

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-061-1(036)	2020	ADD. 83	238

LEGEND

- 4" Double Solid Yellow with Type D Raised Markers @ 20'-0" o.c. (Thermoplastic Extrusion)
- 8" White Stripe with Type C Raised Pavement Markers @ 20'-0" o.c. (Thermoplastic Extrusion)
- 10' Long Profiled Thermoplastic with Type C Raised Pavement Markers @ 40'-0" o.c. (Thermoplastic Extrusion)
- 6" or 8" White Edge Stripe with Type C Raised Pavement Markers @ 40'-0" o.c. (Thermoplastic Extrusion)
- 6" or 8" Yellow Edge Stripe with Type H Raised Pavement Markers @ 40'-0" o.c. (Thermoplastic Extrusion)
- 10' Long Profiled Thermoplastic with Type C Raised Pavement Markers @ 20'-0" o.c. 4" White Stripe (Thermoplastic Extrusion)
- Transverse Median Marking (Thermoplastic Extrusion)
- Transverse Shoulder Marking (Thermoplastic Extrusion)
- 4" White or Yellow Guide Lines (Thermoplastic Extrusion except for bus bays)
- Channelizing Island or Deceleration Lane Gore (Thermoplastic Extrusion)
- Crosswalk and Stop Line. All Stop Lines shall be 4'-0" from Crosswalk unless otherwise noted. (Thermoplastic Extrusion)
- Pavement Arrow (Thermoplastic Extrusion)
- STOP Pavement Word (Thermoplastic Extrusion)

NOTES

1. Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
2. Existing pavement markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various pavement marking items.
3. Raised pavement markers shall not be installed within crosswalks.
4. Final locations of all signs shall be approved by the Engineer prior to any installation work.
5. 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.
6. Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
7. All preformed pavement marking tapes over existing pavement shall be applied with an approved primer as recommended by the tape manufacturer and as approved by the Engineer. The primer shall be allowed to dry to the tacky stage prior to tape application.
8. The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs placed as indicated on the plans or as directed by the Engineer for the duration of the highway project and shall be maintained by the Contractor. These signs shall be placed in addition to the required traffic control signs called for in Section 645 - Traffic Control. The advance construction warning signs shall be new and become the property of the State. The Contractor shall remove, clean, and deliver the signs and posts to the State field office, or as directed by the Engineer, upon the completion of the project.
9. 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.
10. Backing for all new regulatory and warning signs shall not be spliced.
11. All sign panels shall conform to Section 621 of 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"
12. All new and relocated signs and markers installed on pipe posts, light standard or expressway sign post are to be mounted with band brackets and steel braces.
13. Removal of existing delineators and posts, as directed by the Engineer or shown on the plans, shall be considered incidental to the various signing items.
14. All permanent signs shall be installed with square tube posts, unless otherwise specified.
15. Except where installed behind guardrails, all steel sign posts within the clear zone defined by the AASHTO Roadside Design Guide shall have an OM2-2V on each sign post. Where pedestrians might be affected by the wider OM2-2V, RM-3 may be used. Markers shall be considered incidental to various pay items. This requirement is in addition to any reflector marker or marking called out in the contract.

NOTES (cont.)

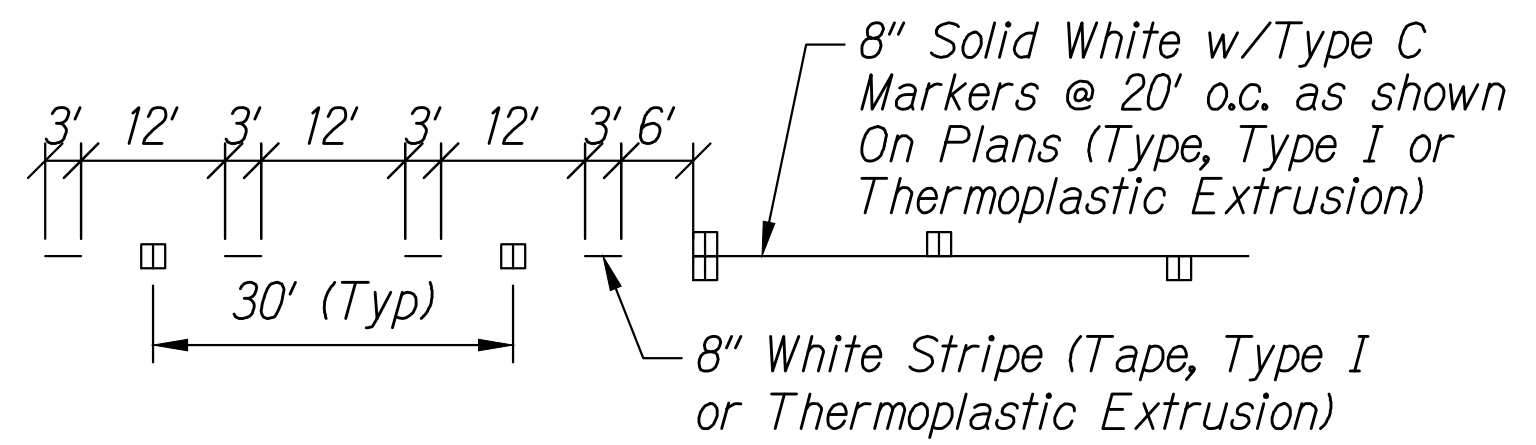
16. Sign graphics on the signing and striping plans shown on the inbound side of the highway are facing inbound traffic. Sign graphics shown on the outbound side of the highway are facing outbound traffic.

REFLECTOR MARKER LEGEND

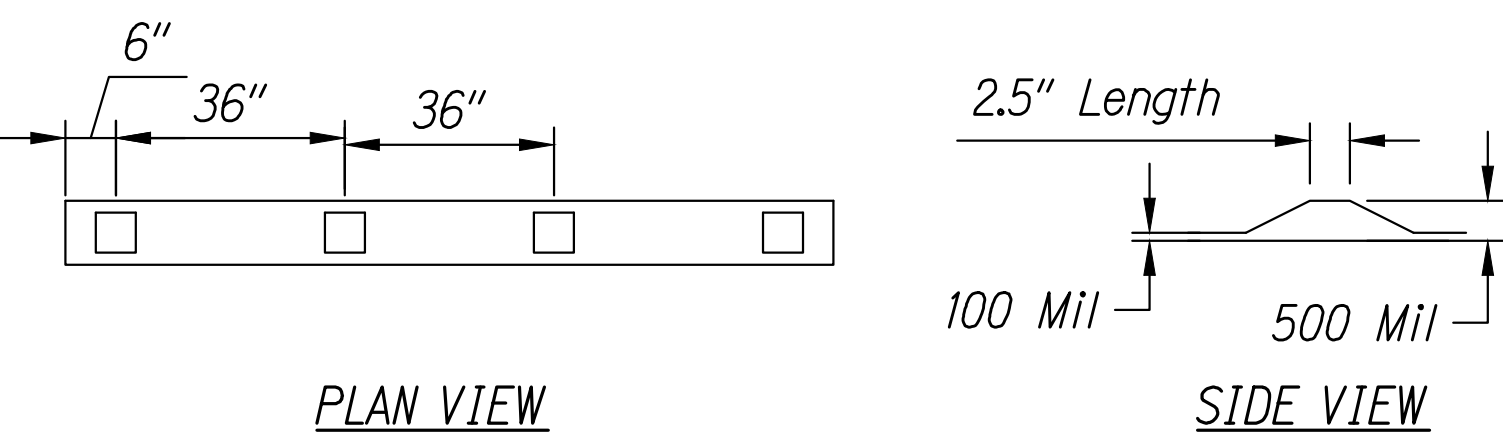
- ||| Bi-Directional Reflector Marker (RM-2, White) w/Post
- ||| Bi-Directional Reflector Marker (RM-3) w/Post

SIGN KEY

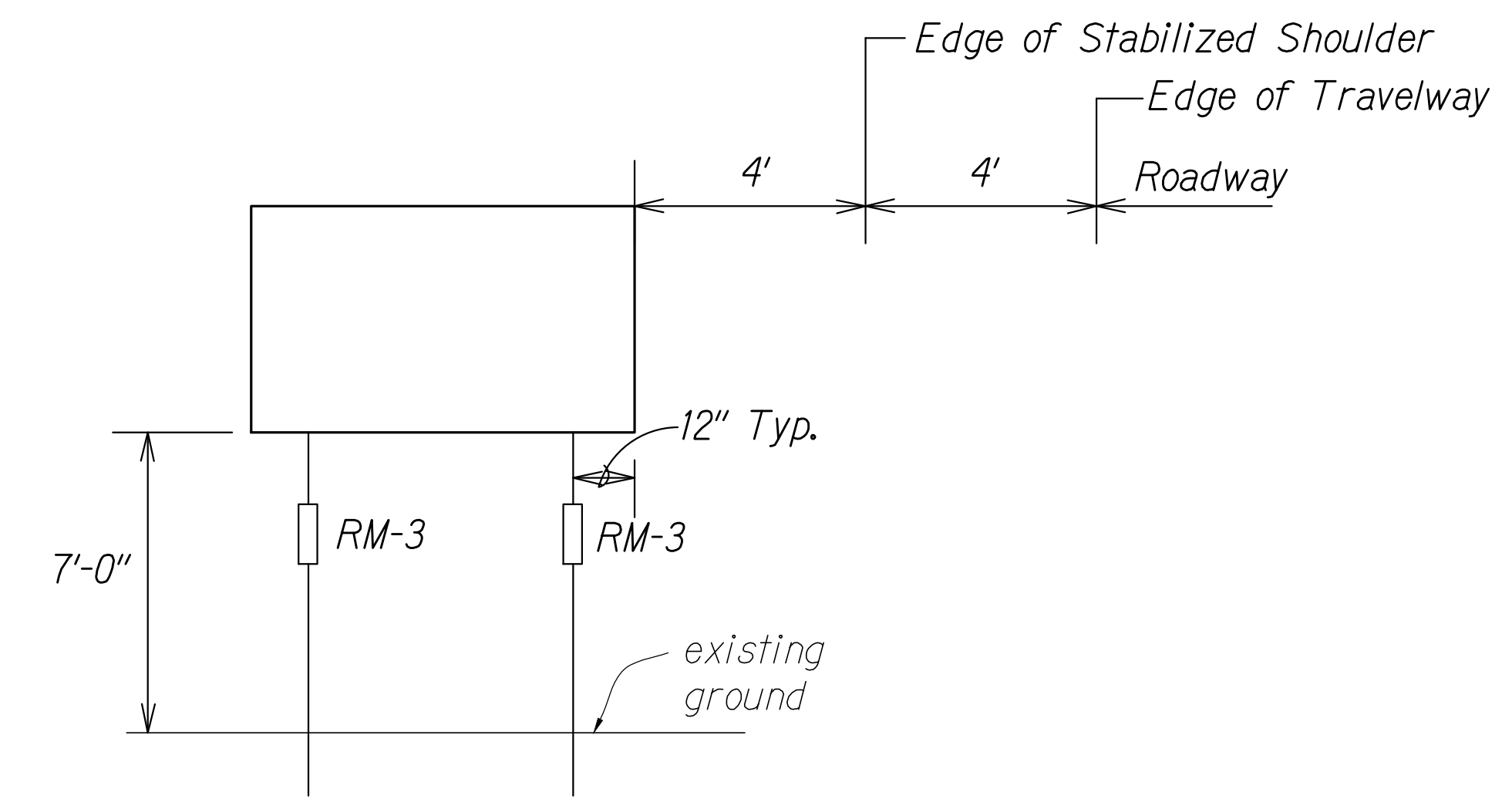
- ① Existing Sign and Post(s) to Remain
- ② Remove Existing Sign and Post
- ③ Install New Sign(s) w/Steel Post(s) and RM-3(s)
- ④ Remove Existing Sign and Post(s) and Install New Sign(s) w/Post(s) and RM-3(s)
- ⑤ Remove Existing Sign on Mast Arm and Install New Sign(s) on Traffic Signal Mast Arm
- ⑥ Remove Existing Sign on Type I Pole and Install New Sign(s) on Traffic Signal Pole
- ⑦ Remove Existing Sign(s) on Light Post and Install New Sign(s) on Light Post



LANE DROP MARKING DETAIL



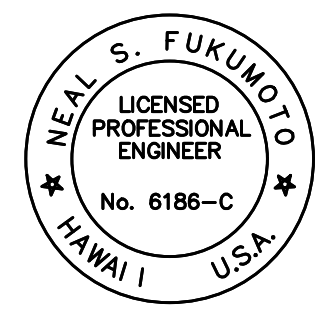
10' LONG PROFILED THERMOPLASTIC DETAIL



DETAIL - FRAME LAYOUT

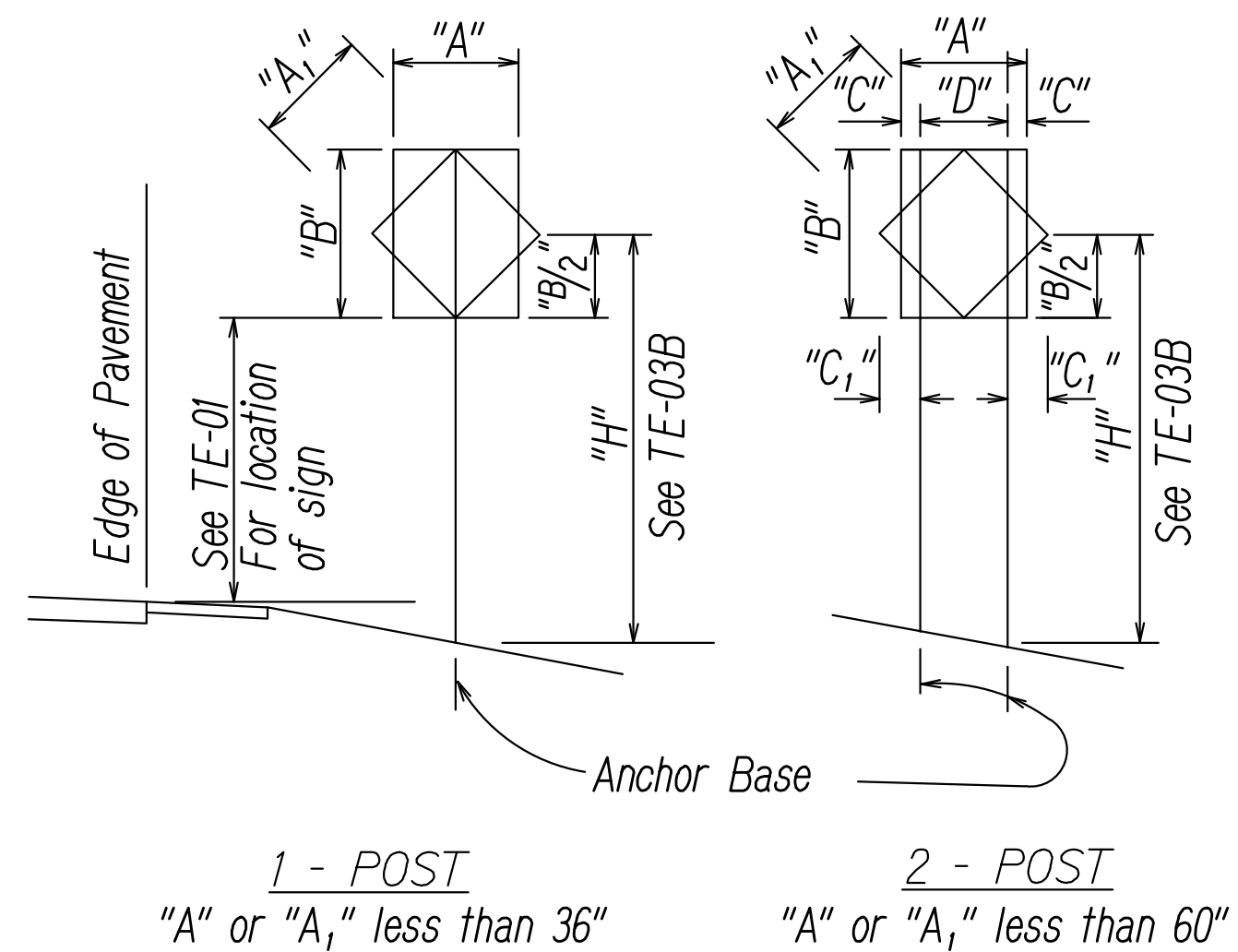
Not to Scale

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



This work was prepared by me or under my supervision. Exp. 04-30-22
Neal S. Fukumoto
 Wesley R. Segawa & Associates, Inc.

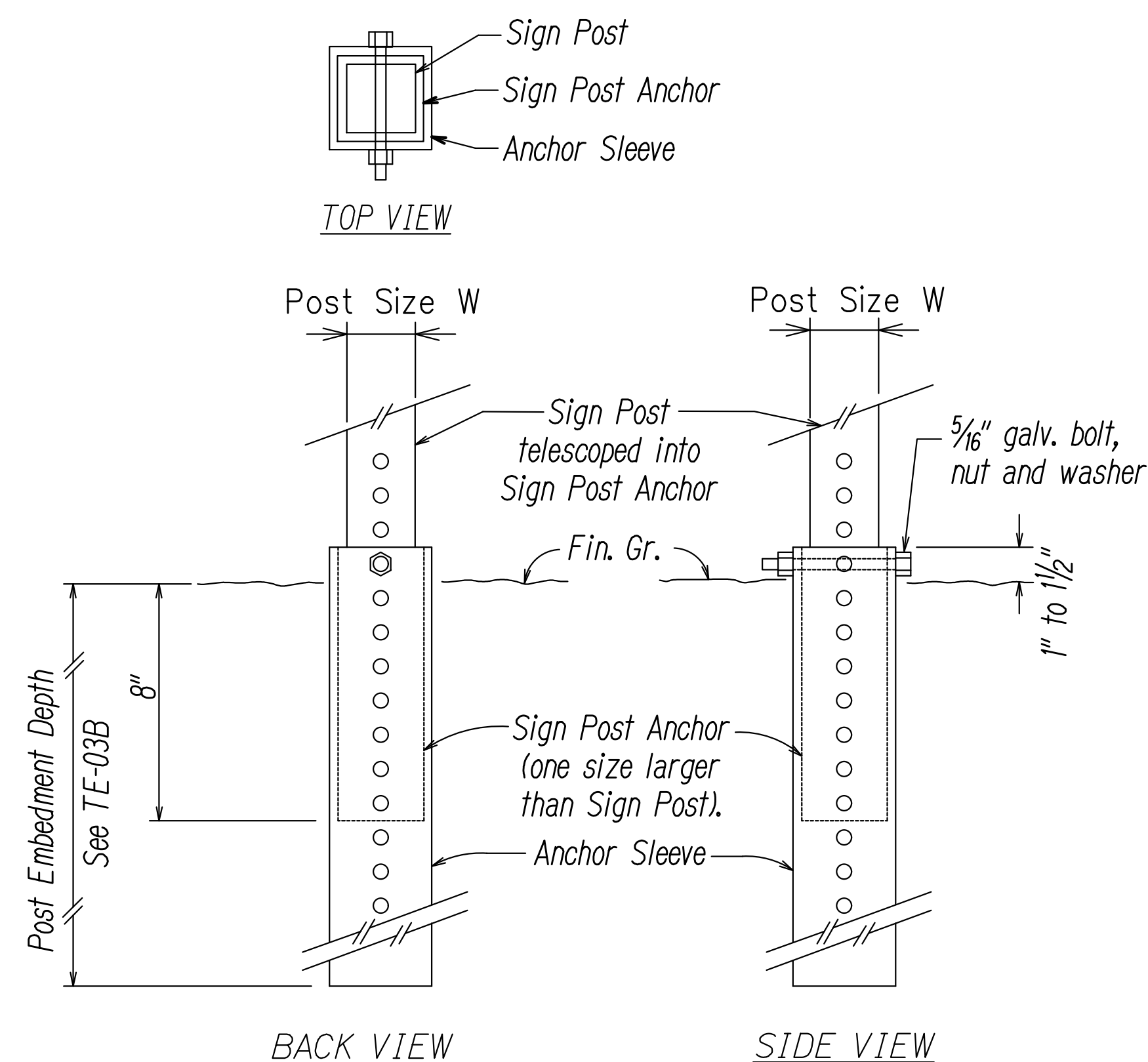
9/3/20	Revised Note
DATE	DESCRIPTION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SIGNING AND STRIPING NOTES	
PALI HIGHWAY RESURFACING Vineyard Boulevard to Waokanaka Street Federal-Aid Project No. NH-061-1(036)	
Date: April 2020	



"A" or "A ₁ "	"C"	"C ₁ "
Less than 36"	6"	-
Greater than 36" and less than 48"	9"	19"
Greater than 48"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24"
See General Notes.

TYPICAL INSTALLATION



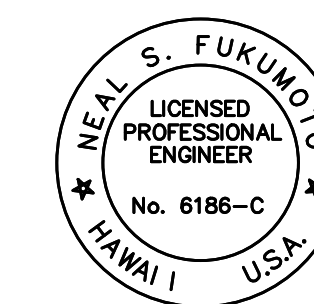
SIGN POST INSTALLATION

ANCHOR BASE DETAIL

GENERAL NOTES

- Design Specifications:**
 - Design shall conform w/ the latest AASHTO Standard Specifications for the Structural Supports for Highway Signs, Luminaires & Traffic Signals and its interim supplements and modifications by the Highways Division, Department of Transportation State of Hawaii.
 - Latest HDOT Memorandum with subject title "Design Criteria for Bridges and Structures."
- Loads:**
 - Basic Wind Speed: 105 mph.
 - Recurrence Interval of 10 years.
- Materials:**
 - Post shall conform to the Standard Specifications.
 - All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M314-105 bolt.
 - Lap splice nuts and bolts shall be M180, with an ultimate tensile strength of 180 ksi, min.
 - Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene material as approved by the Engineer.
- General:**
 - See General Notes on B-01, TE-01, and TE-03B for additional information.
 - All square tube posts shall be 12 gauge unless otherwise specified or shown on the plans.
 - Square tube posts shall be perforated with 7/16" ϕ holes, 1" o.c., 4 sides, along entire length of post.
 - All accessories, fittings and stiffener details (as required) shall be submitted to the Engineer for approval 20 days prior to installation.
 - Alternate designs in accordance with the plans and specifications shall use the Service Load Design Method and shall be stamped by a registered structural engineer of the State of Hawaii and submitted to the Engineer for approval.
 - All sign support posts without break away anchor base shall be outside of the clear zone or shielded by an appropriate traffic barrier system. The traffic barrier system shall be submitted to the Engineer for his approval.
 - The Contractor shall use templates while installing the anchor bolts. Anchor bolts shall be vertical.
 - Excavation and backfill shall be considered incidental to the cost of the sign foundation.

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
N ₁	



This work was prepared by me or under my supervision.
Exp. 04-30-22
Neal S. Fukumoto
Wesley R. Segawa & Associates, Inc.

9/3/20	New Sheet
DATE	DESCRIPTION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SIGNING AND STRIPING NOTES	
PALI HIGHWAY RESURFACING Vineyard Boulevard to Waokanaka Street Federal-Aid Project No. NH-061-1(036)	
Date: April 2020	
SHEET No. CK2 OF 2 SHEETS	