

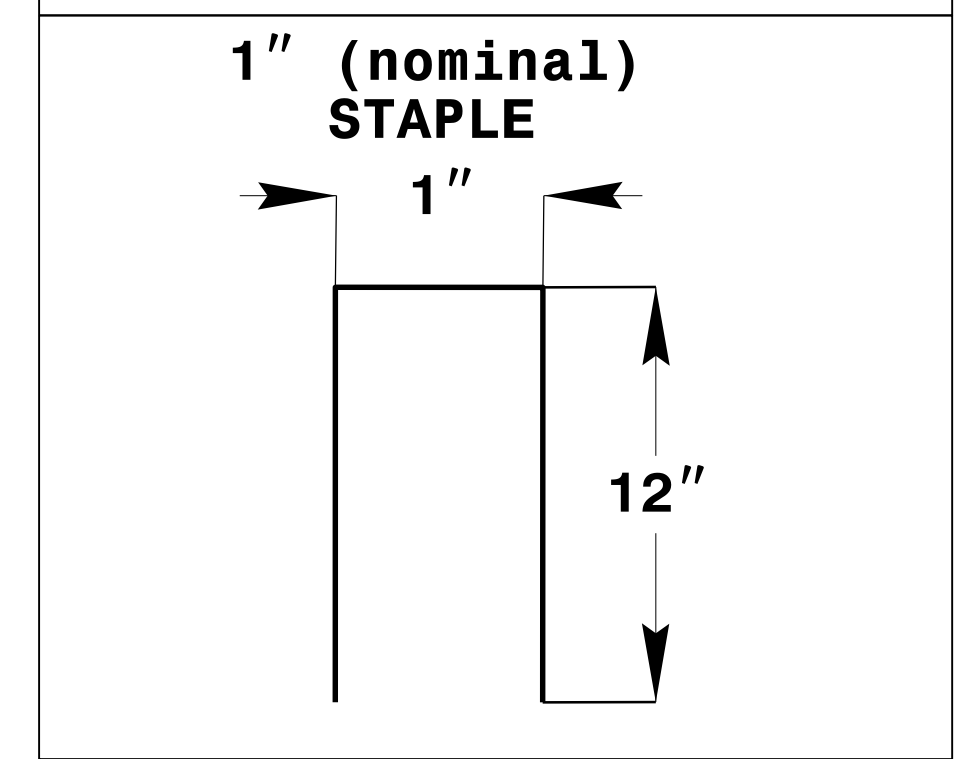
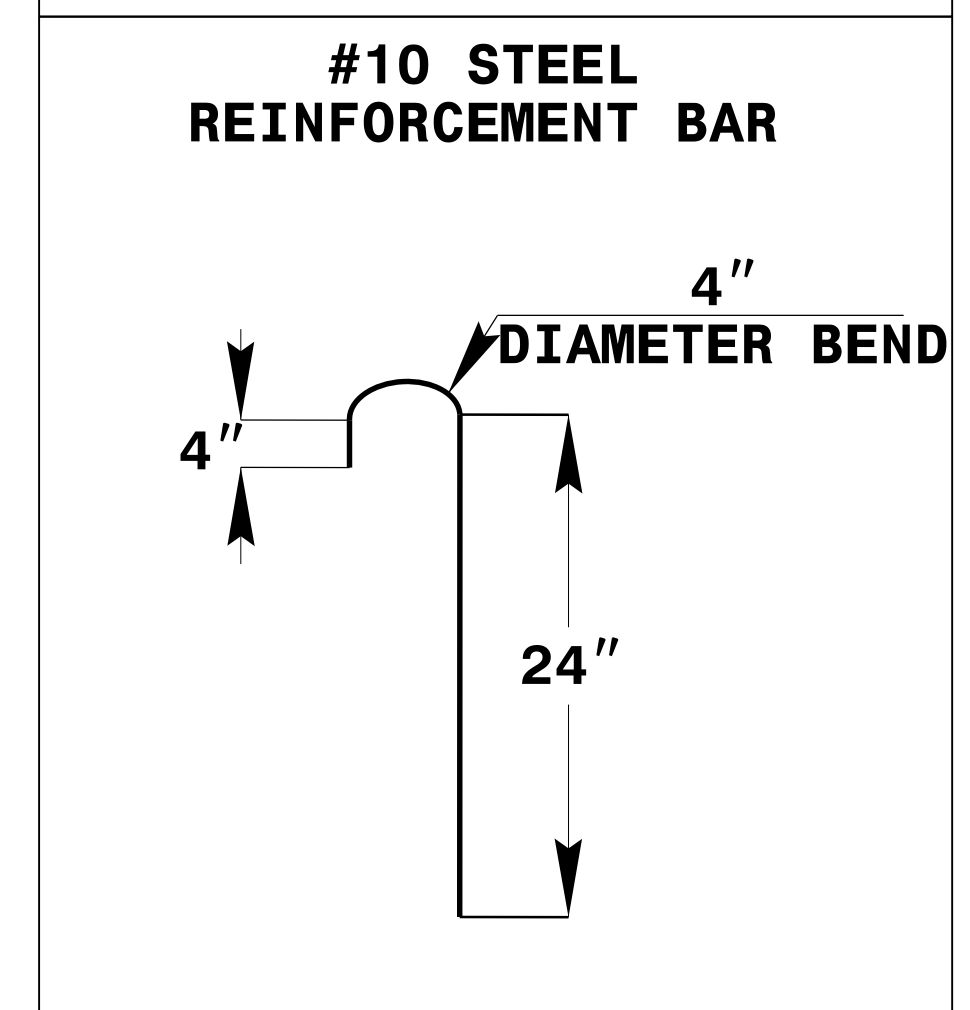
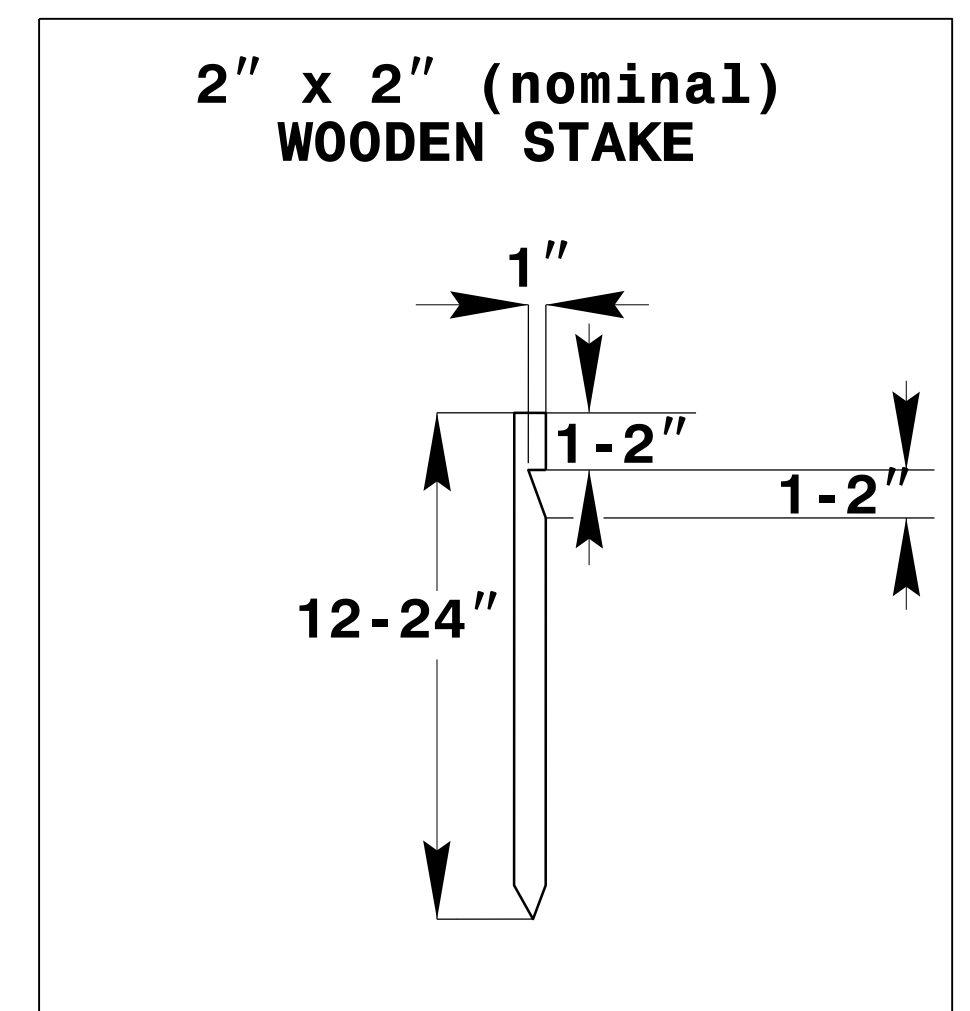
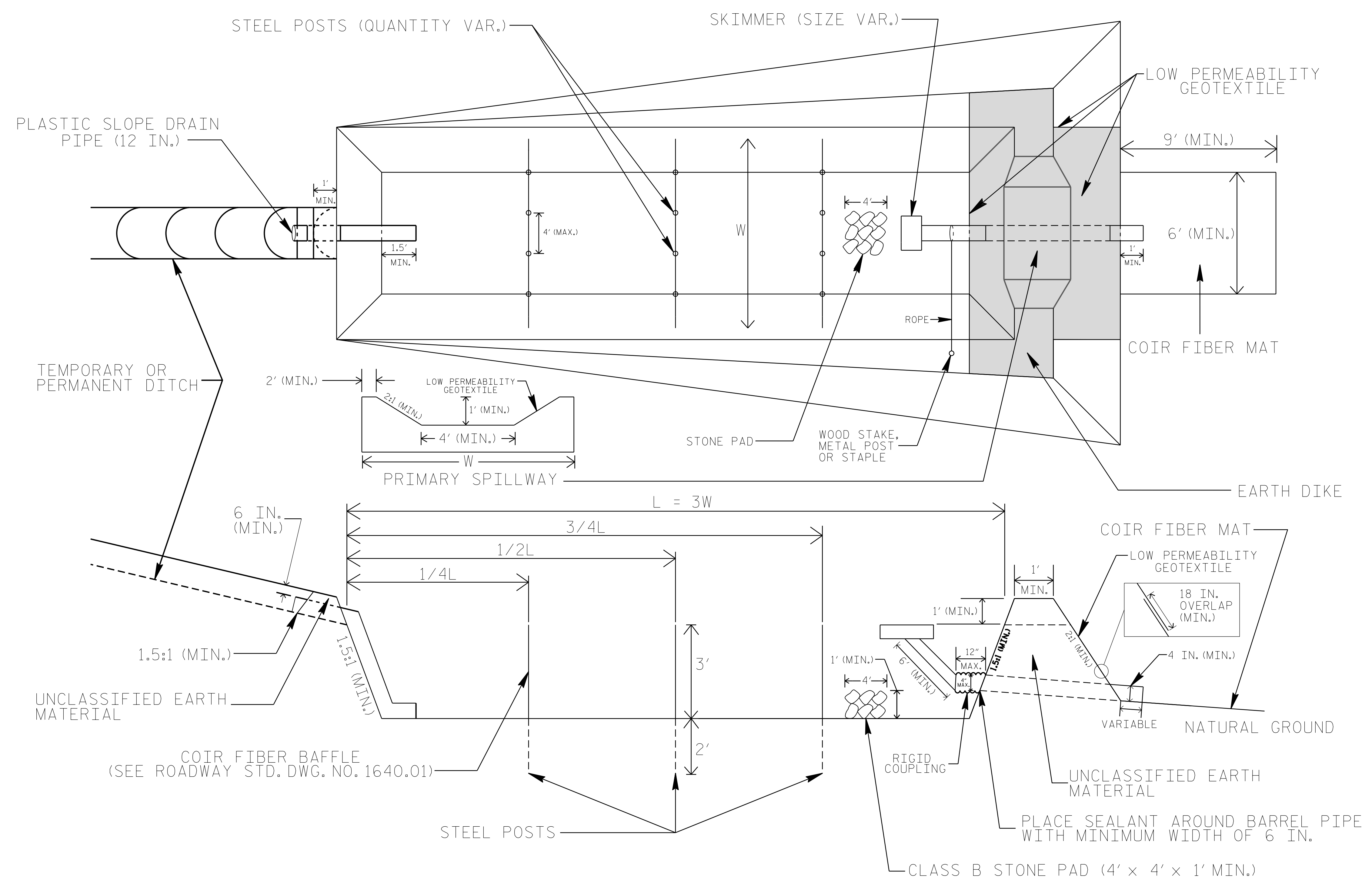
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with their signature on that page.**

**This file or an individual page
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PROJECT REFERENCE NO. B-4490	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)



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 PRIMARY SPILLWAY WEIR 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 OR TARP AS DIRECTED.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

BORROW PIT DEWATERING BASIN DETAIL

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

GENERAL NOTES:

DETERMINE BORROW PIT DEWATERING BASIN SIZE USING $V = 8.0203 * Q * T$, WHERE V IS VOLUME (FT³), Q IS PUMP FLOW RATE (GPM), AND T IS DEWATERING TIME (HR). USE MAXIMUM FLOW RATE OF 1000 GPM AND A MINIMUM DEWATERING TIME OF 2 HOURS.

RISER SHALL BE A NON-PERFORATED, SMOOTH OR CORRUGATED MATERIAL WITH A FLASHBOARD OPTION.

CONSTRUCT THE COIR FIBER BAFFLE IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1640.01 AND WITH MATERIAL THAT MEETS THE SPECIFICATIONS OF ROADWAY STANDARD 1060-14.

PROVIDE 5' STEEL POSTS OF THE SELF-FASTENER ANGLE STEEL TYPE. INSTALL STEEL POSTS WITH NO MORE THAN 3' OF THE POST APPEARING ABOVE THE GROUND.

ATTACH THE COIR FIBER MAT TO THE STEEL POSTS WITH WIRE OR OTHER ACCEPTABLE MEANS AND STAPLED INTO THE BOTTOM AND SIDE SLOPES OF THE BASIN WITH 12" STAPLES.

INSTALL TYPE 2 GEOTEXTILE ON SIDESLOPES AND BOTTOM OF BASIN AT INLET AS SHOWN IN THE DETAIL.

USE THE TYPICAL SECTION SHOWN FOR THE BORROW PIT DEWATERING BASIN AS A GUIDE. THE BASIN MAY HAVE ANY TYPE CONFIGURATION AS LONG AS SUFFICIENT VOLUME IS PROVIDED AND PROVISIONS ARE MADE FOR A NON-PERFORATED RISER.

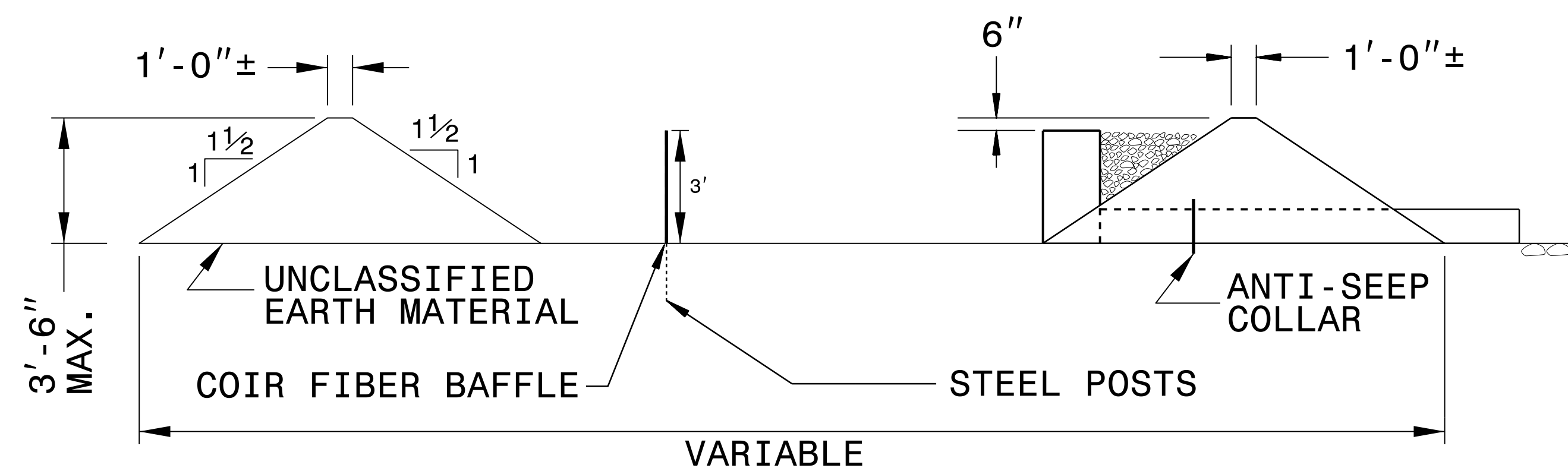
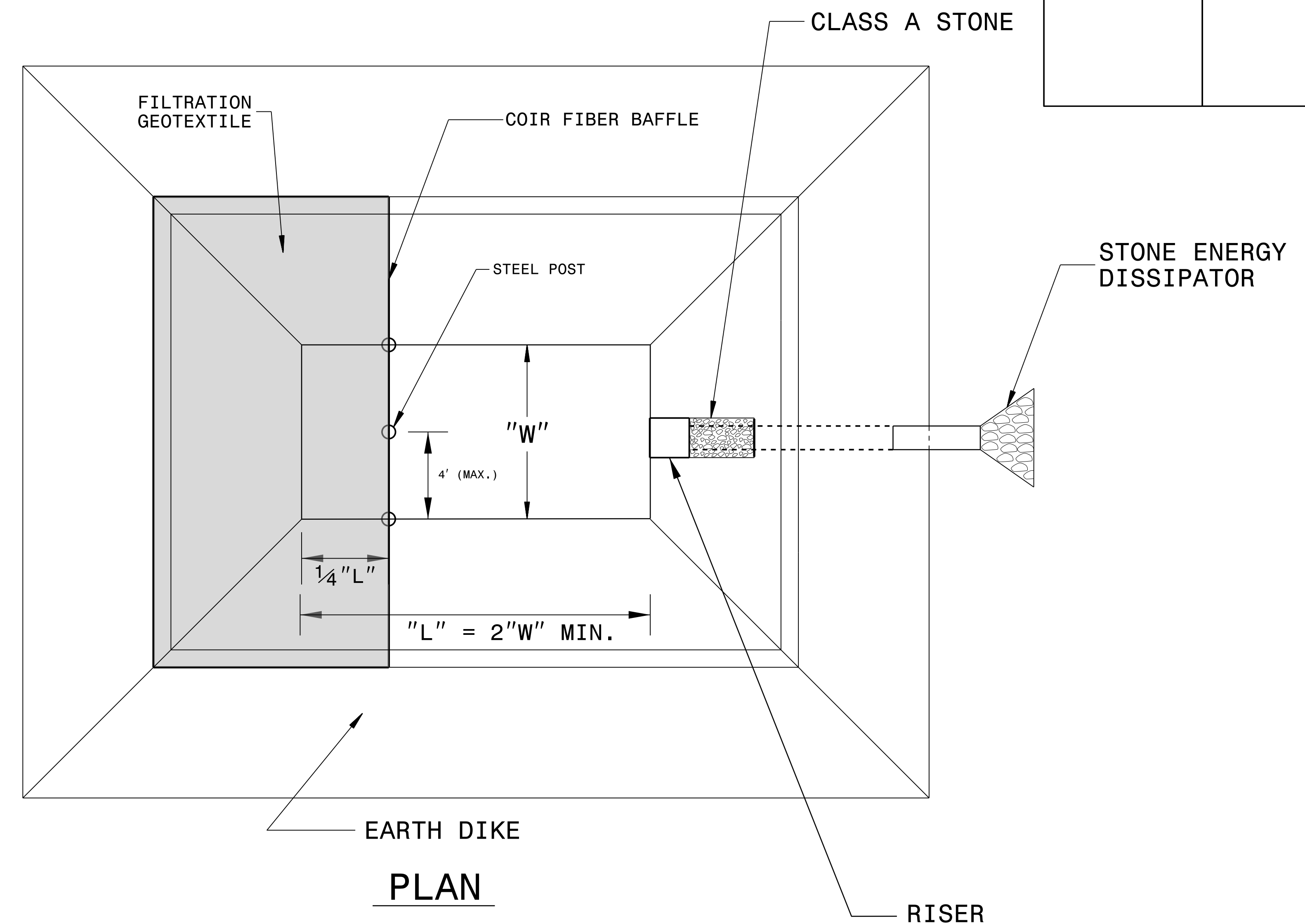
DO NOT EXCEED 3½ FT. IN HEIGHT FOR THE EARTH DIKES REQUIRED FOR BORROW PIT DEWATERING BASIN.

THE BORROW PIT DEWATERING BASIN SIZE IS VARIABLE AND DEPENDENT ON SPECIFIC SITE REQUIREMENTS AS WELL AS PROPOSED CONSTRUCTION OPERATIONS.

SUBMIT THE SIZE, LOCATION AND RISER PIPE MATERIAL FOR APPROVAL PRIOR TO CONSTRUCTION.

PUMP THE EFFLUENT INTO THE BORROW PIT DEWATERING BASIN TO A MAXIMUM DEPTH OF 6 IN. BELOW TOP OF EARTH DIKE.

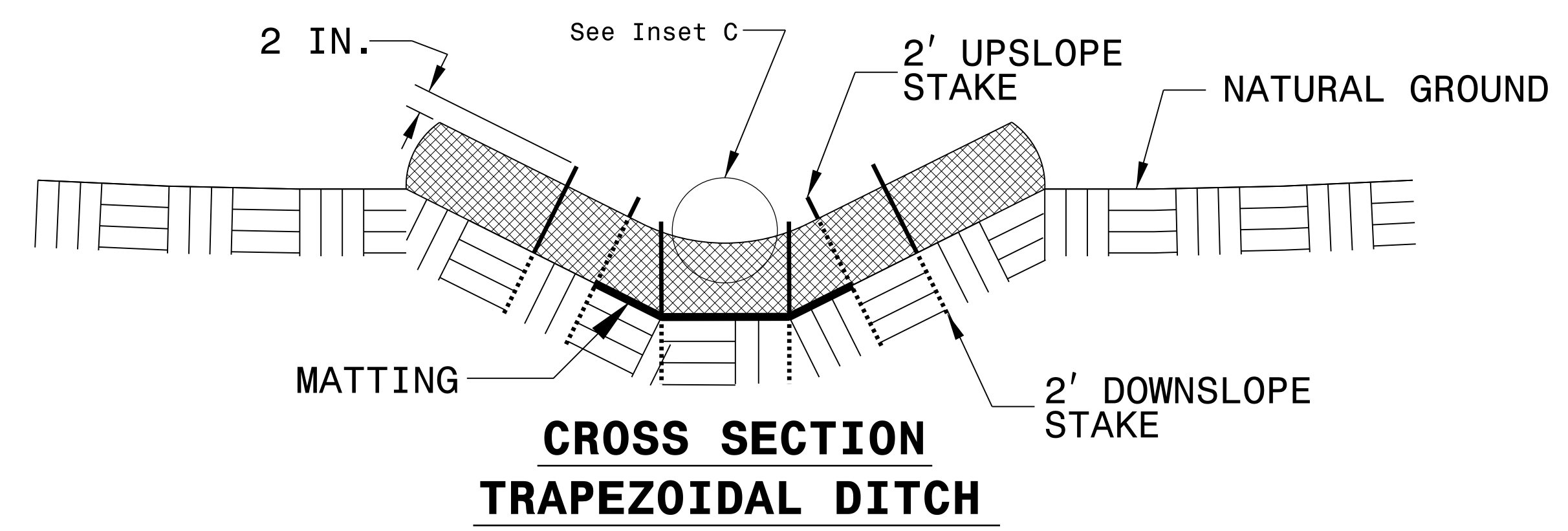
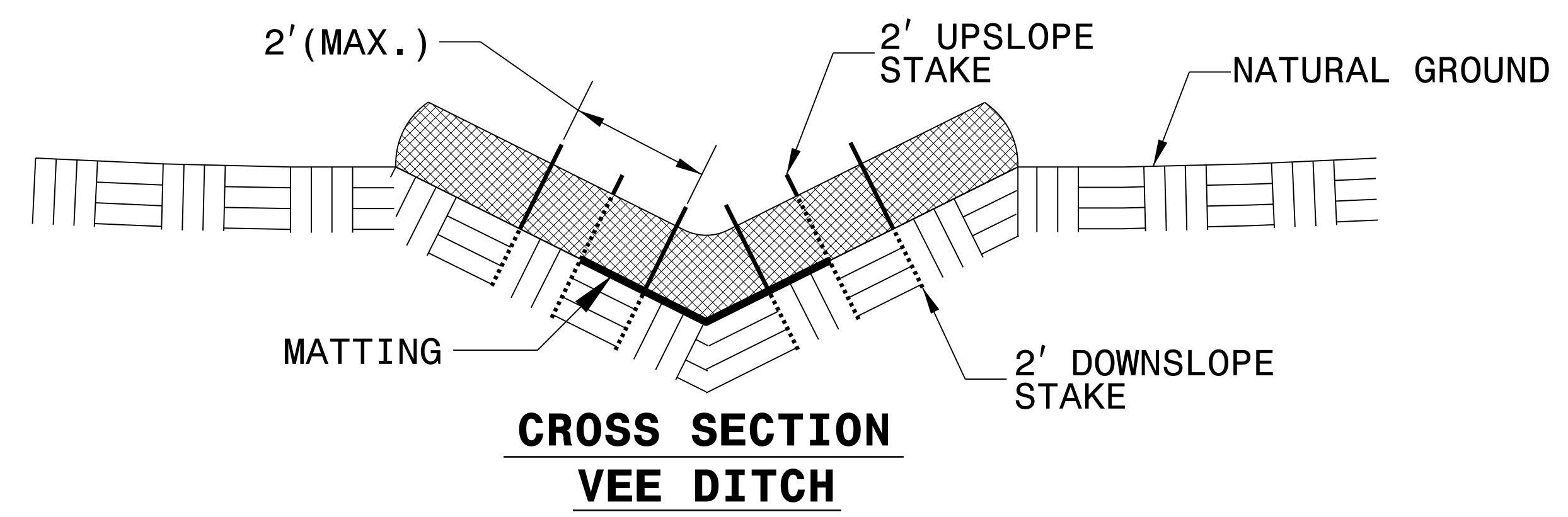
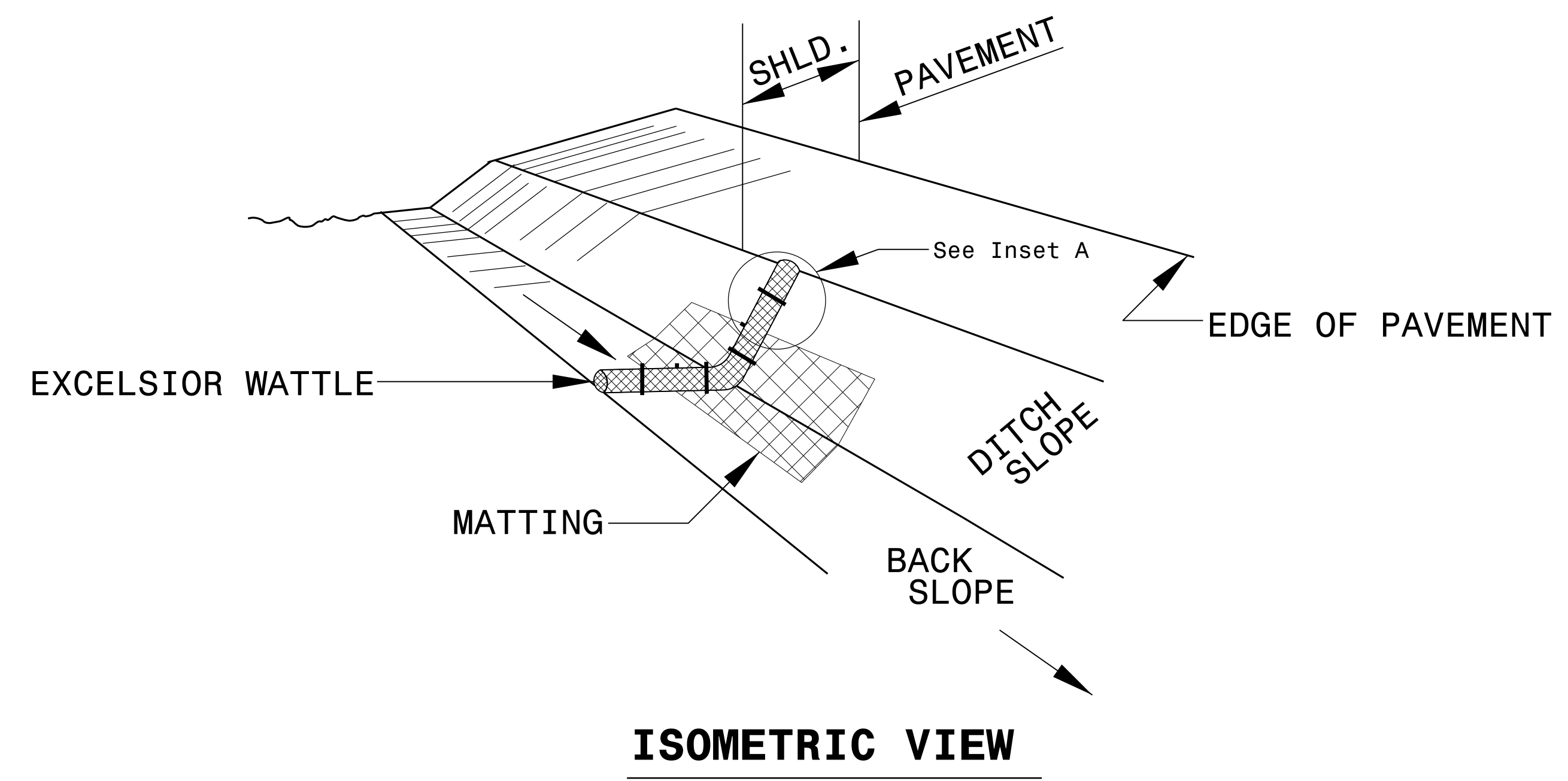
PROVIDE A STONE ENERGY DISSIPATOR PAD AT THE OUTLET OF THE PUMP DISCHARGE HOSE AND OUTLET OF THE RISER BARREL IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 876.02 FOR OUTLET W/O DITCH.



NOT TO SCALE

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR 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.

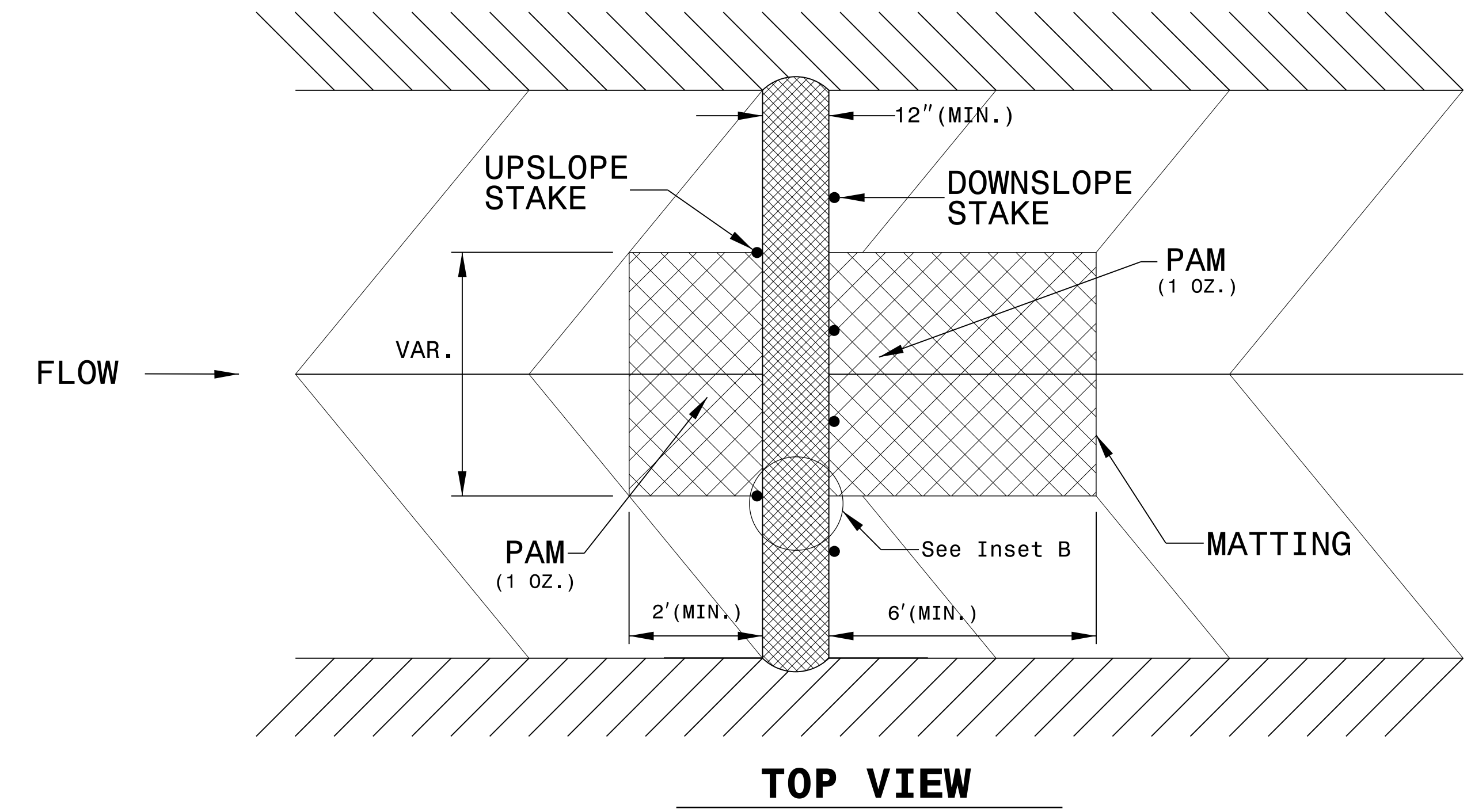
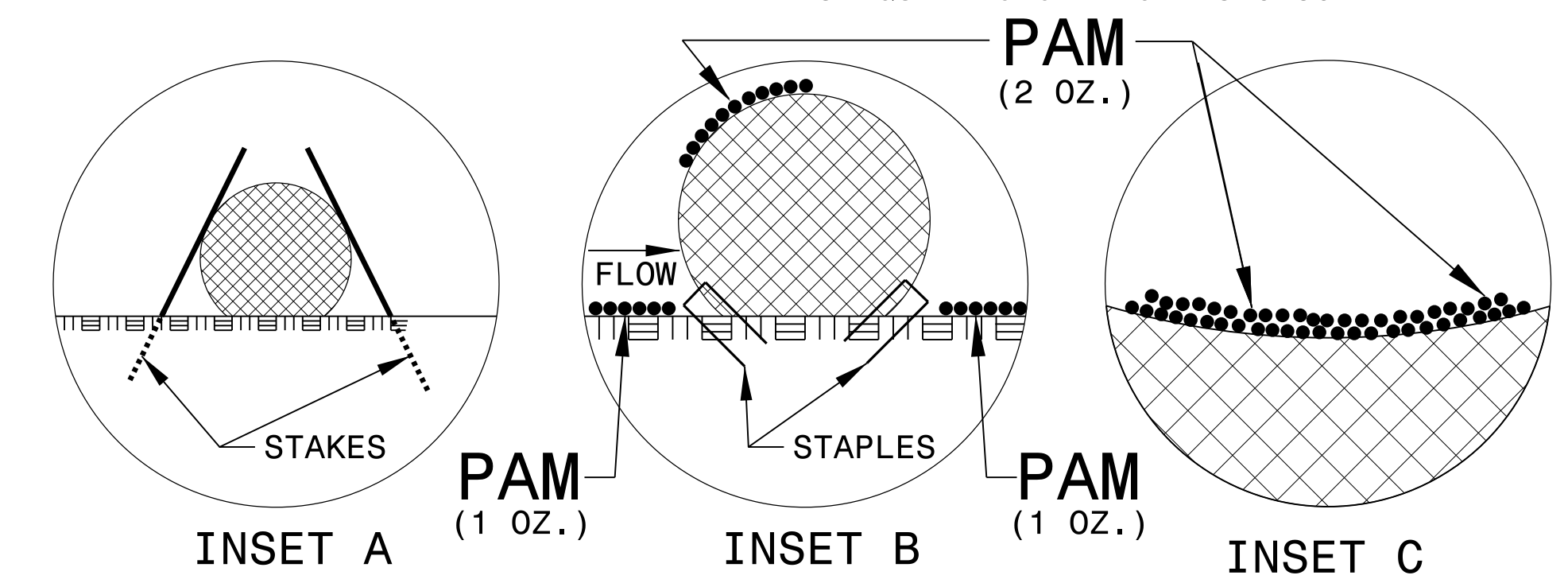
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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.

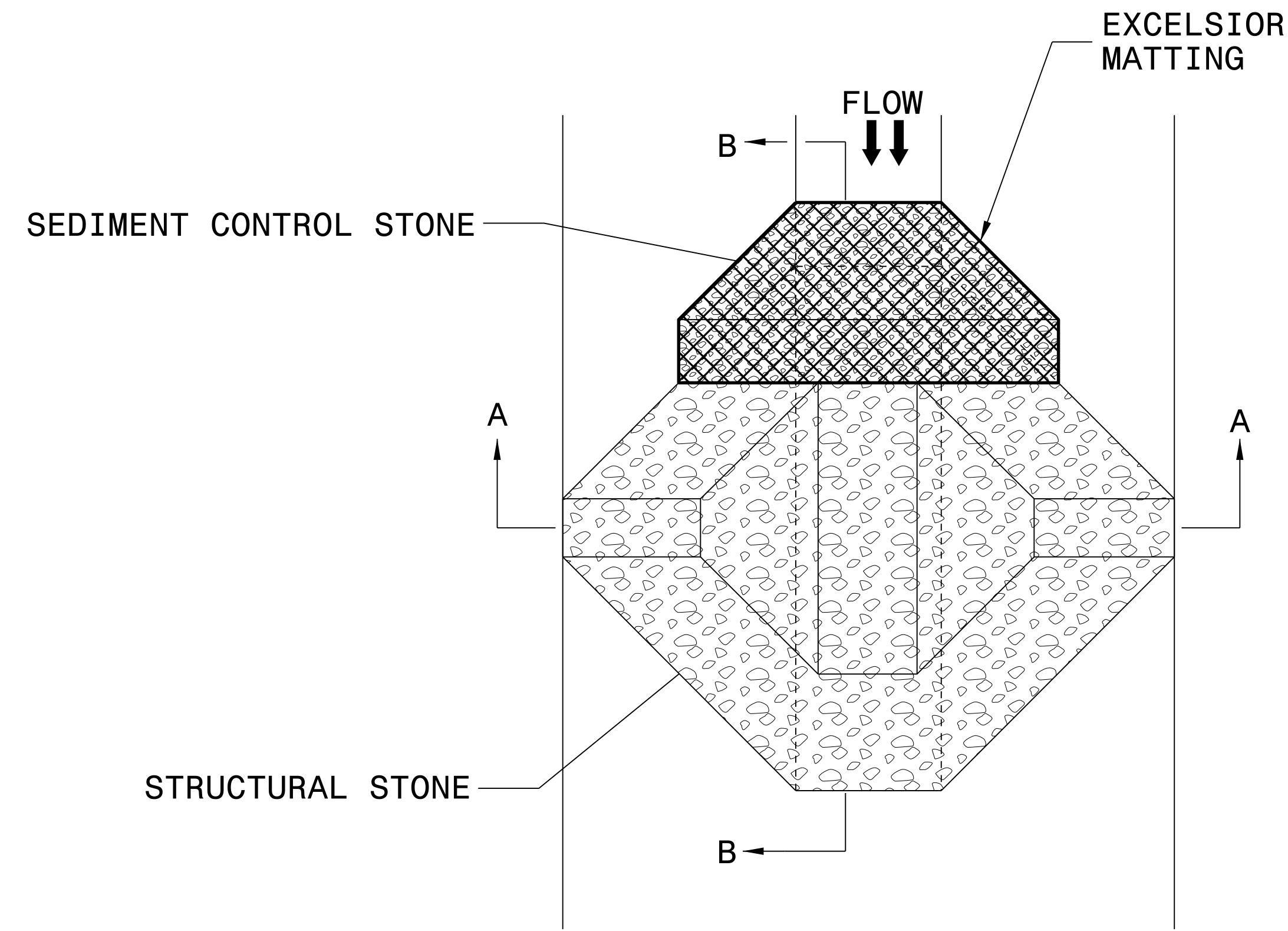
PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

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.



PROJECT REFERENCE NO. B-4490	SHEET NO. EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN

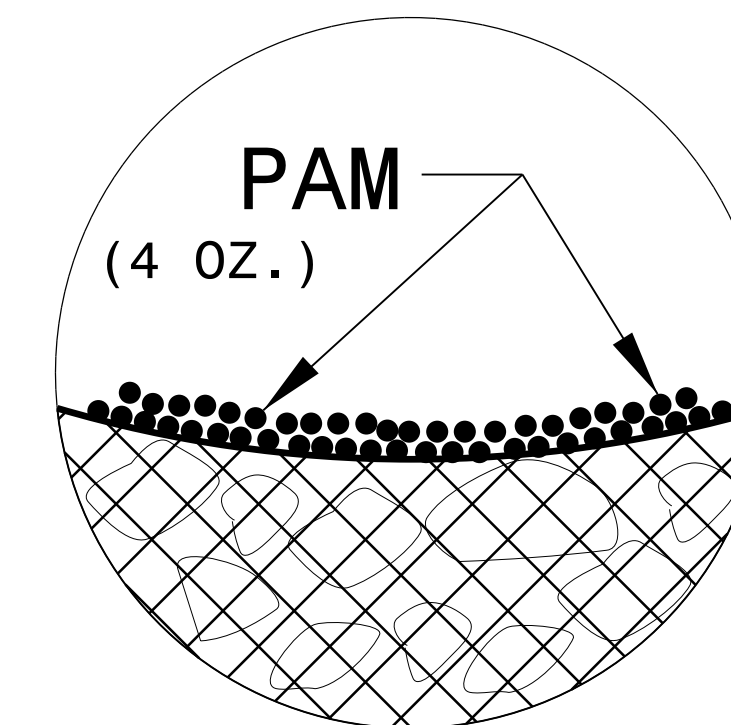
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

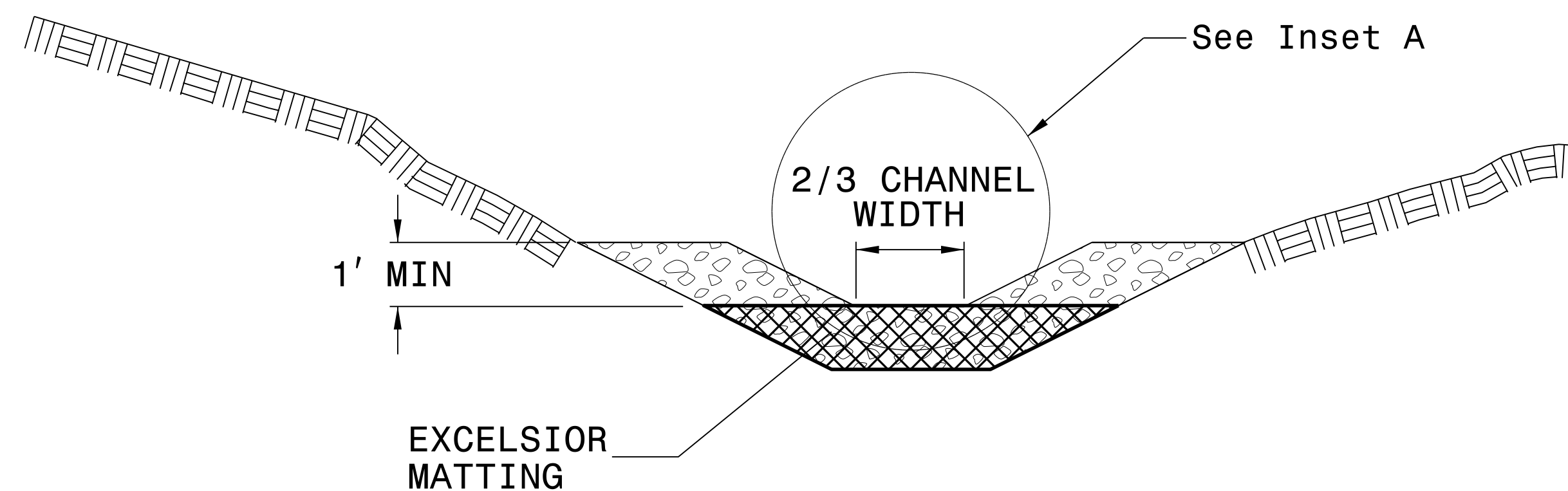
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

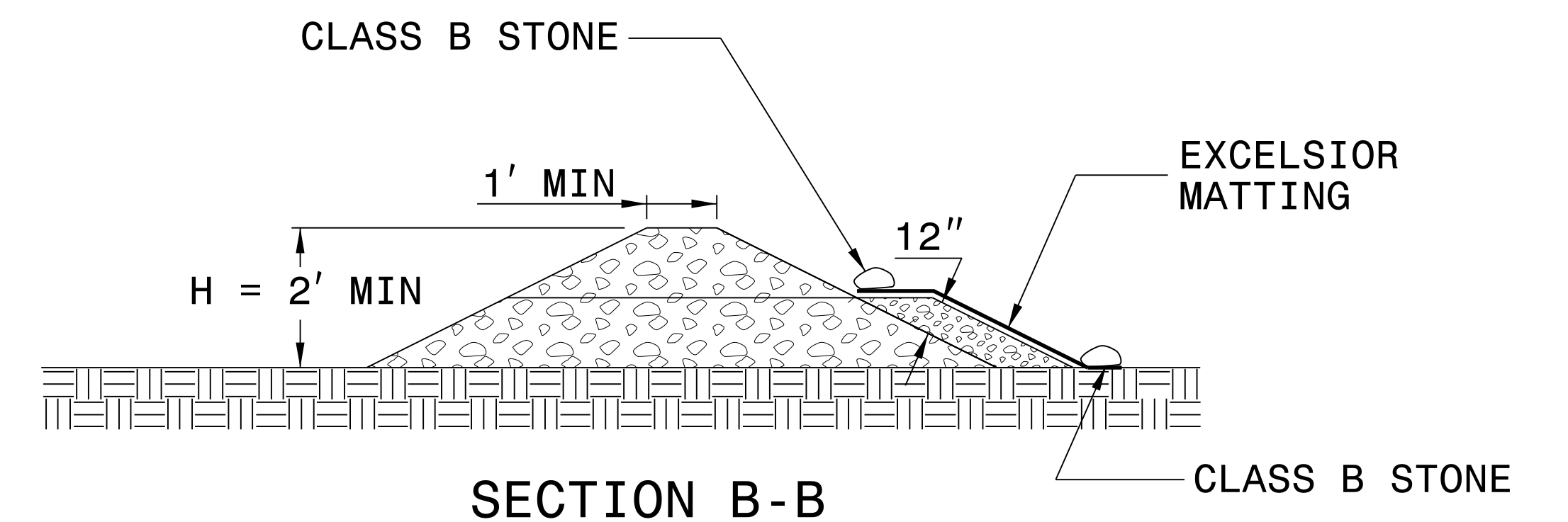
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A

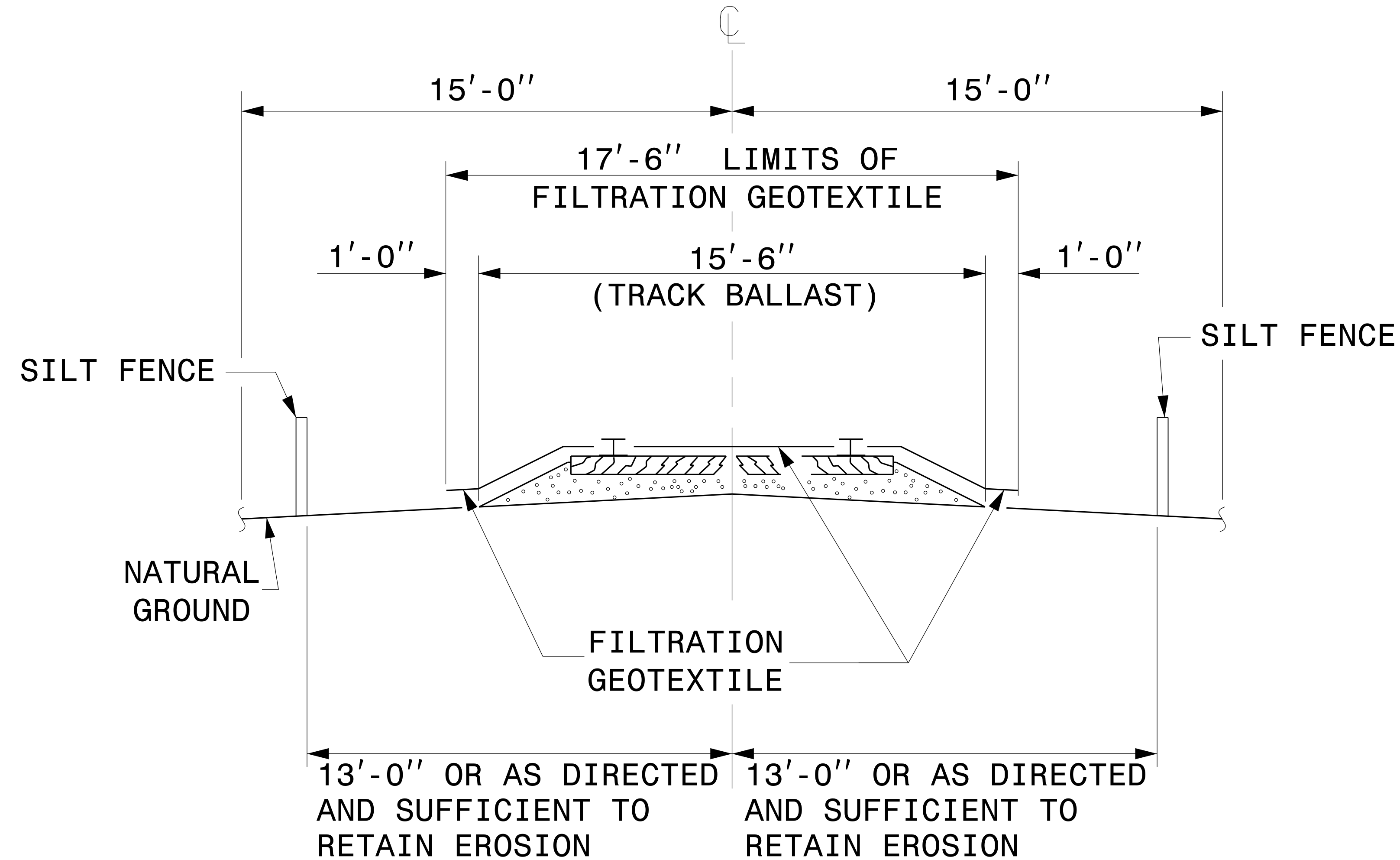


SECTION B-B

NOT TO SCALE

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

RAILROAD EROSION CONTROL DETAIL



NOTES

INSTALL RAILROAD EROSION CONTROL MEASURES PRIOR TO PERFORMING ANY WORK IN THE RAILROAD RIGHT-OF-WAY.

ADDITIONAL EROSION CONTROL MEASURES FOR PROTECTION OF RAILROAD DITCHES MAY BE REQUIRED AS DIRECTED.

NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR RAILROAD EROSION CONTROL MEASURES.

EXTEND LIMITS OF SILT FENCE AND FILTRATION GEOTEXTILE PARALLEL TO RAILROAD A MINIMUM OF 10'-0" OUTSIDE EDGE OF SUPERSTRUCTURE OR TOE OF SLOPE ON CONSTRUCTION. A GREATER LENGTH OF SILT FENCE OR FILTRATION GEOTEXTILE MAY BE REQUIRED AS DIRECTED.

NAIL FILTRATION GEOTEXTILE TO TIMBER RAIL TIES WITH PRIME SOURCE "GRIP CAP" OR EQUIVALENT. SECURE FILTRATION GEOTEXTILE ON SHOULDER AS DIRECTED BY THE RAILROAD AND NCDOT.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

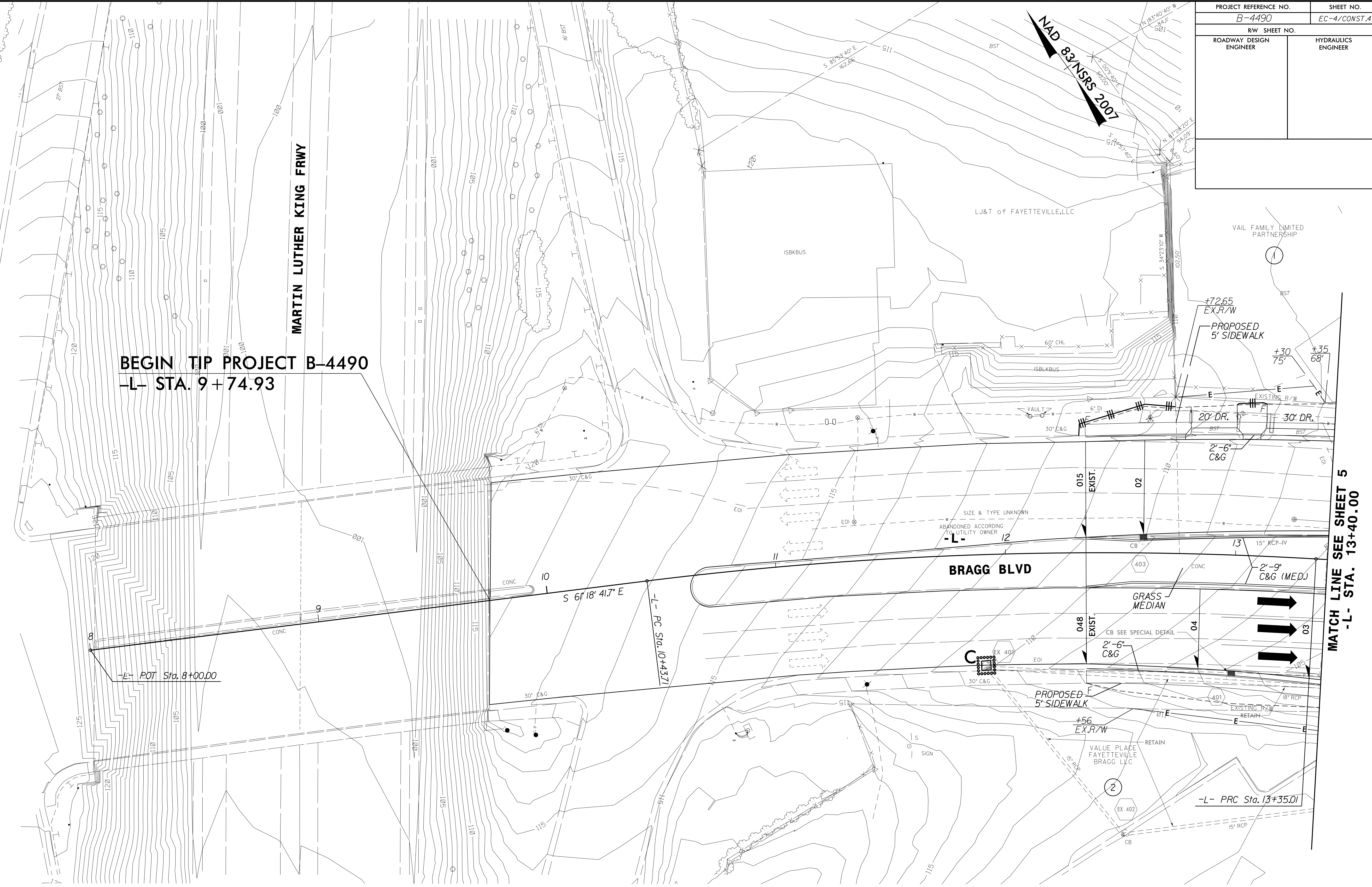
PROJECT REFERENCE NO. <i>B-4490</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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.

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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21-AUG-2015 15:31
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REVISIONS



BEGIN TIP PROJECT B-4490
-L- STA. 9+74.93

-L- POT Sta. 8+00.00

-L- PC Sta. 10+43.71

-L- PRC Sta. 13+35.01

MATCH LINE SEE SHEET 5
-L- STA. 13+40.00

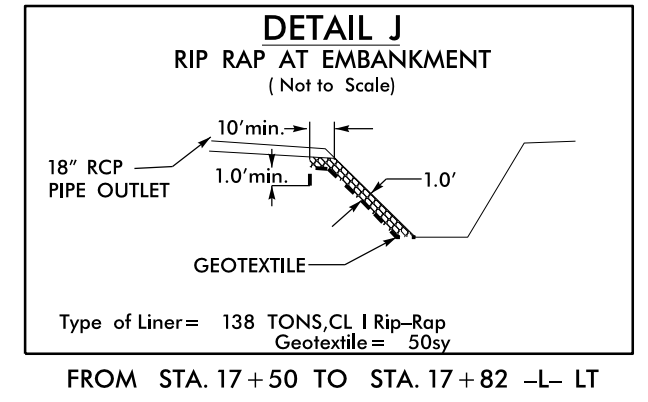
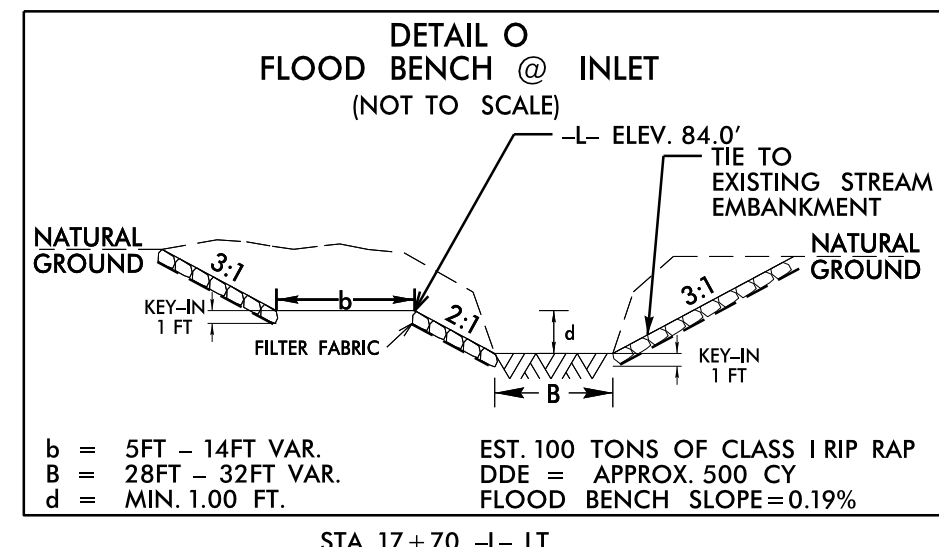
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

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

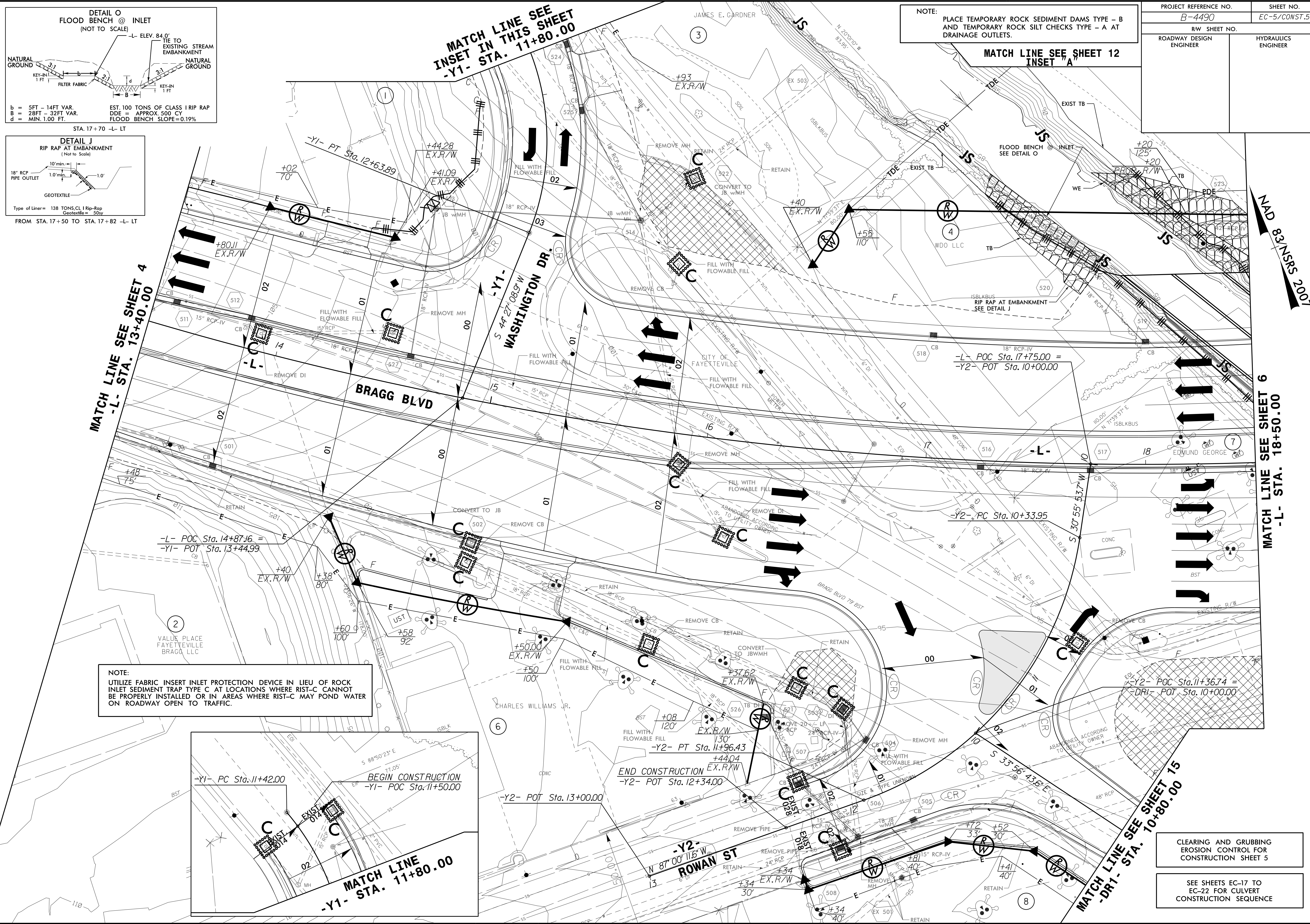
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

PROJECT REFERENCE NO.	SHEET NO.
B-4490	EC-5/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

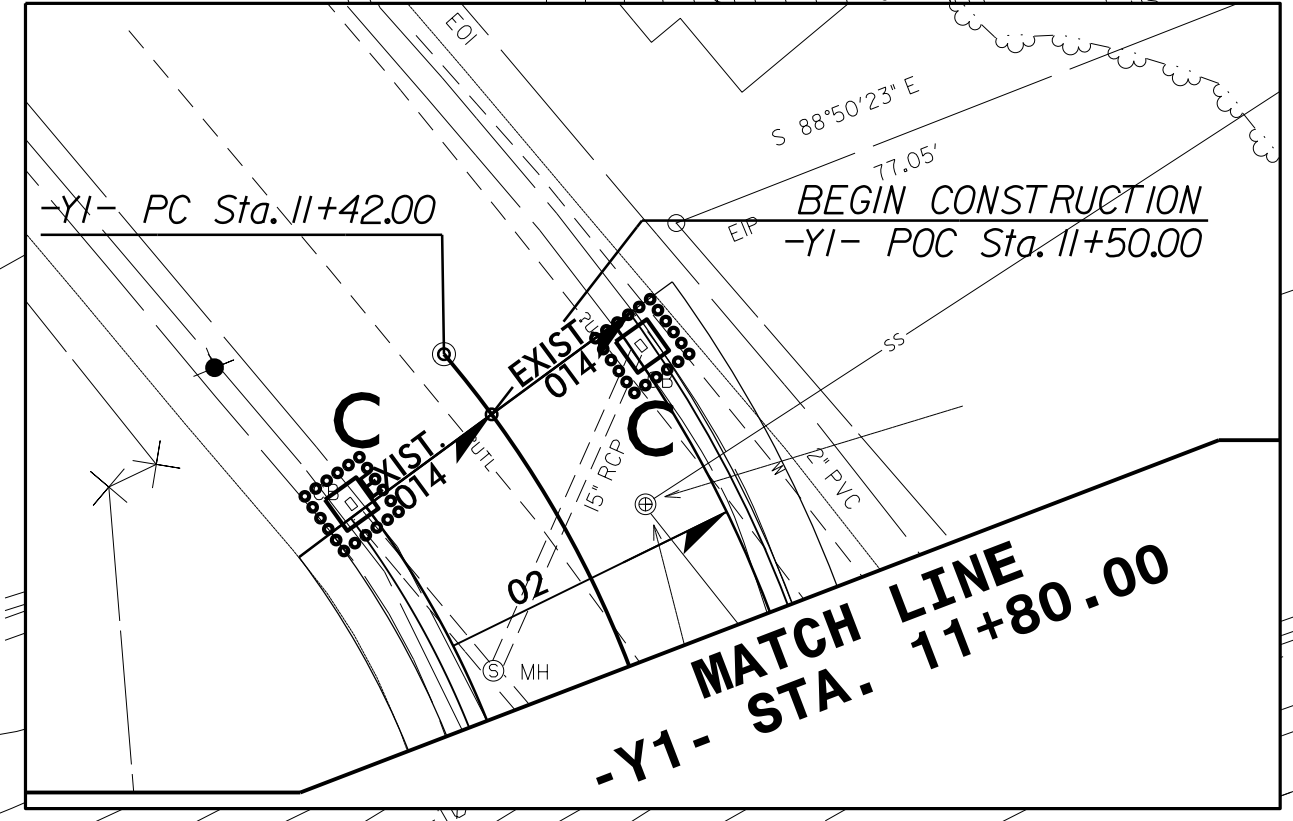
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



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NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

SEE SHEETS EC-17 TO
EC-22 FOR CULVERT
CONSTRUCTION SEQUENCE

NAD 83/NSRS 2007

MATCH LINE SEE SHEET 6
-L- STA. 18+50.00

MATCH LINE SEE SHEET 4
-L- STA. 13+40.00

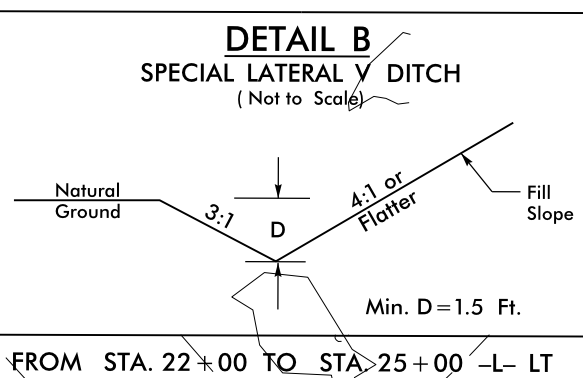
MATCH LINE SEE
INSET IN THIS SHEET
-Y1- STA. 11+80.00

MATCH LINE SEE SHEET 12
INSET "A"

MATCH LINE SEE SHEET 15
-DRI- STA. 10+80.00

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-6/CONST.6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

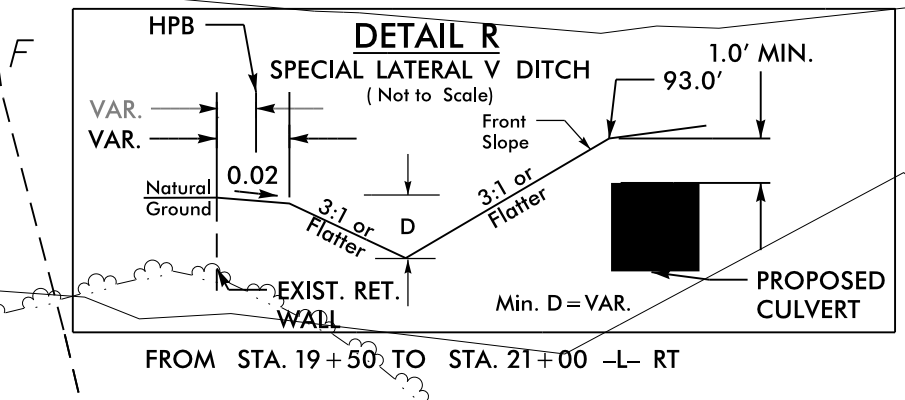
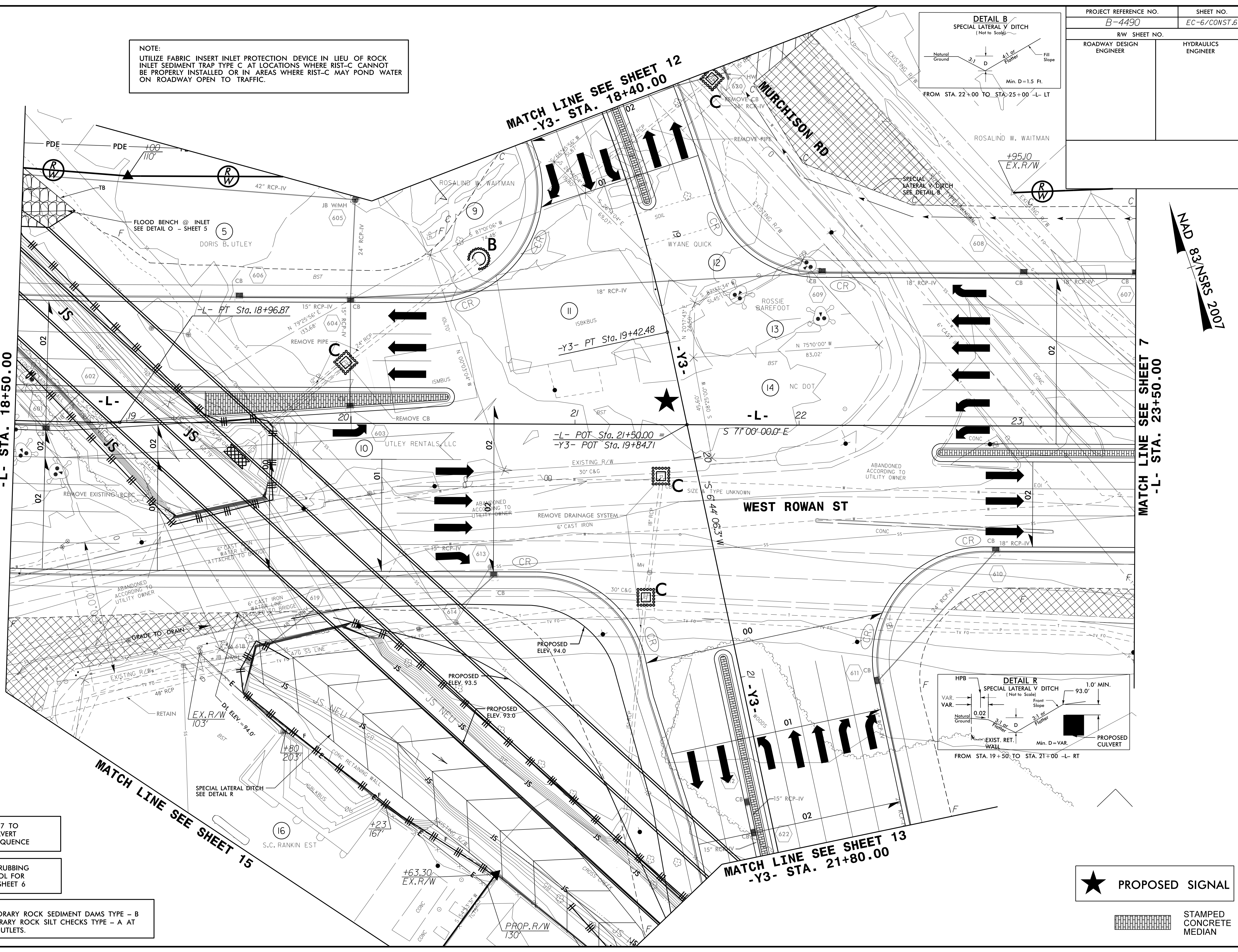


FROM STA. 22+00 TO STA. 25+00 -L- LT

NAD 83/NSRS 2007

MATCH LINE SEE SHEET 5
-L- STA. 18+50.00

MATCH LINE SEE SHEET 7
-L- STA. 23+50.00



FROM STA. 19+50 TO STA. 21+00 -L- RT

SEE SHEETS EC-17 TO EC-22 FOR CULVERT CONSTRUCTION SEQUENCE

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6

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

★ PROPOSED SIGNAL

STAMPED CONCRETE MEDIAN

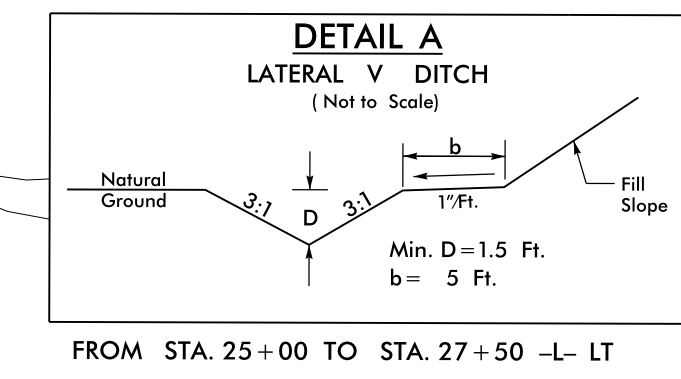
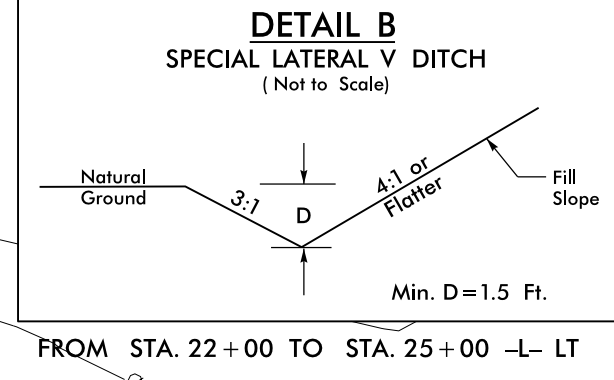
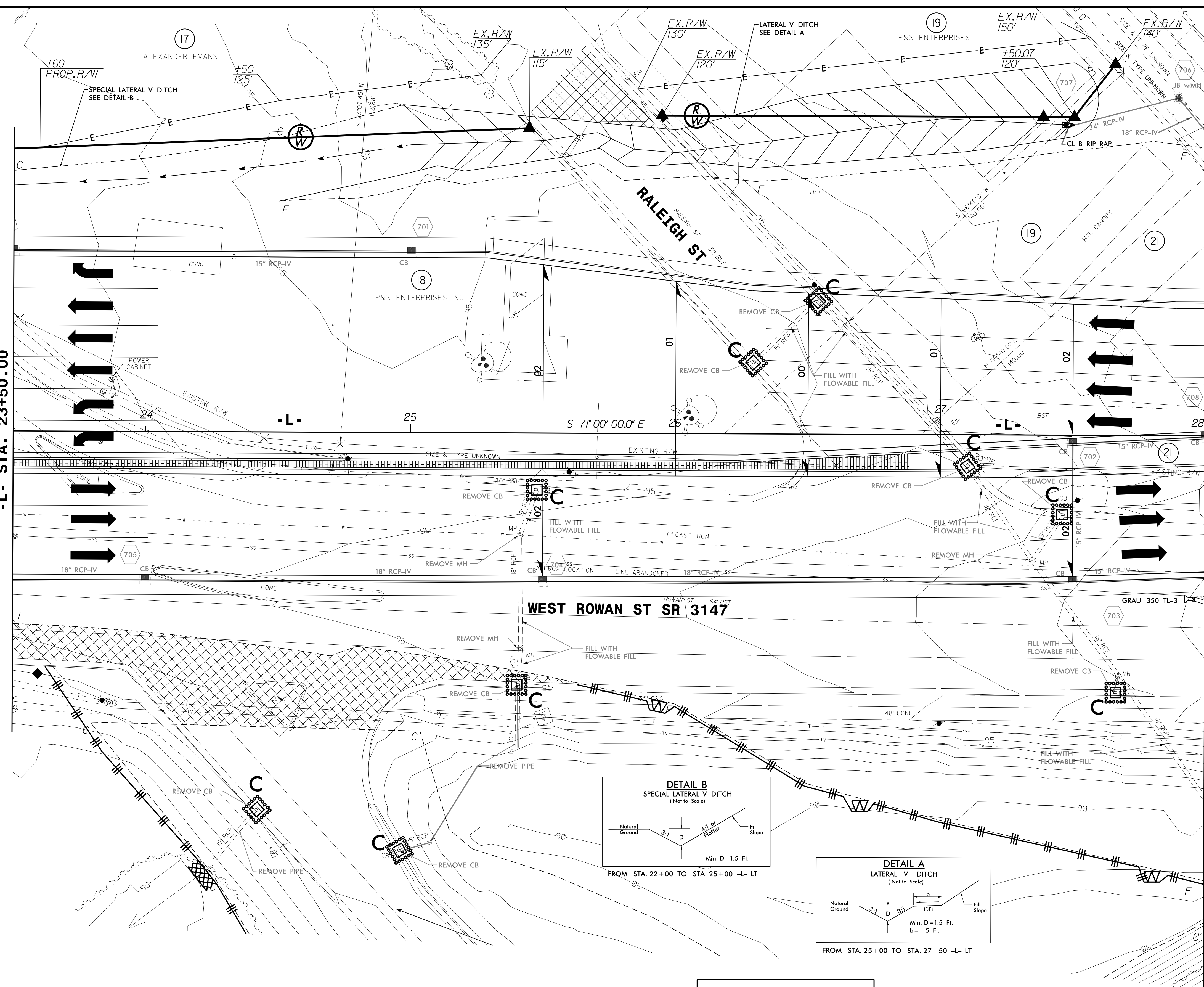
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REVISIONS: 1
REV: 15/11/16

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83 N/SRS 2007

MATCH LINE SEE SHEET 6
-L- STA. 23+50.00

MATCH LINE SEE SHEET 8
-L- STA. 28+00.00



NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7

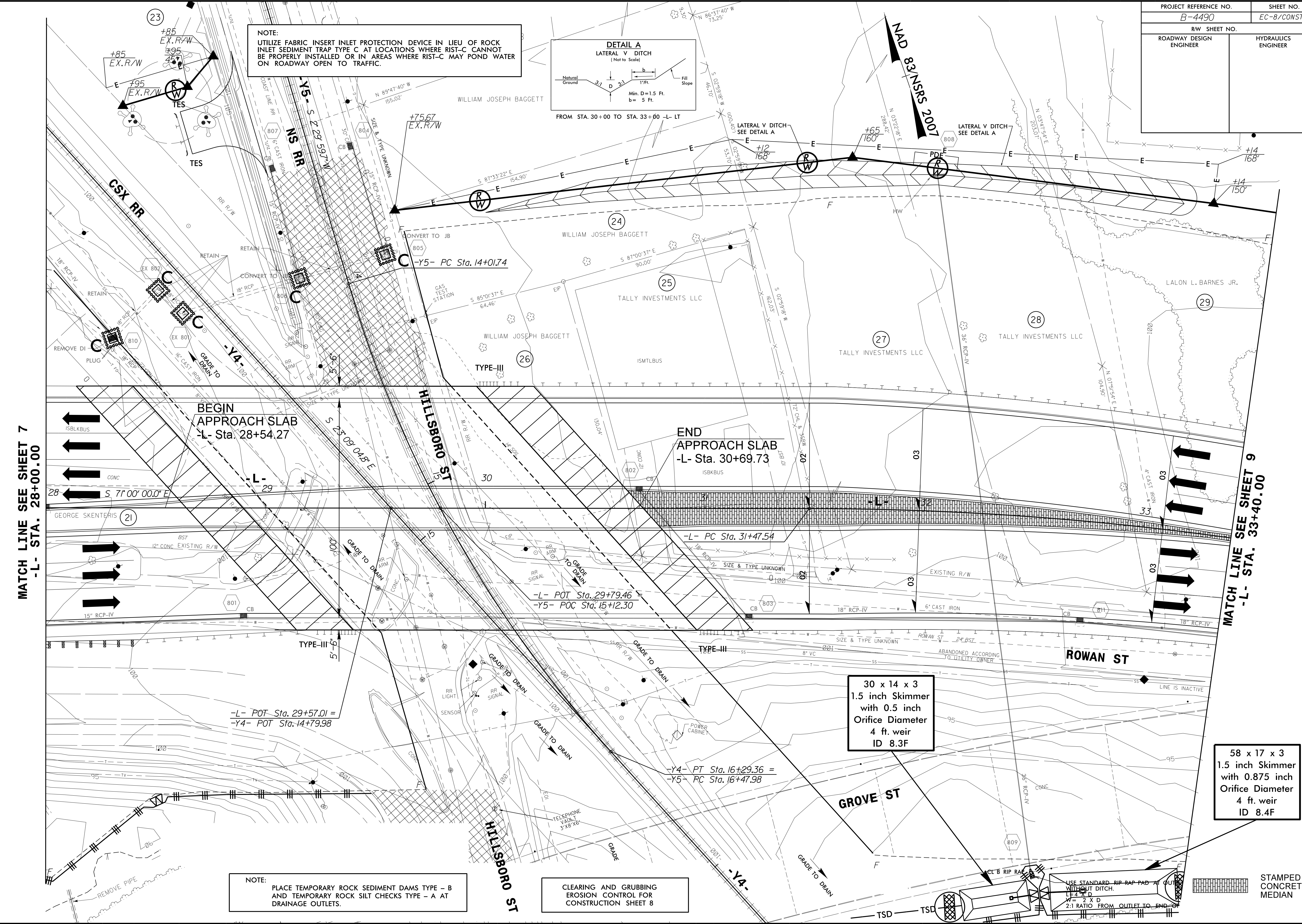
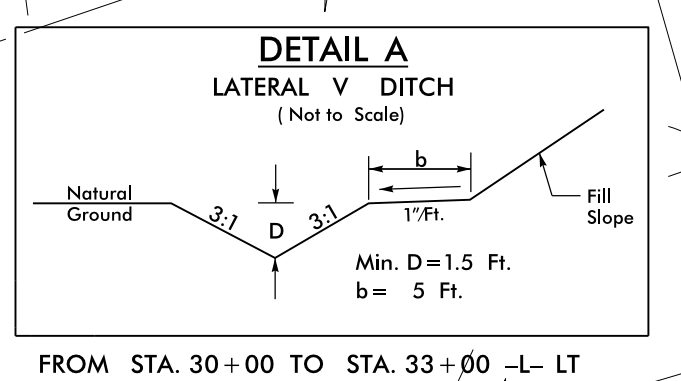
NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.



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REVISIONS: 1

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-B/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.



MATCH LINE SEE SHEET 7
-L- STA. 28+00.00

MATCH LINE SEE SHEET 9
-L- STA. 33+40.00

BEGIN
APPROACH SLAB
-L- Sta. 28+54.27

END
APPROACH SLAB
-L- Sta. 30+69.73

30 x 14 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 8.3F

58 x 17 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 8.4F

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 8

USE STANDARD RIP RAP PAD AT OUTLET WITHOUT DITCH.
LE4 2' D
W = 2 X D
2:1 RATIO FROM OUTLET TO END OF

STAMPED
CONCRETE
MEDIAN

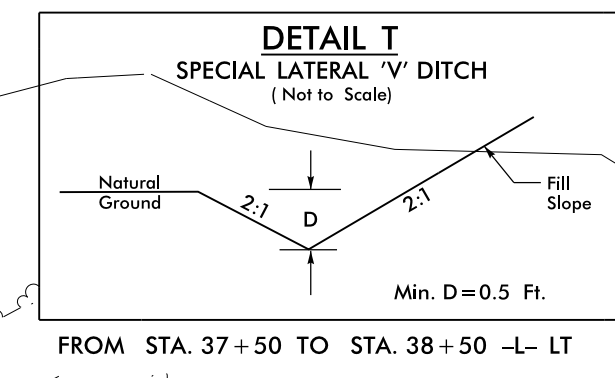
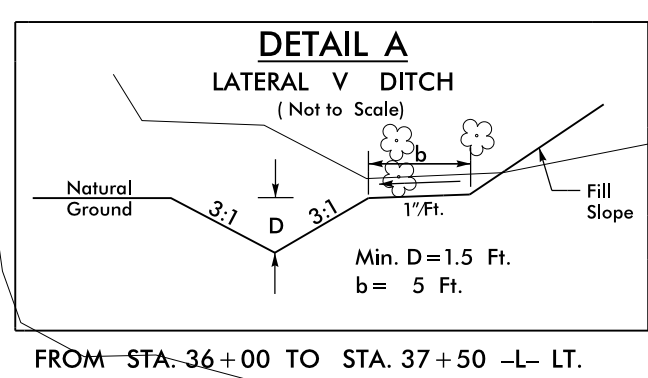
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PROJECT REFERENCE NO. B-4490	SHEET NO. EC-9/CONST.9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

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

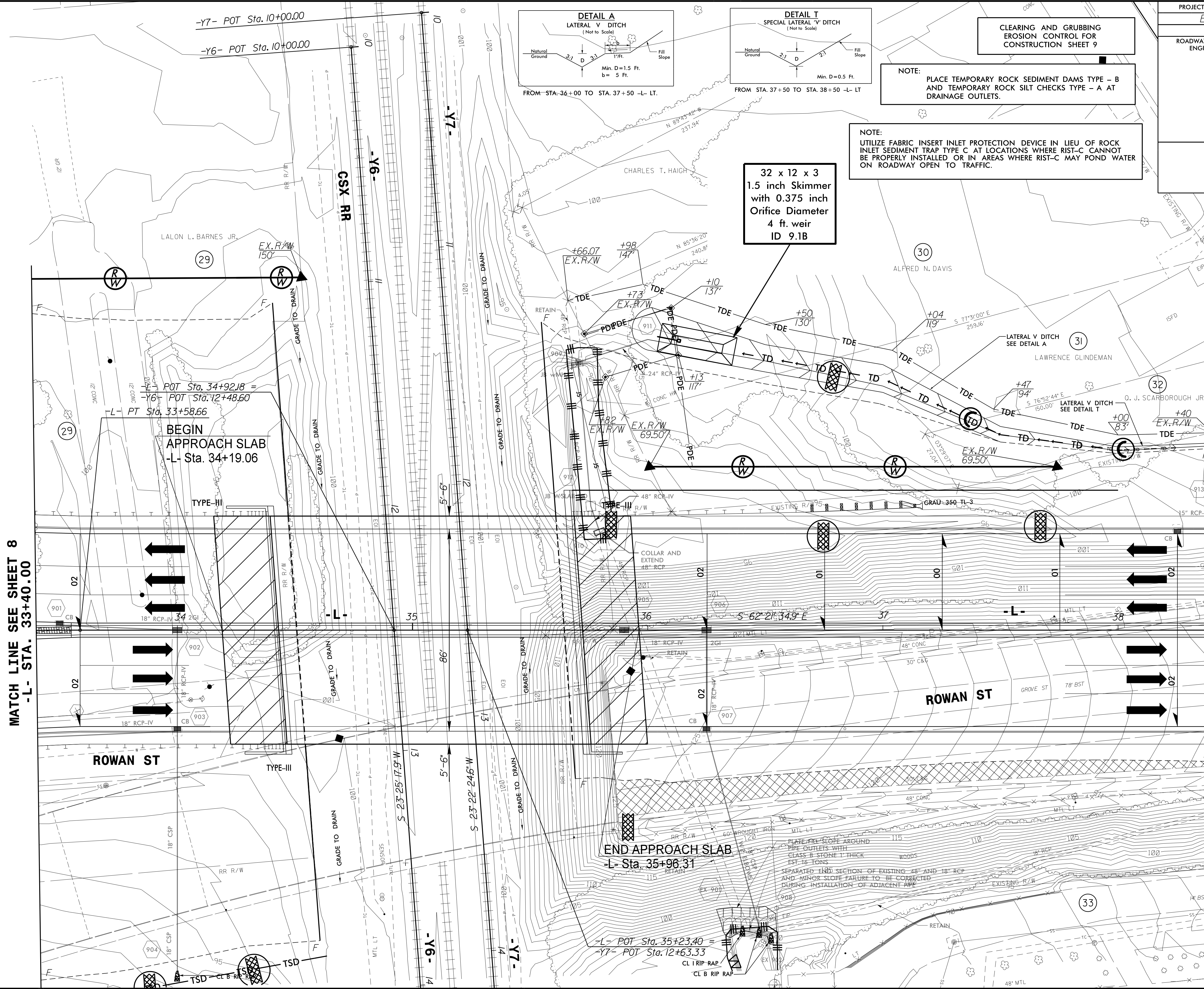
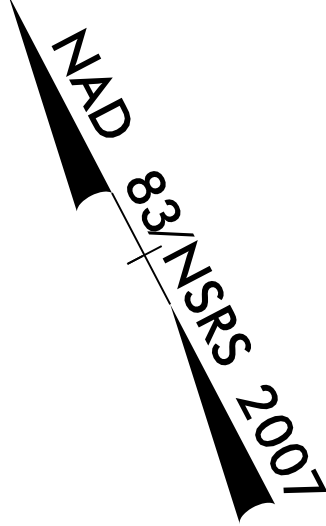
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK
INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RST-C CANNOT
BE PROPERLY INSTALLED OR IN AREAS WHERE RST-C MAY POND WATER
ON ROADWAY OPEN TO TRAFFIC.



32 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 9.1B

MATCH LINE SEE SHEET 8
-L- STA. 33+40.00

MATCH LINE SEE SHEET 10
-L- STA. 38+40.00



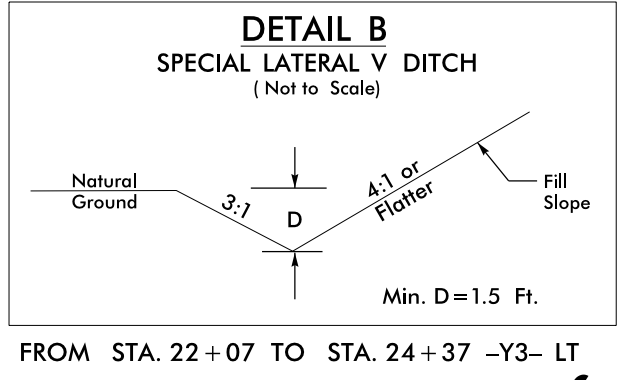
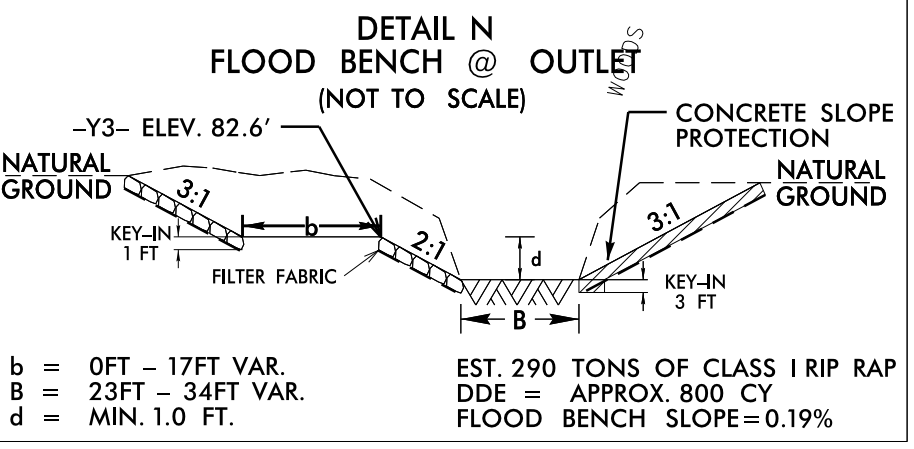
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 REVISIONS: 1
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PROJECT REFERENCE NO.	SHEET NO.
B-4490	EC-13/CONST.13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

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

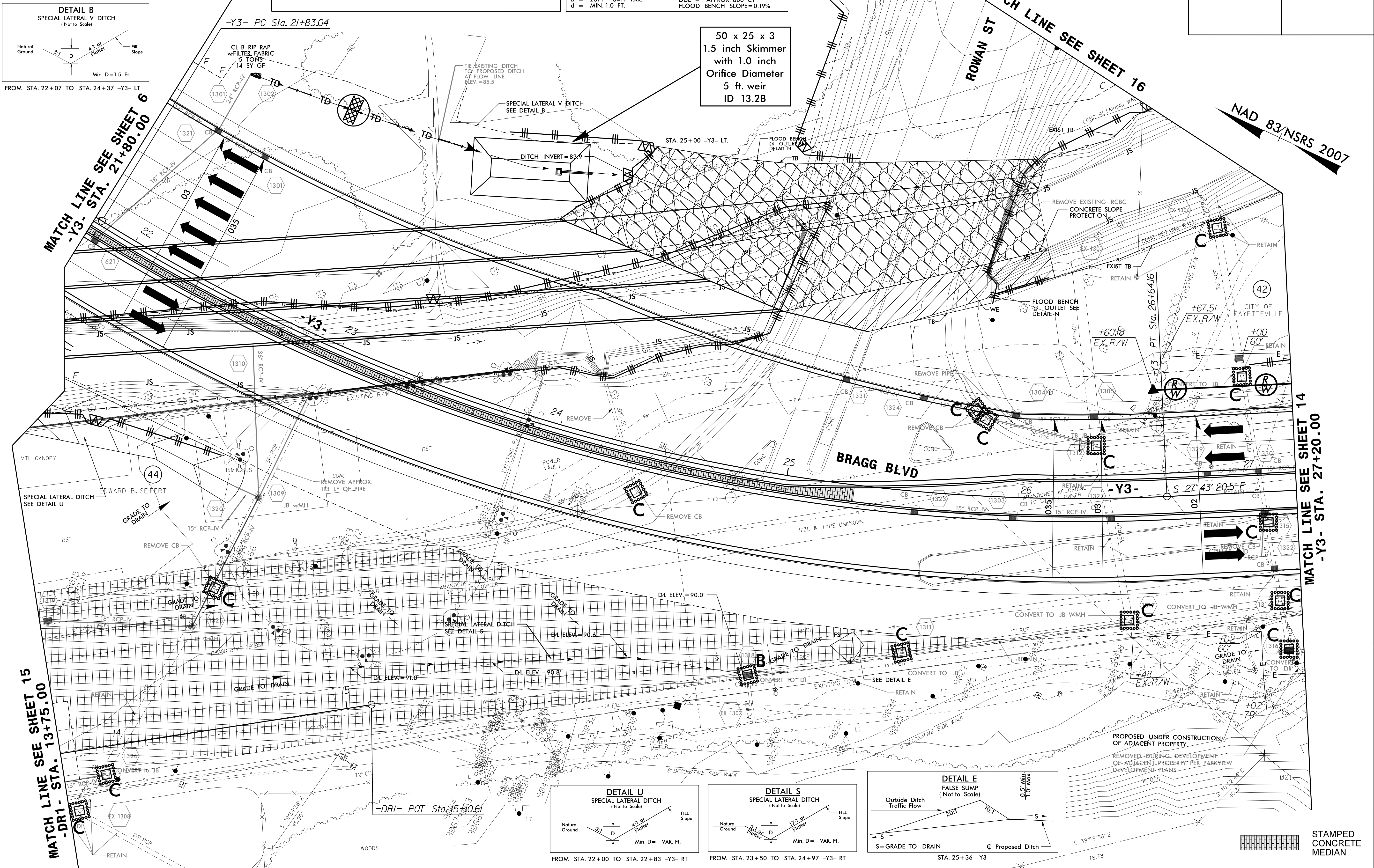
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK
INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT
BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER
ON ROADWAY OPEN TO TRAFFIC.



50 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 13.2B

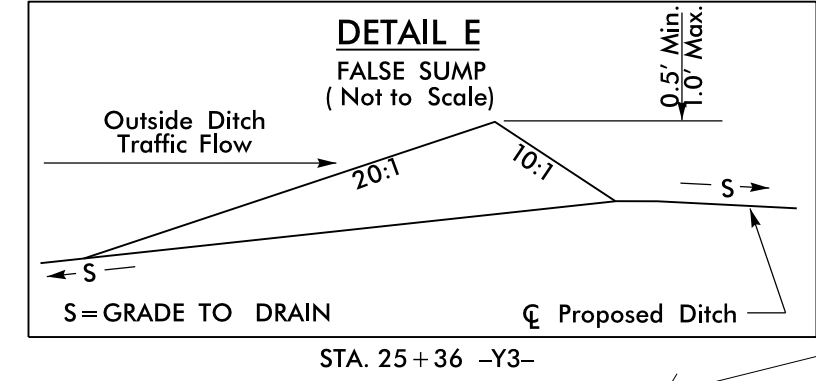
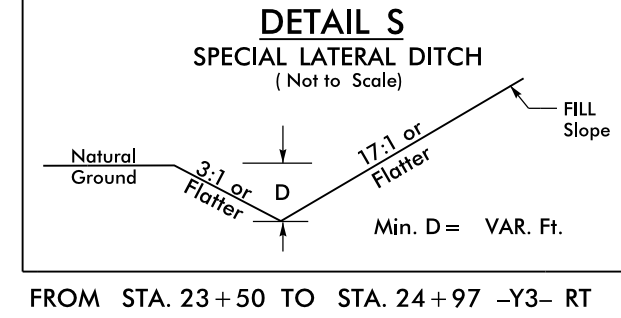
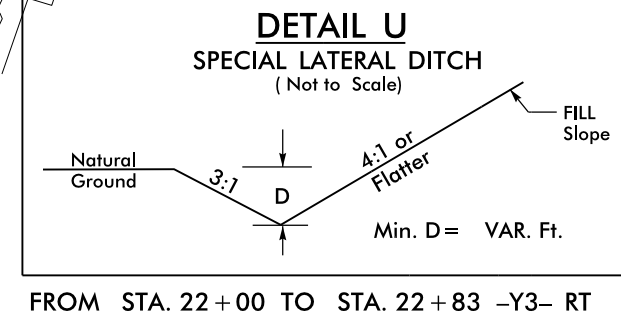
SEE SHEETS EC-17 TO
EC-22 FOR CULVERT
CONSTRUCTION SEQUENCE

8/17/99
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-DR1- STA. 13+75.00

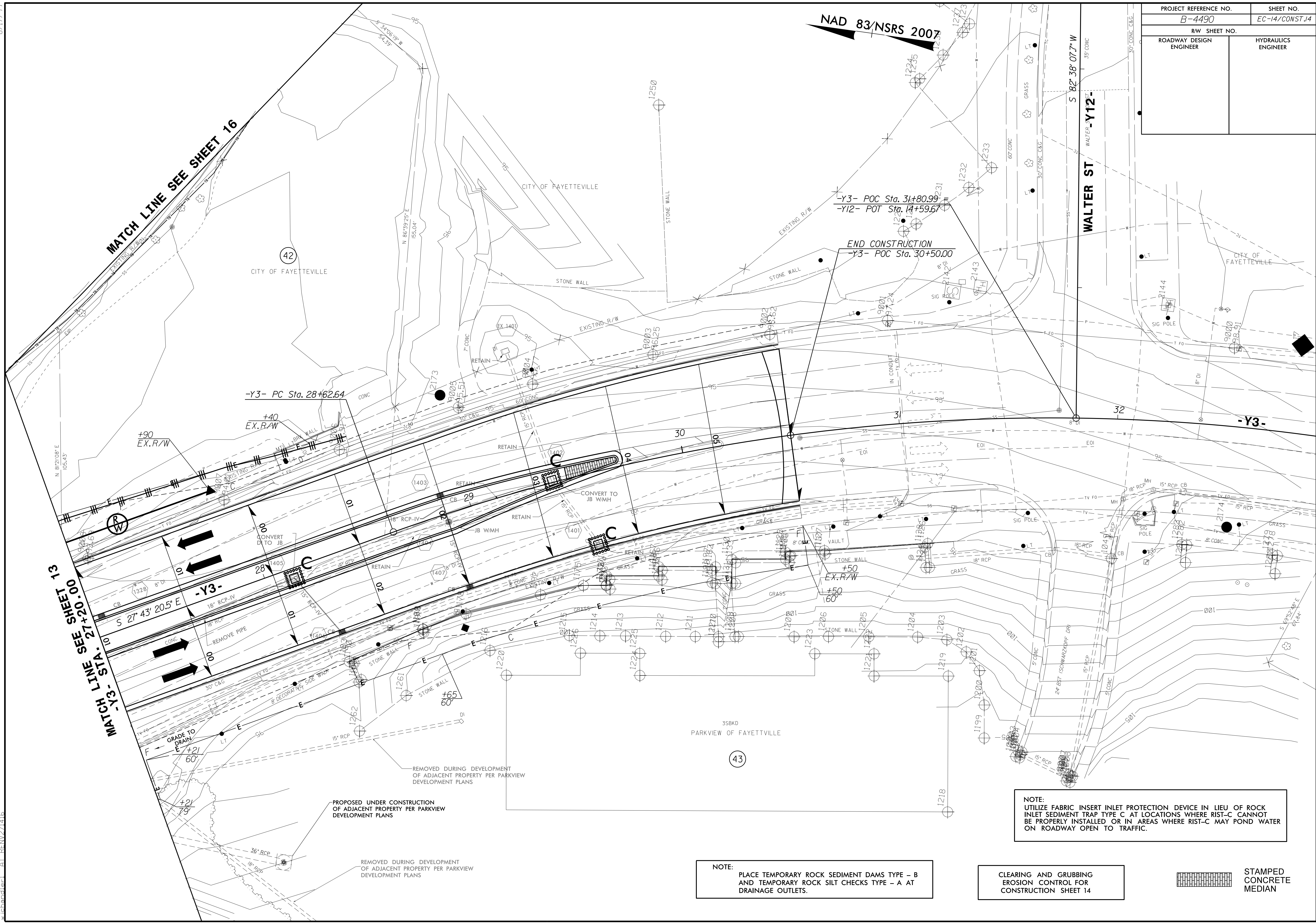
MATCH LINE SEE SHEET 14
-Y3- STA. 27+20.00



STAMPED
CONCRETE
MEDIAN

8.17.99
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BENNY

PROJECT REFERENCE NO.	SHEET NO.
B-4490	EC-14/CONST.14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 13
STA. 27+20.00

NAD 83/NSRS 2007

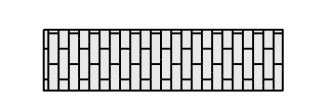
WALTER ST
S 82° 38' 07.7\"/>

-Y3- POC Sta. 31+80.99
-Y12- POT Sta. 14+59.67
END CONSTRUCTION
-Y3- POC Sta. 30+50.00

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

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 14



STAMPED
CONCRETE
MEDIAN

PROPOSED UNDER CONSTRUCTION
OF ADJACENT PROPERTY PER PARKVIEW
DEVELOPMENT PLANS

REMOVED DURING DEVELOPMENT
OF ADJACENT PROPERTY PER PARKVIEW
DEVELOPMENT PLANS

REMOVED DURING DEVELOPMENT
OF ADJACENT PROPERTY PER PARKVIEW
DEVELOPMENT PLANS

35BRD
PARKVIEW OF FAYETTEVILLE
43

-Y3- PC Sta. 28+62.64

+90
EX. R/W

-Y3-

CONC
REMOVE PIPE

GRADE TO
DRAIN
E +21
60

+65
60

STONE WALL
+50
EX. R/W
60

MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 13
STA. 27+20.00

NAD 83/NSRS 2007

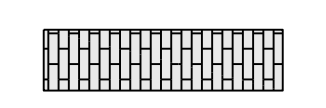
WALTER ST
S 82° 38' 07.7\"/>

-Y3- POC Sta. 31+80.99
-Y12- POT Sta. 14+59.67
END CONSTRUCTION
-Y3- POC Sta. 30+50.00

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

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 14



STAMPED
CONCRETE
MEDIAN

PROPOSED UNDER CONSTRUCTION
OF ADJACENT PROPERTY PER PARKVIEW
DEVELOPMENT PLANS

REMOVED DURING DEVELOPMENT
OF ADJACENT PROPERTY PER PARKVIEW
DEVELOPMENT PLANS

REMOVED DURING DEVELOPMENT
OF ADJACENT PROPERTY PER PARKVIEW
DEVELOPMENT PLANS

35BRD
PARKVIEW OF FAYETTEVILLE
43

-Y3- PC Sta. 28+62.64

+90
EX. R/W

-Y3-

CONC
REMOVE PIPE

GRADE TO
DRAIN
E +21
60

+65
60

STONE WALL
+50
EX. R/W
60

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-16/CONST.16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

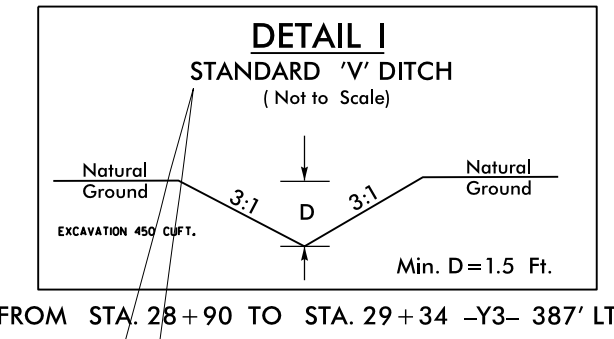
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

MATCH LINE SEE SHEET 13

NAD 83 NSRS 2007

ROWAN ST

HILLSBORO ST



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 16

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

MATCH LINE SEE SHEET 14

8/17/99

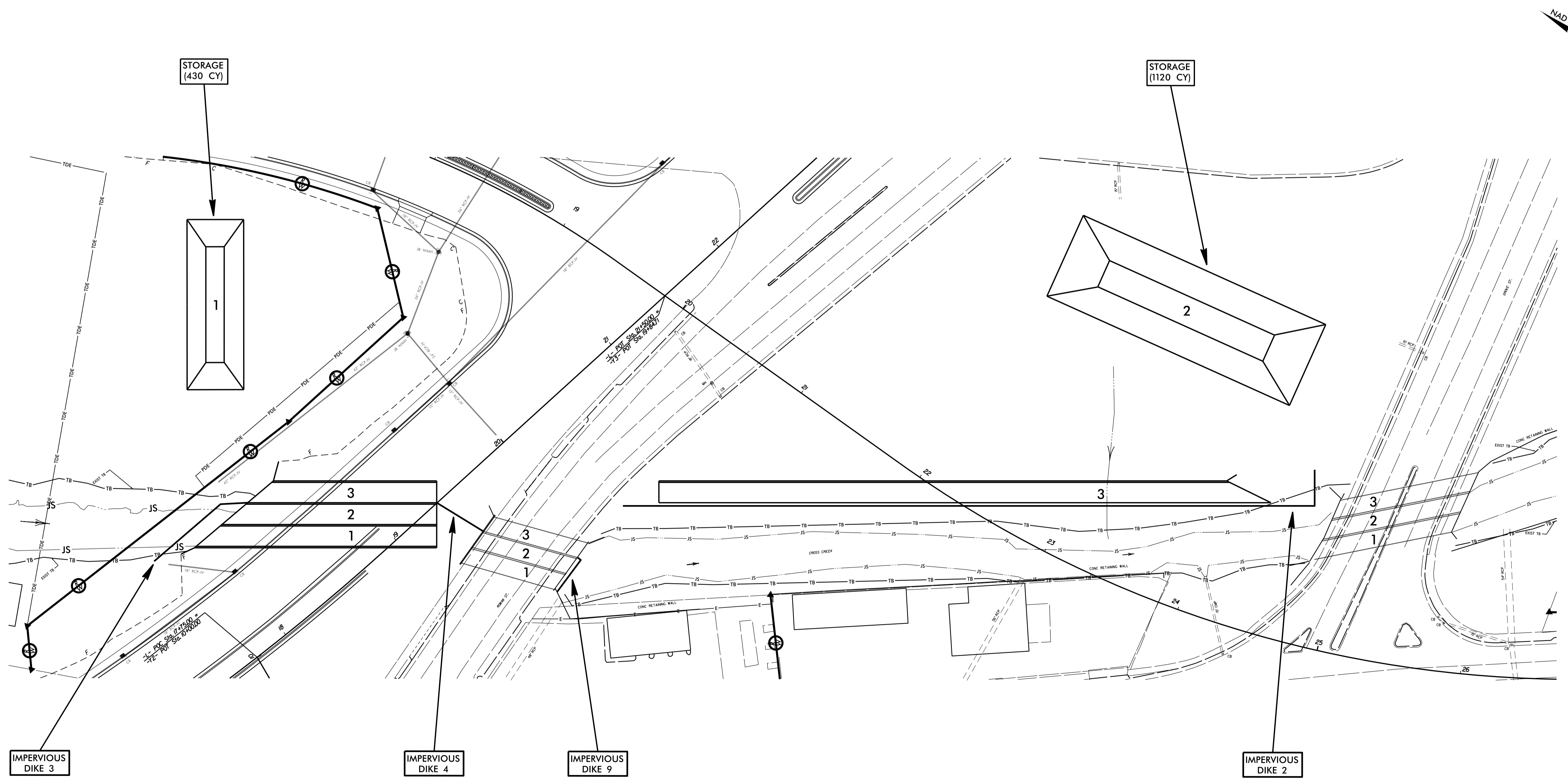
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PROJECT REFERENCE NO. B-4490	SHEET NO. EC-18/CONST. 5, 6, & 13
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

CULVERT CONSTRUCTION SEQUENCE STA. 19 + 26.42 -L- (SHEET 2 OF 6)

PHASE II

4. REMOVE IMPERVIOUS DIKE 1 AND CONSTRUCT IMPERVIOUS DIKES 3 AND 4, DIVERTING FLOW THROUGH PROPOSED BARREL 3 NORTH OF ROWAN ST. AND BARREL 3 OF EXISTING CULVERT UNDER ROWAN ST.
5. CONSTRUCT IMPERVIOUS DIKE 9 TO PREVENT BACK FLOW INTO BARRELS 1 AND 2 OF EXISTING CULVERT UNDER ROWAN ST.
6. CONSTRUCT BARRELS 1 AND 2 OF PROPOSED CULVERT UP TO APPROXIMATELY 40 FEET FROM EXISTING CULVERT UNDER ROWAN ST., INCLUDING INLET WING WALL AT BARREL 1 OF PROPOSED CULVERT.
7. CONSTRUCT PORTION OF PROPOSED ROADWAY OVER COMPLETED CULVERT SECTION AND SHIFT TRAFFIC.



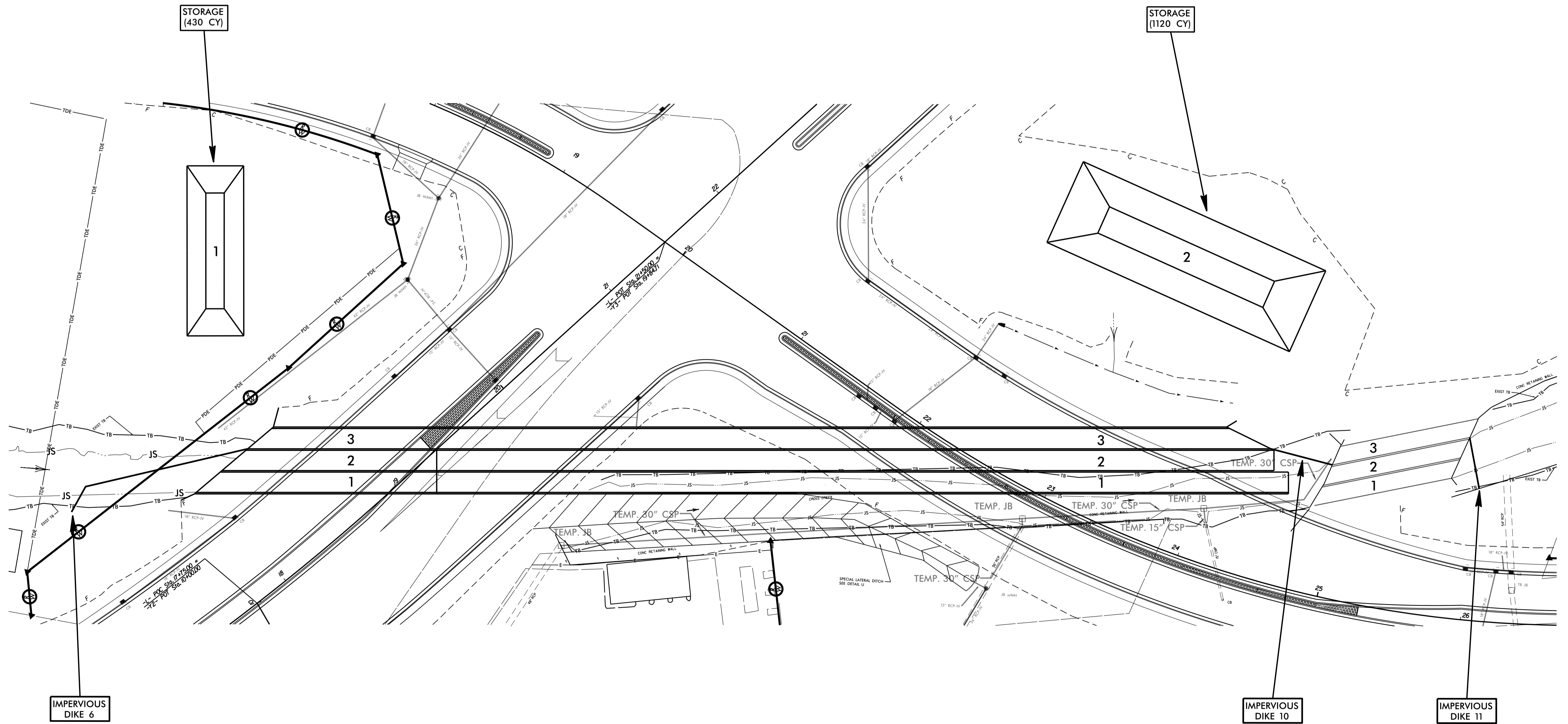
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R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 19 + 26.42 -L- (SHEET 4 OF 6)

PHASE IV

10. REMOVE IMPERVIOUS DIKES 2, 4, AND 5, AND CONSTRUCT IMPERVIOUS DIKES 6 AND 10, DIVERTING FLOW THROUGH COMPLETED BARREL 3 OF PROPOSED CULVERT AND BARREL 3 OF EXISTING CULVERT UNDER GROVE ST.
11. CONSTRUCT IMPERVIOUS DIKE 11 TO PREVENT BACK FLOW INTO BARRELS 1 AND 2 OF EXISTING CULVERT UNDER GROVE ST.
12. REMOVE EXISTING CULVERT UNDER ROWAN ST.
13. INSTALL TEMPORARY CSP SYSTEM (MIN. DIA. 30 INCHES) BETWEEN BARREL 1 OF THE PROPOSED CULVERT AND EXISTING CONCRETE RETAINING WALL.
14. CONSTRUCT BARRELS 1 AND 2 OF THE PROPOSED CULVERT UP TO APPROXIMATELY 40 FEET FROM EXISTING CULVERT UNDER GROVE ST.
15. COMPLETE CONSTRUCTION OF -L- ALIGNMENT AND CONSTRUCT -Y3- ALIGNMENT, AND SHIFT TRAFFIC.

NAD 83/NSRS 2007

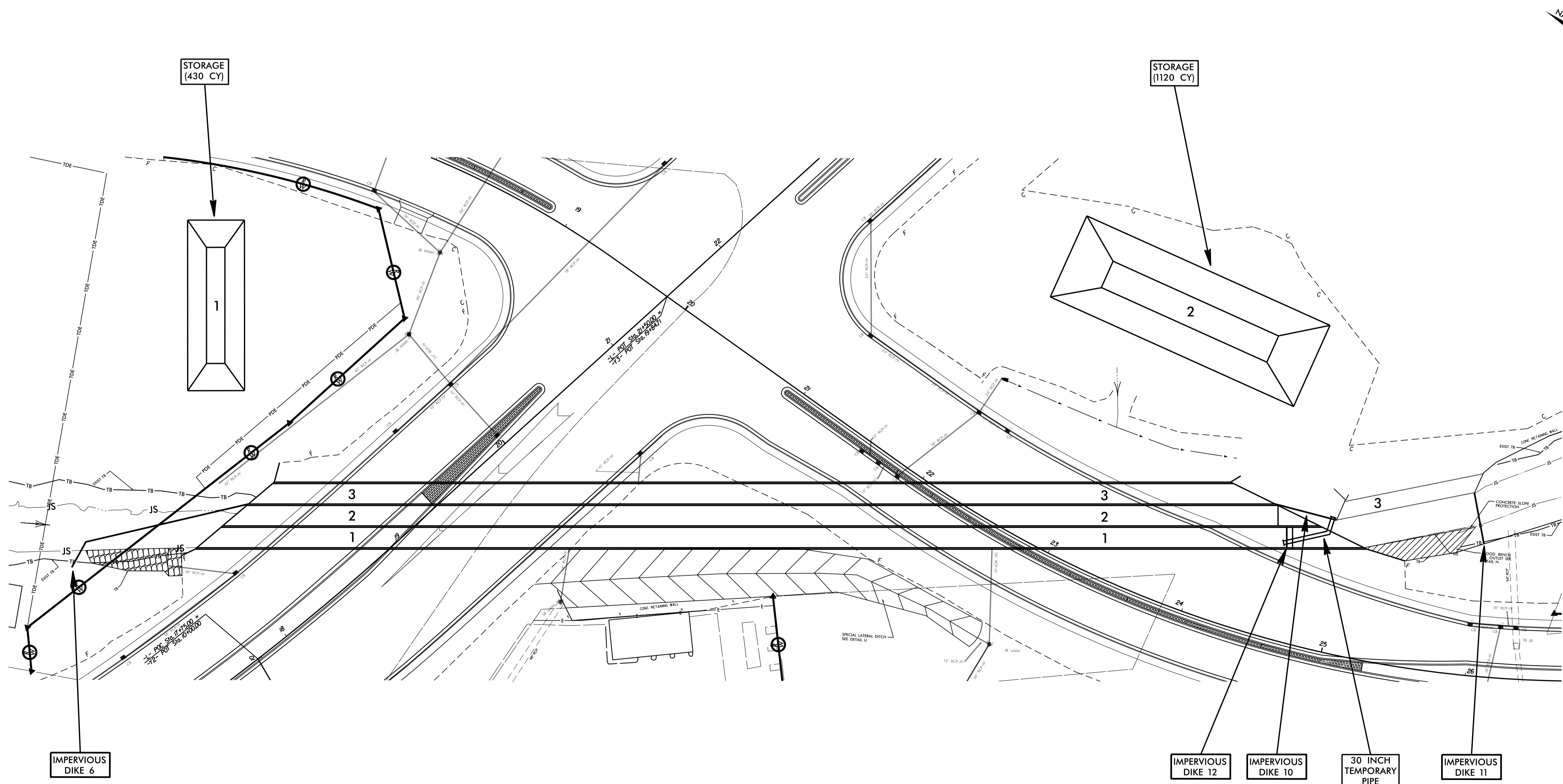


PROJECT REFERENCE NO. B-4490	SHEET NO. EC-21/CONST. 5, 6, & 13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 19 + 26.42 -L- (SHEET 5 OF 6)

PHASE V

16. REMOVE BARRELS 1 AND 2 OF EXISTING CULVERT UNDER GROVE ST.
17. CONSTRUCT IMPERVIOUS DIKE 12 AND INSTALL 30 INCH TEMPORARY PIPE.
18. REMOVE TEMPORARY CSP SYSTEM, AND INSTALL PROPOSED 48 INCH RCP AND 36 INCH RCP INTO SIDE OF BARREL 1 OF PROPOSED CULVERT.
19. CONSTRUCT REMAINDER OF BARRELS 1 AND 2 OF PROPOSED CULVERT AND OUTLET WING WALL AT BARREL 1 OF PROPOSED CULVERT.
20. CONSTRUCT CONCRETE SLOPE PROTECTION AT OUTLET OF BARREL 1 OF PROPOSED CULVERT AND RIP RAP SLOPE PROTECTION AT INLET OF BARREL 1 OF PROPOSED CULVERT, AND INSTALL 1 FT. SILLS AT INLET AND OUTLET OF BARRELS 1 AND 2 OF PROPOSED CULVERT.



NAD 83/NSRS 2007

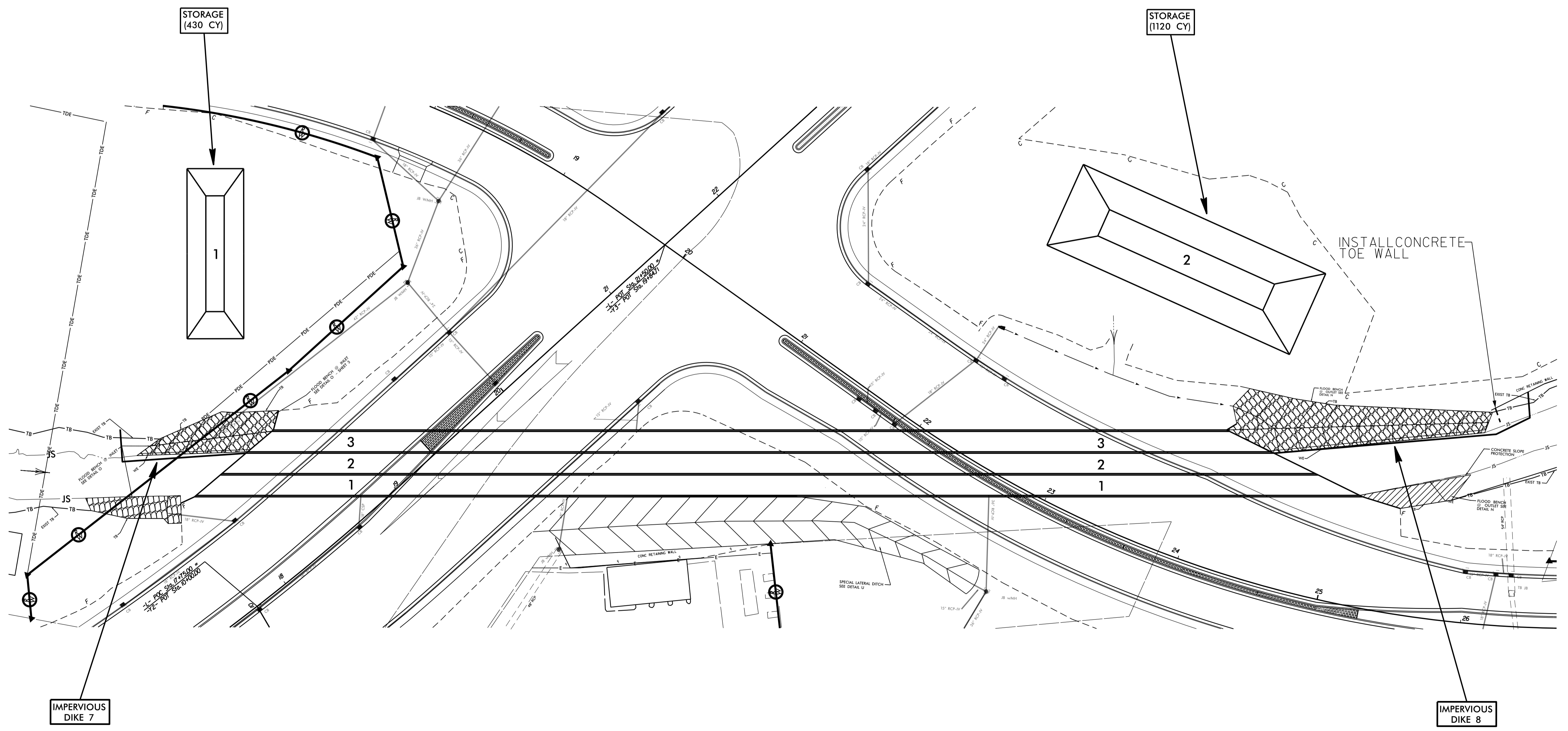
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B-4490	EC-22/CONST. 5, 6, & 13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CULVERT CONSTRUCTION SEQUENCE STA. 19 + 26.42 -L- (SHEET 6 OF 6)

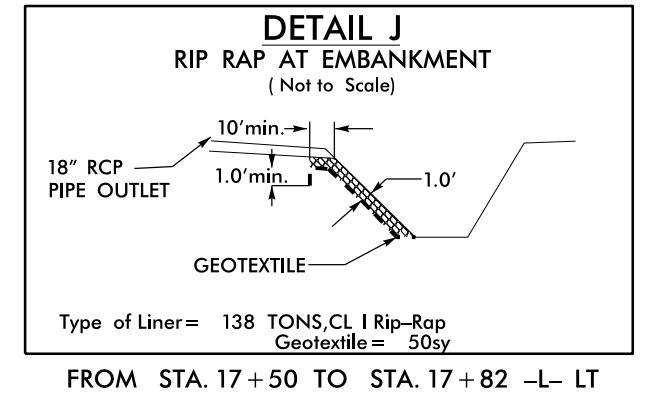
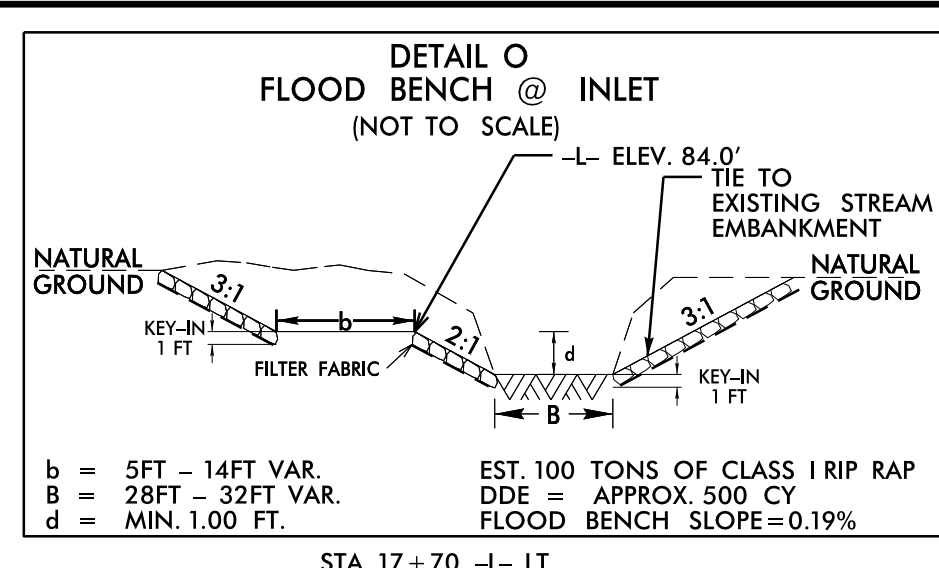
PHASE VI

21. REMOVE IMPERVIOUS DIKES 6, 10, 11, AND 12, 30 INCH TEMPORARY PIPE, AND REMAINDER OF EXISTING CULVERT UNDER GROVE ST.
22. CONSTRUCT IMPERVIOUS DIKES 7 AND 8, DIVERTING FLOW THROUGH BARRELS 1 AND 2 OF PROPOSED CULVERT.
23. CONSTRUCT FLOODPLAIN BENCH AND INSTALL 2 FT. SILLS AT INLET AND OUTLET OF BARREL 3 OF PROPOSED CULVERT.
24. CONSTRUCT CONCRETE TOE WALL AT END OF EXISTING CONCRETE RETAINING WALL, AT THE END OF THE OUTLET FLOODPLAIN BENCH.
25. REMOVE IMPERVIOUS DIKES 7 AND 8, AND REMOVE STILLING BASINS 1 AND 2.
26. COMPLETE ROADWAY.

NAD 83/NSRS 2007



PROJECT REFERENCE NO. B-4490	SHEET NO. EC-24/CONST.5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



FROM STA. 17+50 TO STA. 17+82 -L- LT

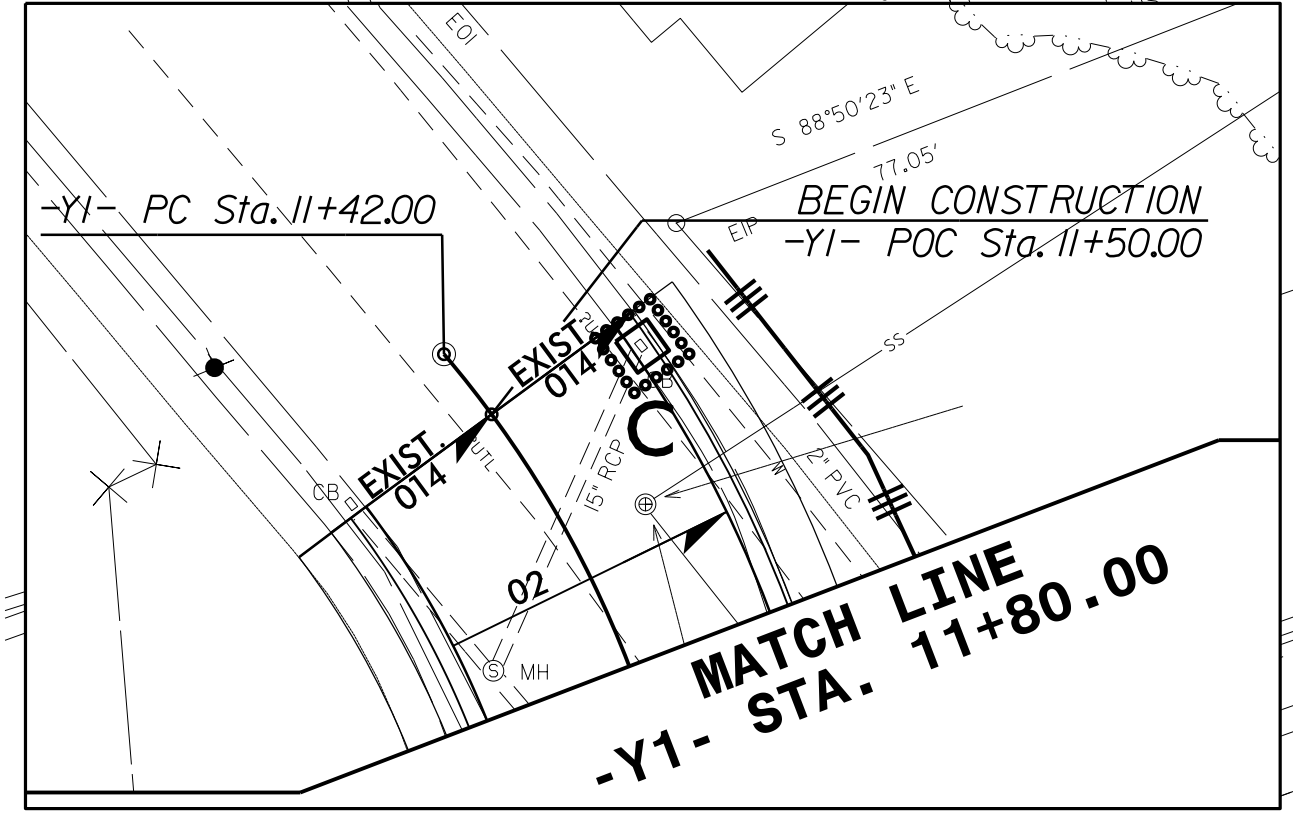
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-Y1- STA. 11+80.00

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INSET "A"

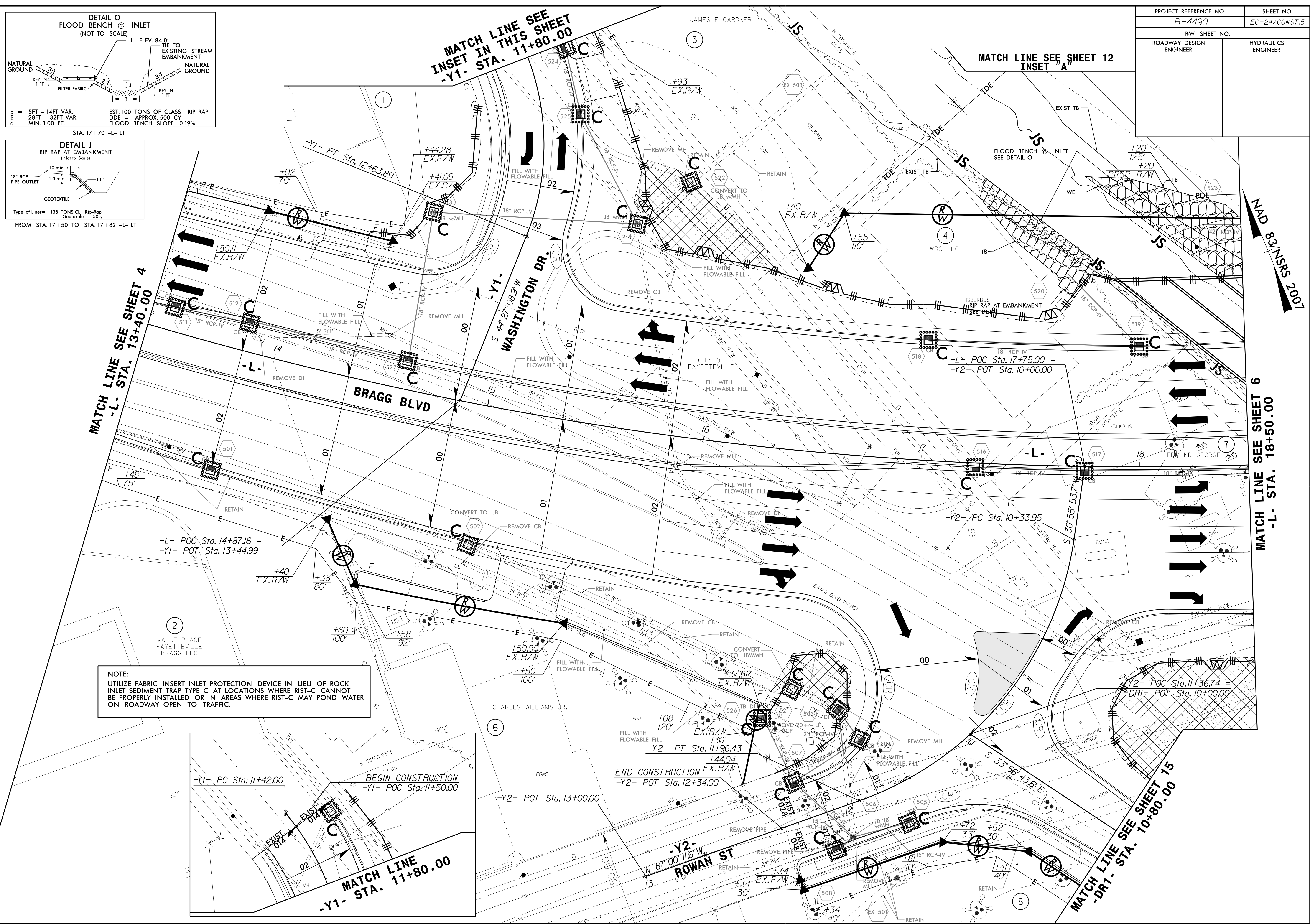
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-L- STA. 13+40.00

MATCH LINE SEE SHEET 6
-L- STA. 18+50.00

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.



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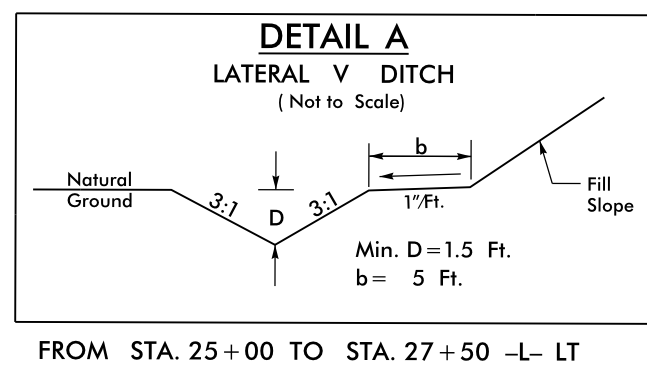
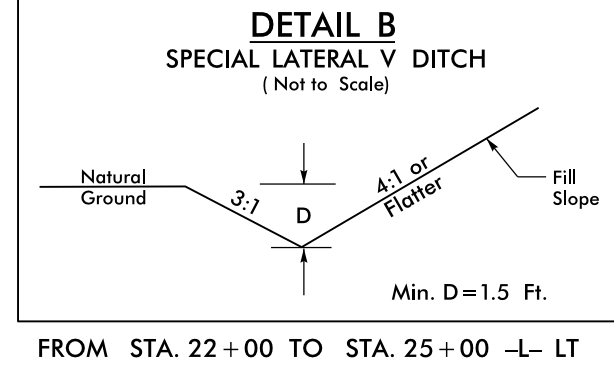
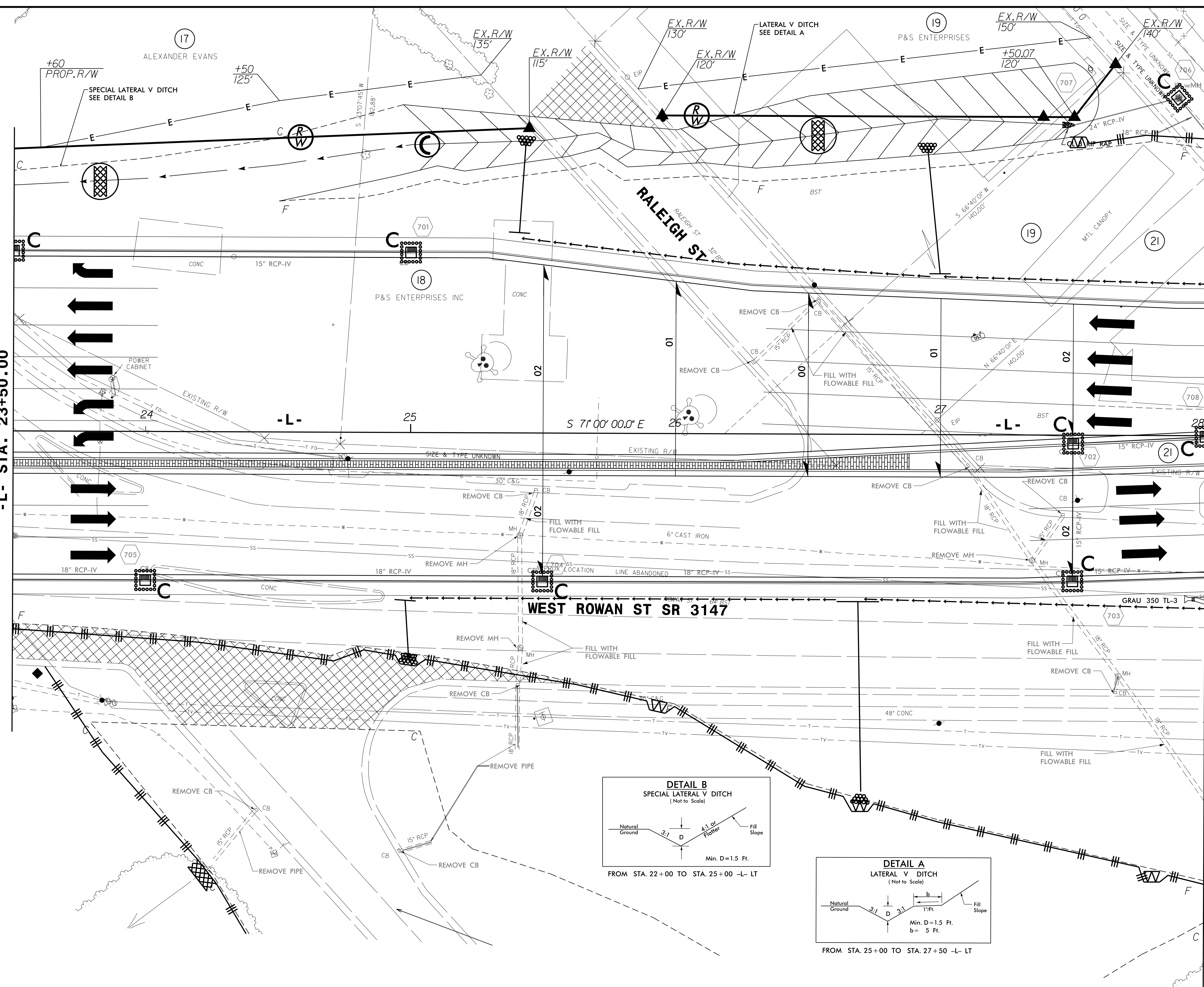


PROJECT REFERENCE NO. B-4490	SHEET NO. EC-26/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83 NRSRS 2007

MATCH LINE SEE SHEET 6
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MATCH LINE SEE SHEET 8
-L- STA. 28+00.00



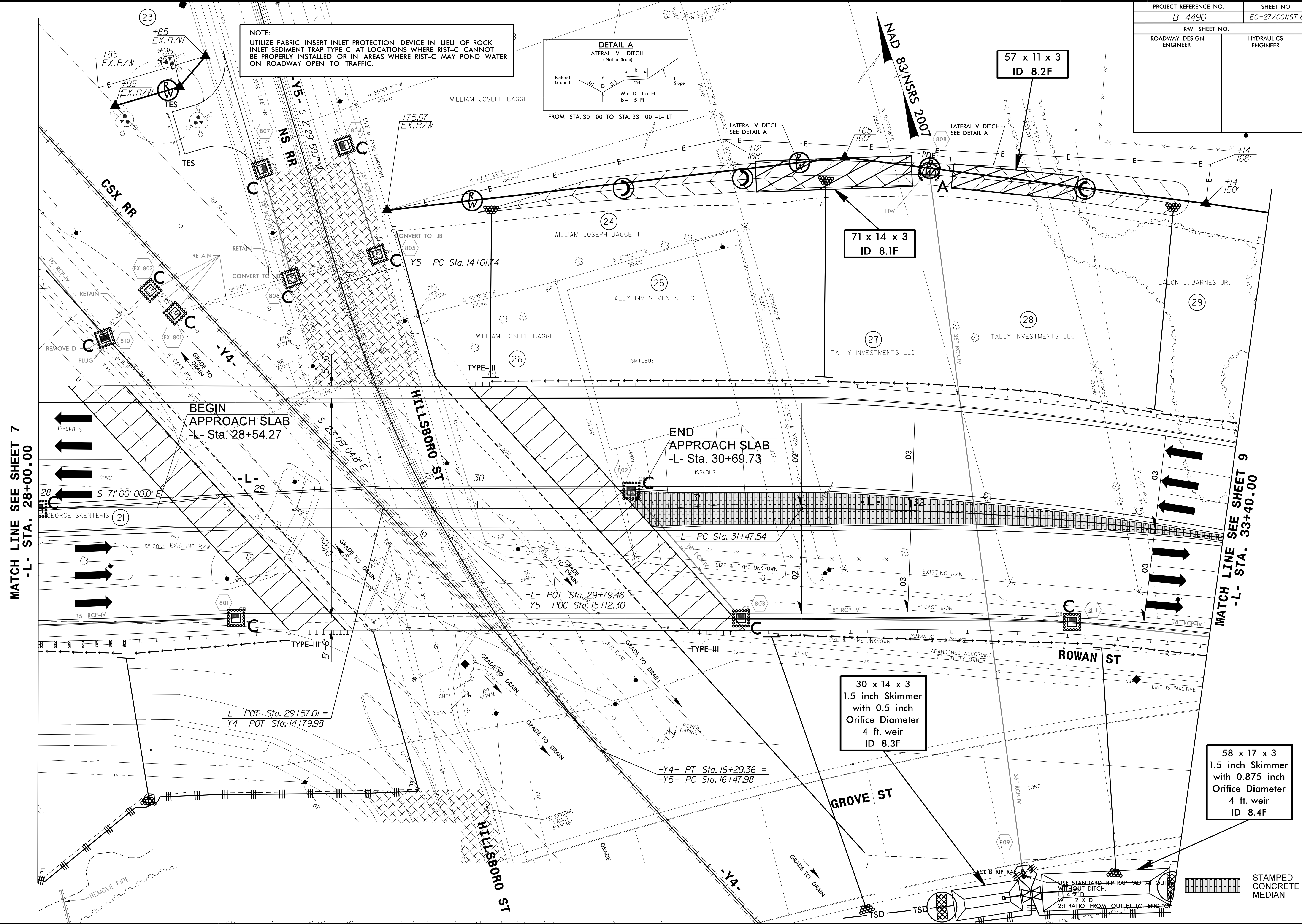
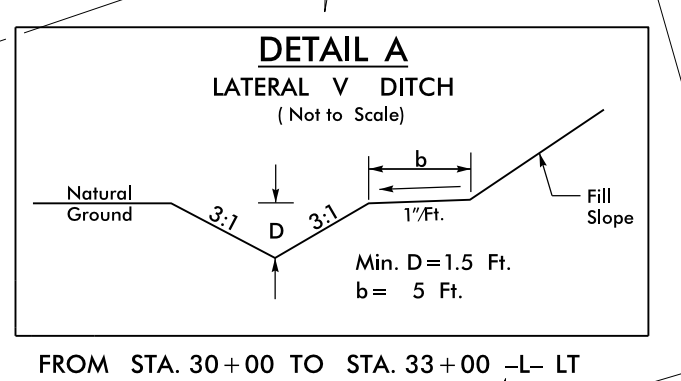
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.



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PROJECT REFERENCE NO. B-4490	SHEET NO. EC-27/CONST.B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.



MATCH LINE SEE SHEET 7
-L- STA. 28+00.00

MATCH LINE SEE SHEET 9
-L- STA. 33+40.00

BEGIN
APPROACH SLAB
-L- Sta. 28+54.27

END
APPROACH SLAB
-L- Sta. 30+69.73

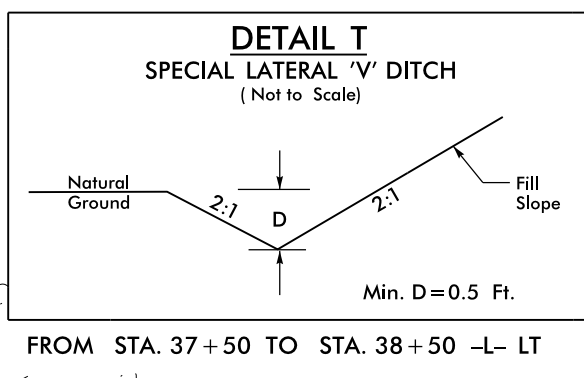
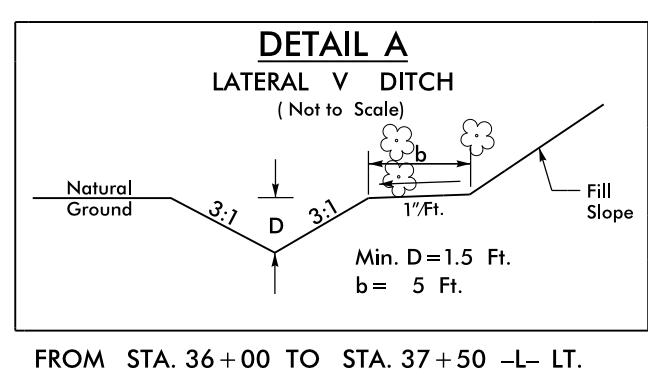
30 x 14 x 3
1.5 inch Skimmer
with 0.5 inch
Orifice Diameter
4 ft. weir
ID 8.3F

58 x 17 x 3
1.5 inch Skimmer
with 0.875 inch
Orifice Diameter
4 ft. weir
ID 8.4F

8/17/99
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STAMPED
CONCRETE
MEDIAN

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-28/CONST.9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

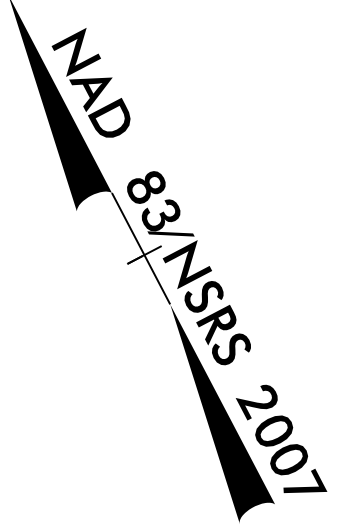


NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

32 x 12 x 3
1.5 inch Skimmer
with 0.375 inch
Orifice Diameter
4 ft. weir
ID 9.1B

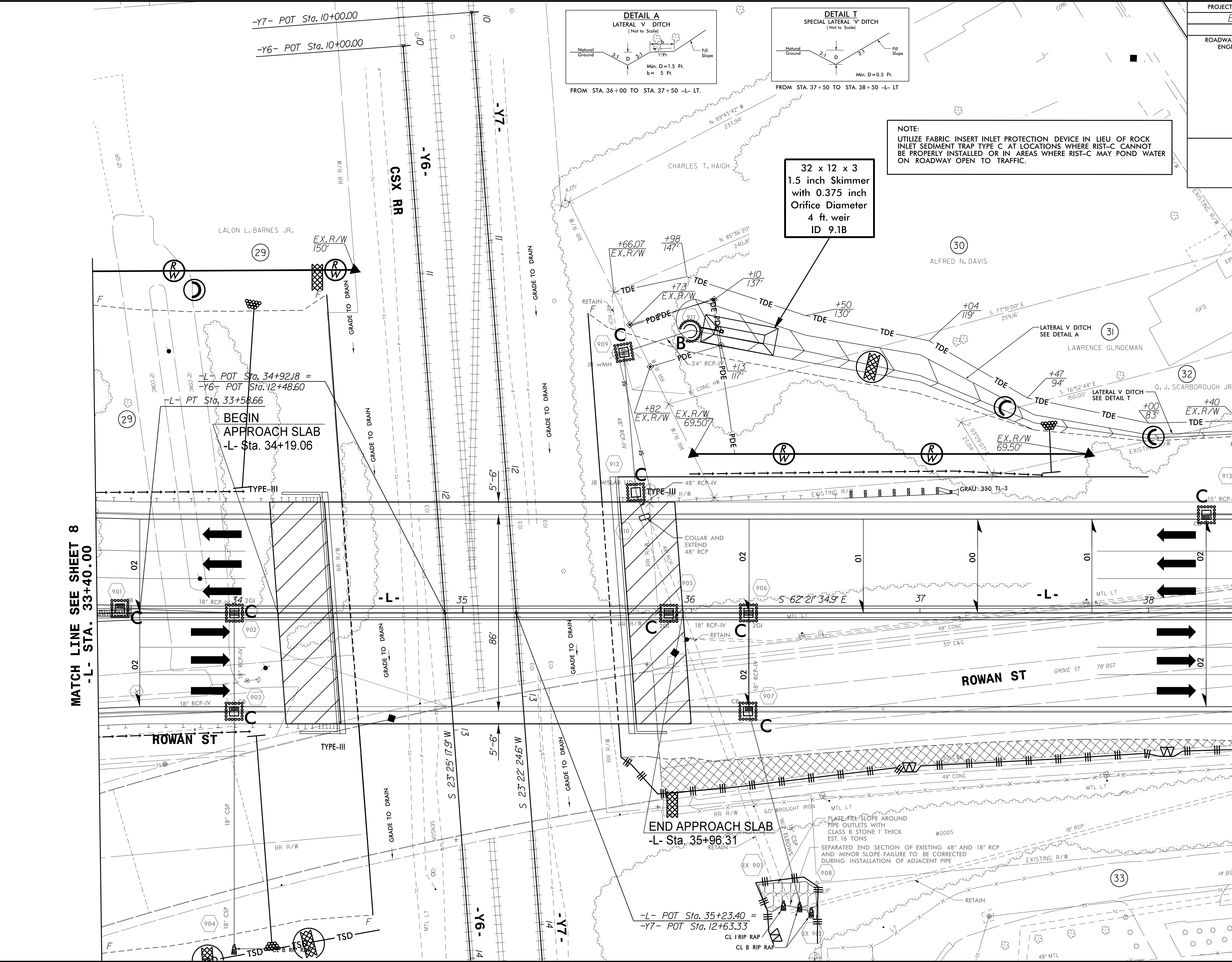
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-L- STA. 33+40.00

MATCH LINE SEE SHEET 10
-L- STA. 38+40.00



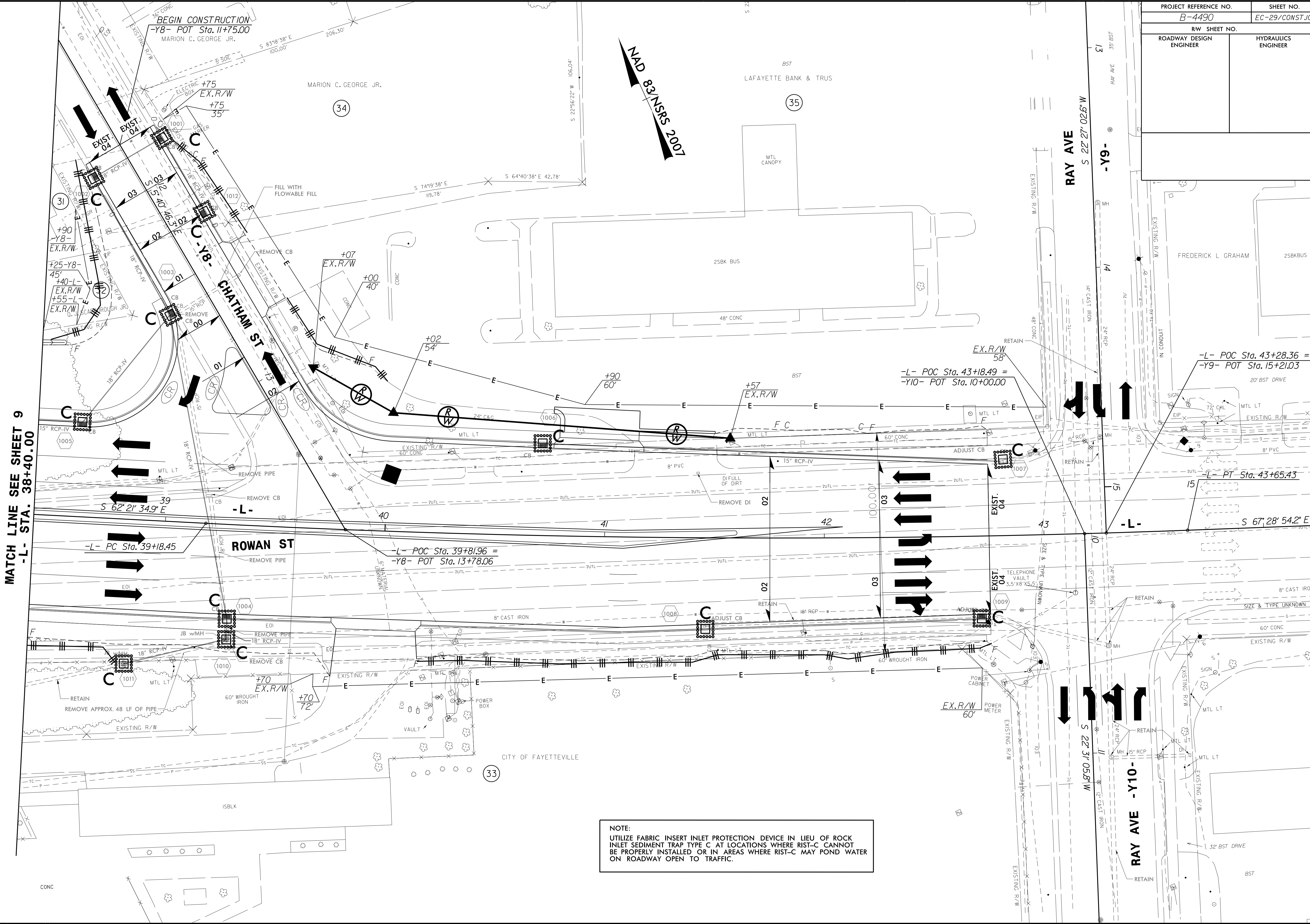
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PROJECT REFERENCE NO.	SHEET NO.
B-4490	EC-29/CONST.10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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 10/17/15



MATCH LINE SEE SHEET 9
 -L- STA. 38+40.00

NOTE:
 UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

PROJECT REFERENCE NO.		SHEET NO.	
B-4490		EC-30/CONST.II	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

NAD 83/NSRS 2007

36

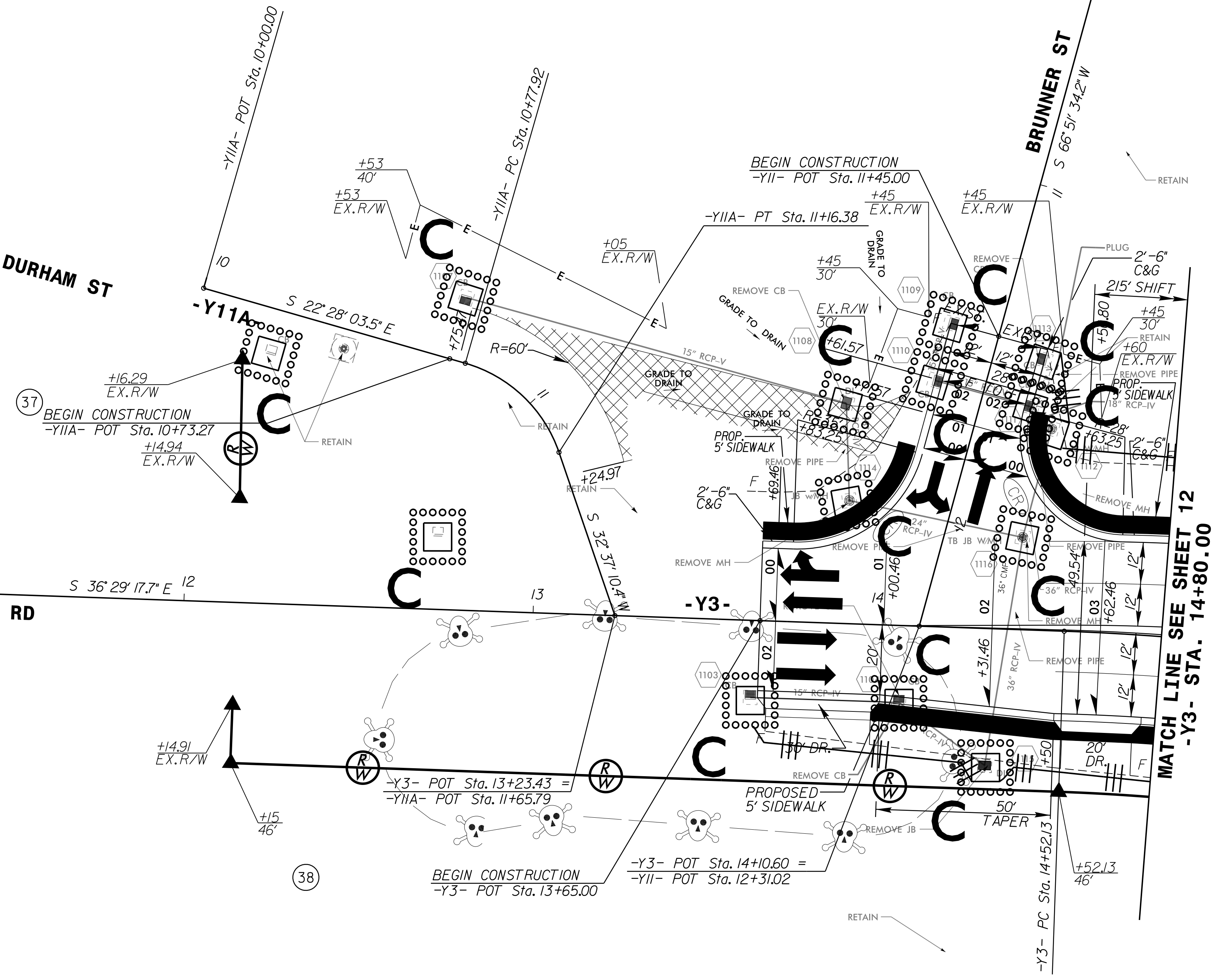
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DURHAM ST

BRUNNER ST -Y11-

MURCHISON RD

MATCH LINE SEE SHEET 12
-Y3- STA. 14+80.00



5

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SEE SHEET No. 25 FOR -Y11A- PROFILE
SEE SHEET No. 25 FOR -Y11- PROFILE

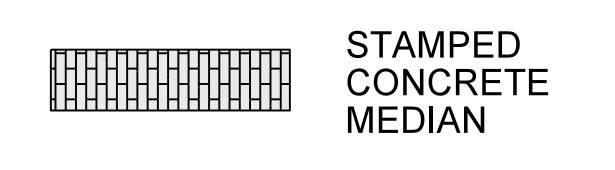
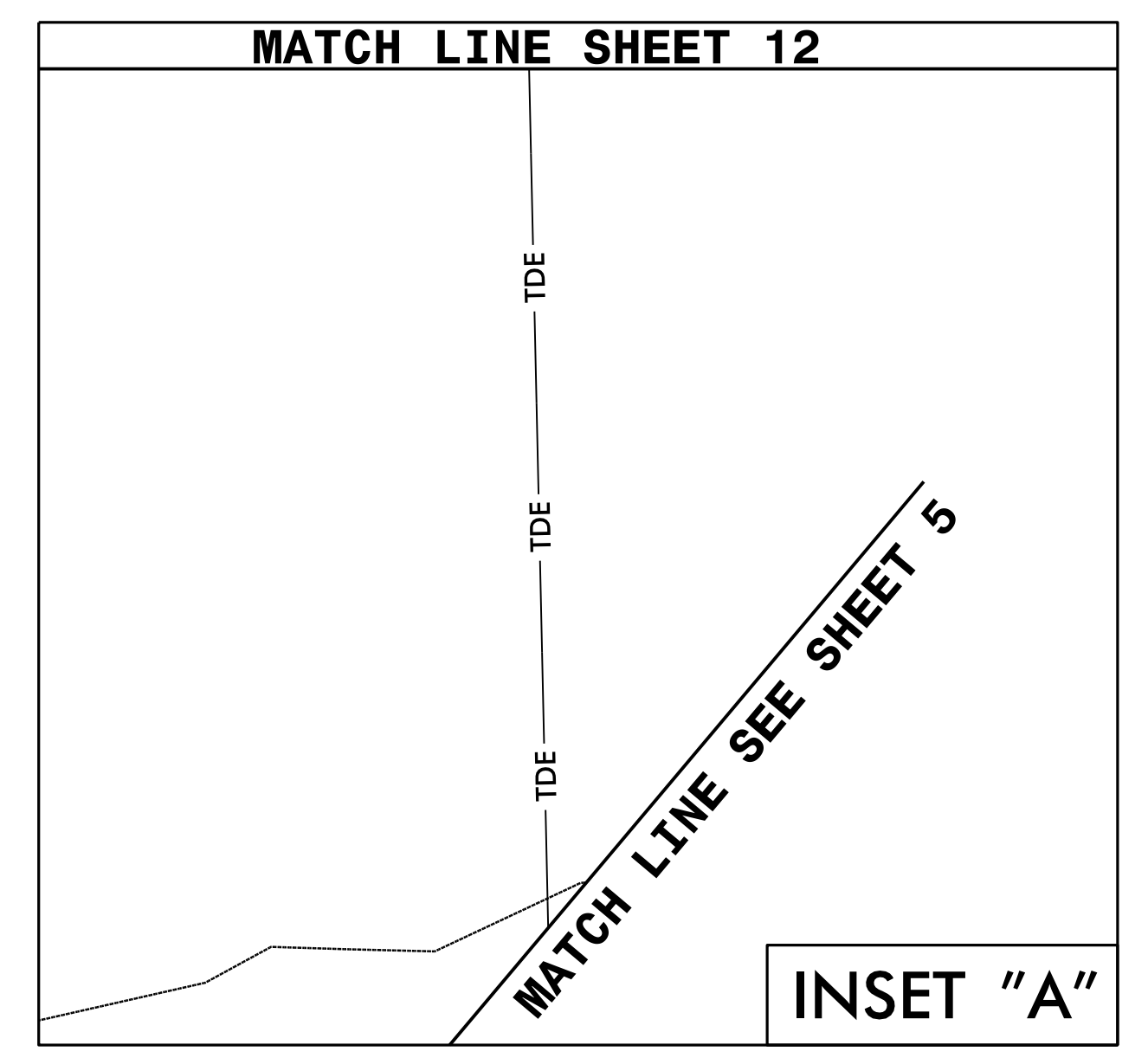
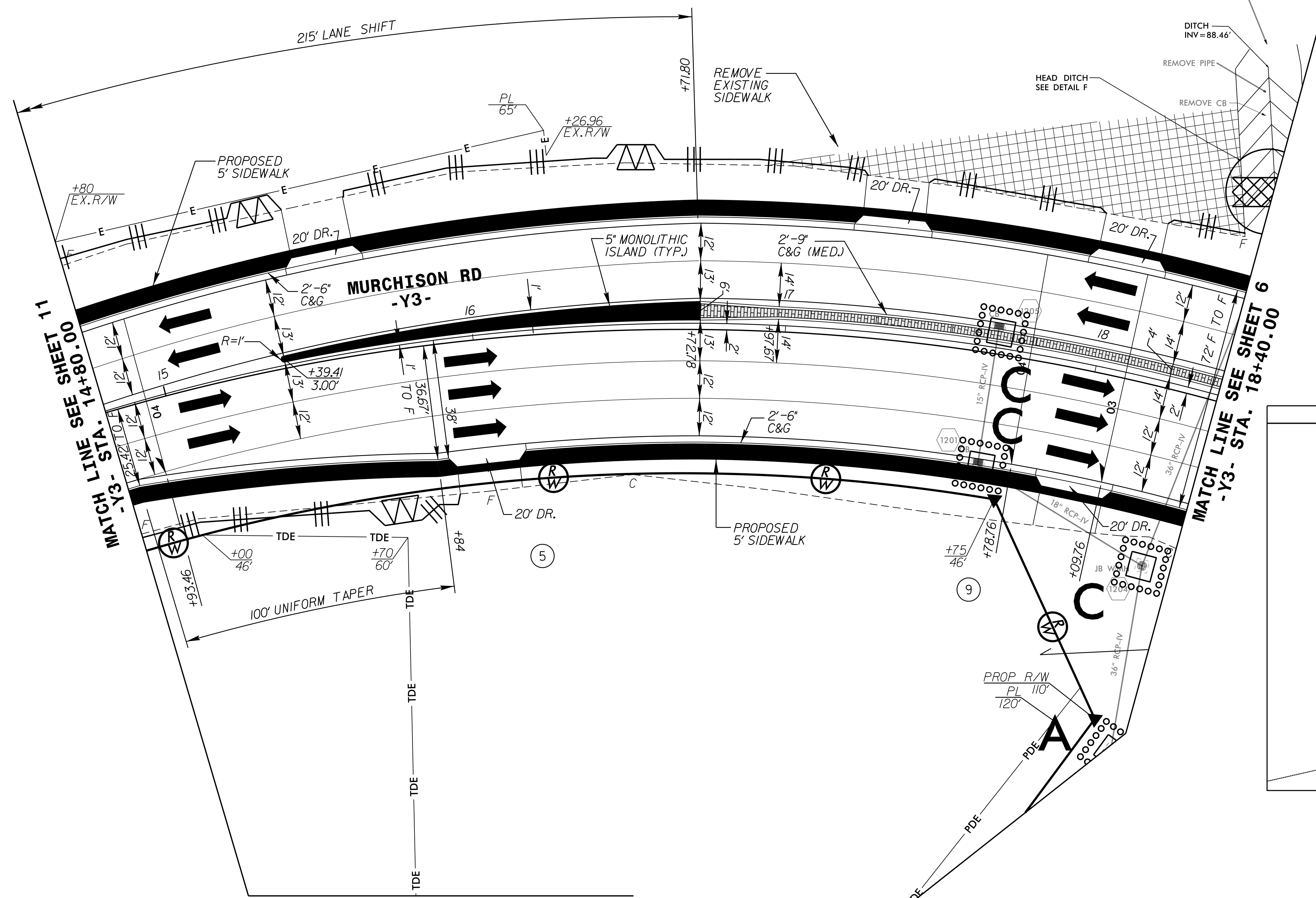
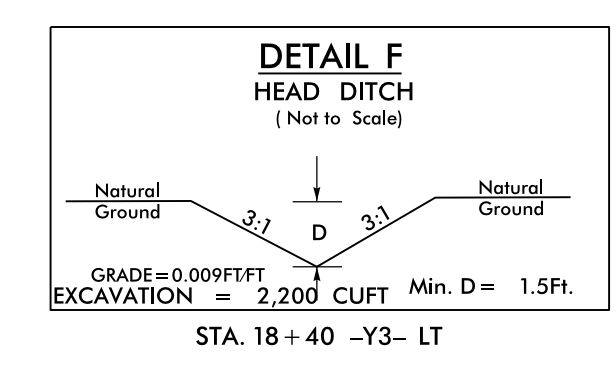
8/17/99

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REVISION 1

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B-4490	EC-31/CONST.12
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

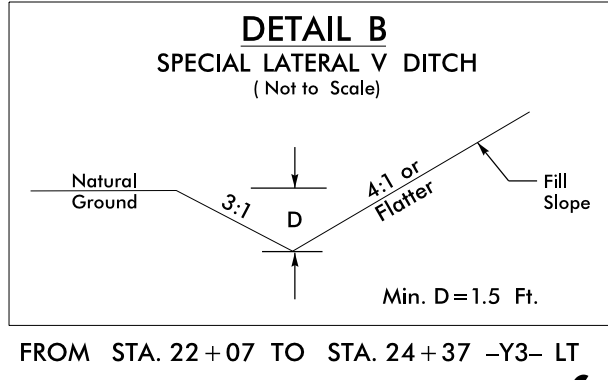
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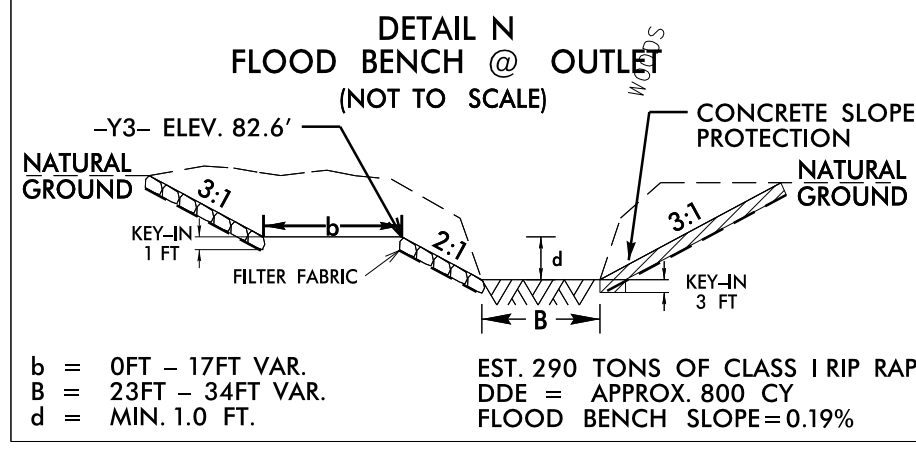
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PROJECT REFERENCE NO. B-4490	SHEET NO. EC-32/CONST.13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.



b = 0 FT - 17 FT VAR.
B = 23 FT - 34 FT VAR.
d = MIN. 1.0 FT.

EST. 290 TONS OF CLASS 1 RIP RAP
DDE = APPROX. 800 CY
FLOOD BENCH SLOPE=0.19%

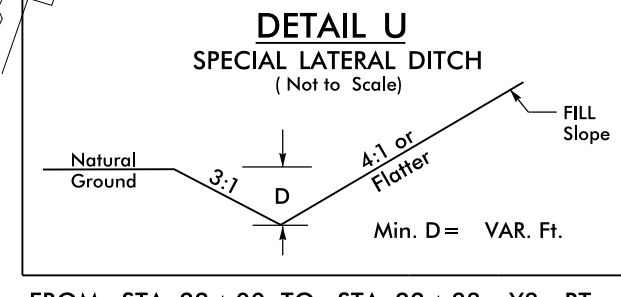
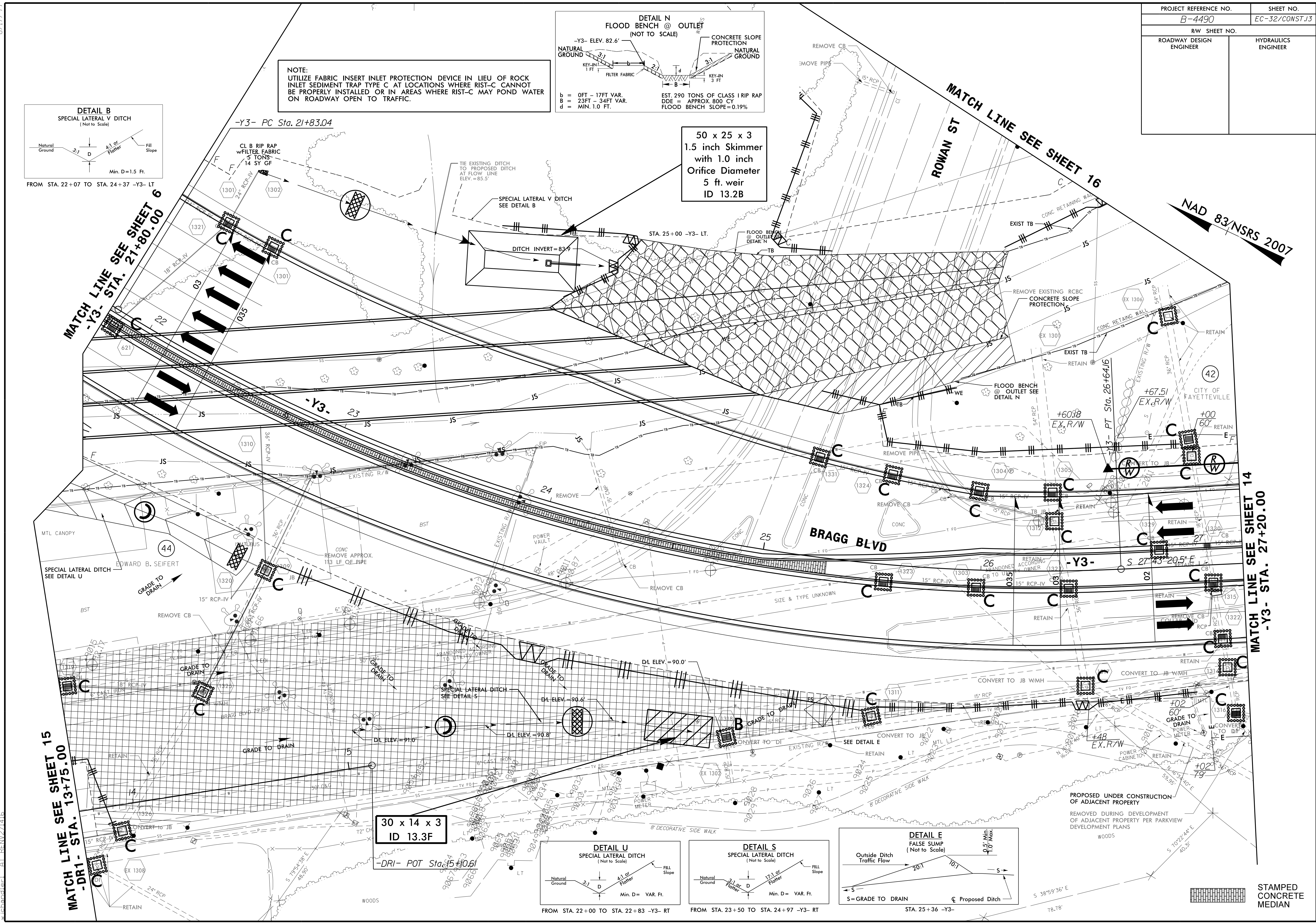
50 x 25 x 3
1.5 inch Skimmer
with 1.0 inch
Orifice Diameter
5 ft. weir
ID 13.2B

FROM STA. 22+07 TO STA. 24+37 -Y3- LT

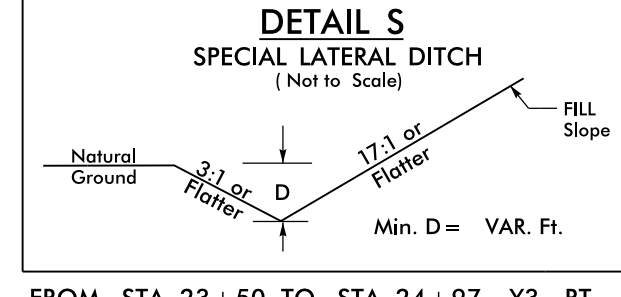
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MATCH LINE SEE SHEET 15
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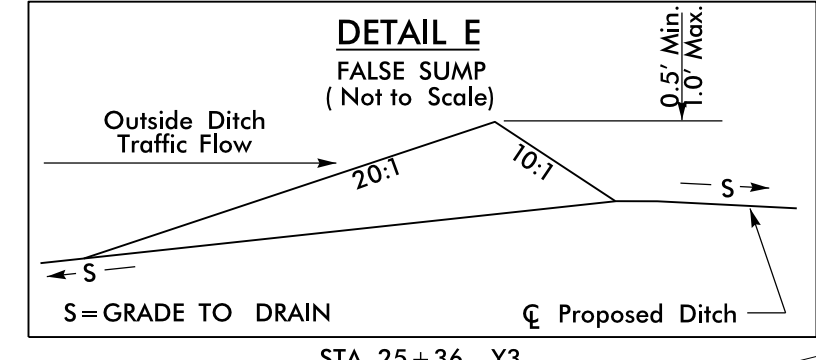
MATCH LINE SEE SHEET 14
-Y3- STA. 27+20.00



FROM STA. 22+00 TO STA. 22+83 -Y3- RT



FROM STA. 23+50 TO STA. 24+97 -Y3- RT



STA. 25+36 -Y3-

30 x 14 x 3
ID 13.3F

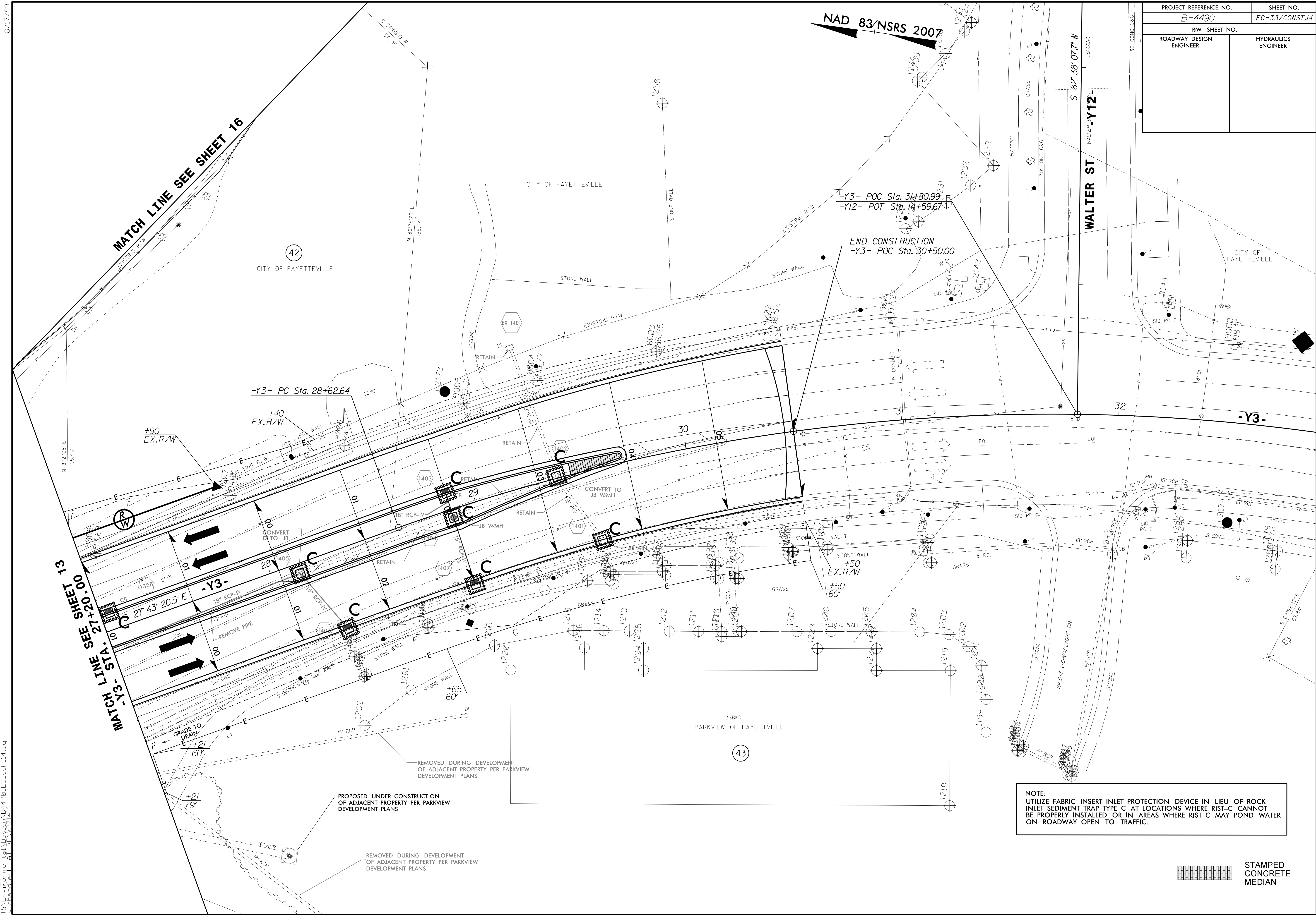
-DRI- POT Sta. 15+10.61

PROPOSED UNDER CONSTRUCTION OF ADJACENT PROPERTY
REMOVED DURING DEVELOPMENT OF ADJACENT PROPERTY PER PARKVIEW DEVELOPMENT PLANS

STAMPED CONCRETE MEDIAN

8/17/99
14-MAR-2016 14:37
R:\V\Projects\1321\Design\B4490-EC.psh.13.dgn
w:\stand\ec\13

PROJECT REFERENCE NO.		SHEET NO.	
B-4490		EC-33/CONST.14	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



NOTE:
 UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C, AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

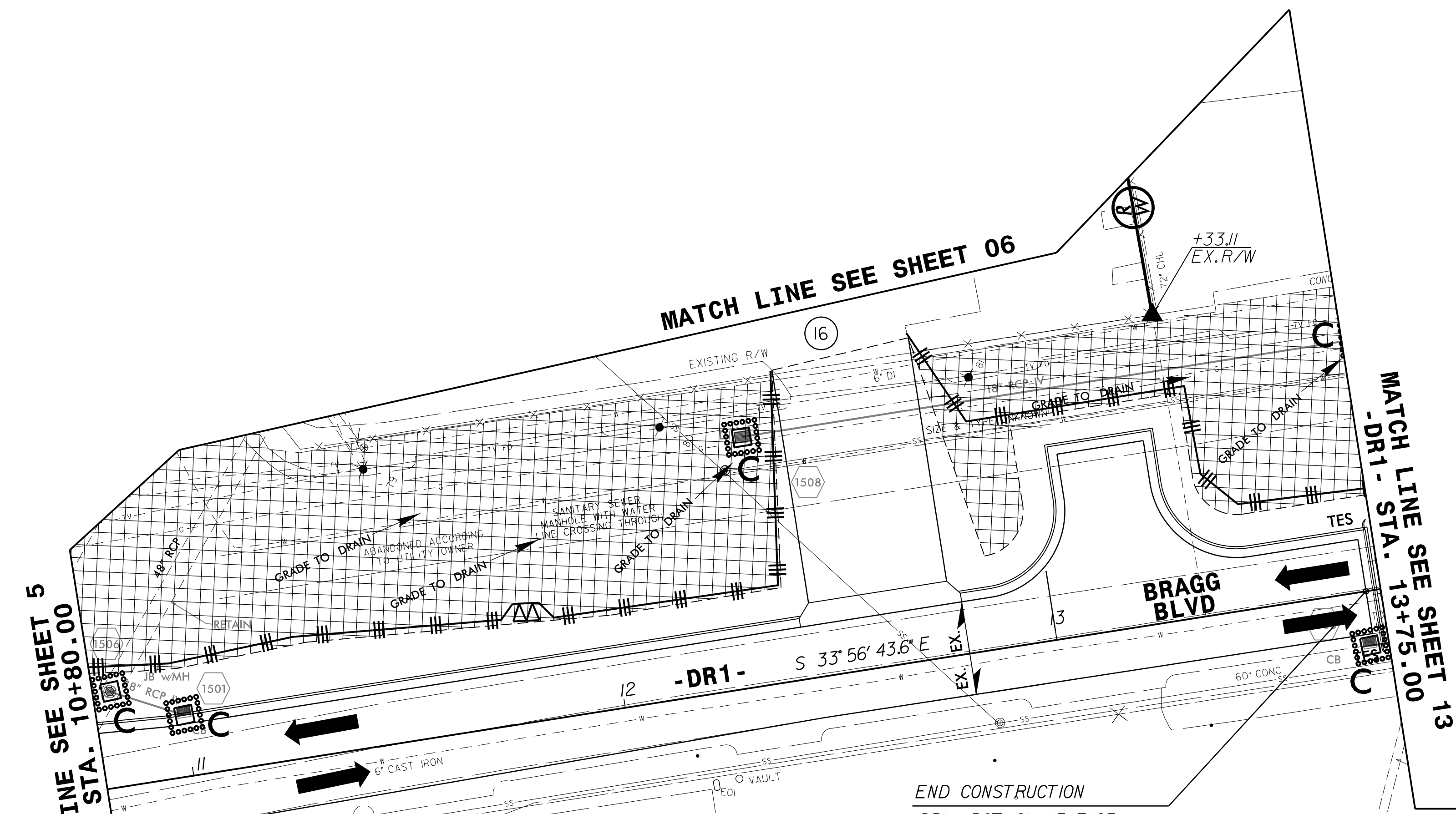
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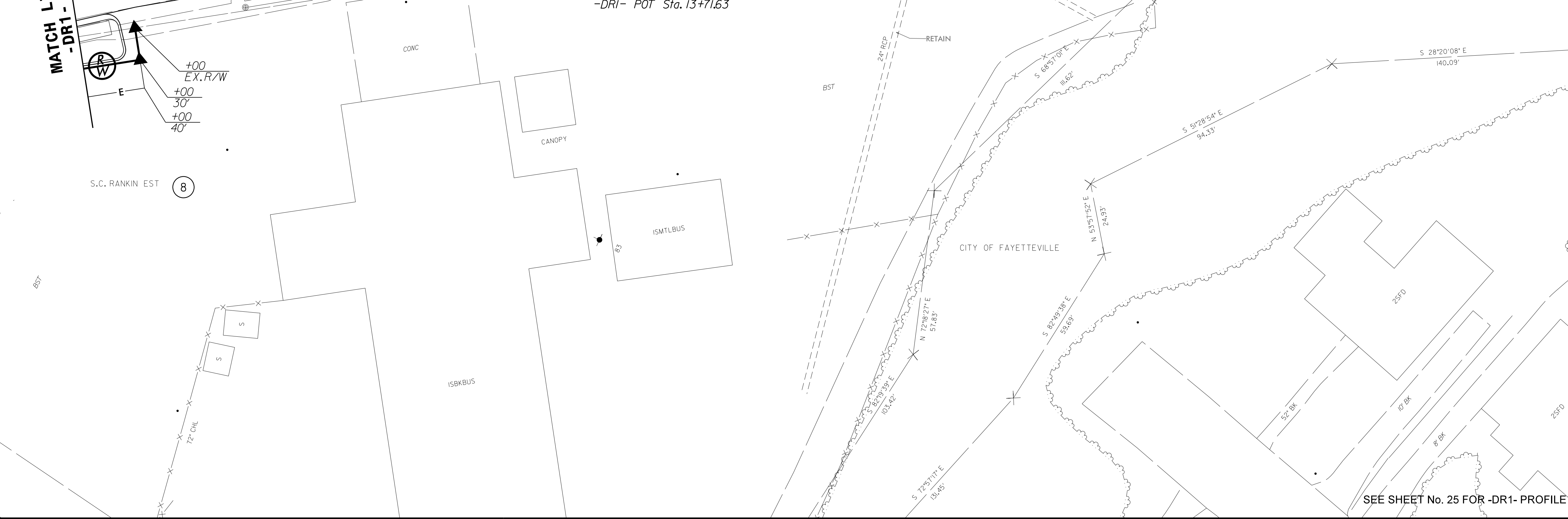
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B-4490	EC-34/CONST.15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

8/17/99



NOTE:
 UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.



31-AUG-2015 15:35
 \\DENVER\proj\B4490-EC.psh_15.dgn
 shenry

SEE SHEET No. 25 FOR -DR1- PROFILE

PROJECT REFERENCE NO. B-4490	SHEET NO. EC-35/CONST.16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

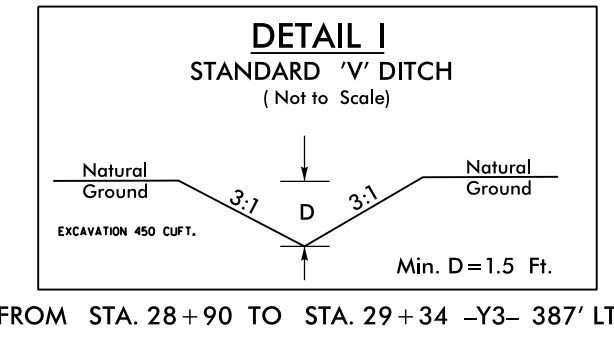
NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C AT LOCATIONS WHERE RIST-C CANNOT BE PROPERLY INSTALLED OR IN AREAS WHERE RIST-C MAY POND WATER ON ROADWAY OPEN TO TRAFFIC.

MATCH LINE SEE SHEET 13

NAD 83/NSRS 2007

ROWAN ST

74 x 35 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
7 ft. weir
ID 16.1



MATCH LINE SEE SHEET 14

HILLSBORO ST

8/17/99
3:\AUG-2015 15:37
C:\Users\benj\Documents\BENJ\EC-35\CONST.16.dgn

