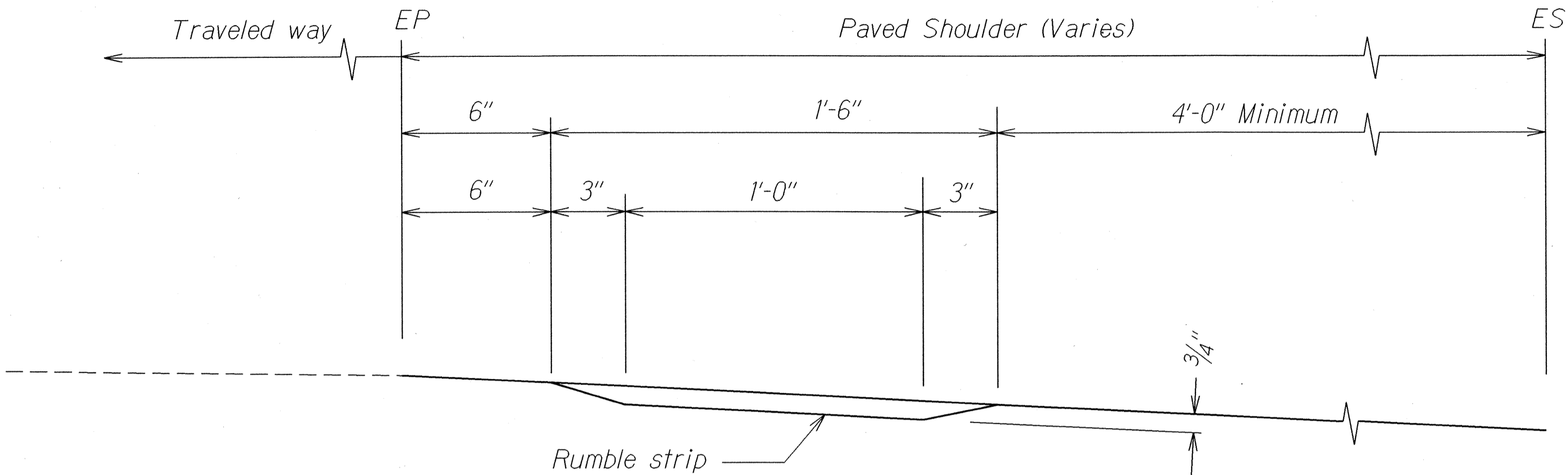


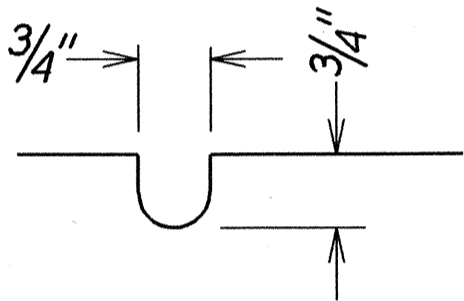
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(28)	2002	ADD.7	47

NOTES :

- Rumble Strip depressions must be placed after Breakdown Rolling, with Finish Rolling done after Rumble Strip Rolling but not on depressions unless otherwise directed by the Engineer.
- Rolling for Rumble Strip depressions shall be done when temperature of asphalt is about 180° F (when fines just stick to the palm of hand). Discontinue rolling if mat begins to tear. The rolling of depressions or the stopping of rolling process shall be done in accordance to the the preceding requirements unless otherwise directed by the Engineer.
- Priority is to complete full Breadown Rolling in order to achieve the required density. Full depth depression is a secondary consideration unless otherwise directed by the Engineer.
- The method of constructing the Rumble Strip depressions shall be submitted to the Engineer for acceptance prior to the actual work.
- The construction of the the Shoulder Rumble Strip including the fabrication of the grooving apparatus and 6"white stripe, shall be considered incidental to Section 312 - Plant Mix Glassphalt Concrete Base Course and will not be paid for separately.
- When shoulder reconstruction is required, Shoulder Rumble Strip shall be replaced exactly in the same location as constructed on the ground, no alterations will be allowed.



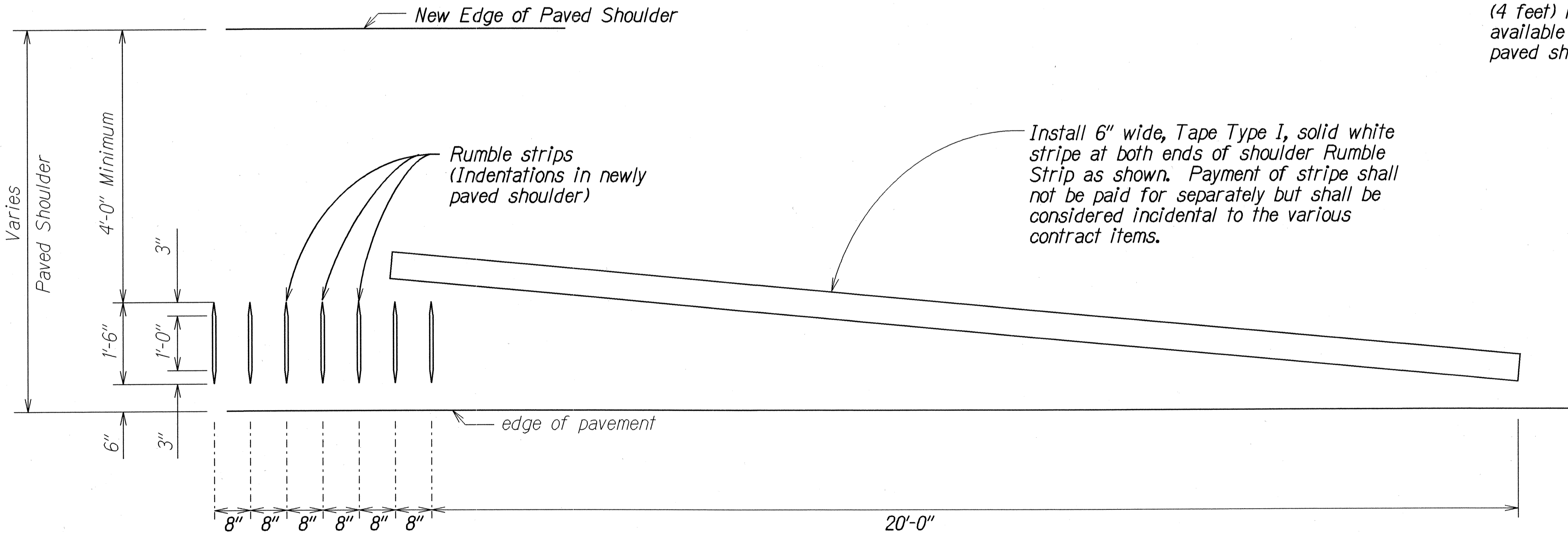
LONGITUDINAL SECTION - RUMBLE STRIP
Scale: 3"=1'-0"



SECTION - RUMBLE STRIP
Scale: 6"=1'-0"

NOTE

Shoulder rumble strips should not be used unless 1.2 meters (4 feet) minimum of clear shoulder width for bicycle use is available between the rumble strips and the outer edge of the paved shoulder.

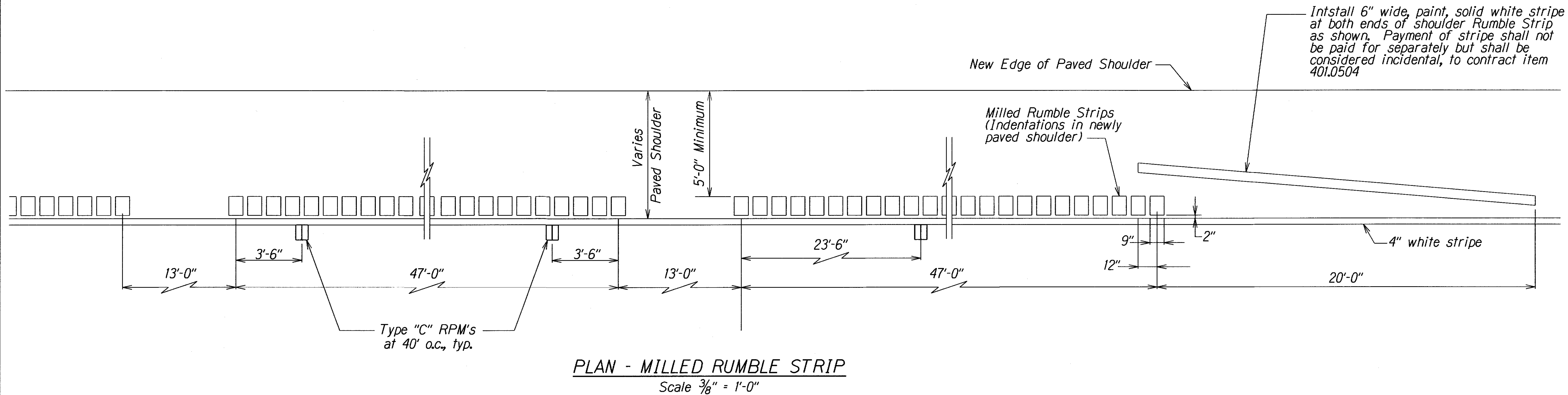


PLAN
Scale: 3/4"=1'-0"

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTED BY	
QUANTITIES BY	
DATE	

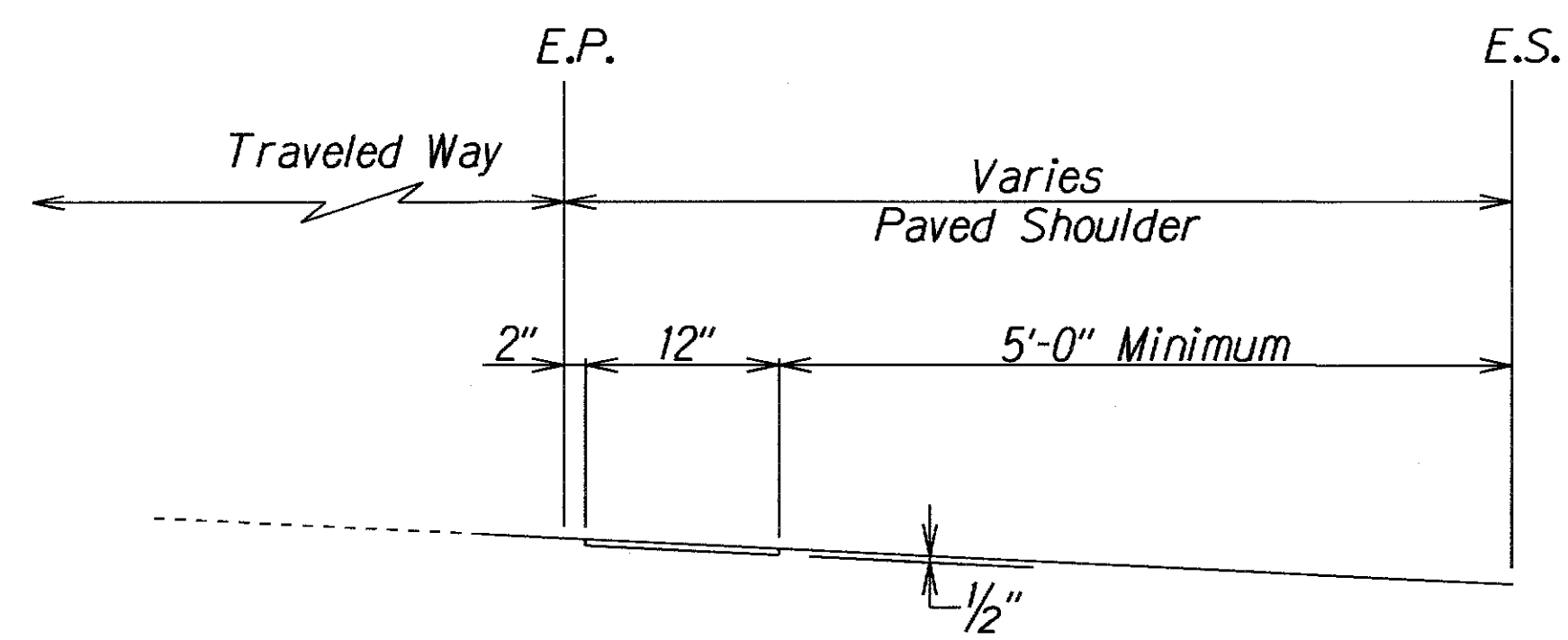
12/10/01	Plan Sheet No. ADD.7 shall supercede Plan Sheet No. 7 per Addendum No. 1.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION SHOULDER RUMBLE STRIP DETAILS AND NOTES QUEEN KA'AHUMANU HIGHWAY GUARDRAIL AND SHOULDER IMPROVEMENTS F.A. PROJECT NO. NH-019-1(28) Scale: see plans Date: April, 2001	
SHEET No. 1	OF 1 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(028)	2002	ADD.7S-1	47

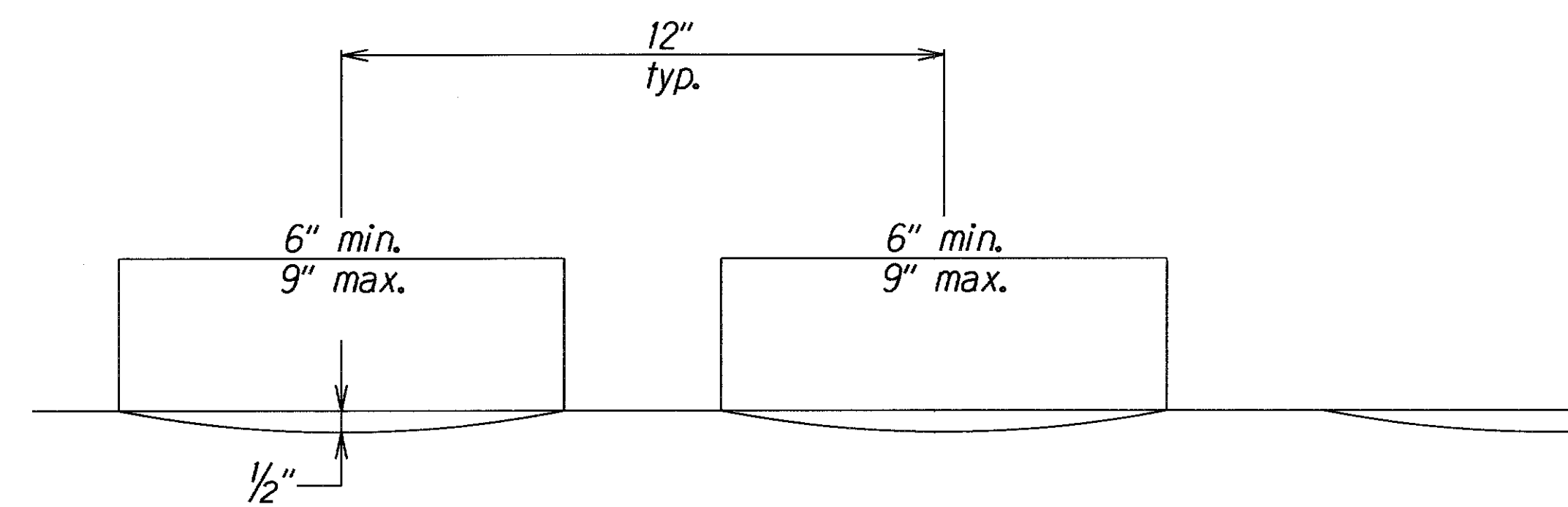


Notes:

1. The method of constructing the Milled Rumble Strip shall be submitted to the Engineer for acceptance prior to the actual work.
2. The construction of the Milled Rumble Strip shall be paid for under Item No. 401.0504. The milling apparatus and 20 lf, 6" white stripe shall be considered incidental to Item No. 401.0504 and will not be paid for separately.
3. Rumble strips shall be installed along all shoulders, except at right turn deceleration and acceleration lanes, as noted on the plans.
4. Do not place Type "C" markers within 2 ft. of the 13 ft. Rumble Strip opening.
5. Rumble Strip will be paid for by linear foot. Included 13-foot gaps will be considered Rumble Strip and measured for payment. Any other gaps in the Rumble Strip (such as driveways, side roads, channelized intersections, etc.) will not be measured for payment.
6. Rumble Strips are to be installed after the edge of pavement striped and before the installation of the Type "C" markers.



LONGITUDINAL SECTION - MILLED RUMBLE STRIP
 Not to Scale



CROSS SECTION - MILLED RUMBLE STRIP
 Not to Scale

NOTE:
 Shoulder rumble strips should not be used unless 1.5 meters (5 feet) of clear shoulder width for bicycle use is available between the rumble strips and the outer edge of the paved shoulder.

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
N.	

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SHOULDER RUMBLE STRIP
DETAILS AND NOTES
QUEEN KA'AHUMANU HIGHWAY
Guardrail and Shoulder Improvements
Federal-Aid Project No. NH-019-1(28)
Scale: NTS Date: April, 2001