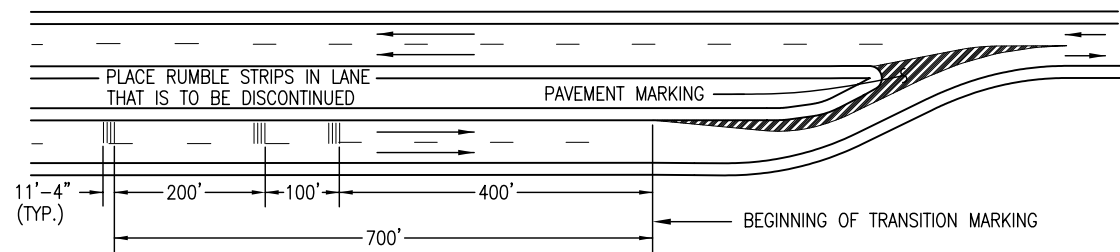
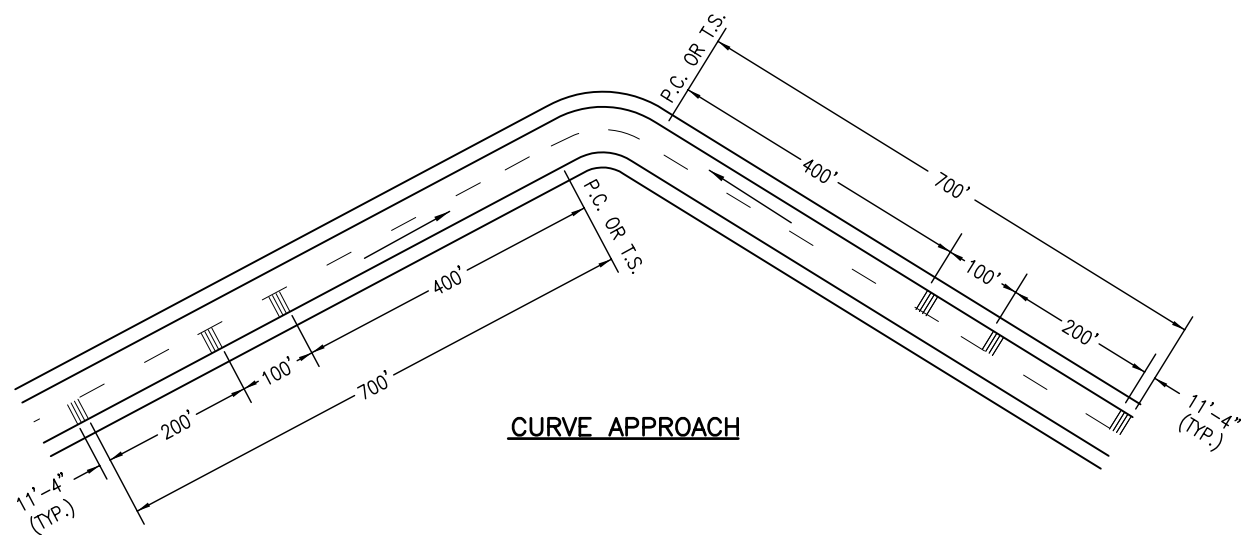


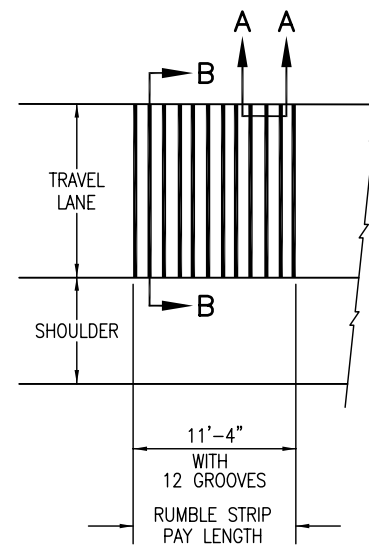
**STOP SIGN APPROACH**



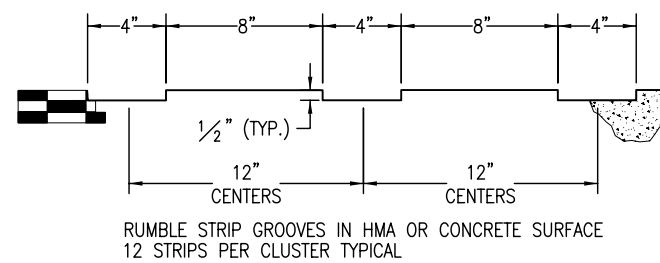
**LANE REDUCTION TRANSITION**



**TRAVEL LANE RUMBLE STRIPS**

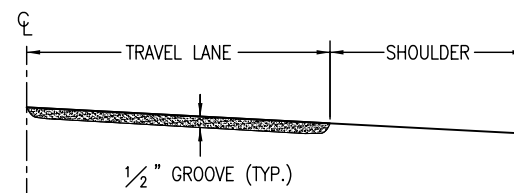


**TYPICAL RUMBLE STRIP CLUSTER**



RUMBLE STRIP GROOVES IN HMA OR CONCRETE SURFACE  
12 STRIPS PER CLUSTER TYPICAL

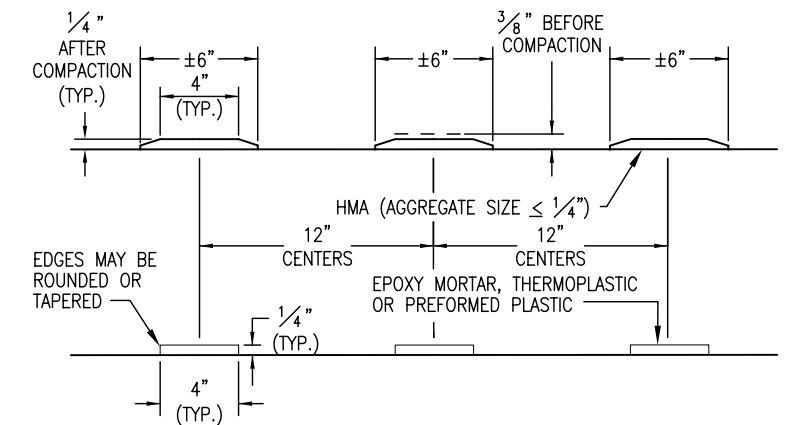
**SECTION A-A (GROOVED)**



**SECTION B-B (GROOVED)**

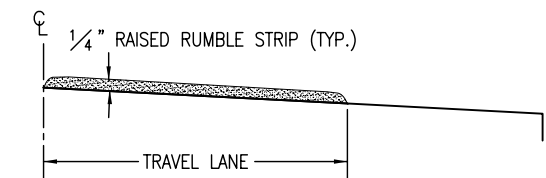
**PERMANENT GROOVED RUMBLE STRIPS**

- NOTES**
- GROOVED RUMBLE STRIP SKEW OR CLUSTER SPACING SHALL BE MODIFIED TO AVOID LOCATING A GROOVE ON A CONCRETE PAVEMENT TRANSVERSE JOINT.
  - PERMANENT TRAVEL LANE RUMBLE STRIPS SHALL BE THE GROOVE DESIGN, AND MAY BE CUT IN EXISTING OR NEW HMA OR CONCRETE PAVEMENT. THE GROOVES MAY BE CUT BY SAWING, GRINDING, OR OTHER METHOD AS APPROVED.
  - TEMPORARY RUMBLE STRIPS SHOULD NORMALLY BE THE RAISED DESIGN. THEY MAY BE GROOVES IF LOCATED IN A PAVEMENT THAT WILL BE REMOVED OR COVERED WITH A PAVEMENT COURSE BEFORE COMPLETION OF THE PROJECT. TYPICAL USES OF TEMPORARY RUMBLE STRIPS ARE FOR LANE CLOSURES OR ALIGNMENT CHANGES IN CONSTRUCTION ZONES.
  - THE HMA (RAISED RUMBLE STRIPS) SHALL BE PLACED ON A CLEAN, TACK COATED TREATED PAVEMENT IN  $\frac{3}{8}$  IN. HIGH FORMS. THE FORMS SHALL BE REMOVED AND THE ASPHALT COMPACTED BY ROLLING ALONG THE STRIPS. EPOXY MORTAR SHALL BE FORMED, TROWELED, AND LEVELED WITH A ROLLER AND THE TOP EDGES ROUNDED, THERMOPLASTIC STRIPS SHALL BE APPLIED BY THE EXTRUSION PROCESS. PREFORMED PLASTIC SHALL BE INSTALLED IN CONFORMANCE WITH THE INSTRUCTIONS OF THE MANUFACTURER.



PREFORMED PLASTIC STRIPS SHALL BE SPACED ON 12 IN. CENTERS AND MAY VARY FROM THE 4 IN. TYPICAL WIDTH. 12 STRIPS PER CLUSTER TYPICAL

**SECTION A-A (RAISED)**



**SECTION B-B (RAISED)**

**TEMPORARY RAISED RUMBLE STRIPS**

**Computer File Information**

Creation Date: 07/04/06	Initials: SJR
Last Modification Date: 07/04/06	Initials: LTA
Full Path: www.dot.state.co.us/DesignSupport/	
Drawing File Name: 614010303.dwg	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

(R-X)
(R-X)
(R-X)
(R-X)

**Sheet Revisions**

Date:	Comments

**Colorado Department of Transportation**

4201 East Arkansas Avenue  
Denver, Colorado 80222  
Phone: (303) 757-9083  
Fax: (303) 757-9820

Project Development Branch SRJ/LTA

**RUMBLE STRIPS**

Issued By: Project Development Branch on July 04, 2006

**STANDARD PLAN NO.**

M-614-1

Sheet No. 3 of 3