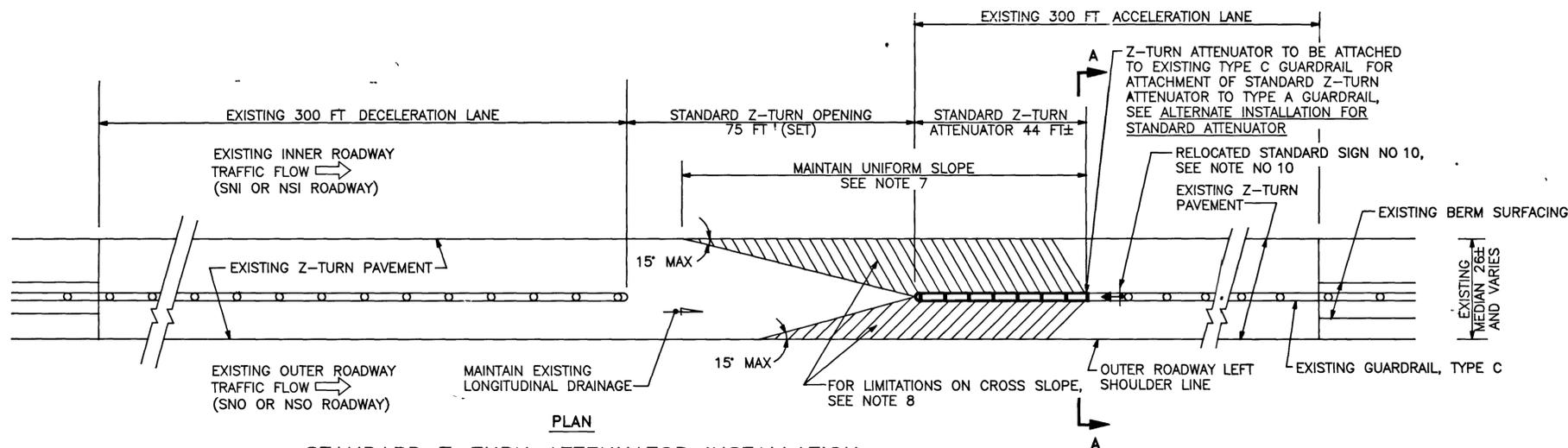
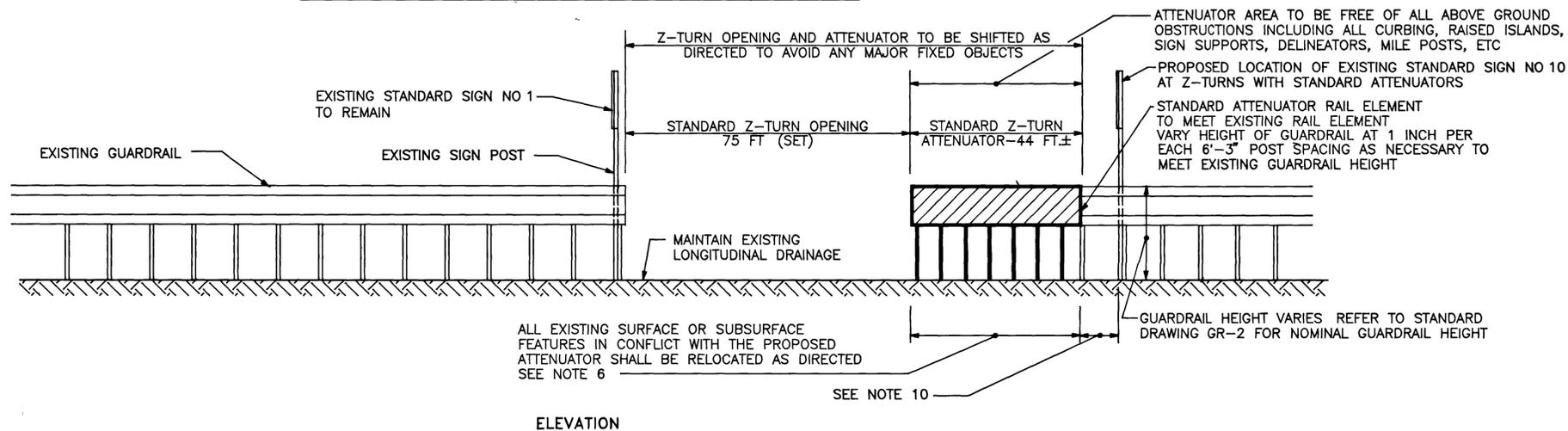


DRAWING PREPARED BY URBITRAN ASSOCIATES INC.
ROBERT B LEE N J P.E. NO 26759

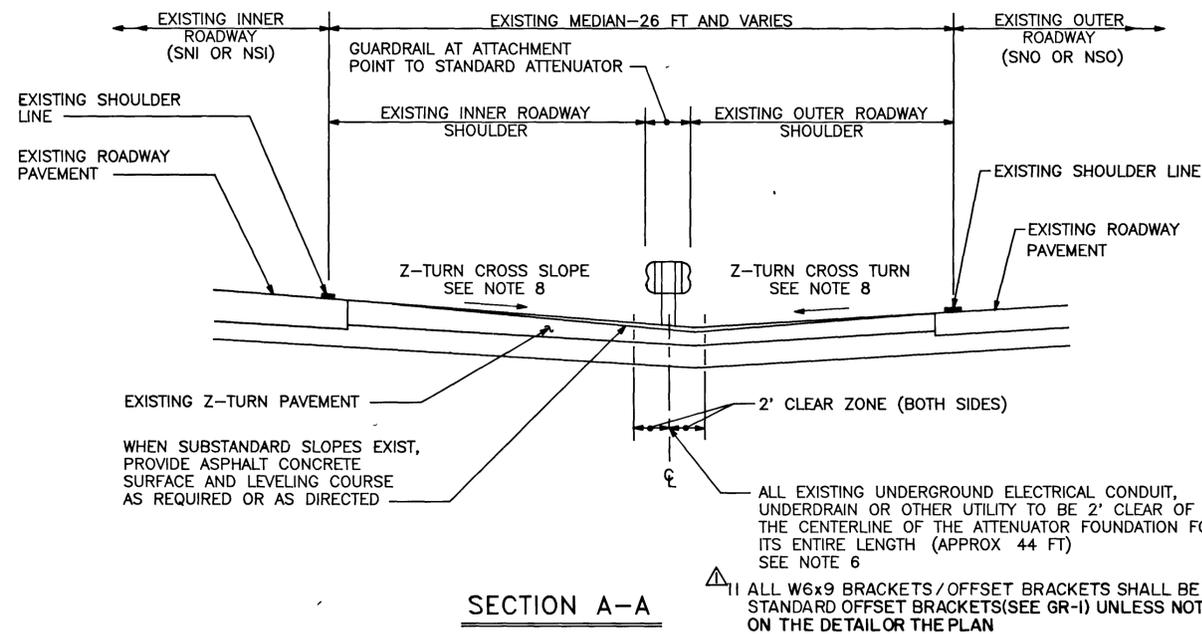
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STANDARD Z-TURN ATTENUATOR INSTALLATION



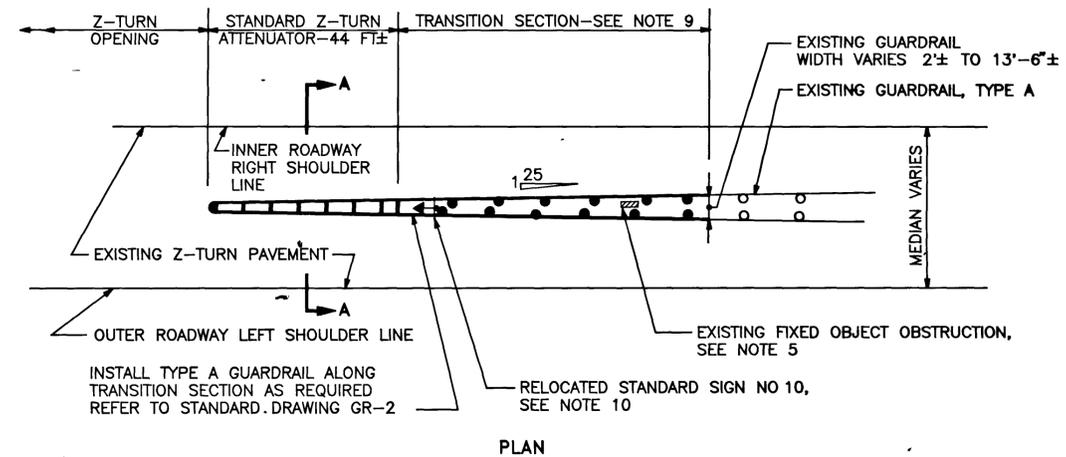
ELEVATION FOR STANDARD AND ALTERNATE ATTENUATOR INSTALLATION



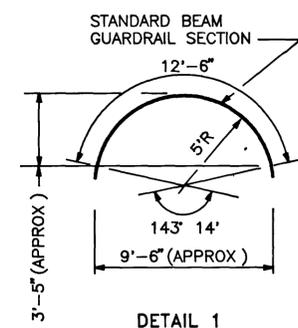
SECTION A-A

GENERAL NOTES:

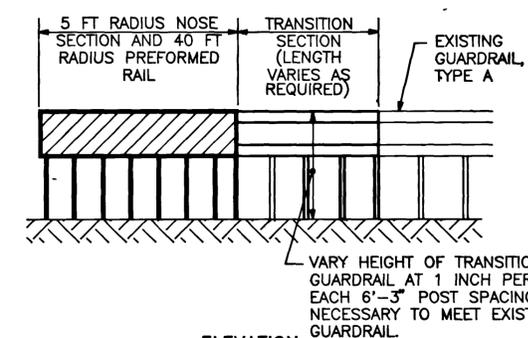
- 1 THE SELECTION CRITERIA FOR ATTENUATOR INSTALLATIONS AT Z-TURNS IS AS FOLLOWS
 -THE STANDARD Z-TURN ATTENUATOR INSTALLATION SHALL BE APPLICABLE AT Z-TURNS WITH TYPE C GUARDRAIL
 -THE ALTERNATE INSTALLATION FOR STANDARD ATTENUATOR SHALL BE APPLICABLE TO Z-TURNS WITH TYPE A GUARDRAIL WHERE AMPLE UNOBSTRUCTED SPACE IS AVAILABLE TO INSTALL THE REQUIRED GUARDRAIL TRANSITIONS
 -THE ALTERNATE END TREATMENT SHALL BE APPLICABLE TO Z-TURNS WITH TYPE A GUARDRAIL WHERE THE TYPE A GUARDRAIL CAN NOT BE PROPERLY TRANSITIONED
- 2 EXISTING DRAINAGE IN THE MEDIAN SHOULD BE MAINTAINED
- 3 FOR THE REQUIRED INSTALLATION OF ALL STANDARD GUARDRAIL COMPONENTS, REFER TO STANDARD DRAWINGS GR-1 TO GR-7
- 4 FOR AREAS REQUIRING REDUCED POST SPACING, REFER TO STANDARD DRAWING GR-5 FOR THE INSTALLATION OF ADDITIONAL GUARDRAIL POSTS
- 5 ADJUST GUARDRAIL TRANSITION AS REQUIRED TO MINIMIZE IMPACTS TO THE EXISTING FIXED OBJECTS IN THE MEDIAN
- 6 IN AREAS WHERE EXISTING ELECTRICAL CONDUIT OR OTHER UTILITY LINES MIGHT CONFLICT WITH PROPOSED GUARDRAIL POSTS OR ATTENUATOR FOUNDATIONS, THE CONTRACTOR MUST EXPOSE THE CONDUIT BY HAND EXCAVATED TEST PITS
- 7 ELIMINATE ANY BREAKS IN LONGITUDINAL GRADE OR CROSS SLOPE TO PROVIDE A SMOOTH APPROACH
- 8 ALLOWABLE CROSS SLOPE AT PROPOSED Z-TURN ATTENUATORS
 -FOR NEW CONSTRUCTION, CROSS SLOPE IN SHADED AREA SHALL BE 10:1 OR FLATTER
 -FOR EXISTING Z-TURNS, DESIRABLE CROSS SLOPE IN SHADED AREA SHALL BE 10:1 OR FLATTER HOWEVER, A CROSS SLOPE OF 8:1 SHALL BE CONSIDERED THE MAXIMUM ALLOWABLE
 -CROSS SLOPES STEEPER THAN 8:1 SHALL BE REGRADED
- 9 WHEN TRANSITION LENGTH BECOMES EXCESSIVE, OR ADVERSELY AFFECTS EXISTING FEATURES IN THE MEDIAN, REFER TO ALTERNATE END TREATMENT
- 10 STANDARD SIGN NO 10 SHALL BE RELOCATED A MINIMUM OF 6'-3" BEYOND END OF STANDARD ATTENUATOR AT ALL INSTALLATIONS OF THE STANDARD ATTENUATOR



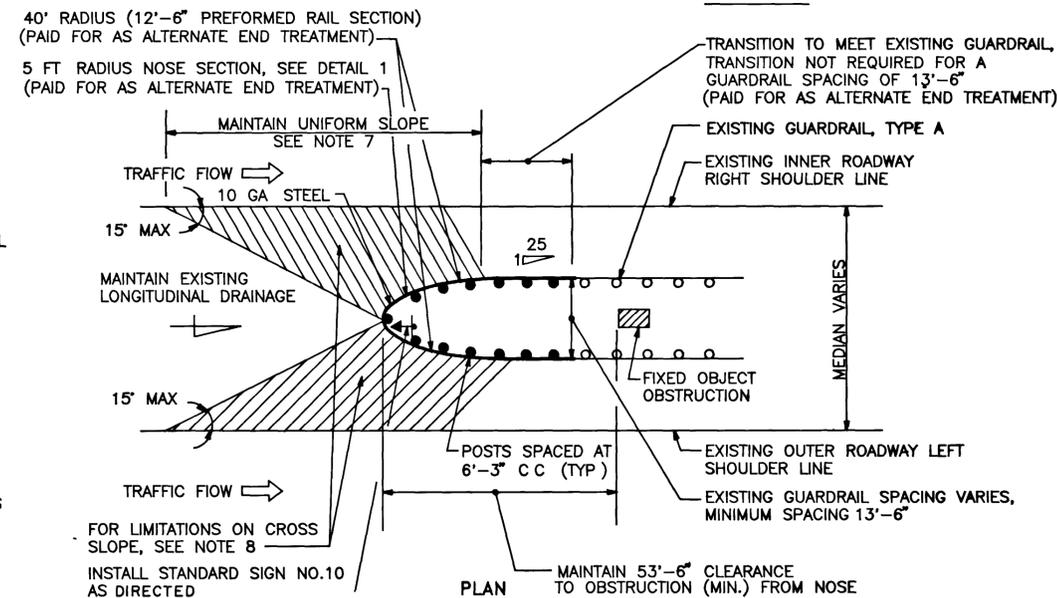
ALTERNATE INSTALLATION FOR STANDARD ATTENUATOR



DETAIL 1



ELEVATION



ALTERNATE END TREATMENT



APP	NO	DATE	REVISION
	1	10/01	ADDED NOTE II
		7/93	ORIGINAL DRAWING

NEW JERSEY TURNPIKE AUTHORITY	
NEW JERSEY TURNPIKE	
STANDARD Z-TURN ATTENUATOR INSTALLATION	
OFFICE OF THE CHIEF ENGINEER NEW BRUNSWICK NEW JERSEY	1993 STANDARD DRAWING GR-8

CONTRACT NO.

SHEET NO.

OF