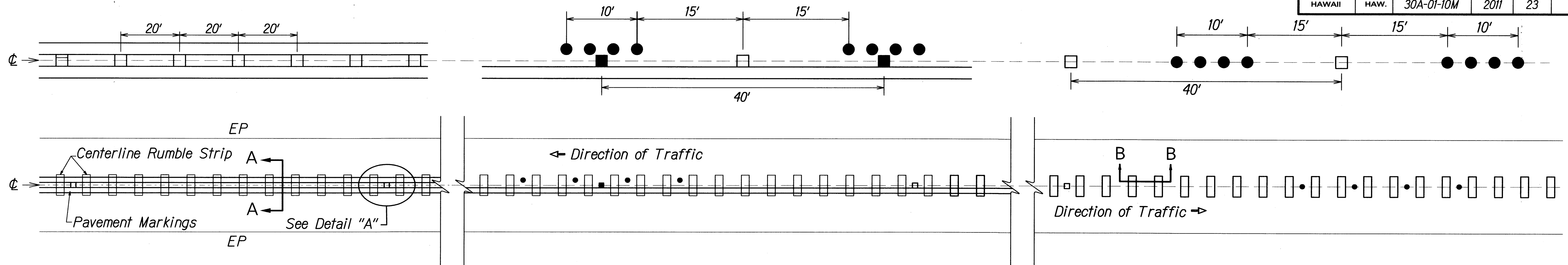
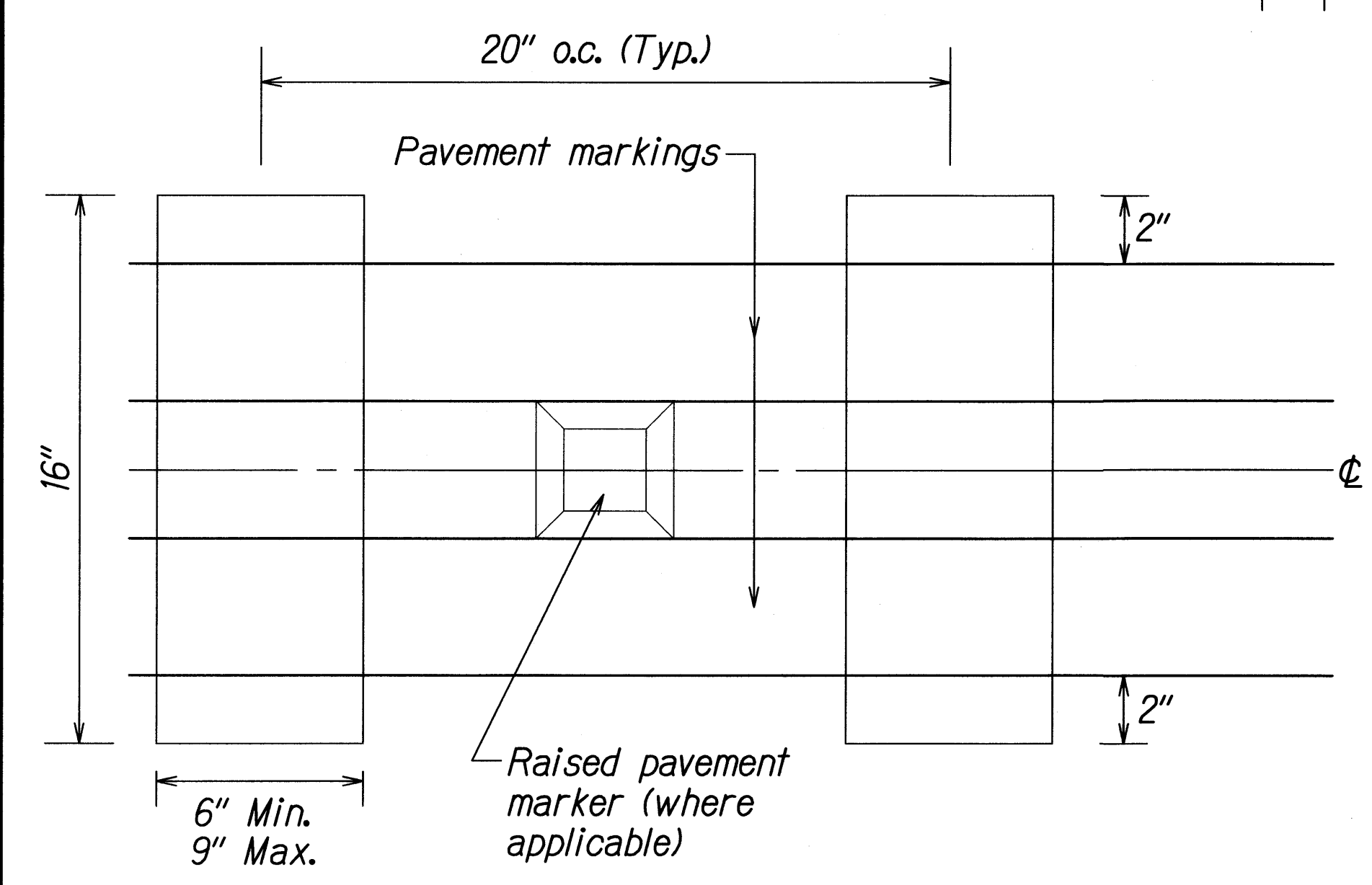


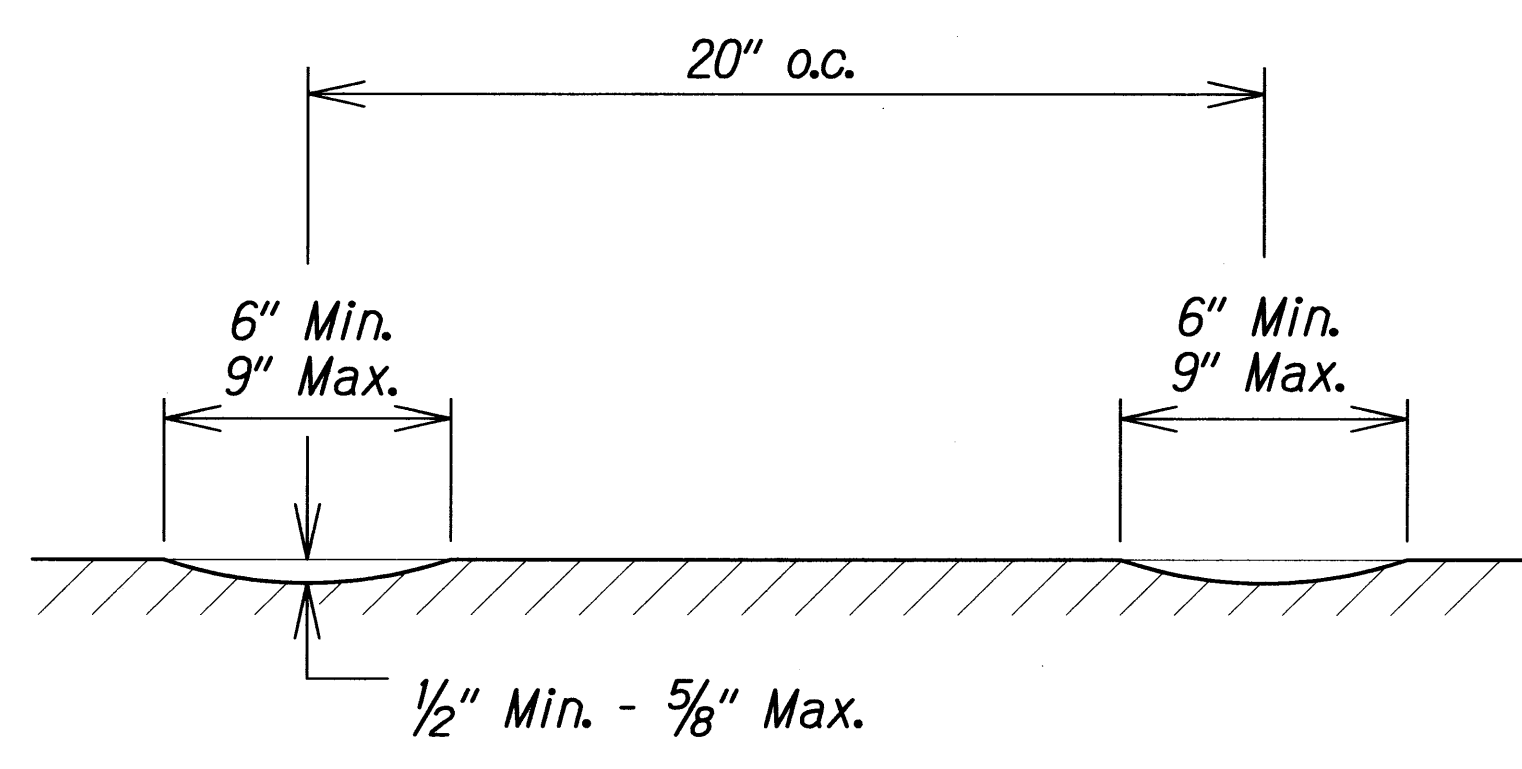
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	30A-01-10M	2011	23	40



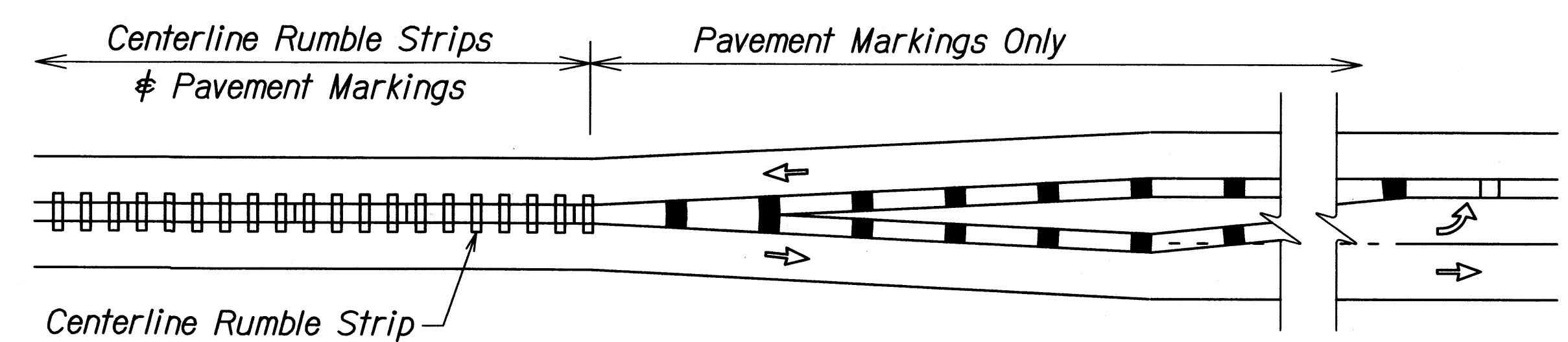
PLAN - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



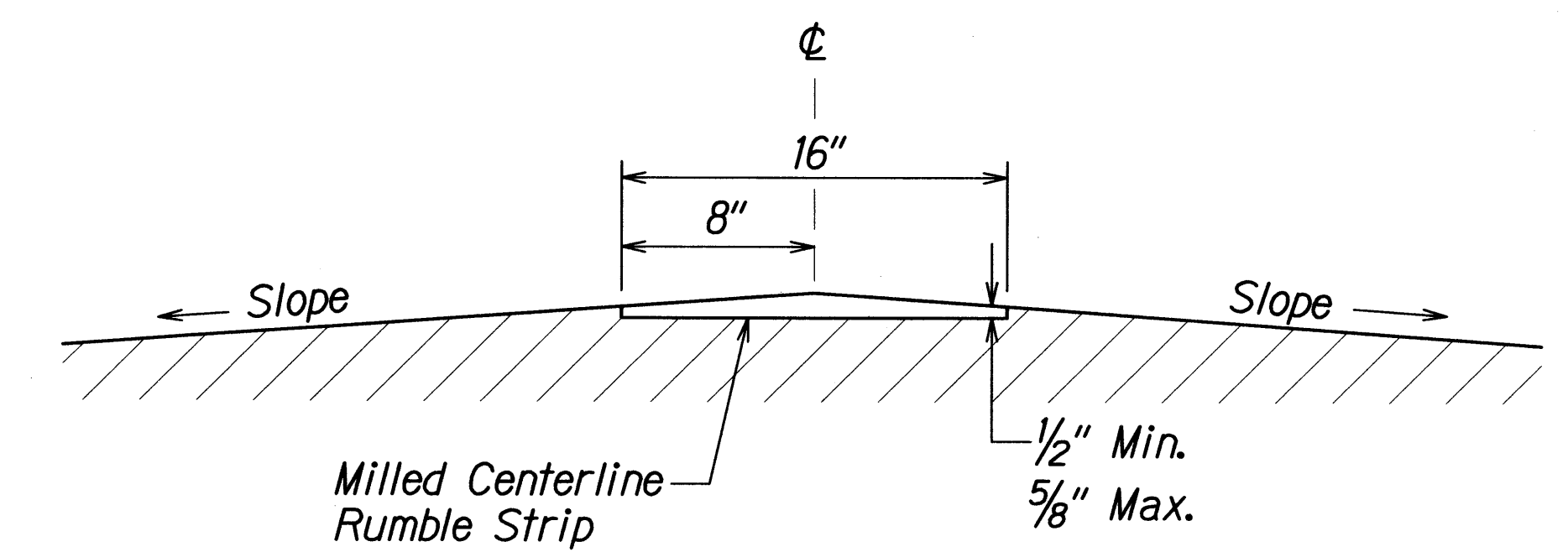
DETAIL "A"
Not to Scale



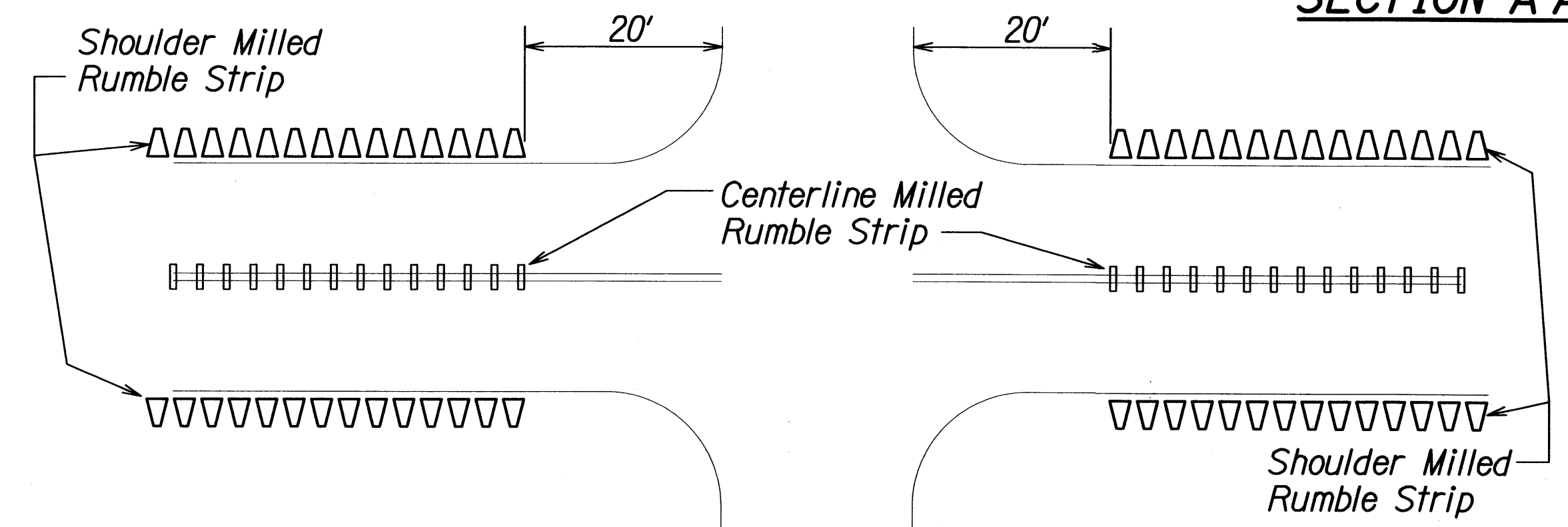
SECTION B-B - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



CENTERLINE MILLED RUMBLE STRIP INSTALLATION LIMIT



SECTION A-A - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



SHOULDER MILLED RUMBLE STRIP INSTALLATION LIMIT
Not to Scale

NOTES:

1. The method of constructing the centerline milled rumble strip shall be submitted to the Engineer for acceptance prior to the actual work.
2. Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement markings prior to installation.
3. Raised pavement markers shall be installed on level surface between the rumble strips. Do not install raised pavement markers inside the milled area.
4. The construction of the centerline milled rumble strip shall be paid for under Item No. 615.0100 - Centerline Milled Rumble Strip. The milling apparatus and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.0100.
5. Do not install centerline rumble strips on bridge decks.
6. Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
7. Pre-formed pavement striping tape or hot spray thermoplastic shall be used for solid line markings withing the milled centerline rumble strip area.
8. Hot spray thermoplastic shall be used for solid line markings within the milled centerline rumble strip area.

ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
DATE	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

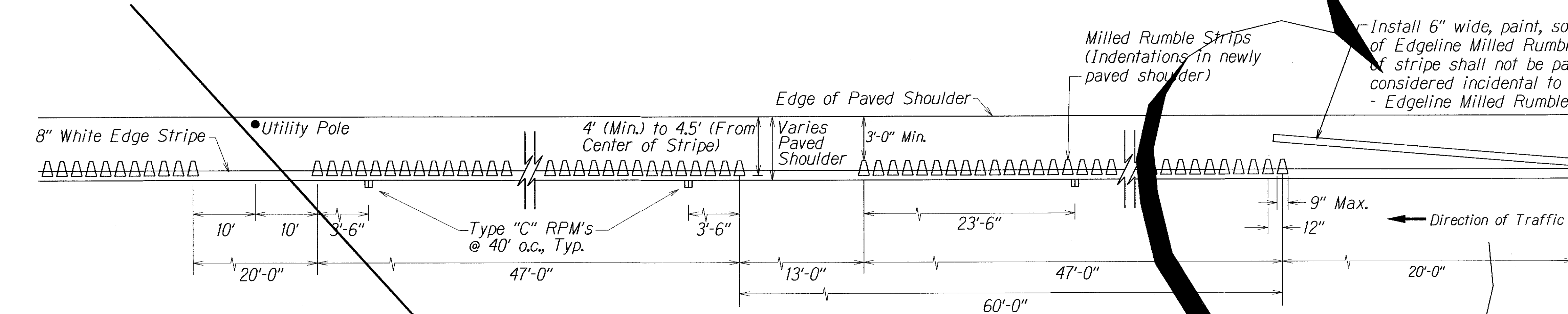
CENTERLINE MILLED RUMBLE STRIP DETAIL

HONOAPIILANI HIGHWAY RESURFACING
Vicinity of Hoonui Road to Plantation Estates Golf Course
Project No. 30A-01-10M

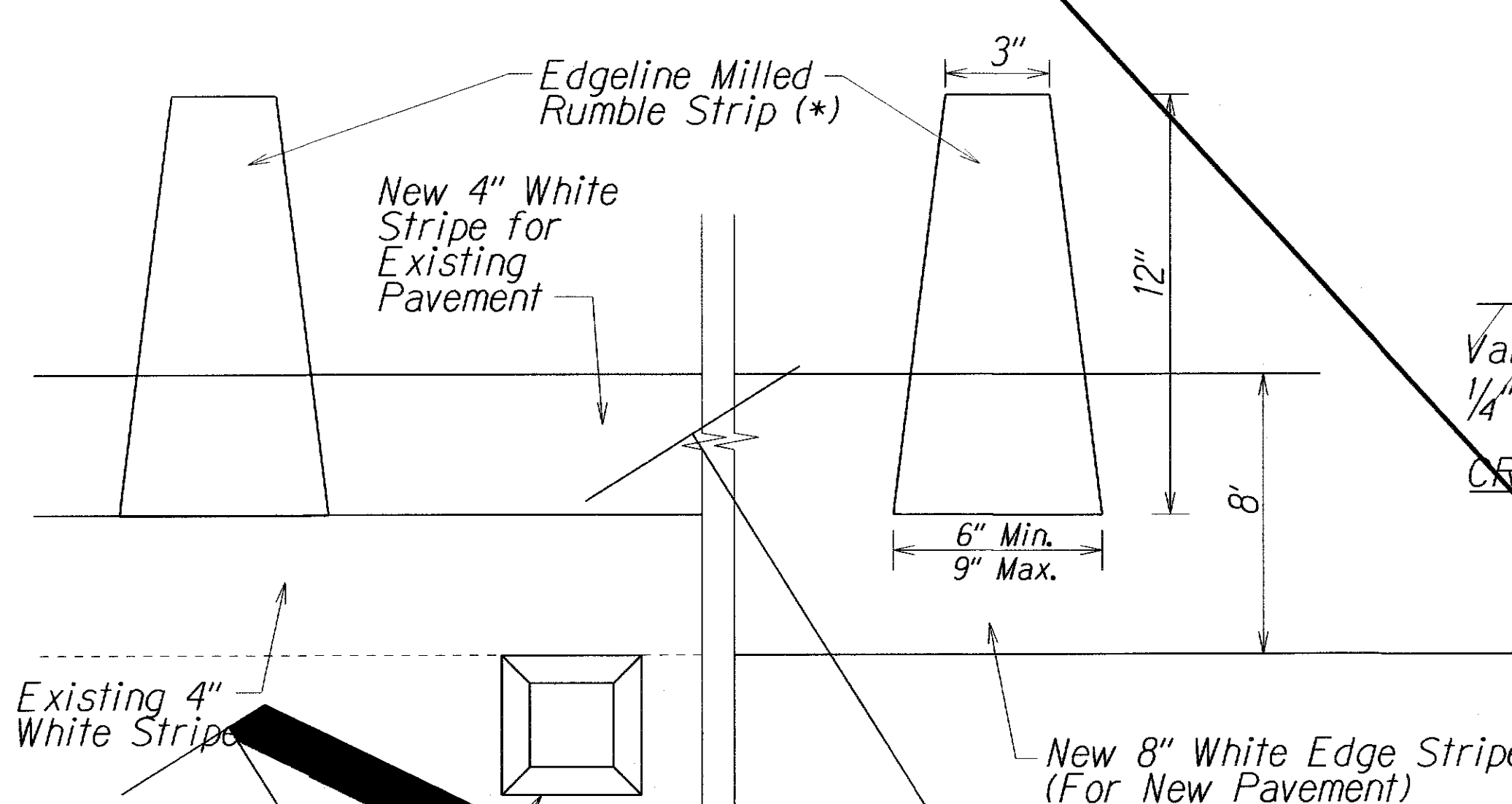
Scale: As Shown Date: July, 2009

SHEET No. 1 OF 3 SHEETS

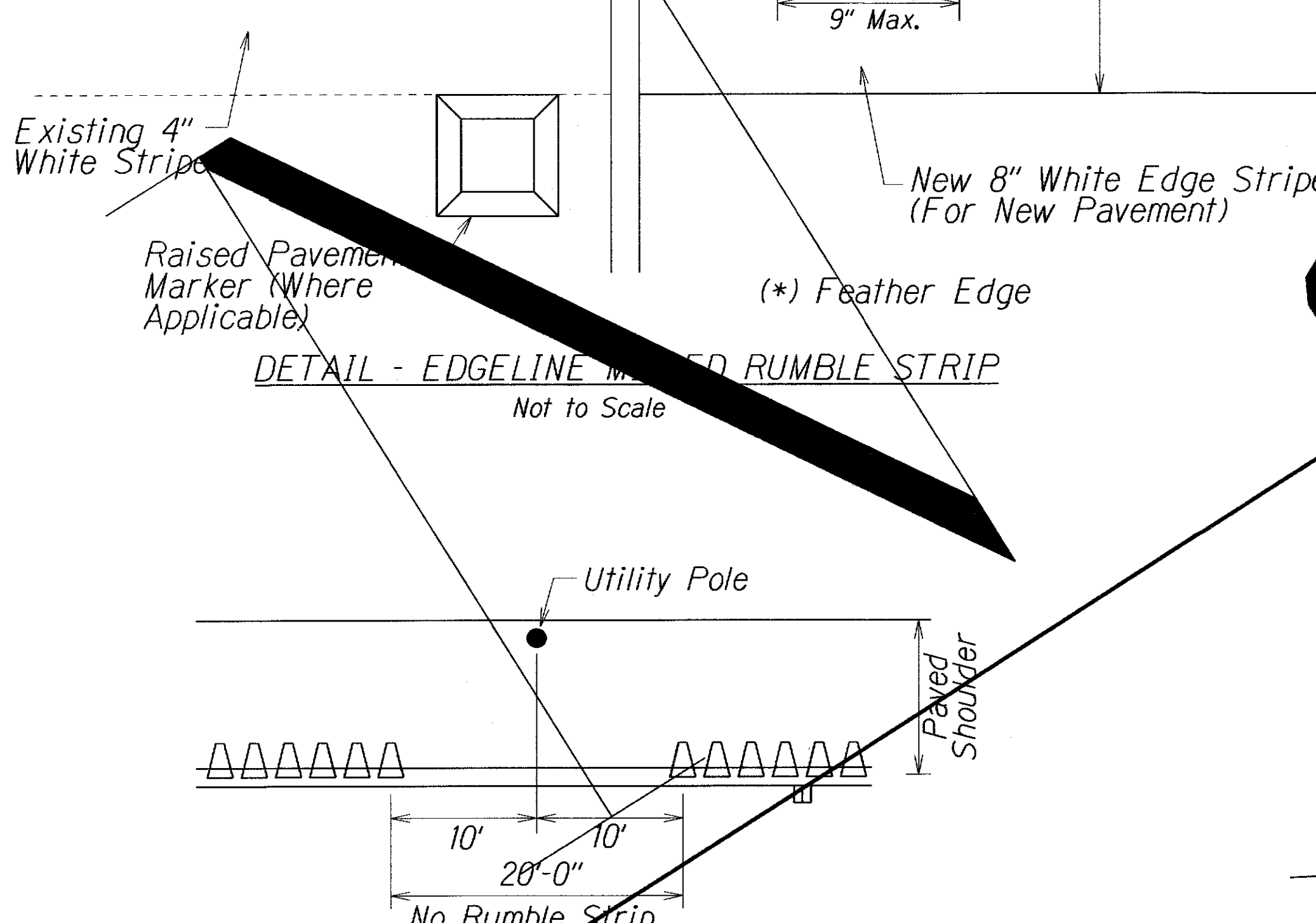
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	30A-01-10M	2011	24	40



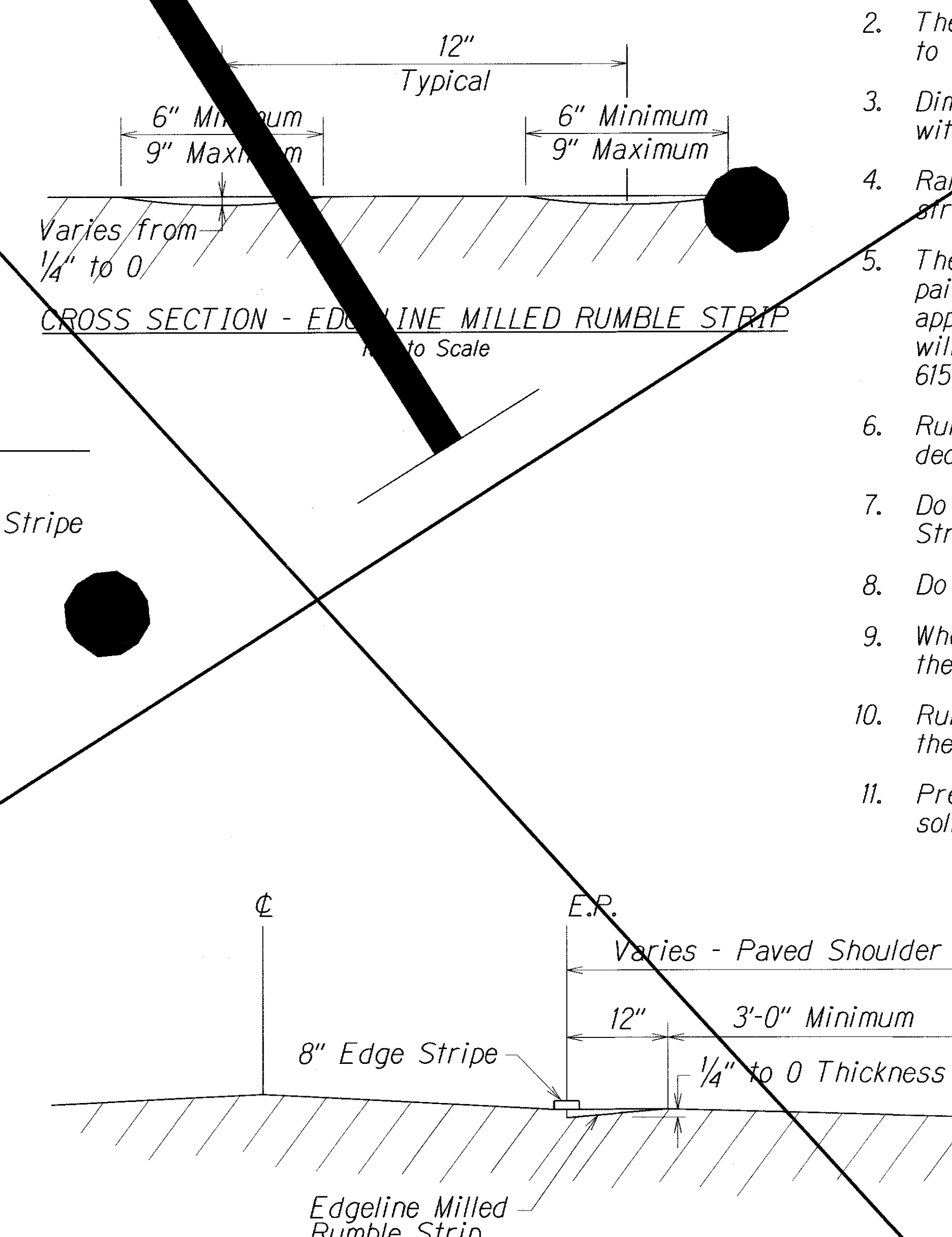
PLAN - EDGE LINE MILLED RUMBLE STRIP



DETAIL - EDGE LINE MILLED RUMBLE STRIP



DETAIL - CONDITION WHERE UTILITY POLE EXISTS



LONGITUDINAL SECTION - EDGE LINE MILLED RUMBLE STRIP

NOTES:

1. Edgeline milled rumble strips shall be installed where the existing condition of the shoulder are 4' to 4.5' from center of edge stripe.
2. The method of constructing the edgeline milled rumble strip shall be submitted to the Engineer for acceptance prior to the actual work.
3. Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement marking prior to installation.
4. Raised pavement markers shall be installed on level surface between the rumble strips. Do not install raised pavement markers inside the milled area.
5. The construction of the edgeline milled rumble strip and 13-foot gaps shall be paid for under Item No. 615.0200 - Edgeline Milled Rumble Strip. The milling apparatus, 20 L.F. - 6" white stripe, and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.0200 - Edgeline Milled Rumble Strip.
6. Rumble strips shall be installed along all shoulders, except at right turn deceleration and acceleration lanes, as noted on the plans.
7. Do not place Type "C" Raised Pavement markers within 2 ft. of the 13 ft. Rumble Strip opening.
8. Do not install edgeline rumble strips on bridge decks.
9. Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
10. Rumble Strips are to be installed after the edge of pavement stripe and before the installation of the Type "C" raised pavement markers.
11. Pre-formed pavement striping tape or hot spray thermoplastic shall be used for solid line markings within the edgeline milled rumble strip area.

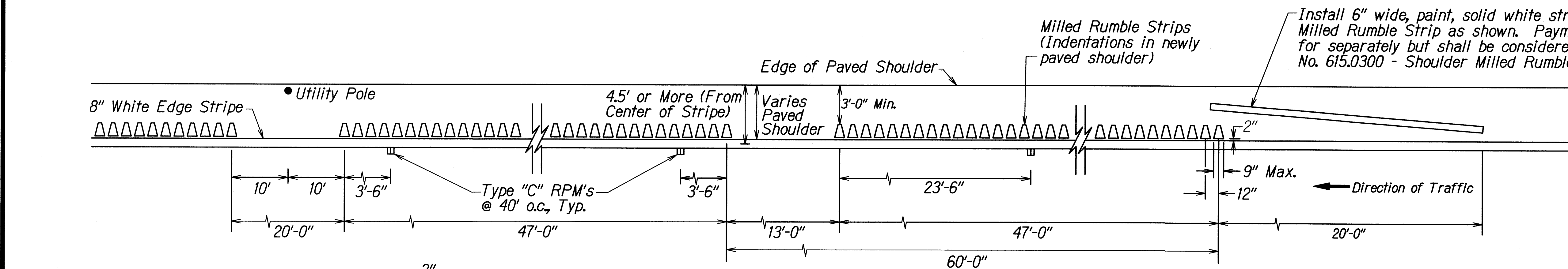
LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

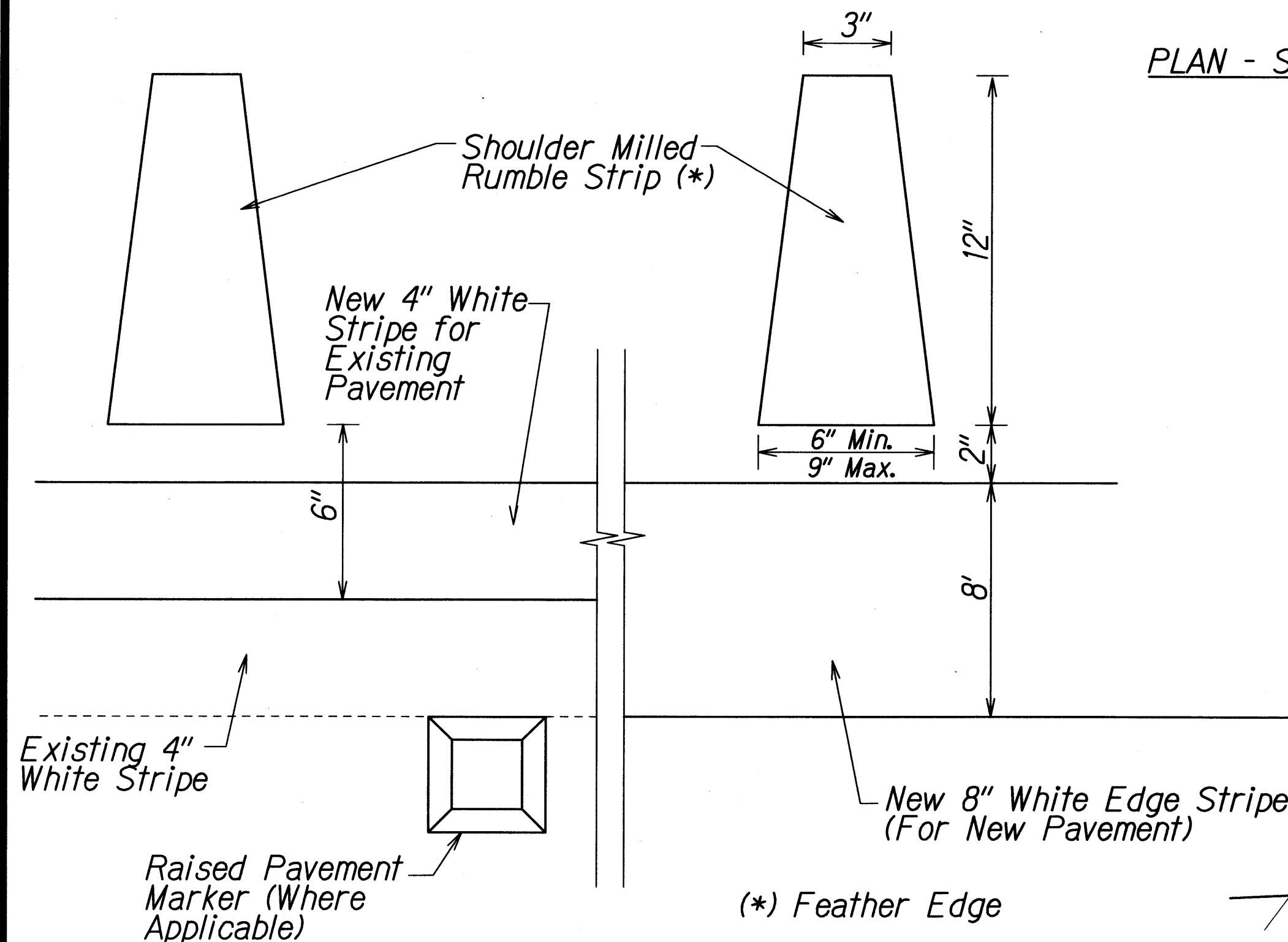
EDGE LINE MILLED RUMBLE STRIP
DETAIL FOR SHOULDER 4' TO 4.5'
HONOAPIILANI HIGHWAY RESURFACING
 Vicinity of Hoonui Road to Plantation Estates Golf Course
 Project No. 30A-01-10M
 Scale: As Shown Date: July, 2009
 SHEET No. 2 OF 3 SHEETS

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

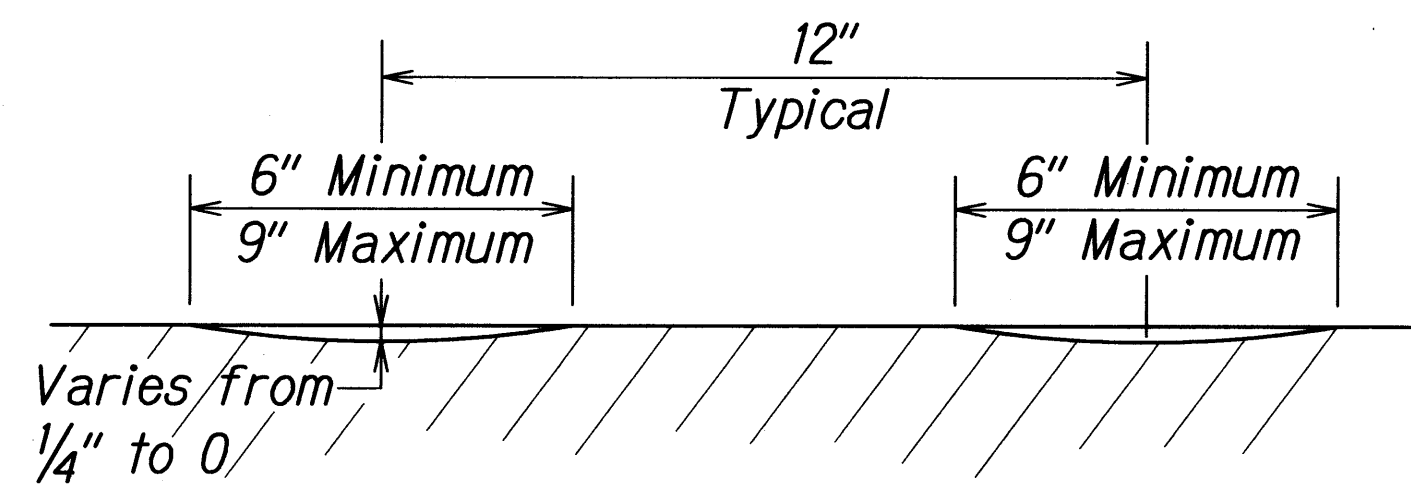
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	30A-01-10M	2011	25	40



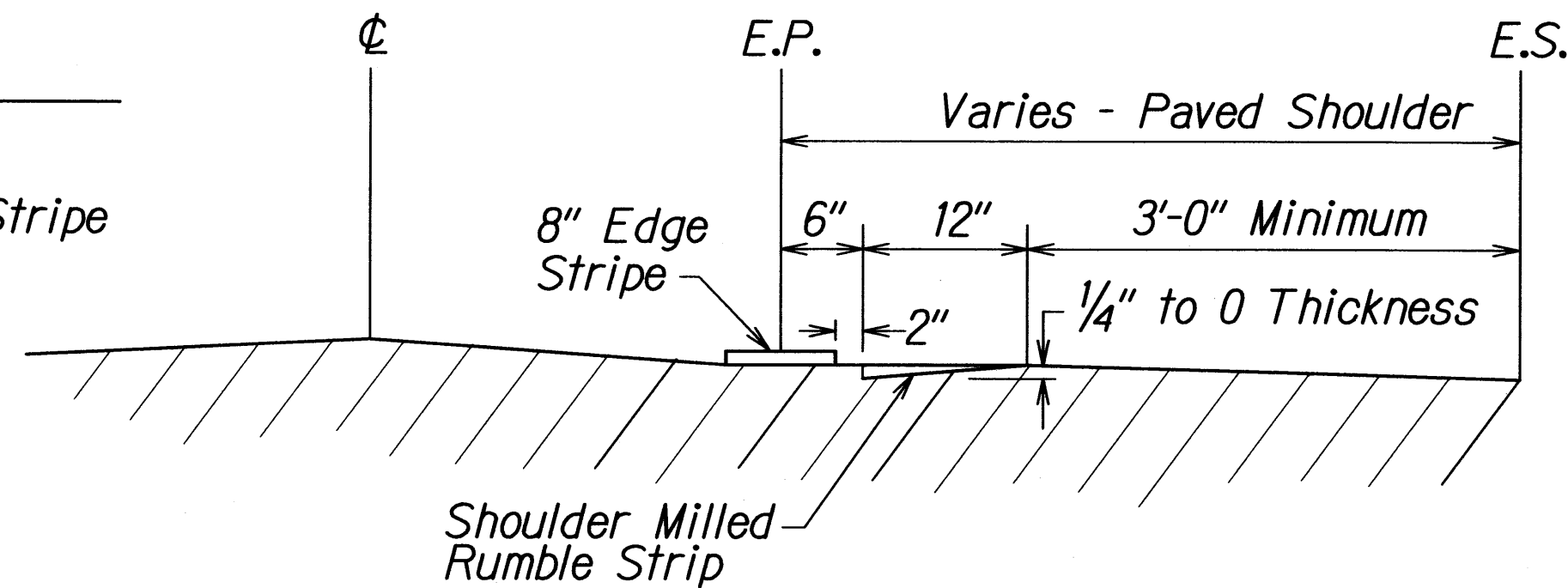
PLAN - SHOULDER MILLED RUMBLE STRIP
Not to Scale



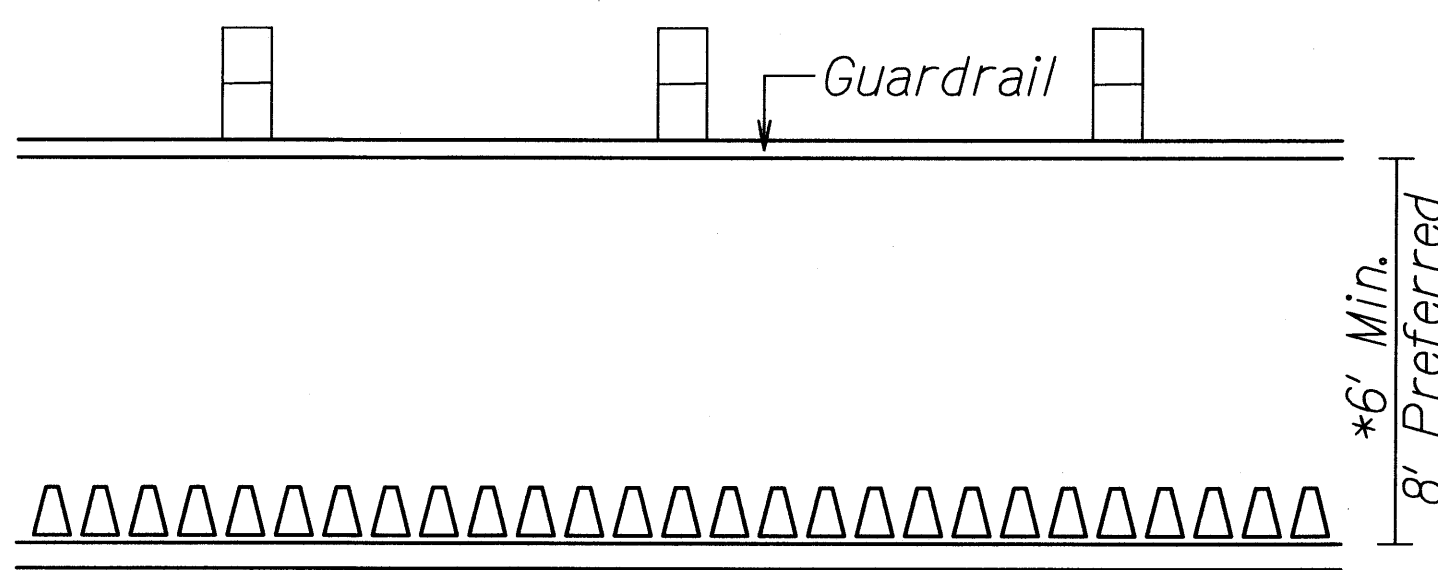
DETAIL - SHOULDER MILLED RUMBLE STRIP
Not to Scale



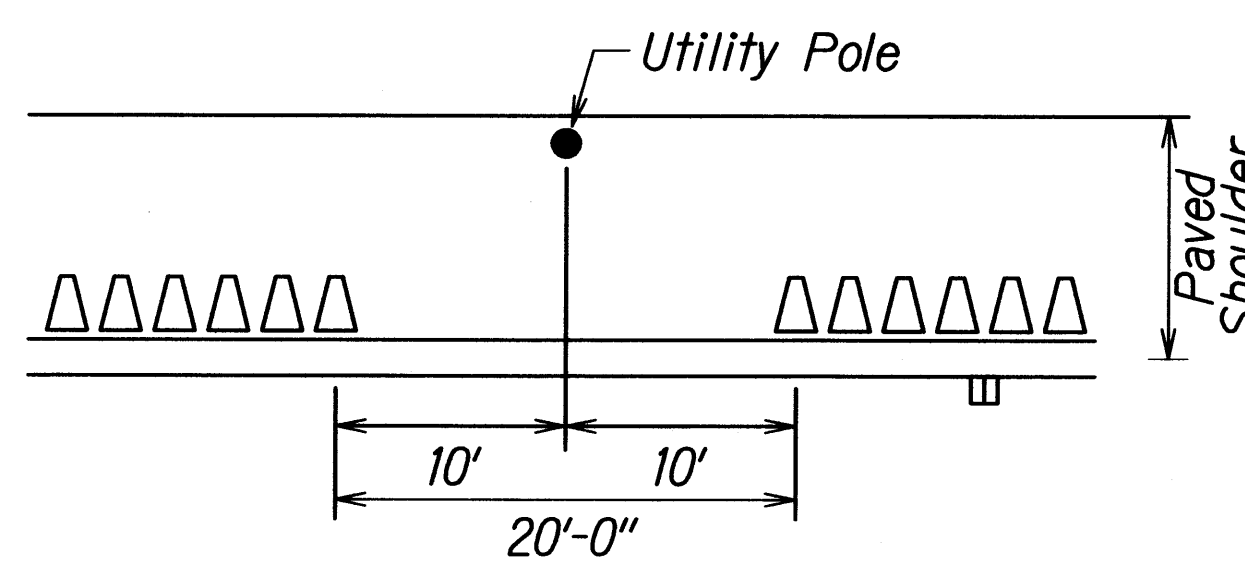
CROSS SECTION - SHOULDER MILLED RUMBLE STRIP
Not to Scale



LONGITUDINAL SECTION - SHOULDER MILLED RUMBLE STRIP
Not to Scale



DETAIL - CONDITION WHERE GUARDRAIL EXISTS
Not to Scale



DETAIL - CONDITION WHERE UTILITY POLE EXISTS
Not to Scale

NOTES:

- Shoulder milled rumble strips shall be installed where the existing condition of the shoulder are 4.5' or more from center of edge stripe.
- The method of constructing the shoulder milled rumble strip shall be submitted to the Engineer for acceptance prior to the actual work.
- Dimensions shown are approximate. Adjust rumble strip spacing to coordinate with pavement marking prior to installation.
- Raised pavement markers shall be installed on level surface between the rumble strips. Do not install raised pavement markers inside the milled area.
- The construction of the edgeline milled rumble strip and 13-foot gaps shall be paid for under Item No. 615.0300 - Shoulder Milled Rumble Strip. The milling apparatus, 20 L.F. - 6" white stripe, and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.0300 - Shoulder Milled Rumble Strip.
- Rumble strips shall be installed along all shoulders, except at right turn deceleration and acceleration lanes, as noted on the plans.
- Do not place Type "C" Raised Pavement markers within 2 ft. of the 13 ft. Rumble Strip opening.
- Do not install edgeline rumble strips on bridge decks.
- Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.
- Rumble Strips are to be installed after the edge of pavement stripe and before the installation of the Type "C" raised pavement markers.
- Pre-formed pavement striping tape or hot spray thermoplastic shall be used for solid line markings within the shoulder milled rumble strip area.

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
IN CHARGE	_____
NOTED	_____
APPROVED	_____

*If shoulder width is less than 6', do not install shoulder rumble strip where guardrail exists.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SHOULDER MILLED RUMBLE STRIP
DETAIL FOR SHOULDER 4.5' OR MORE
HONOAPIILANI HIGHWAY RESURFACING
 Vicinity of Hoonui Road to Plantation Estates Golf Course
 Project No. 30A-01-10M

Scale: As Shown
Date: July, 2009

SHEET No. 3 OF 3 SHEETS