

Figure 10-10: Details of a centerline rumble strip. The figure consists of three parts: a plan view, a side elevation, and a detail view. The plan view shows a 40-foot section of a road with a centerline rumble strip. The rumble strip is composed of three 10-foot segments, each with a 15-foot gap. The side elevation shows the rumble strip as a series of raised rectangular blocks. The detail view shows a close-up of the rumble strip with a circular callout labeled 'A' pointing to a specific detail. The detail view also shows the rumble strip with a circular callout labeled 'B' pointing to a specific detail. The detail view includes the text "Direction of Traffic" and "See Detail 'A'".

12" o.c.
(Typ.)

Pavement markings

2"

16"

2"

10"

6" Min.
9" Max.

DETAIL "A"
Not to Scale

Diagram illustrating a typical double-flange connection. The dimensions shown are:

- Overall length: 12" o.c. (on center)
- Typical
- Flange width: 6" Min. to 9" Max.
- Flange thickness: 1/2" Min. to 5/8" Max.

Diagram illustrating the layout of a centerline milled rumble strip. The rumble strip is 16" wide, with 10" of rumble strip on each side of the centerline. The rumble strip is 1/2" Min. deep and 5/8" Max. high. The diagram is labeled "Centerline Milled Rumble Strip" and "Slope".

Diagram illustrating the placement of rumble strips on a two-lane road cross-section. The diagram shows two rows of triangles representing rumble strips on the shoulders or edgelines, and a row of squares representing rumble strips in the centerline. The distance between the centerline rumble strips is marked as 20'. The distance between the shoulder/edgeline rumble strips is also marked as 20'. The diagram is labeled "SECTION" on the right side.

Labels and dimensions shown in the diagram:

- Shoulder or Edgeline Milled Rumble Strip (top left)
- 20'
- Centerline Milled Rumble Strip (center)
- 20'
- Pavement Marking (bottom center)
- Shoulder or Edgeline Milled Rumble Strip (bottom right)

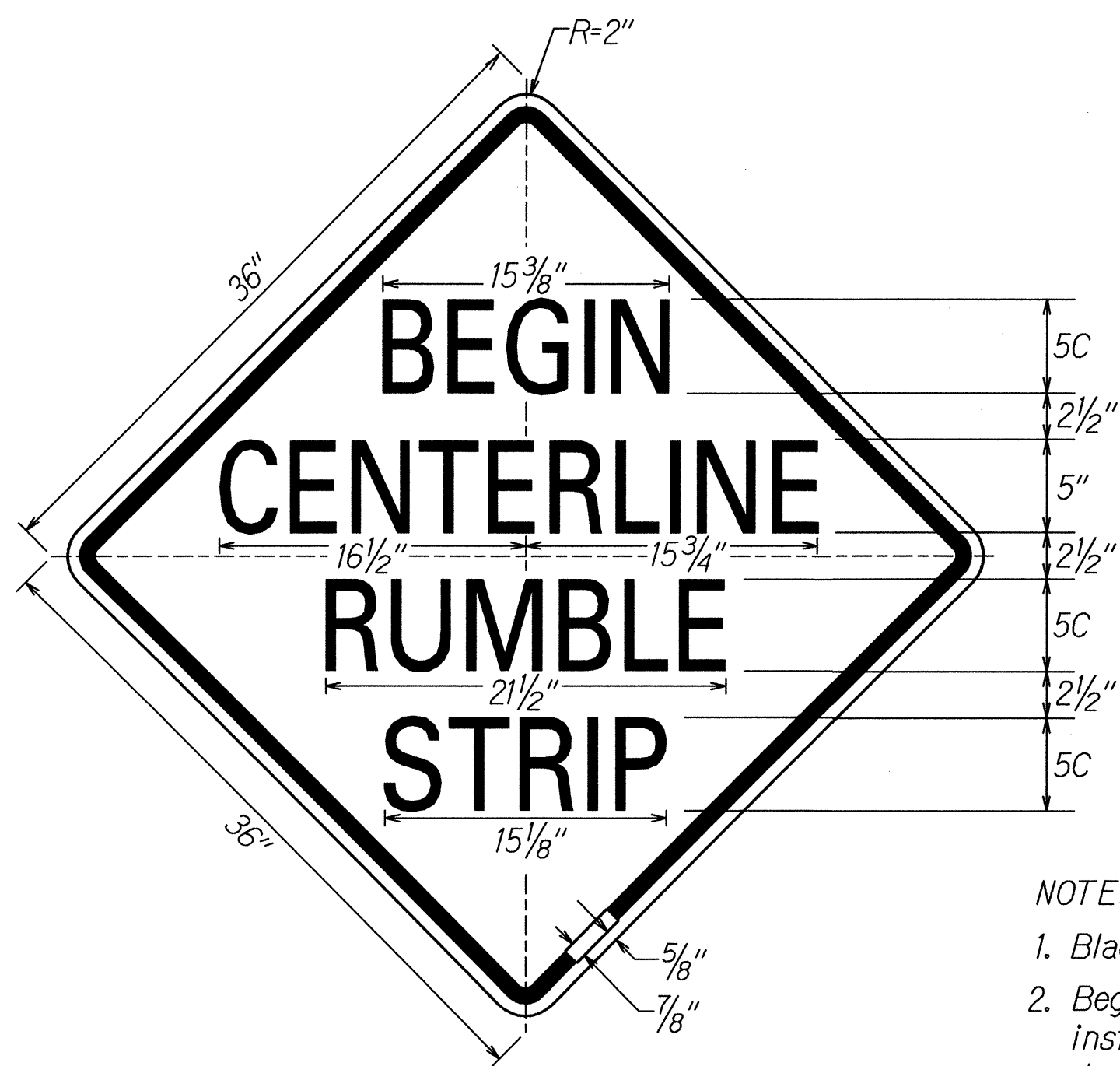
NOTES:

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. 615.0110 - Double 10-inch Milled Rumble Strip, Centerline.*
5. *The milling apparatus and removal of existing pavement markings will not be paid for separately and shall be considered incidental to Item 615.0110 - Double 10-Inch Milled Rumble Strip, Centerline.*
6. *Do not install centerline rumble strips on bridge decks.*
7. *Where at-grade bridges are present, rumble strips shall end/begin 20 L.F. beyond the existing bridge deck joints/concrete approach slab.*

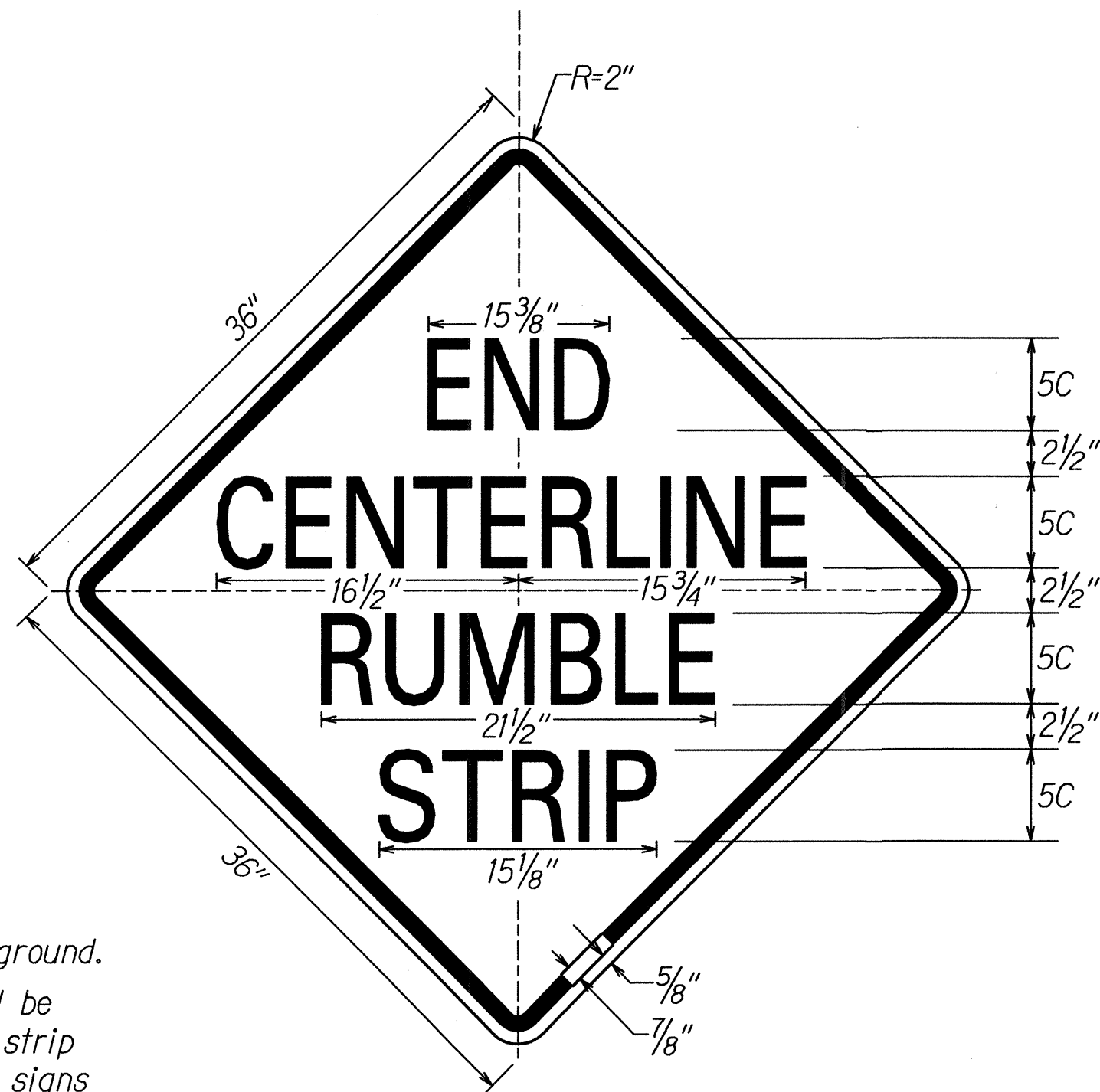
ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____
NOTE BOOK	DRAWN BY _____
<i>Idim</i>	TRACED BY _____
<i>Ikaitisd</i>	DESIGNED BY _____
	QUANTITIES BY _____
	CHECKED BY _____

61

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(056)	2013	62	85



W8-14a



W8-14b

- NOTE:
1. Black legend on reflectorized yellow background.
 2. Begin Centerline Rumble Strip signs shall be installed 50 feet before the first rumble strip depression. End Centerline Rumble Strip signs shall be installed 50 feet beyond the last rumble strip depression.

SIGN NOTES

1. All signs shall conform to Section 621 of the Special Provisions and the latest editions and amendments of the following FHWA publications:
 - a. "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD)
 - b. "Standard Highway Signs"
 - c. "Standard Alphabets for Highway Signs"
2. Borders, messages, arrows, symbols and shield shall conform to details as shown on the plans and as specified in the MUTCD.
3. Sign messages shall be as indicated on the plan, or as directed by the Engineer.
4. Backing for all new Regulatory and Warning Signs shall not be spliced.
5. Final locations of all signs shall be accepted by the Engineer prior to any installation work.
6. Existing signs that are to be replaced, shall not be removed until new signs are installed as replacements, or the messages are no longer necessary.
7. Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal and disposal of existing signs and/or posts as designated on these plans shall be incidental to the various signing items.
8. All signs shall be installed on square tube posts, unless otherwise noted.
9. Each sign post shall have a Type II OM. Installation of Type II OM shall be considered incidental to sign items.
10. Contractor shall mark the back of all signs using labels. Payment to be incidental to various contract items.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
Revised	
No.	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CENTERLINE RUMBLE STRIP	
SIGN DETAILS AND NOTES	
KALANIANA'OLE HIGHWAY RESURFACING	
West Hind Drive to	
Vicinity of Hanauma Bay Road	
Federal Aid Project No. NH-072-1(056)	
Not to Scale	Date: April 2013
SHEET No. T20 OF 35 SHEETS	