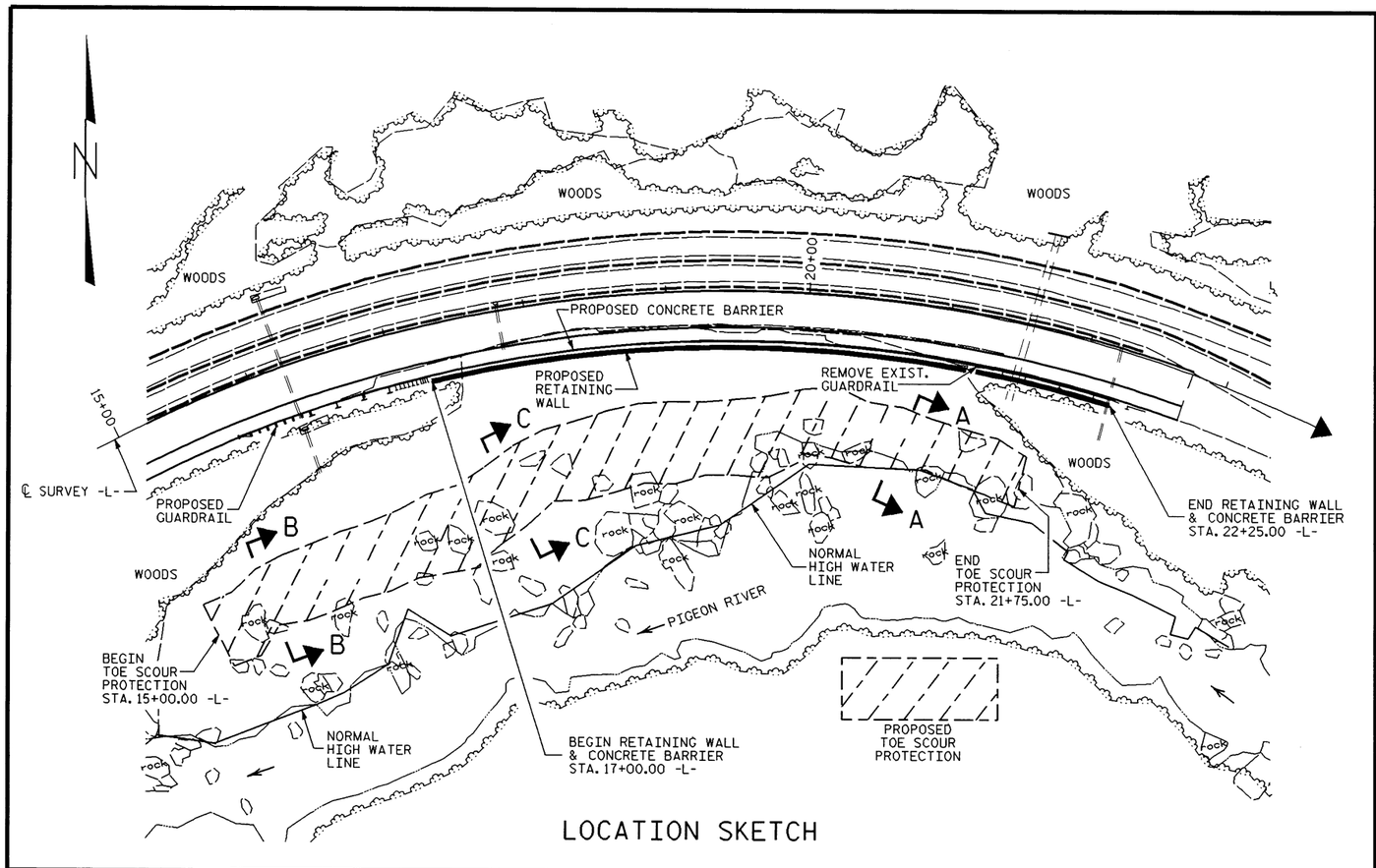
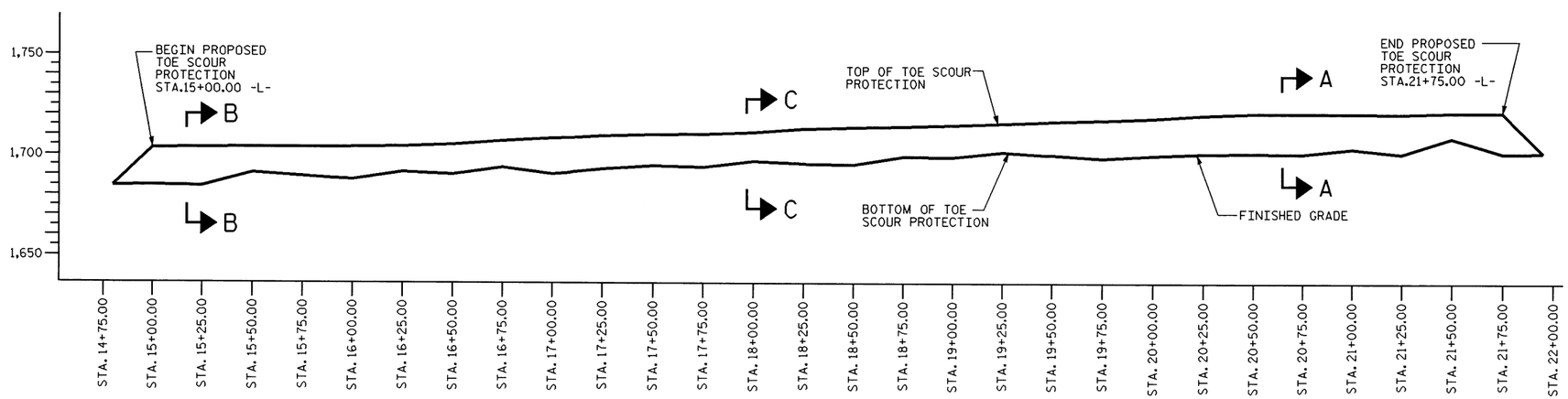


LOCATION SKETCH

PRELIMINARY
NOT FOR LETTING

ESTIMATED QUANTITIES	
DESCRIPTION	QUANTITY
ROCK EMBANKMENT	13,500 TONS
SELECT MATERIAL, CLASS A	4,500 TONS
SELECT MATERIAL, CLASS VI	2,000 TONS
FILTER FABRIC	5,000 SQUARE YARDS
RING NET	10,500 SQUARE YARDS
TENSIONED ROCK BOLT	140 EACH



FOR SECTIONS A-A, B-B & C-C SEE SHEET 2 OF 4

PROJECT NO. 112.104401
HAYWOOD COUNTY
STATION: 15+00 TO 35+25

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOE SCOUR PROTECTION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			
2			4			

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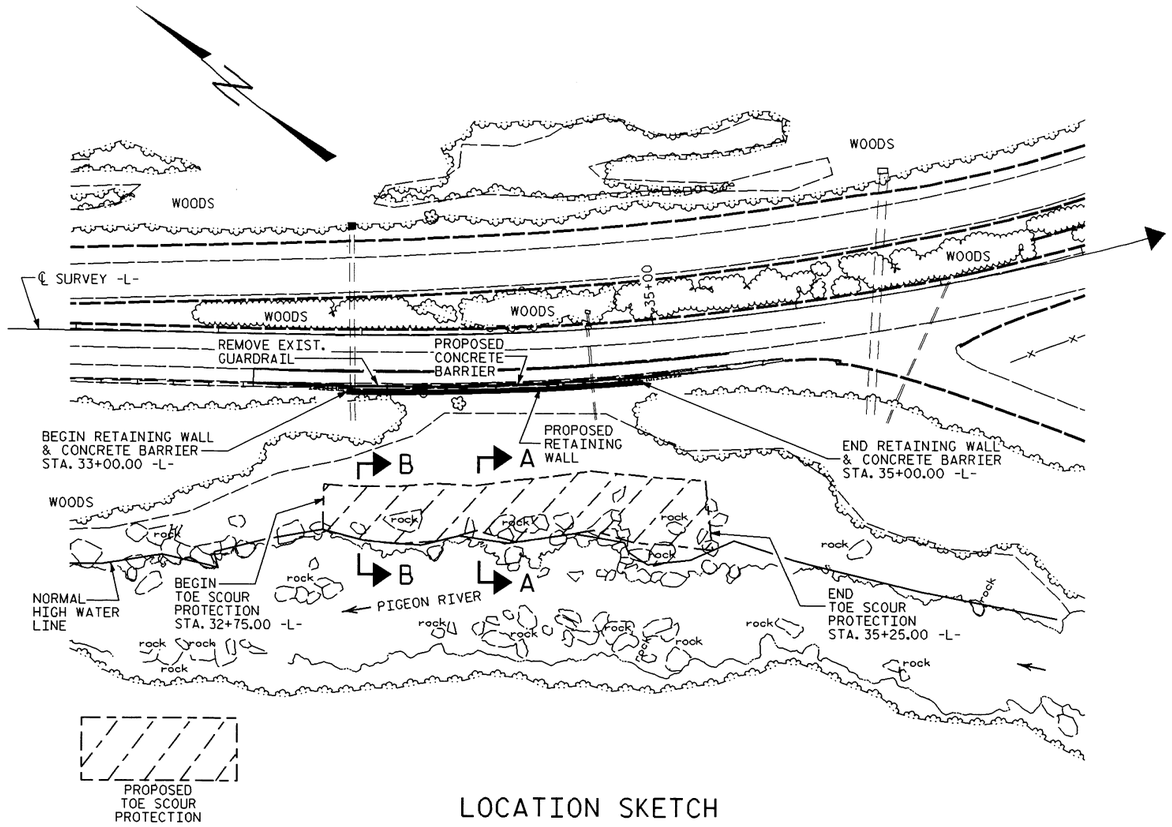
NOT FOR LETTING



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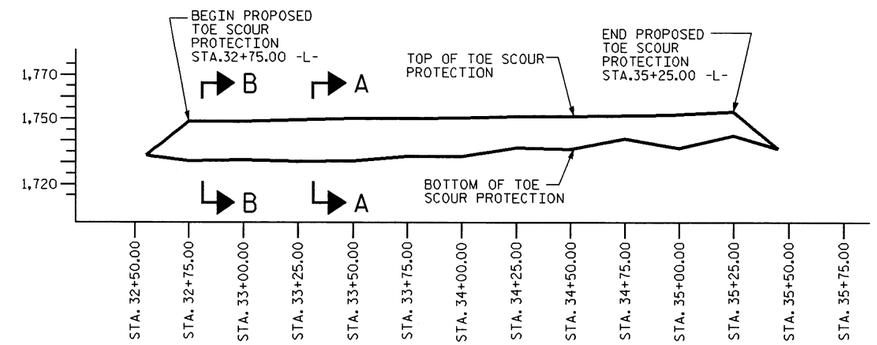
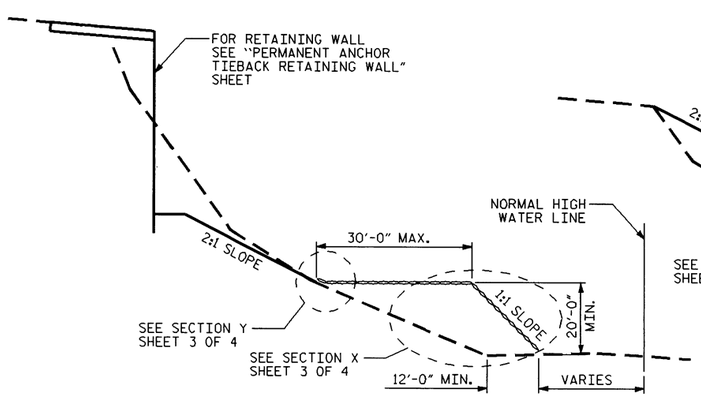
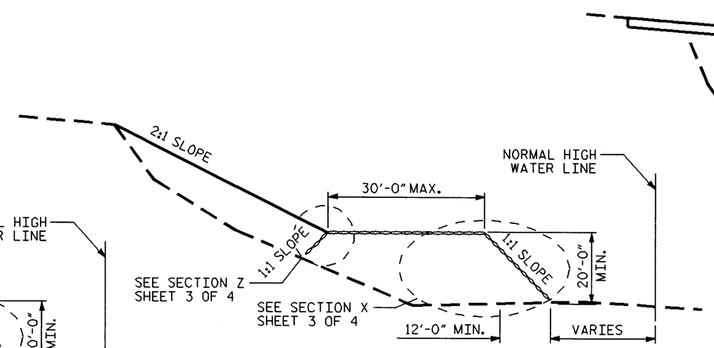
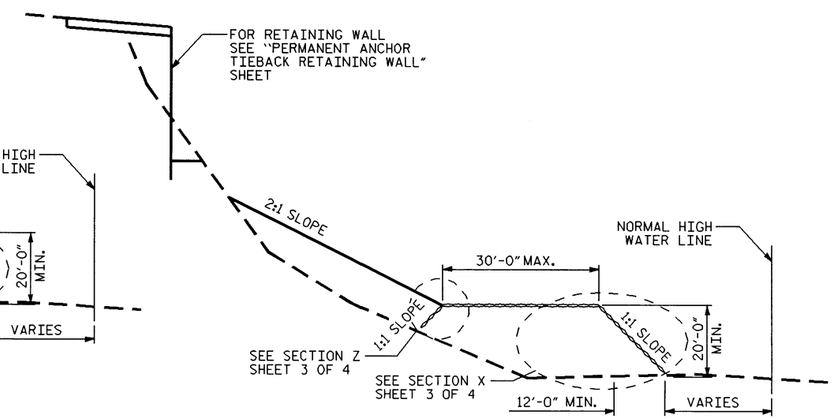




SECTION A-A



SECTION B-B



SECTION C-C

PROJECT NO. 112.104401
HAYWOOD COUNTY
STATION: 15+00 TO 35+25
SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOE SCOUR PROTECTION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			
2			4			

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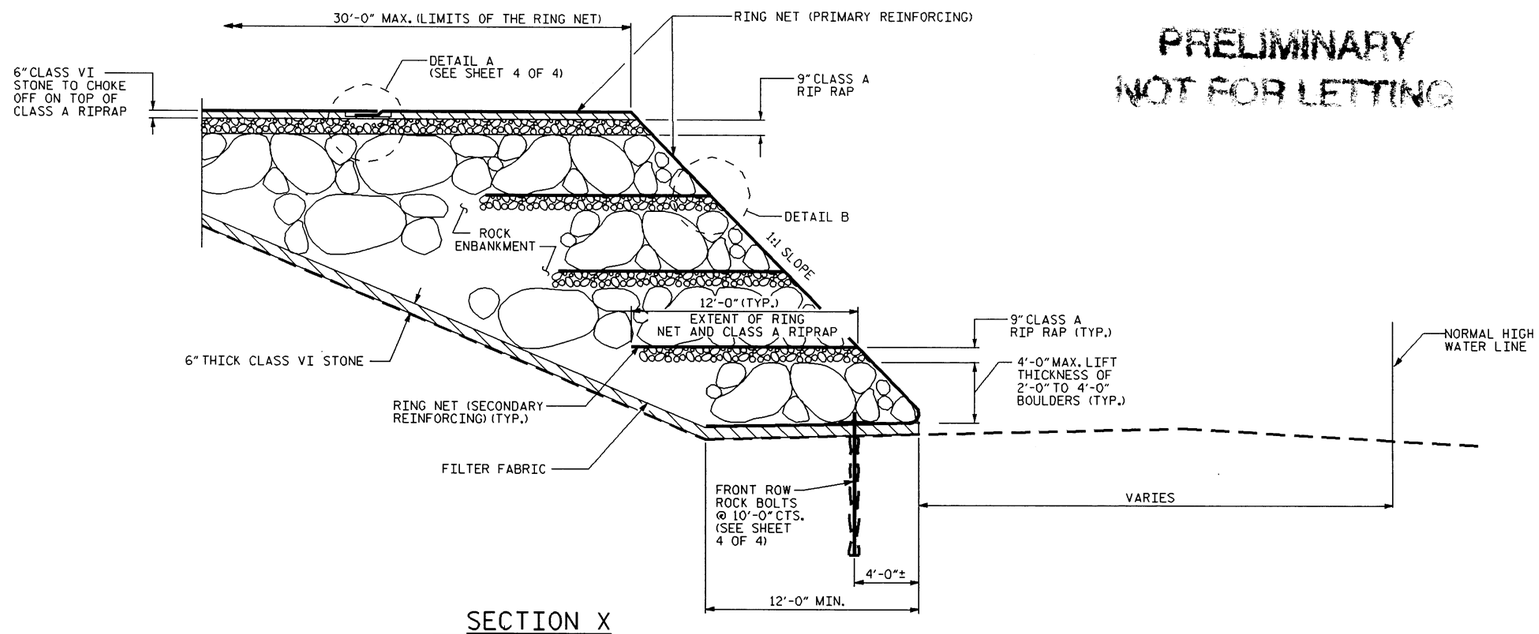
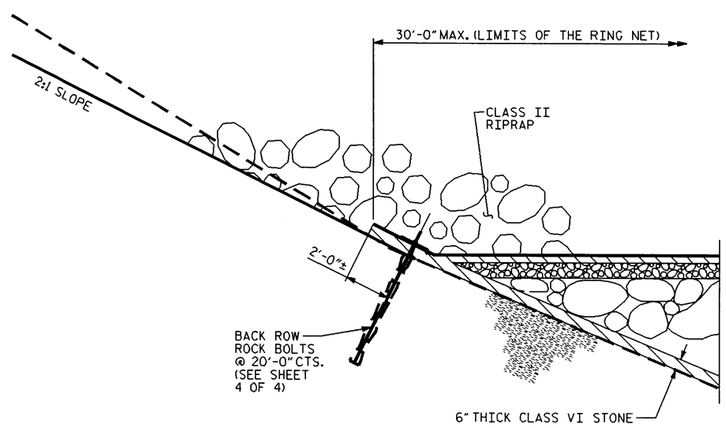


SECTION X



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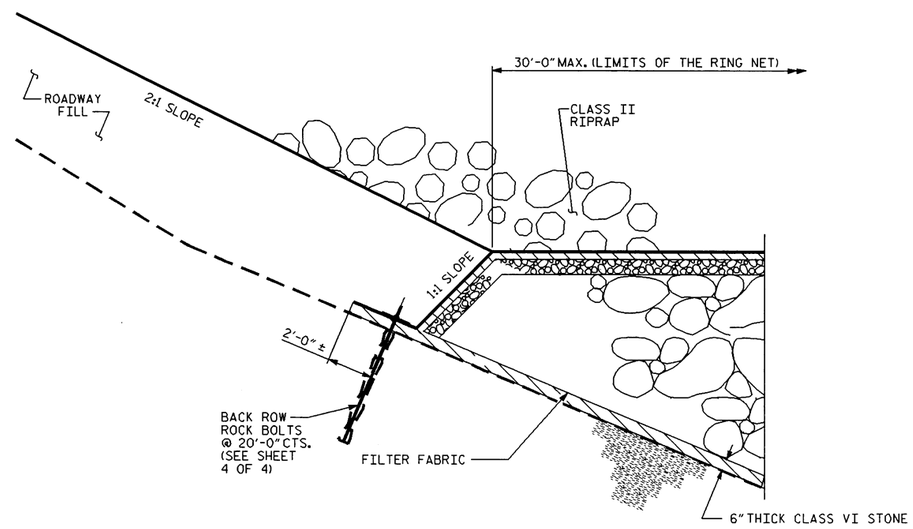

SECTION Z

PROJECT NO. 112.104401
HAYWOOD COUNTY
STATION: 15+00 TO 35+25

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOE SCOUR PROTECTION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

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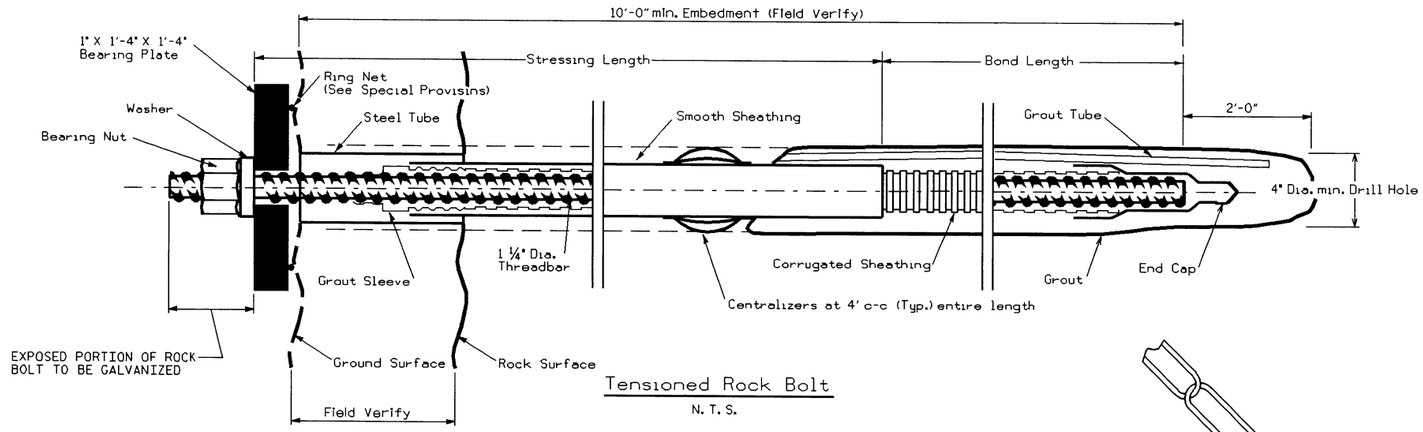
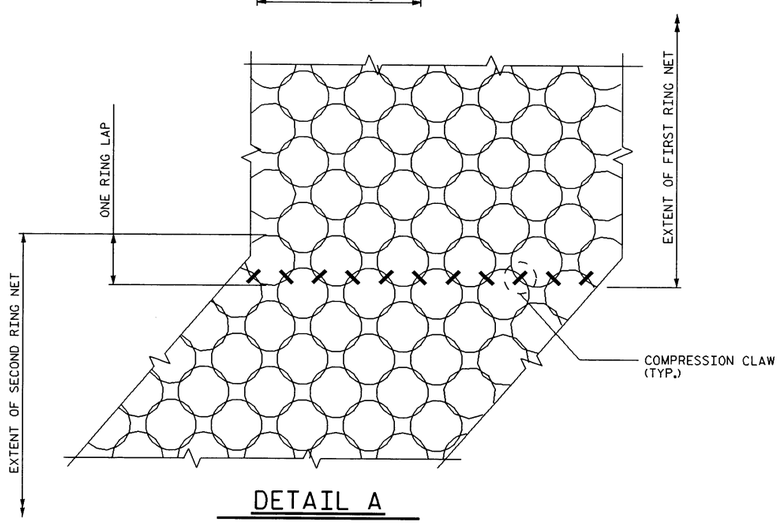
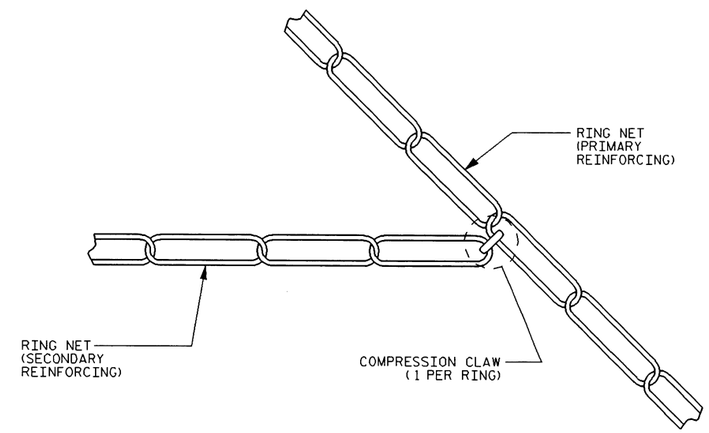


Tensioned Rock Bolt

N. T. S.



DETAIL A



DETAIL B

NOTES:

STABILIZE UPPER SLOPE BEFORE BEGINNING WORK ON THE TOE SCOUR PROTECTION.

CONSTRUCT TOE SCOUR PROTECTION ACCORDING TO THE SPECIAL PROVISIONS, DETAILS, PLANS, AND AS DIRECTED BY THE ENGINEER.

SEE SPECIAL PROVISIONS FOR TOE SCOUR PROTECTION.

SEE SPECIAL PROVISIONS FOR TENSIONED ROCK BOLTS.

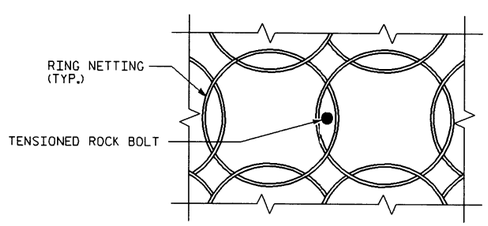
PAYMENT FOR THE COMPRESSION CLAWS WILL BE INCLUDED IN THE COST OF THE RING NET.

CONSTRUCTION SEQUENCE:

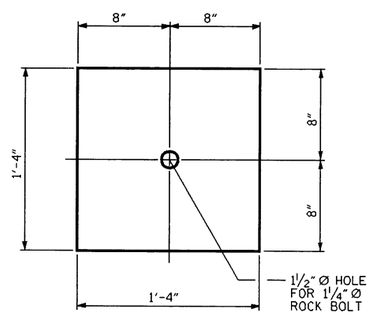
1. CLEAR AREA OF DEBRIS. LEVEL LOCATION OF THE RING NETS.
2. INSTALL FRONT ROW TENSIONED ROCK BOLTS AS SHOWN ON THE PLANS. DO NOT INSTALL BEARING PLATE ASSEMBLY OR TENSION THE ROCK BOLTS.
3. PLACE 6 INCH LAYER OF SELECT MATERIAL, CLASS VI (#57 STONE).
4. PLACE FILTER FABRIC AS SHOWN ON THE PLANS.
5. PLACE RING NET FOR PRIMARY REINFORCEMENT.
6. INSTALL BEARING PLATE ASSEMBLY AND TENSION ROCK BOLTS.
7. PLACE 2 TO 4 FOOT BOULDERS IN 4 FOOT THICK LIFT. END DUMPING ON RING NETS WILL NOT BE ALLOWED.
8. PLACE RIP RAP, CLASS A MATERIAL ON TOP OF LIFT TO CHOKE OFF.
9. PLACE RING NET FOR SECONDARY REINFORCEMENT AND CONNECT TO FACE.
10. REPEAT STEPS 7 THROUGH 9, AS NECESSARY, TO THE TOP OF THE TOE SCOUR PROTECTION STAGGERING THE FACE AT A BATTER OF 1:1 (H:V).
11. INSTALL TOP LAYER OF RING NETS.
12. INSTALL BACK ROW TENSIONED ROCK BOLTS AS SHOWN ON THE PLANS.
13. PLACE SELECT MATERIAL, CLASS VI (#57 STONE) TO CHOKE OFF UPPER LAYER.

PLACE ADDITIONAL FILTER FABRIC AS SHOWN ON THE PLANS.

PRELIMINARY
NOT FOR LETTING

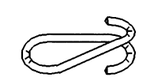


ROCK BOLT PLACEMENT



BEARING PLATE

(1" X 1'-4" X 1'-4" GALVANIZED PLATE)



TECCO COMPRESSION CLAW

PROJECT NO. 112.104401

HAYWOOD COUNTY

STATION: 15+00 TO 35+25

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOE SCOUR PROTECTION

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

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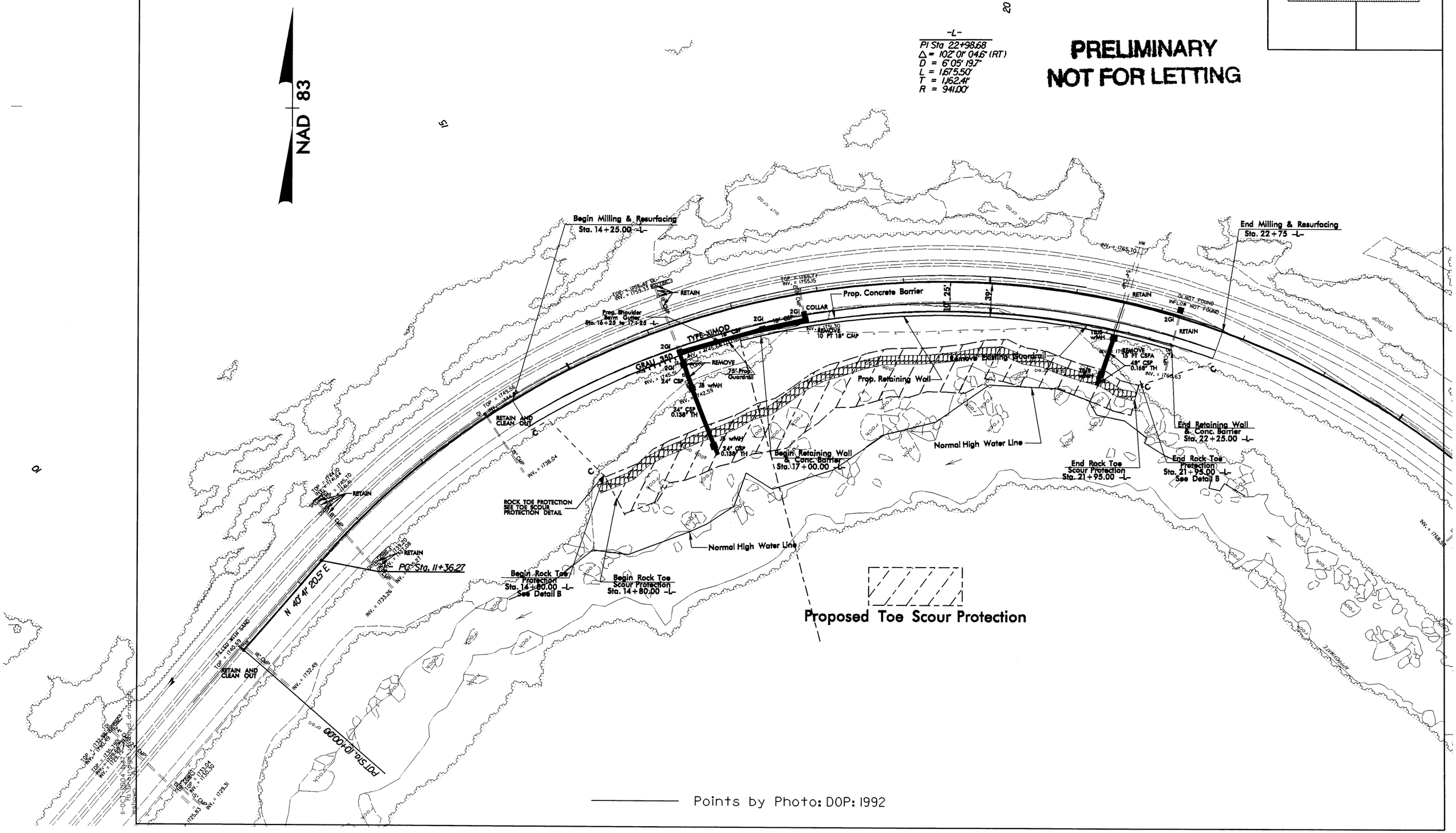
PROJECT REFERENCE NO.	SHEET NO.
112J04401	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PRELIMINARY NOT FOR LETTING



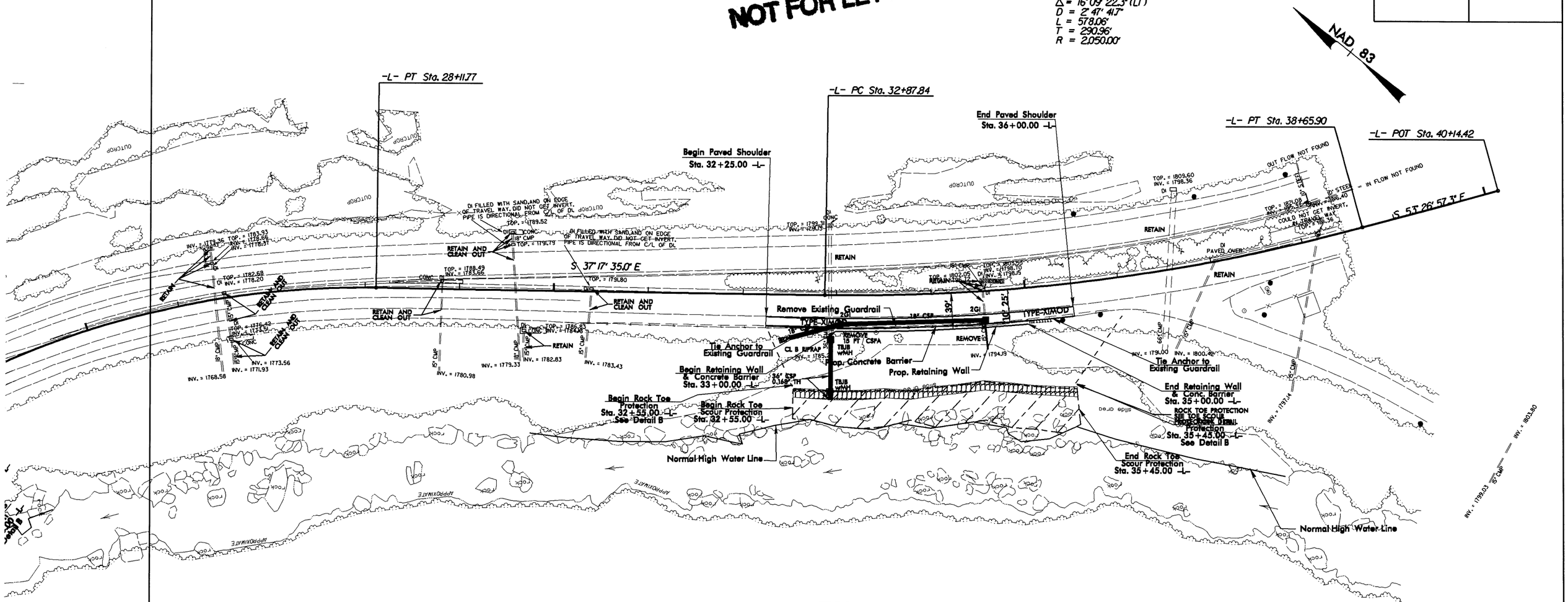
PROJECT REFERENCE NO.	SHEET NO.
112J04401	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PRELIMINARY
NOT FOR LETTING

-L-
PI Sta 35+78.80
Δ = 16° 09' 22.3" (LT)
D = 2° 47' 41.7"
L = 578.06'
T = 290.96'
R = 2,050.00'

NAD 83



Proposed Toe Scour Protection

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