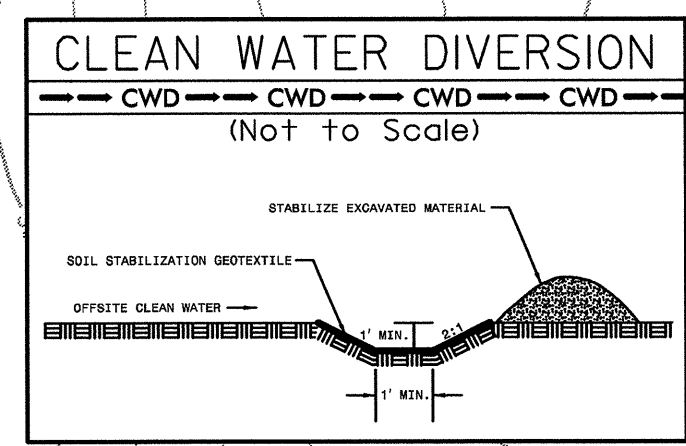
MATCHLINE STA. 10349+00
SEE SHEET NO. 6

TO KANNAPOLIS

TO CHARLOTTE

113 x 48 x 3
2 inch Skimmer
with 2.0 inch
Orifice Diameter
40 ft. weir
ID 5.1

98 x 48 x 3
2 inch Skimmer
with 1.875 inch
Orifice Diameter
40 ft. weir
ID 5.2



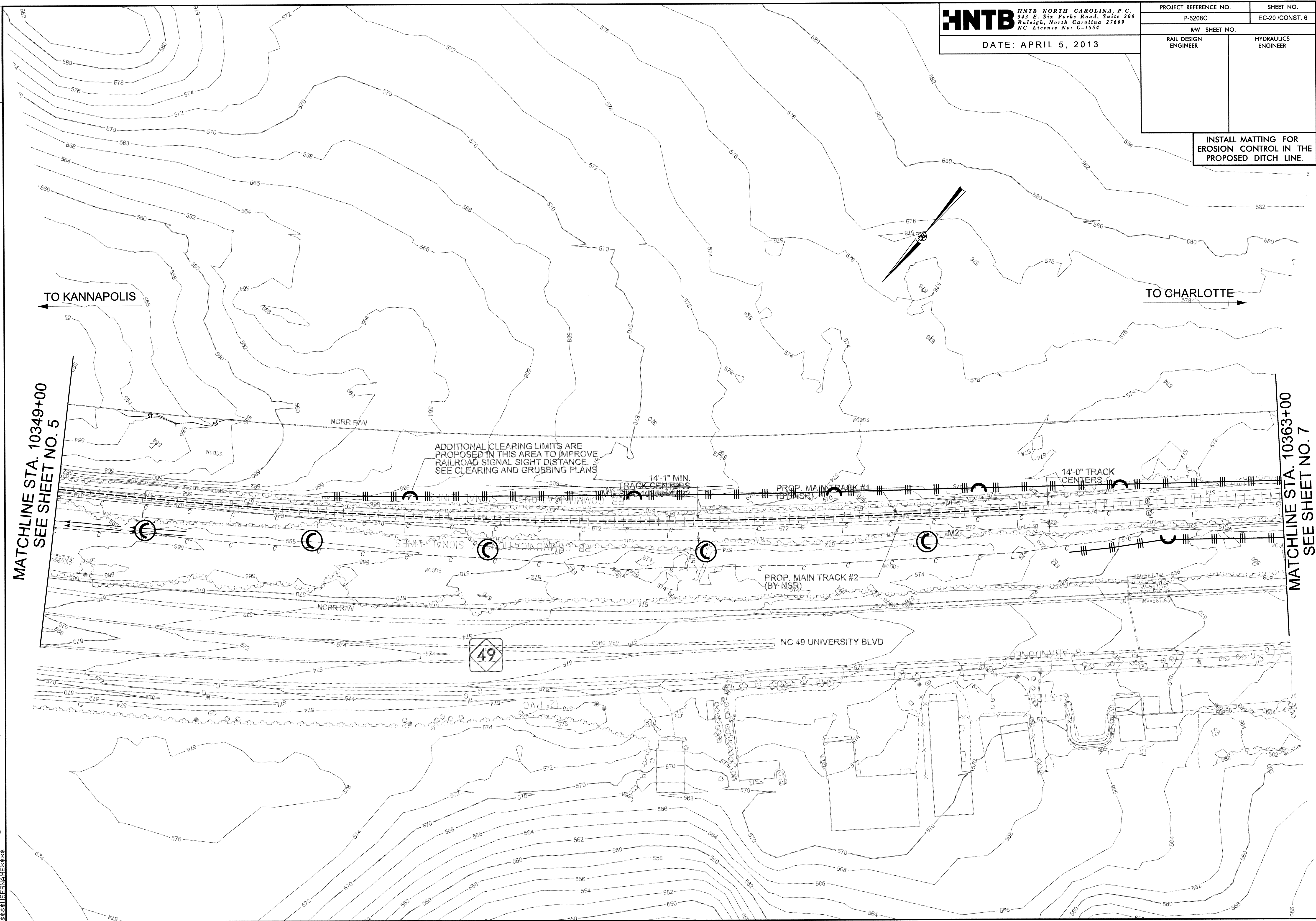
2:16:38 PM EC sch 05.dgn
3:38:55 PM EC sch 05.dgn

0041DEL_P10a1

PACK

HNTB HNTB NORTH CAROLINA, P.C. 343 E. Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554	PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-20 /CONST. 6
	RW SHEET NO.	
DATE: APRIL 5, 2013	RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



TO KANNAPOLIS

TO CHARLOTTE

MATCHLINE STA. 10349+00
SEE SHEET NO. 5

MATCHLINE STA. 10363+00
SEE SHEET NO. 7

ADDITIONAL CLEARING LIMITS ARE PROPOSED IN THIS AREA TO IMPROVE RAILROAD SIGNAL SIGHT DISTANCE. SEE CLEARING AND GRUBBING PLANS

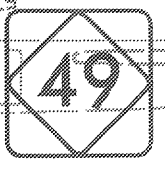
14'-1" MIN. TRACK CENTERS

PROP. MAIN TRACK #1 (BY NSR)

14'-0" TRACK CENTERS

PROP. MAIN TRACK #2 (BY NSR)

NC 49 UNIVERSITY BLVD



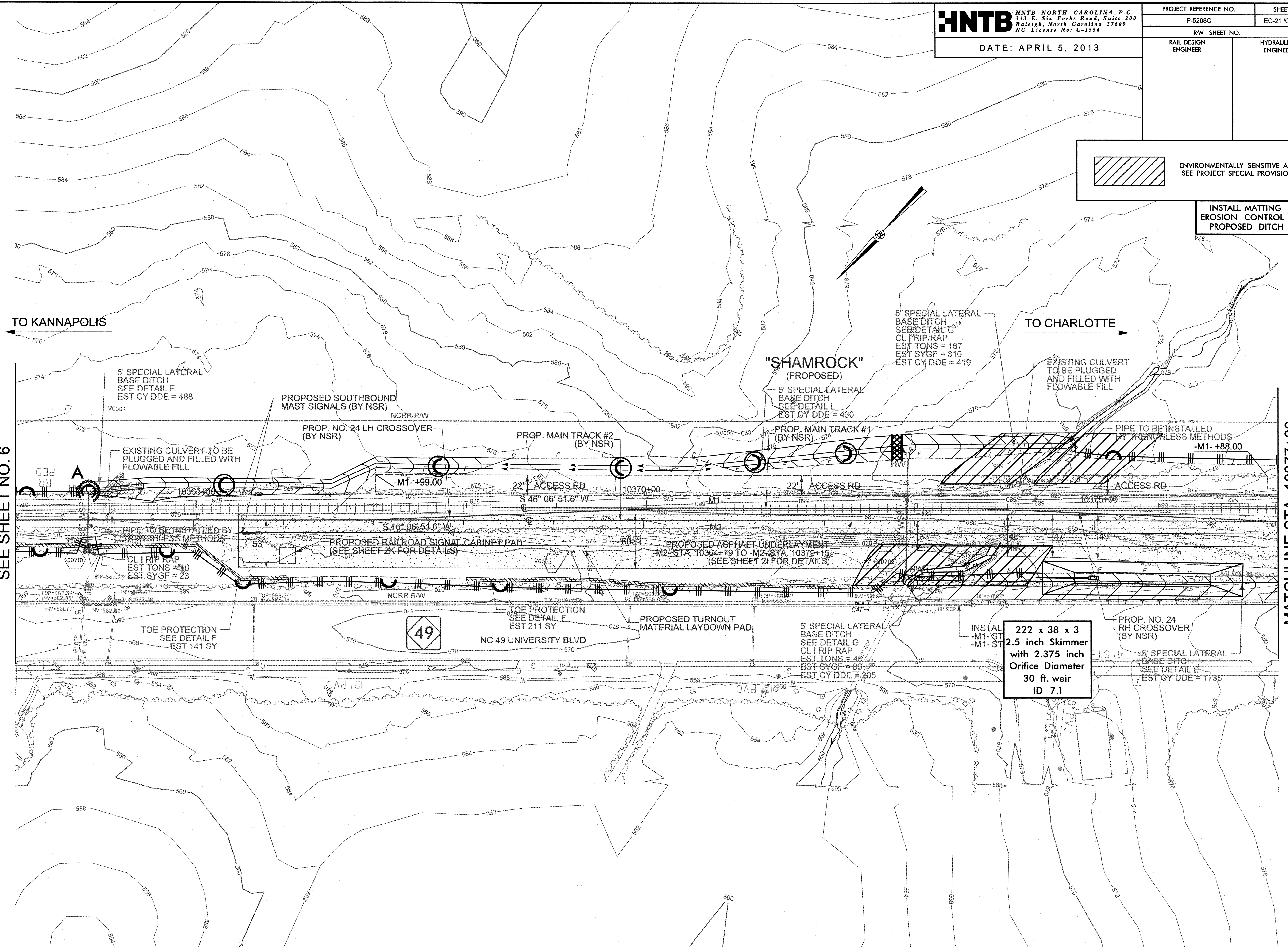
2:36:45 PM EC_esh_06.dgn

DATE: APRIL 5, 2013



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.



MATCHLINE STA. 10363+00
SEE SHEET NO. 6

MATCHLINE STA. 10377+00
SEE SHEET NO. 8

TO KANNAPOLIS

TO CHARLOTTE

"SHAMROCK"
(PROPOSED)

222 x 38 x 3
2.5 inch Skimmer
with 2.375 inch
Orifice Diameter
30 ft. weir
ID 7.1

49

0041DEL_P10a1
0001ADD_P10a1

REVISIONS
REVISION #1 (7/5/2013): SUBSURFACE DRAIN ADDED. REVISED -Y6- SADDLE CREEK RD ALIGNMENT.

3:21:57 PM EC
3:21:57 PM EC
3:21:57 PM EC
3:21:57 PM EC

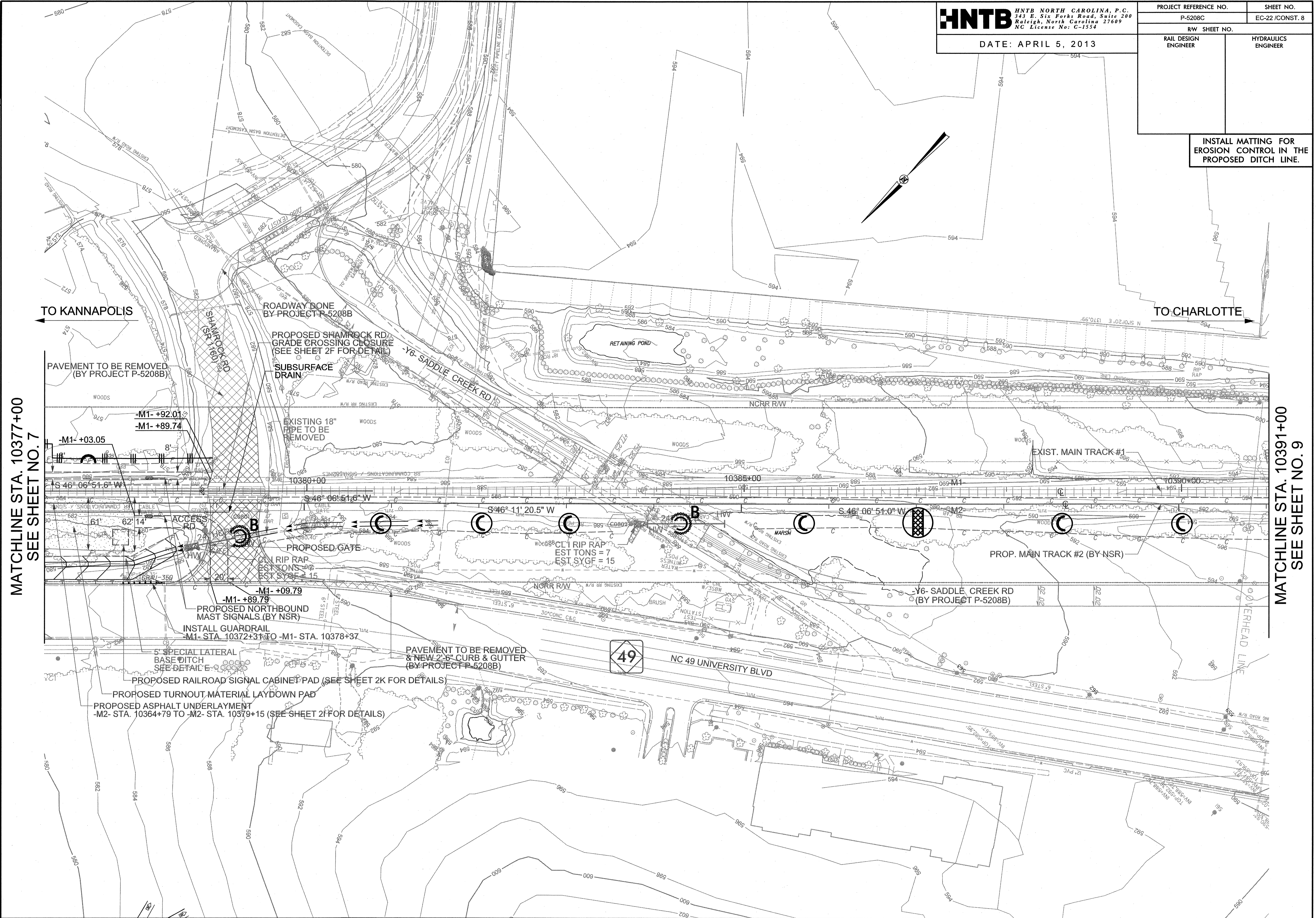
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. P-5208C
SHEET NO. EC-22/CONST. 8

DATE: APRIL 5, 2013

RW SHEET NO.
RAIL DESIGN ENGINEER
HYDRAULICS ENGINEER

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



MATCHLINE STA. 10377+00
SEE SHEET NO. 7

MATCHLINE STA. 10391+00
SEE SHEET NO. 9

TO KANNAPOLIS

TO CHARLOTTE

49

0041DEL_P10a1

PKY

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Raleigh, North Carolina 27609
NC License No: C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C		SHEET NO. EC-23 /CONST. 9	
RW SHEET NO.			
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER	

TO KANNAPOLIS

TO CHARLOTTE

MATCHLINE STA. 10391+00
SEE SHEET NO. 8

MATCHLINE STA. 10405+00
SEE SHEET NO. 10



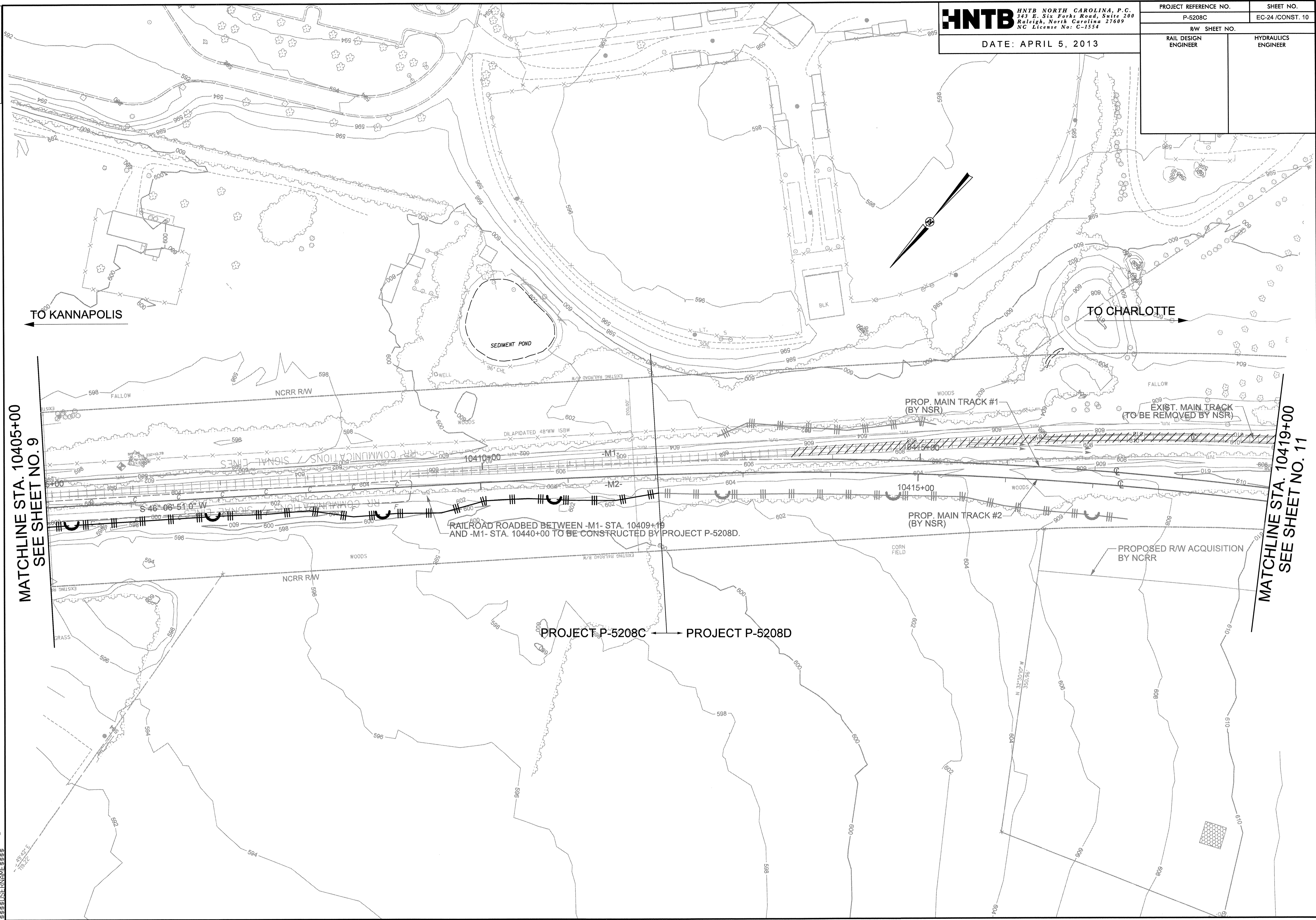
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3/28/2013
10405+00.dgn

0041DEL_P10a1

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NC License No: C-1534

DATE: APRIL 5, 2013

PROJECT REFERENCE NO.		SHEET NO.	
P-5208C		EC-24/CONST. 10	
RW SHEET NO.			
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER	



MATCHLINE STA. 10405+00
SEE SHEET NO. 9

MATCHLINE STA. 10419+00
SEE SHEET NO. 11

2:37:19 PM EC_Rsh_10.dgn
3:53:51 PM
3:53:51 PM

0041DEL_P10a1

2:37:27 PM EC_resh_11.dgn
3:56:51 PM EC_resh_11.dgn

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Raleigh, North Carolina 27609
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PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-25 /CONST. 11
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DATE: APRIL 5, 2013

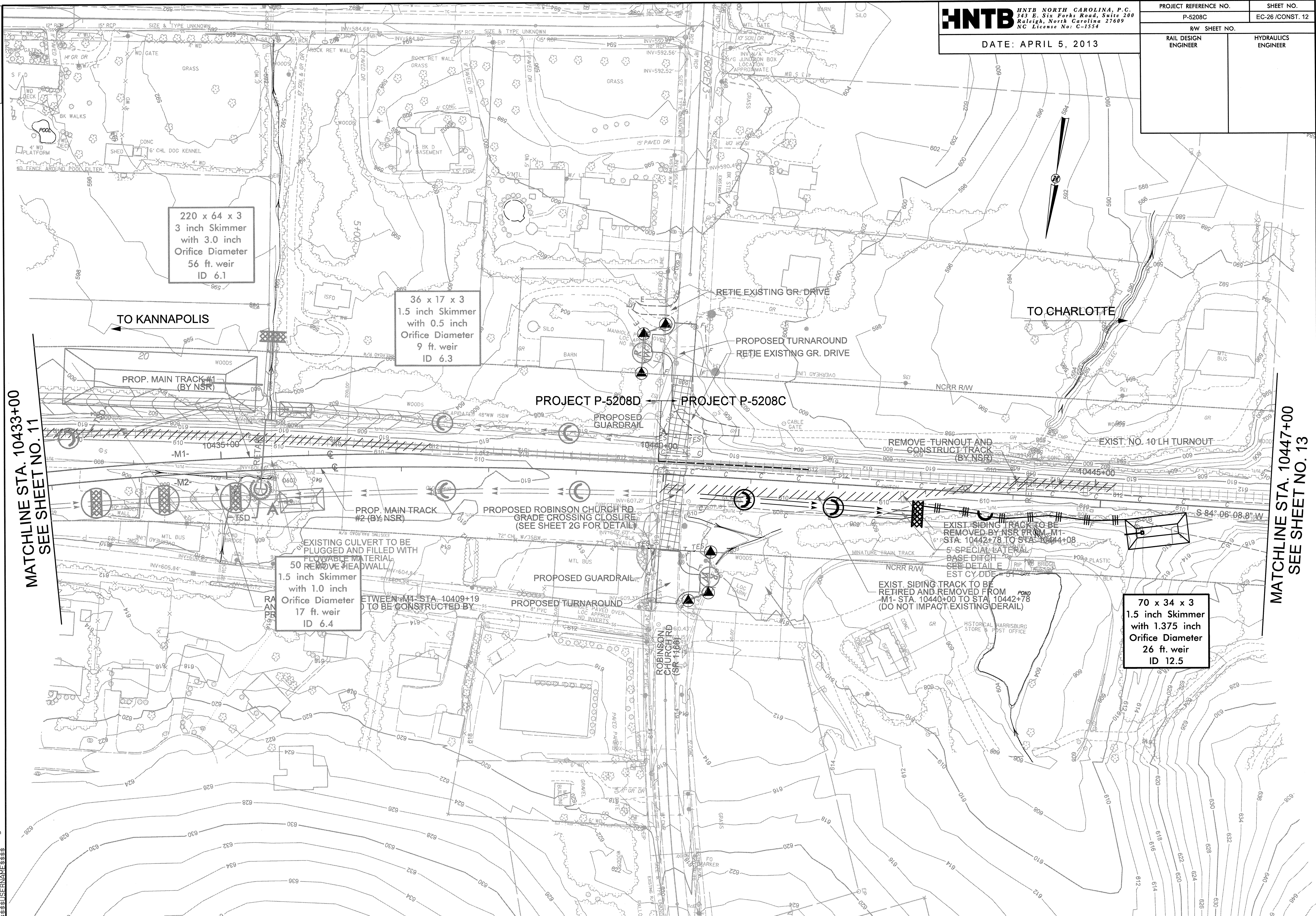


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 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1534

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-26 /CONST. 12
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCHLINE STA. 10433+00
SEE SHEET NO. 11

MATCHLINE STA. 10447+00
SEE SHEET NO. 13

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3:33:33 USER:VAV

0041DEL_P10a1

2:37:45 PM EC sch.13.dgn
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Raleigh, North Carolina 27609
NC License No: C-1554

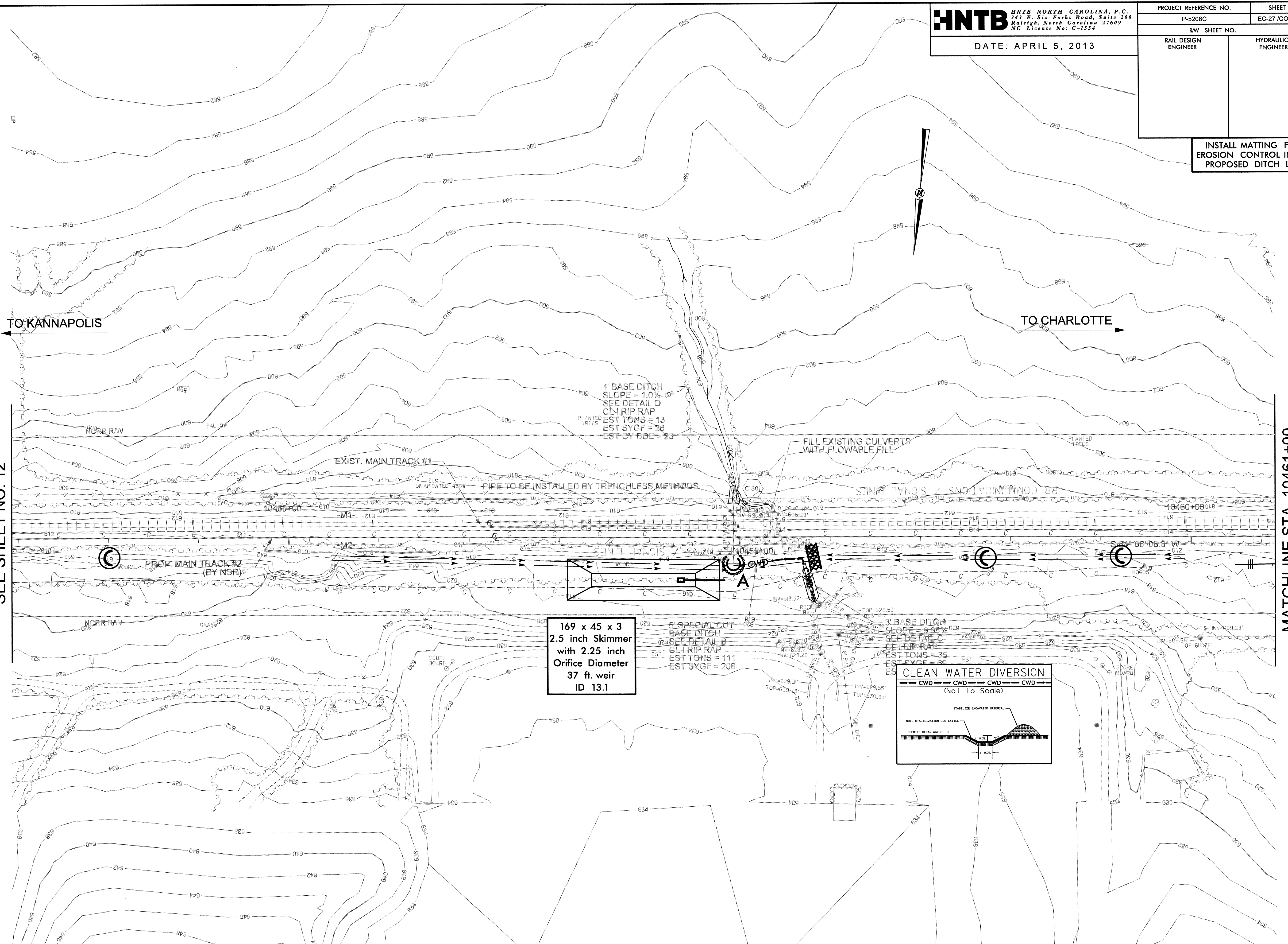
DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C		SHEET NO. EC-27/CONST. 13	
R/W SHEET NO.			
RAIL DESIGN ENGINEER		HYDRAULICS ENGINEER	

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

MATCHLINE STA. 10447+00
SEE SHEET NO. 12

MATCHLINE STA. 10461+00
SEE SHEET NO. 14



MATCHLINE STA. 10447+00
SEE SHEET NO. 12

MATCHLINE STA. 10461+00
SEE SHEET NO. 14

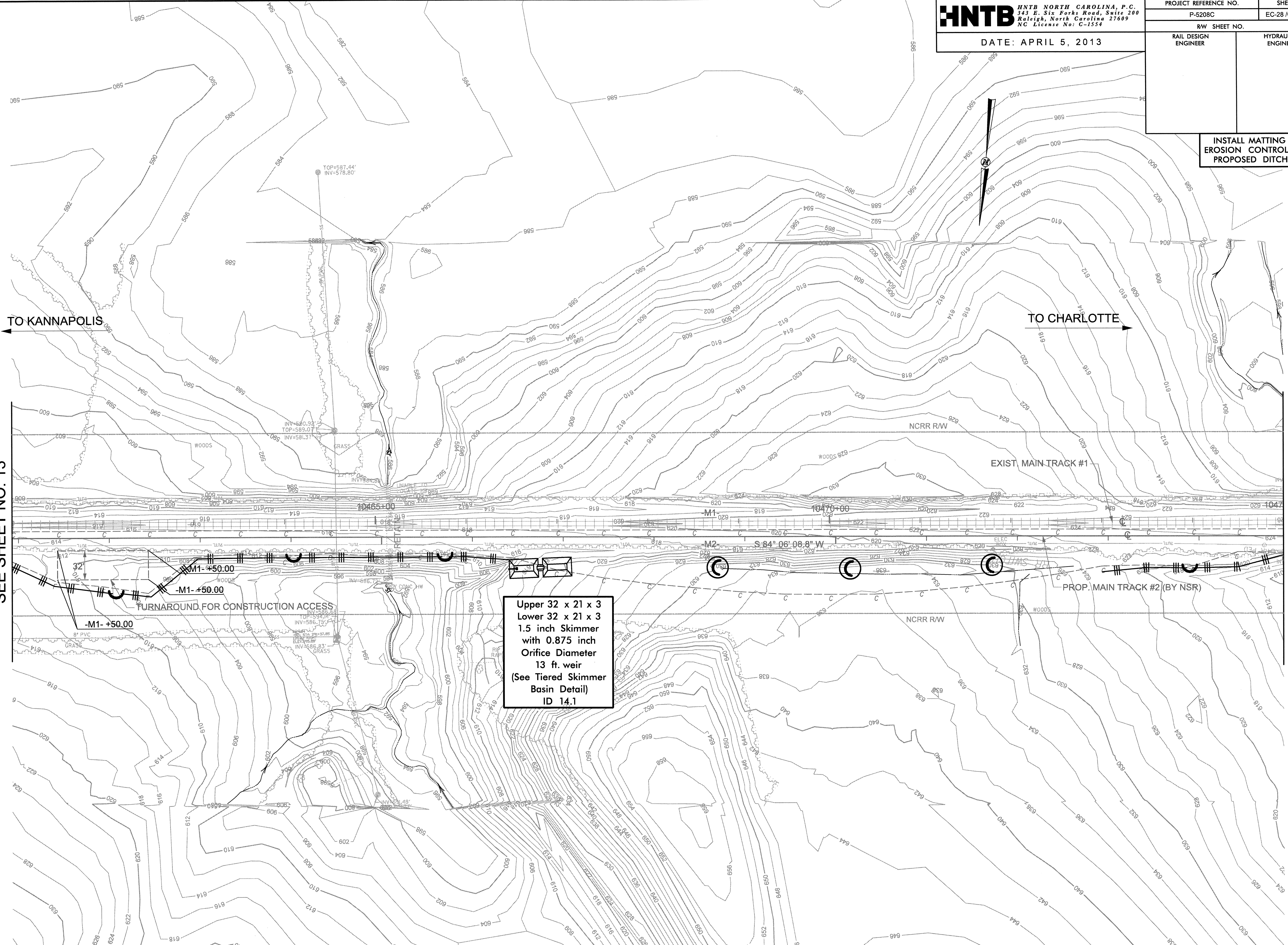
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Raleigh, North Carolina 27609
NC License No: C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C		SHEET NO. EC-28 /CONST. 14
RW SHEET NO.		
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER	

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



MATCHLINE STA. 10461+00
SEE SHEET NO. 13

MATCHLINE STA. 10475+00
SEE SHEET NO. 15

Upper 32 x 21 x 3
Lower 32 x 21 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
13 ft. weir
(See Tiered Skimmer
Basin Detail)
ID 14.1

2:37:55 PM EC_sch_14.dgn
3:53:53 PM EC_sch_14.dgn

0041DEL_P10a1

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PROJECT REFERENCE NO.	SHEET NO.
P-5208C	EC-29/CONST. 15
R/W SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

DATE: APRIL 5, 2013

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

MATCHLINE STA. 10475+00
SEE SHEET NO. 14

MATCHLINE STA. 10489+00
SEE SHEET NO. 16



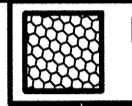
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2/26/13
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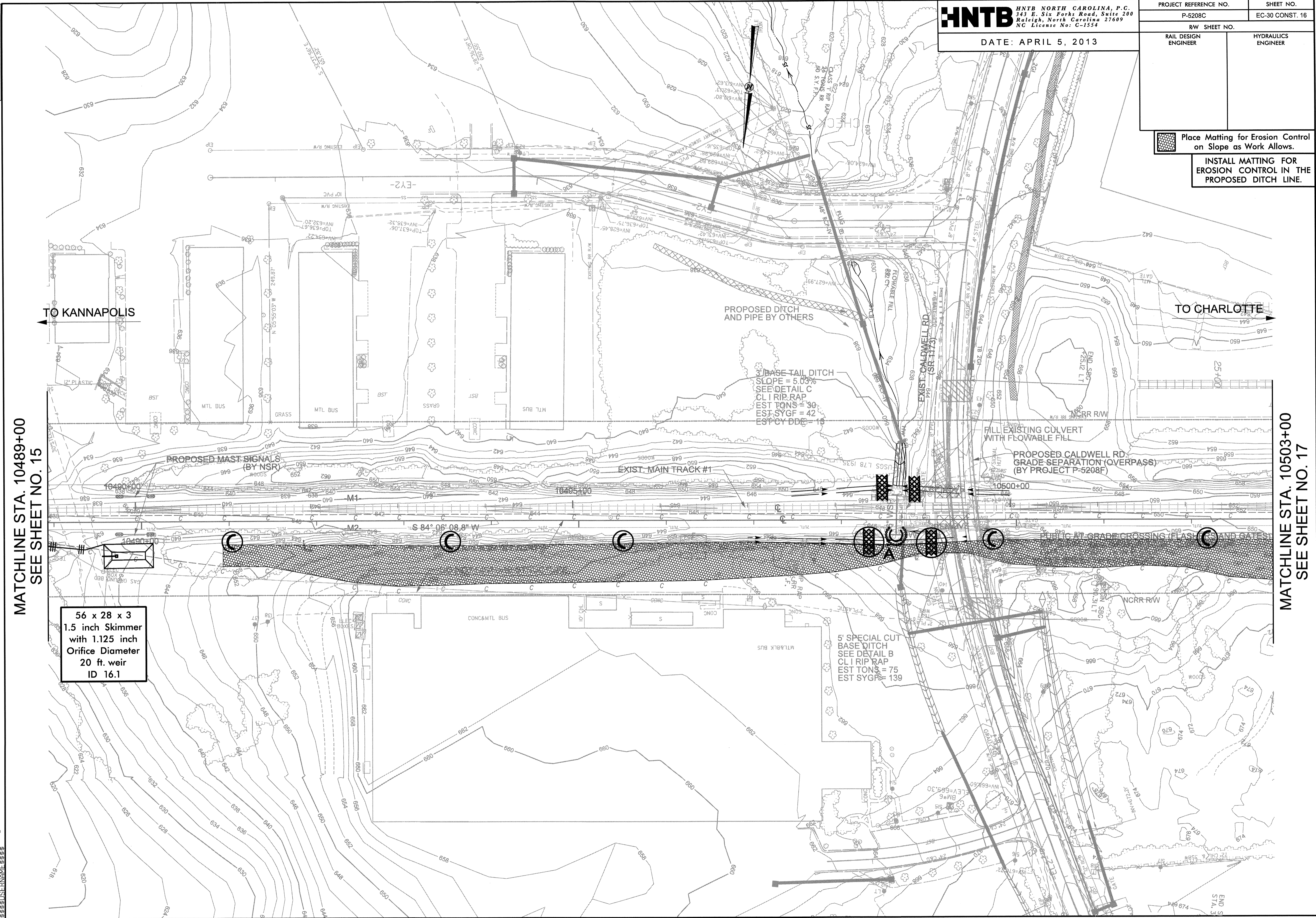
HNTB HNTB NORTH CAROLINA, P.C.
243 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No. C-1554

DATE: APRIL 5, 2013

PROJECT REFERENCE NO. P-5208C	SHEET NO. EC-30 CONST. 16
RW SHEET NO.	
RAIL DESIGN ENGINEER	HYDRAULICS ENGINEER

 Place Matting for Erosion Control on Slope as Work Allows.

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.



MATCHLINE STA. 10489+00
SEE SHEET NO. 15

MATCHLINE STA. 10503+00
SEE SHEET NO. 17

TO KANNAPOLIS

TO CHARLOTTE

56 x 28 x 3
1.5 inch Skimmer
with 1.125 inch
Orifice Diameter
20 ft. weir
ID 16.1

5' SPECIAL CUT
BASE DITCH
SEE DETAIL B
CL I RIP RAP
EST TONS = 75
EST SYGF = 139

3' BASE TAIL DITCH
SLOPE = 5.03%
SEE DETAIL C
CL I RIP RAP
EST TONS = 30
EST SYGF = 42
EST CY DDE = 15

FILL EXISTING CULVERT
WITH FLOWABLE FILL

PROPOSED CALDWELL RD.
GRADE SEPARATION (OVERPASS)
(BY PROJECT P-5208F)

2:38:02 PM EC_sch_16.dgn
16:55:55 USER:ME

0041DEL_P10a1

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO. P-5208C SHEET NO. EC-31/CONST. 17

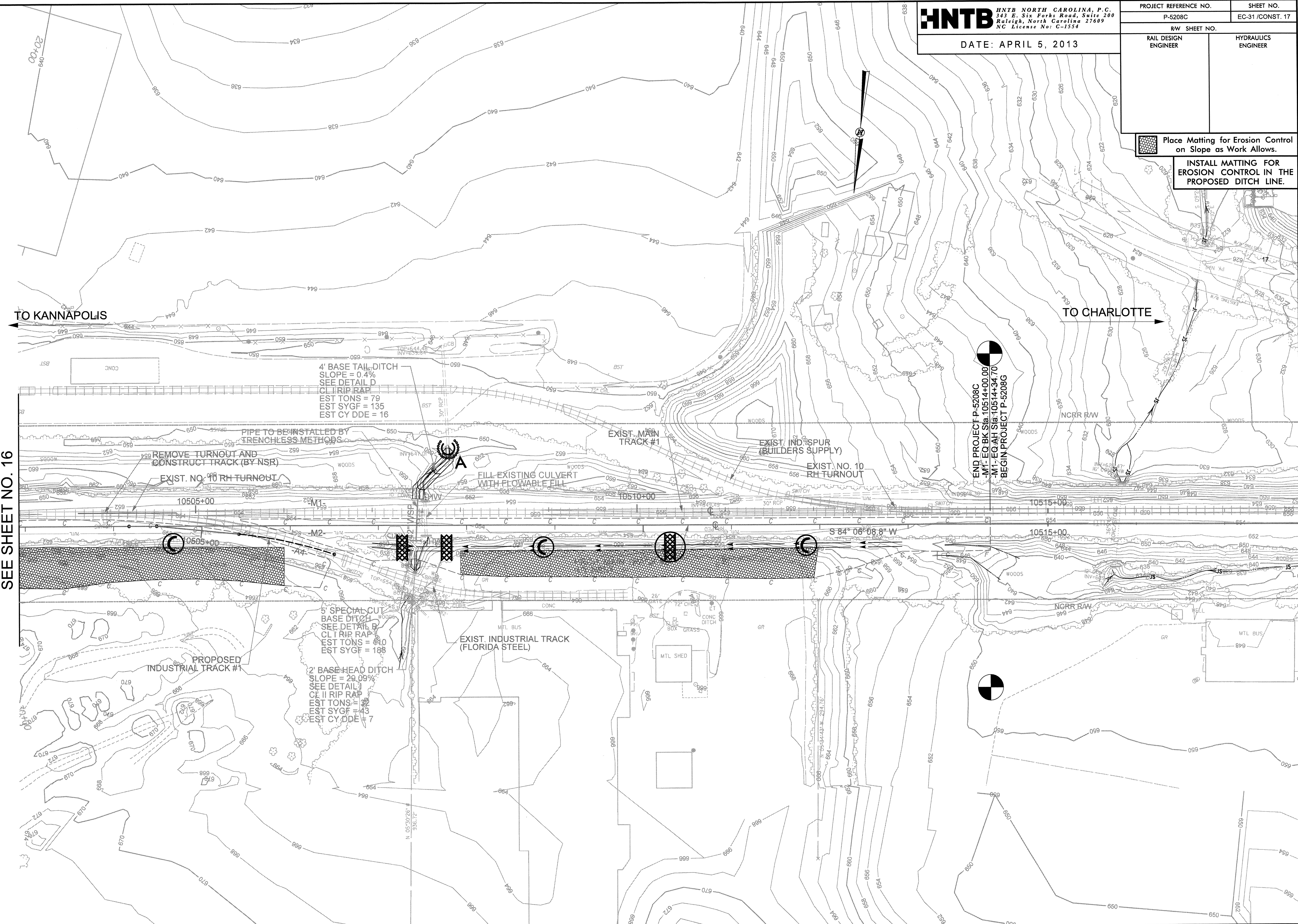
DATE: APRIL 5, 2013

RW SHEET NO. RAIL DESIGN ENGINEER HYDRAULICS ENGINEER

Place Matting for Erosion Control on Slope as Work Allows.

INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE.

MATCHLINE STA. 10503+00
SEE SHEET NO. 16



TO KANNAPOLIS

TO CHARLOTTE

4' BASE TAIL DITCH
SLOPE = 0.4%
SEE DETAIL D
CL II RIP RAP
EST TONS = 79
EST SYGF = 135
EST CY DDE = 16

REMOVE TURNOUT AND
CONSTRUCT TRACK (BY NSR)
EXIST. NO. 10 RH TURNOUT

FILL EXISTING CULVERT
WITH FLOWABLE FILL

EXIST. NO. 10
RH TURNOUT

END PROJECT P-5208C
-M1- EQ BK Sta. 10514+00.00
-M1- EQ AH Sta. 10514+34.70
BEGIN PROJECT P-5208G

5' SPECIAL CUT
BASE DITCH
SEE DETAIL B
CL II RIP RAP
EST TONS = 610
EST SYGF = 188

2' BASE HEAD DITCH
SLOPE = 29.09%
SEE DETAIL J
CL II RIP RAP
EST TONS = 43
EST SYGF = 43
EST CY DDE = 7

EXIST. INDUSTRIAL TRACK
(FLORIDA STEEL)

PROPOSED
INDUSTRIAL TRACK #1

2:38:20 PM EC_esh17.dgn
3:53:53 PM 3/27/13