

REVISION OF SECTION 614
RUMBLE STRIPS (GRINDING)

Section 614 of the Standard Specifications is hereby revised for this project as follows:

Subsection 614.12 shall include the following:

Rumble strips shall be constructed on the existing highway shoulder.

The rumble strips shall be formed by machine grinding. The rumble strips shall adhere to the pattern and dimensions shown in the plans.

Rumble strips shall be placed throughout the project on both the inside and outside shoulders, as shown on the plans.

Subsection 6 14.13 shall include the following:

Rumble strips will be measured by the linear meter which shall include all labor, materials, tools, equipment and incidentals required to construct the rumble strips, complete in place and removal of all materials displaced during the grinding operations from the roadway template as specified in the plans, in these special provisions, and as directed by the engineer.

Subsection 615.14 shall include the following:

Pay Item	Pay Unit
Rumble Strips (Grinding)	Linear Meter

AS CONSTRUCTED			FED. ROAD DISTRICT	DIVISION	PROJECT NUMBER	SHEET NUMBER		
NO REVISIONS	<input type="text"/>	REVISED	<input type="text"/>	VOID	<input type="text"/>	VIII	COLO.	6

GENERAL NOTES

RUMBLE STRIPS SHALL CONFORM TO THE DETAILS AND LOCATIONS AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL LAY OUT A RUMBLE STRIP TEST PATTERN PRIOR TO THE START OF CONSTRUCTION FOR APPROVAL BY THE ENGINEER.

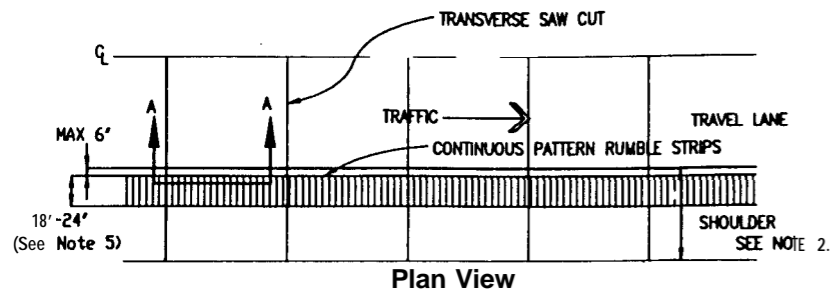
THE CONTRACTOR SHALL NOT PLACE RUMBLE STRIPS WITHIN 100 M EACH SIDE OF INTERSECTING CROSS STREETS, 10 M EACH SIDE OF MAILBOXES, THROUGH ACCELERATION LANES, DECELERATION LANES, AND RAMPS. IN ADDITION, RUMBLE STRIPS SHALL NOT BE PLACED WITHIN 50 METERS OF PRIVATE ROAD APPROACHES FOR HOUSES OR BUSINESSES LOCATED WITHIN 100 M OF THE ROADWAY OR WHEN SHOULDERS ARE LESS THAN 1.2 M. THESE AREAS WILL NOT BE PAID FOR AS RUMBLE STRIPS.

MAXIMUM LANE CLOSURE SHALL NOT EXCEED 1.6 KM IN EACH DIRECTION. MAXIMUM SHOULDER CLOSURE SHALL NOT EXCEED 3.2 KM IN EACH DIRECTION.

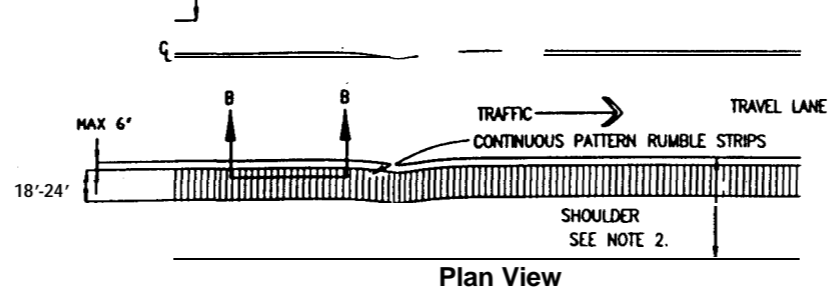
CONTRACTOR SHALL HAVE A DESIGNATED STAGING AREA FOR PERSONAL VEHICLES AND CONSTRUCTION EQUIPMENT WHEN NOT IN USE. THE STAGING SHALL BE INCIDENTAL TO THE WORK.

ALL CONSTRUCTION SIGNS SHALL BE REMOVED AT THE END OF THE WORKING DAY. CONSTRUCTION SIGNS SHALL ONLY BE ERECTED WHEN WORK IS TO BE PERFORMED.

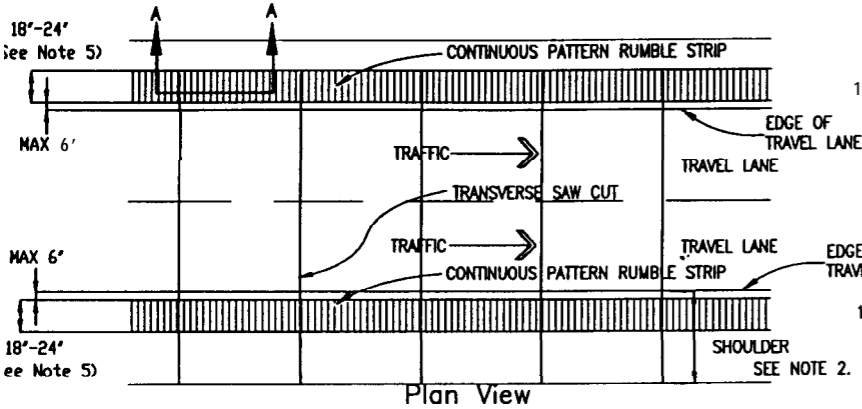
MATERIALS REMOVED DURING THE RUMBLE STRIP GRINDING PROCESS SHALL BE SWEEPED FROM THE ROADWAY. COST OF SWEEPING SHALL BE INCLUDED IN THE COST OF ITEM 614 RUMBLE STRIP (GRINDING).



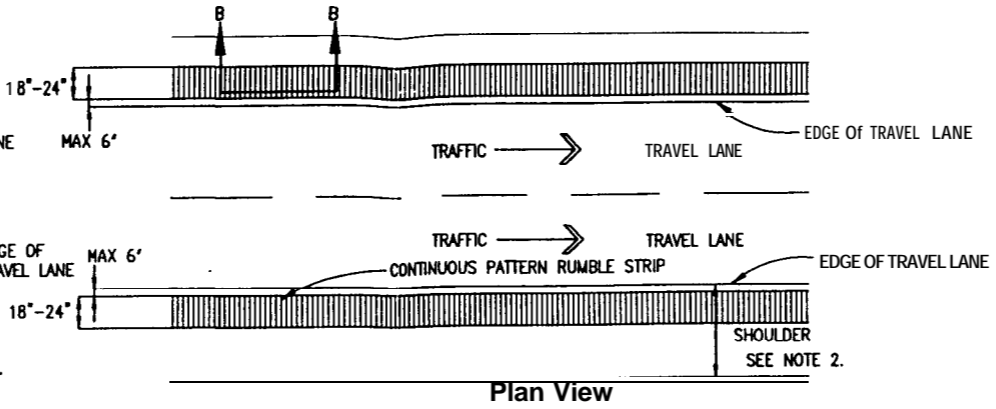
CONTINUOUS RUMBLE STRIP TWO-LANE ROADWAY (CONCRETE)



CONTINUOUS RUMBLE STRIP TWO-LANE ROADWAY (ASPHALT)



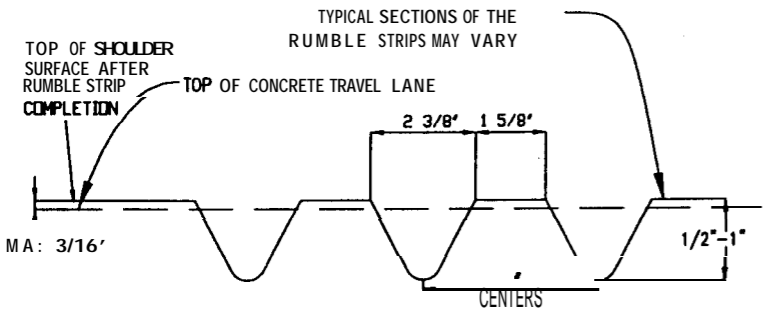
CONTINUOUS RUMBLE STRIP 4 LANE DIVIDED ROADWAY (CONCRETE)



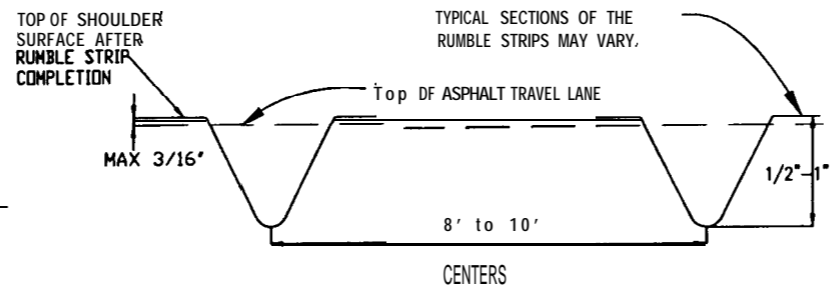
CONTINUOUS RUMBLE STRIP 4 LANE DIVIDED ROADWAY (ASPHALT)

GENERAL NOTES

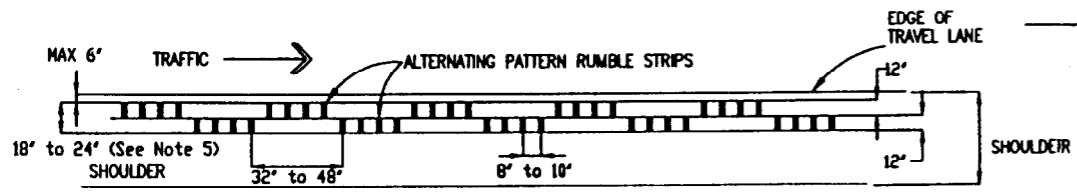
1. RUMBLE STRIPS SHUL BE OMITTED AT AUXILIARY LANES, ROAD APPROACHES AND OTHER INTERRUPTIONS AS DIRECTED BY THE ENGINEER.
2. MAINTAIN A MINIMUM OF 3 FEET BETWEEN EDGE OF RUMBLE STRIP AND OUTSIDE EDGE OF SHOULDER.
3. COSTS FOR THE RUMBLE STRIPS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE PRICE OF HOT BITUMINOUS PAVEMENT OR CONCRETE PAVEMENT UNLESS OTHERWISE NOTED IN ME PLANS. RETRO-FIT RUMBLE STRIPS WILL BE MEASURED BY THE FOOT OF STRIPS PRODUCED AND PAID FOR AS RUMBLE STRIP (GRINDING)
4. RUMBLE STRIPS MAY BE INSTALLED BY SAWING, GRINDING, ROLLING OR OTHER METHOD AS APPROVED.
5. USE 18' WIDE RUMBLE STRIP AND MINIMIZE THE DISTANCE BETWEEN RUMBLE STRIP AND WHITE LINE ON CONCRETE PAVEMENTS WITH 14' WIDE SLABS.
6. RUMBLE STRIPS MAY HAVE A MINIMUM WIDTH OF 12' WHEN USED ON 4' WIDE SHOULDERS.



TYPICAL SECTION A - A

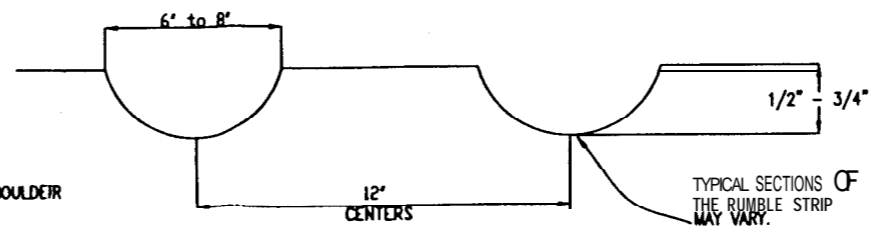


TYPICAL SECTION B - B



Plan View

ALTERNATING PATTERN RUMBLE STRIP (ALTERNATE DESIGN) (ASPHALT)



TYPICAL SECTIONS A - A AND B - B FOR GRIND-IN RET OF RUMBLE STRIP ON EXISTING PAVEMENT

Retro-fit Rumble Stripe may have a minimum width of 1 ft. when shoulder is 4' wide.

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 Staff Design

Computer File information
 Drawing available in CAD Library, STANDARDS directory
 Drawing File Name: 6140102er1.dwg
 WRS kad Version: R13_c4 Scale: Units: English

Standard Plan Revised
 Date: 8-21-97
 Comments: New shoulder rumbles

RUMBLE STRIPS
 Issued By Staff Design Branch
 November 1, 1992

STANDARD PLAN NO
M-614-1
Sheet No. 2 of