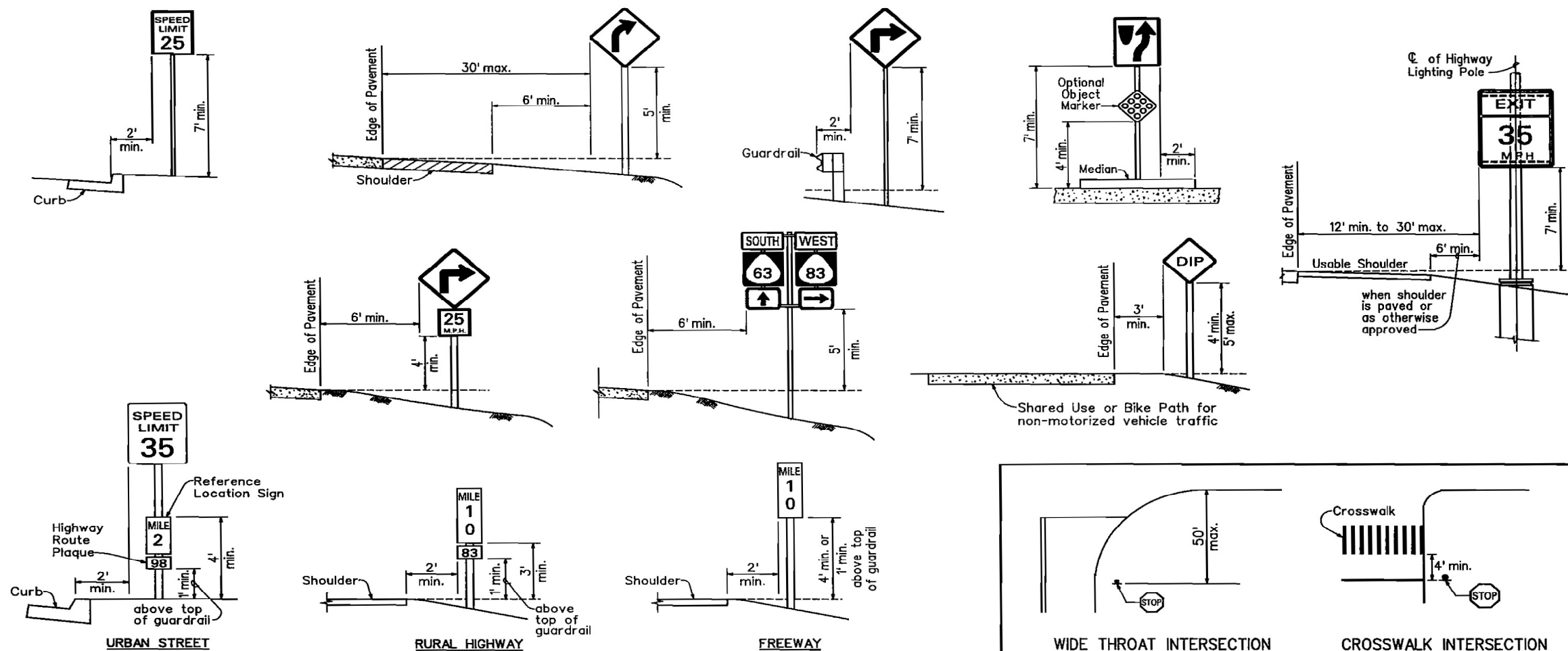
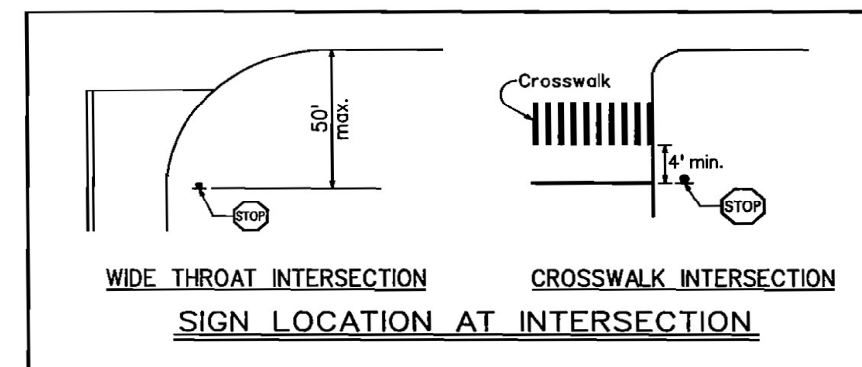


STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V8	V23



GENERAL NOTES

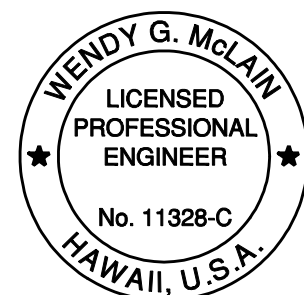
1. Sign shall be installed in conformance with the latest edition of Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD), as amended or supplemented by the contract documents.
2. The minimum lateral and vertical clearances are guidelines and shall be exceeded whenever practical. Sign shall be installed as consistent as possible with other existing and new signs to create an overall coordinated appearance that best command road users' attention and respect.
3. Unless otherwise shown, sign shall be vertically mounted at right angles to the direction of, and facing, the traffic that they are intended to serve. On curved alignment, the angle of placement should be determined by the direction of approaching traffic rather than by the roadway edge at the point where the sign is located.
4. Sign with arrow denoting extent of restrictive zone, such as parking, shall be mounted 45 degrees to the line of traffic flow.
5. Reference location sign may be moved in either direction as much as 50 feet when approved by the Engineer.

HEIGHT AND LATERAL LOCATION OF SIGN

00/00/00	X	
DATE	REVISION	APP'D

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD PLAN TE-01
SIGN HEIGHT AND LOCATION

STANDARD PLAN TE-01 07/11/08



THIS WORK WAS PREPARED BY ME OR
UNDER MY SUPERVISION.

4/30/2016

SIGNATURE EXPIRATION DATE
OF THE LICENSE

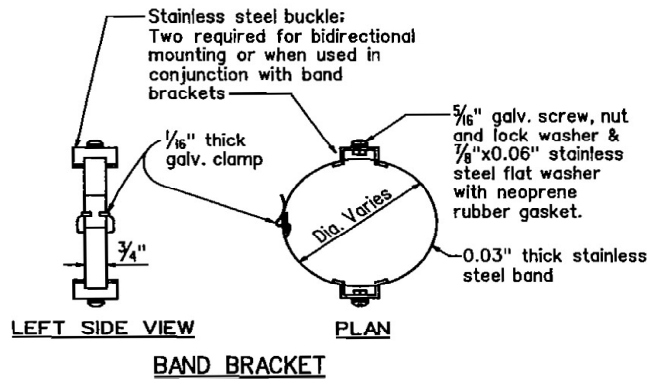
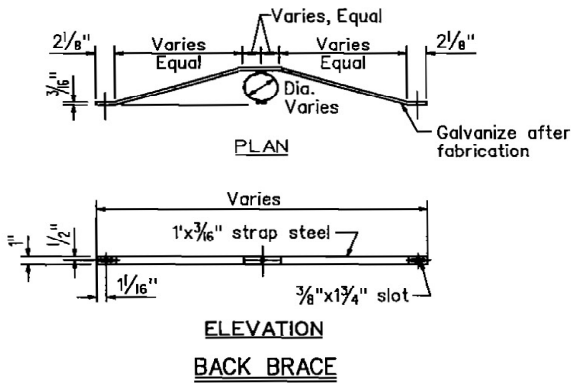
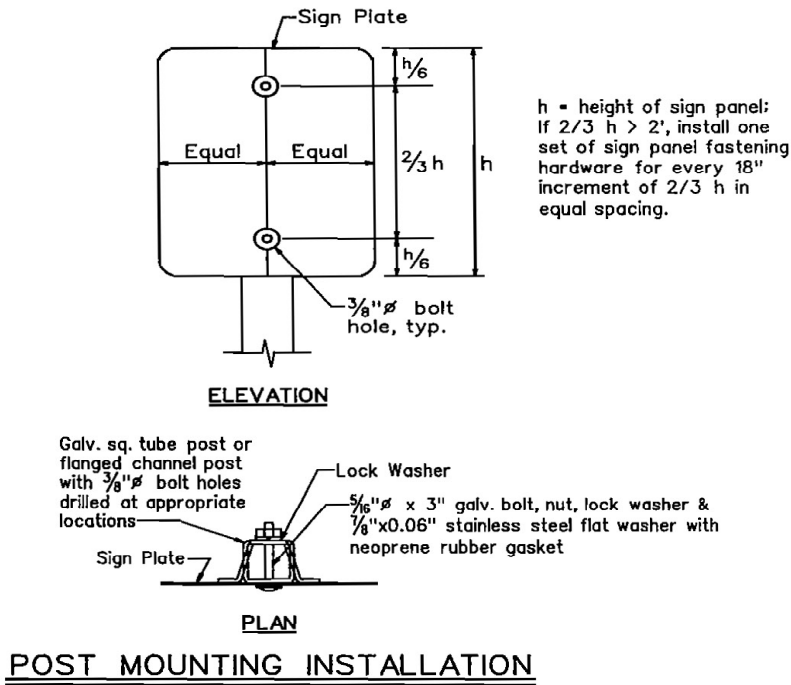
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**U.S. CUSTOMARY SPECIAL
(HDOT STD TE-01)
MISCELLANEOUS
SIGN DETAILS**

**SPECIAL
633-A**

12/5/2014 11:01:05 AM W:_Civil\3D Projects\2014_027.001 ATKINS Saddle Road West Side Truck Escape Ramps\Roadway\Sheets\14-533\HI SR 200 00_esp633-B.dgn

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V9	V23



POLE MOUNTING INSTALLATION

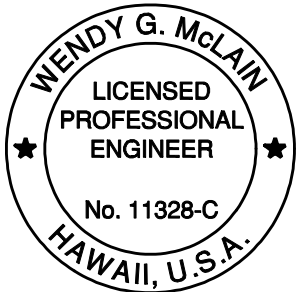
GENERAL NOTES

1. Sign message, color, size, shape and reference shall be in conformance with the latest edition of Federal Highway Administration Standard Highway Signs (SHS), as amended or supplemented by the contract documents.
2. Sign post shall not exceed top of sign except where street name sign is attached above it. Where street name sign is required, sign post shall extend $3\frac{1}{2}"$ above top of sign to accommodate street name sign post cap.
3. Unless otherwise shown, signs of unequal shape and size shall not be mounted back to back.
4. Signs sharing same post(s) shall not be overlapped. Each sign shall have on its own a minimum of two sets of fastening hardware per post. Maintain 1" clearance between signs.
5. Sign with lateral overhang more than 2' shall be installed with back brace or other support assembly approved by the Engineer.
6. Sign may be mounted on highway lighting or traffic signal poles as follows:
 - a. Sign less than 10 square feet in area shall be installed with two sets of band brackets.
 - b. Sign between 10 and 28 square feet shall be installed with two sets of band brackets and back braces.
 - c. Sign larger than 28 square feet shall be reviewed and approved in writing by the Engineer prior to installation.
7. Anchor base shall be required for all sign post installations in accordance with the related Standard Plans sign mounting details.
8. Sign shall be installed with the required number of post(s), material and frame stiffeners in accordance with the related Standard Plans sign mounting details.

00/00/00	X	
DATE	REVISION	APP'D.



STANDARD PLAN TE-01A 07/11/08



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SIGNATURE

4/30/2016

EXPIRATION DATE OF THE LICENSE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY SPECIAL
(HDOT STD TE-01A)
MISCELLANEOUS
SIGN DETAILS

SPECIAL
633-B

12/5/2014 11:02:35 AM W:_Civil\3D Projects\2014_027.001 ATKINS Saddle Road West Side Truck Escape Ramps\Roadway\Sheets\14-633\HI SR 200 00_esp633-C.dgn

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V10	V23

GENERAL NOTES

1. Design Specifications:

- (A) 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.
(B) Latest HDOT Memorandum with subject title "Design Criteria for Bridges and Structures."

2. Loads:

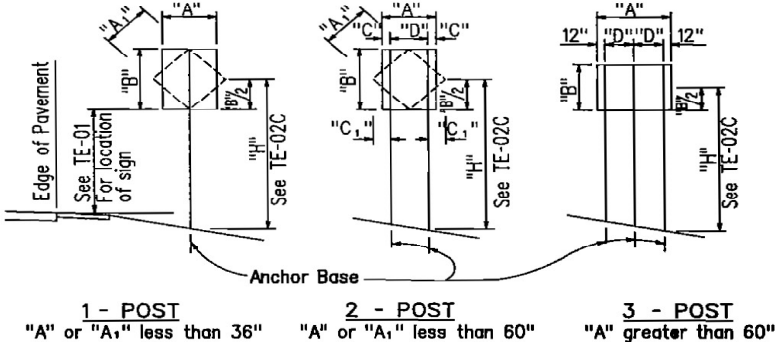
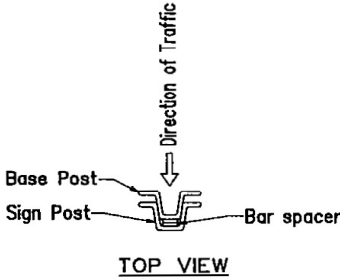
- (A) Basic Wind Speed: 105 mph.
(B) Recurrence Interval of 10 years.

3. Materials:

- (A) Post shall conform to the Standard Specifications.
(B) Post shall be zinc coated after fabrication in accordance with ASTM A-123.
(C) All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M314-105 bolt.
(D) Lap splice nuts and bolts shall be M180, with an ultimate tensile strength of 180 ksi, min.
(E) Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene material as approved by the Engineer.

4. General:

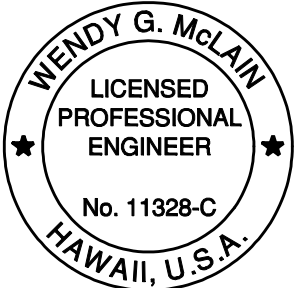
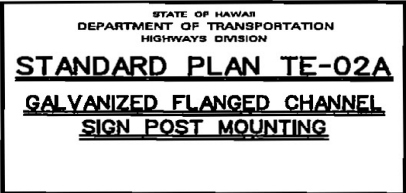
- (A) See B-01, TE-01, TE-02B and TE-02C for additional information.
(B) All accessories, fittings, connection details, and stiffener details (as required) shall be designed for the loads specified in the General Notes and submitted to the Engineer for approval 20 days prior to installation.
(C) Alternate designs in accordance with the plans and specifications shall use the Service Load Design Method and shall be stamped by a registered engineer of the State of Hawaii in the related discipline and submitted to the Engineer for approval.
(D) All sign support posts 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.
(E) The Contractor shall use templates while installing the anchor bolts. Anchor bolts shall be vertical.
(F) Excavation and backfill costs shall be considered incidental to the cost of the sign foundation.
(G) Sign post shall be punched their full length with 3/8" holes on 1" centers.
(H) Base post shall be punched with a minimum of thirty-six 3/8" dia. holes on 1" centers with the first hole 1" from the top.
(J) Base post shall be driven to a minimum embedment as shown on sheet TE-02C. The base post may protrude a maximum of 4" above the surrounding ground surface.
(K) Base post damaged or deformed in the splice contact area shall be repaired or replaced at no additional cost to the State. Drive cap shall be used as required.



"A" or "A1"	"C"	"C1"
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.

00/00/00	X	
DATE	REVISION	APP'D.



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SIGNATURE: *Wendy G. McLain* 4/30/2016
EXPIRATION DATE OF THE LICENSE

STANDARD PLAN TE-02A 05/31/07

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL (HDOT STD TE-02A) GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	
	SPECIAL 633-C

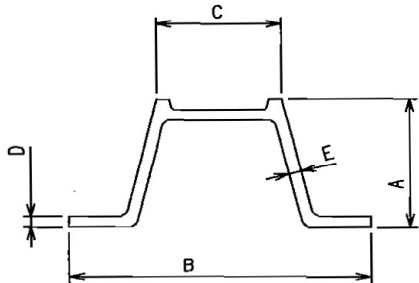
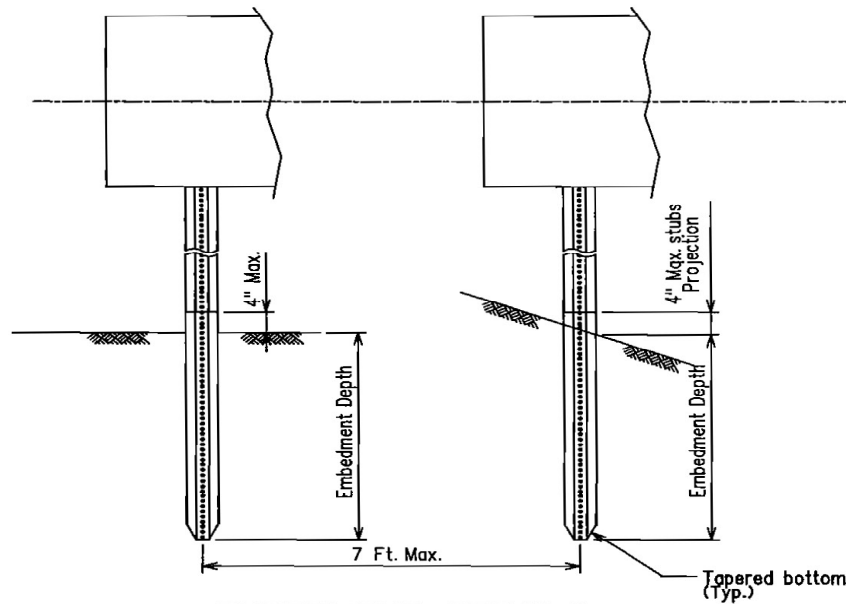


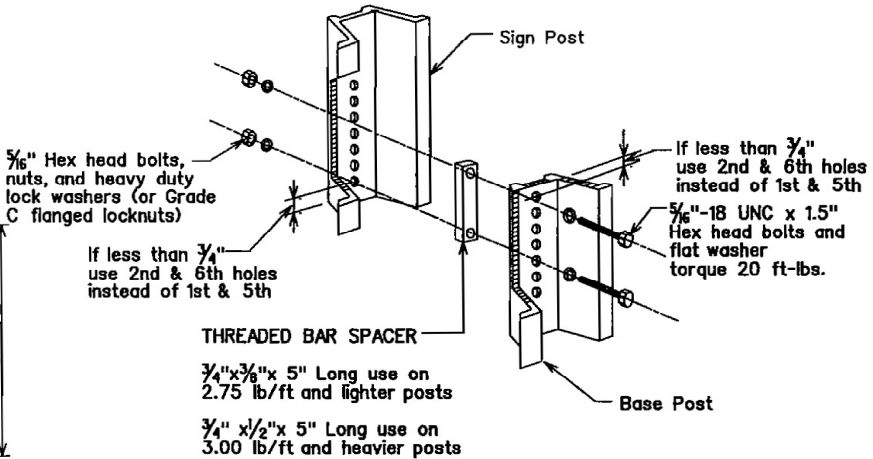
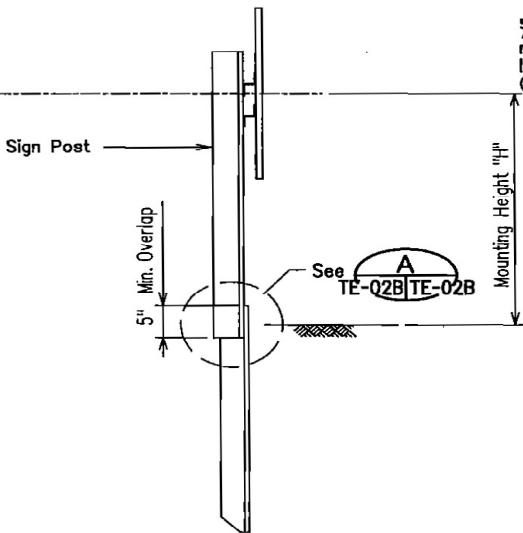
TABLE 1: MINIMUM FLANGED CHANNEL POST PROPERTIES & DIMENSIONS								
Post Size	Area (in ²)	I (in ⁴)	S (in ³)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)
2.50 lbs./ft.	0.70	0.21	0.25	1.516	3.062	1.278	0.176	0.117
4.00 lbs./ft.	1.11	0.54	0.47	1.968	3.500	1.336	0.272	0.143

Note
The contractor shall submit shop drawings and catalog cuts to the Engineer for approval.



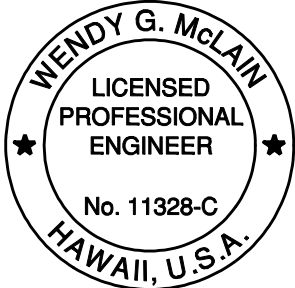
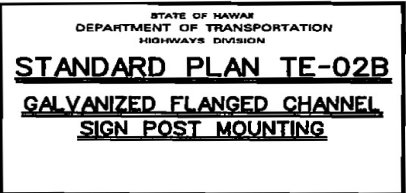
EMBEDMENT DETAILS

NOTE:
Three posts allowed within 7 feet swath.



SECTION **A**
TE-02B TE-02B

DATE	REVISION	APP'D.
00/00/00 X		



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
SIGNATURE: *Wendy G. McLain* 4/30/2016
EXPIRATION DATE OF THE LICENSE

STANDARD PLAN TE-02B 05/31/07

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL (HDOT STD TE-02B) GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING	
	SPECIAL 633-D

12/5/2014 11:04:25 AM W:_Civil\3D Projects\2014_027.001 ATKINS Saddle Road West Side Truck Escape Ramps\Roadway\Sheets\I-533\HI SR 200 00_esp633-E.dgn

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V12	V23

FLANGED CHANNEL: 1-POST INSTALLATION - STIFF CLAY												
Post Size W	"H" - Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2.50 lbs./ft.	6	3.17	5	3.17	4	3.17	4	3.17	3	3.17	2	3.17
4.00 lbs./ft.	-	-	-	-	-	-	7	4	7	4	6	4

FLANGED CHANNEL: 1-POST INSTALLATION - SAND AND GRAVEL												
Post Size W	"H" - Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2.50 lbs./ft.	6	6.5	5	6	4	5.5	4	5.5	3	5	2	4.5
4.00 lbs./ft.	-	-	-	-	-	-	7	7	7	7	6	7

FLANGED CHANNEL: 2-POST INSTALLATION - STIFF CLAY												
Post Size W	"H" - Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2.50 lbs./ft.	11	3.17	10	3.17	9	3.17	8	3.17	7	3.17	6	3.17
4.00 lbs./ft.	25	3.17	22	3.17	20	3.17	18	3.17	16	3.17	14	3.17

FLANGED CHANNEL: 2-POST INSTALLATION - SAND AND GRAVEL												
Post Size W	"H" - Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2.50 lbs./ft.	11	3.17	10	3.17	9	3.17	8	3.17	7	3.17	6	3.17
4.00 lbs./ft.	25	4	22	4	20	4	18	4	16	4	14	4

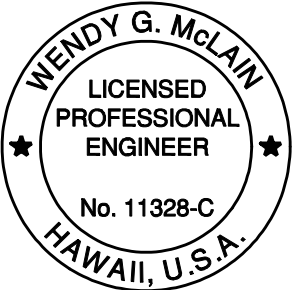
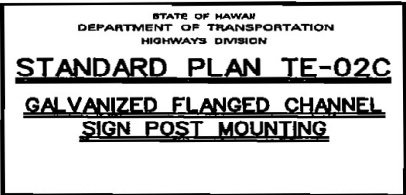
FLANGED CHANNEL: 3-POST INSTALLATION - STIFF CLAY												
Post Size W	"H" - Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2.50 lbs./ft.	19	3.17	16	3.17	14	3.17	12	3.17	10	3.17	8	3.17
4.00 lbs./ft.	37	3.17	32	3.17	28	3.17	24	3.17	22	3.17	20	3.17

FLANGED CHANNEL: 3-POST INSTALLATION - SAND AND GRAVEL												
Post Size W	"H" - Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2.50 lbs./ft.	19	3.17	16	3.17	14	3.17	12	3.17	10	3.17	8	3.17
4.00 lbs./ft.	37	3.17	32	3.17	28	3.17	24	3.17	22	3.17	20	3.17

- Notes:
- "H" dimension given in tables is the maximum Height "H" for the corresponding sign area.
 - Sign Area in tables is the maximum sign area for the corresponding "H".

POST EMBEDMENT DEPTH TABLES

00/00/00	X	
DATE	REVISION	APP'D.



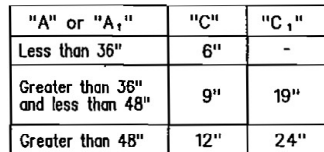
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
4/30/2016
SIGNATURE EXPIRATION DATE OF THE LICENSE

STANDARD PLAN TE-02C 05/31/07


U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY SPECIAL
(HDOT STD TE-02C)
GALVANIZED FLANGED CHANNEL
SIGN POST MOUNTING

SPECIAL
633-E



TYPICAL INSTALLATION

A circular professional engineer seal. The outer ring contains the text "WENDY G. McLain" at the top and "HAWAII, U.S.A." at the bottom, separated by two stars. The inner circle contains the text "LICENSED PROFESSIONAL ENGINEER" and "No. 11328-C".

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL (HDOT STD TE-03A) GALVANIZED SQUARE TUBE SIGN POST MOUNTING	
	SPECIAL 633-F

12/5/2014 11:06:28 AM W:_Civil\3D Projects\2014_027.001 ATKINS Saddle Road West Side Truck Escape Ramps\Roadway\Sheets\1-533\HI SR 200 00_esp633-G.dgn

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V14	V23

SQUARE TUBE: 1-POST INSTALLATION - STIFF CLAY												
Post Size W	"H" = Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2"	7.7	4.5	6.7	4	6.0	4	5.4	4	4.9	4	4.5	4
2 1/2"	-	-	-	-	-	-	-	-	9.6	4	8.8	4

SQUARE TUBE: 2-POST INSTALLATION - STIFF CLAY												
Post Size W	"H" = Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2"	17.4	3	15.2	3	13.5	3	12.2	3	11.0	3	10.1	3
2 1/2"	30.2	3	26.5	3	23.5	3	21.1	3	19.2	3	17.6	3

SQUARE TUBE: 1-POST INSTALLATION - SAND AND GRAVEL												
Post Size W	"H" = Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2"	7.7	4.5	6.7	4.5	6.0	4	5.4	4	4.9	4	4.5	4
2 1/2"	-	-	-	-	-	-	-	-	9.6	5	8.8	5

SQUARE TUBE: 2-POST INSTALLATION - SAND AND GRAVEL												
Post Size W	"H" = Ground Level to Midpoint (ft.)											
	7		8		9		10		11		12	
	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)	Sign Area (Sq.Ft.)	Embed. Depth (Ft.)
2"	17.4	3	15.2	3	13.5	3	12.2	3	11.0	3	10.1	3
2 1/2"	30.2	4	26.5	4	23.5	4	21.1	4	19.2	4	17.6	4

POST EMBEDMENT DEPTH TABLES

- Notes:
- 1. "H" dimension given in tables is the maximum Height "H" for the corresponding sign area.
 - 2. Sign Area in tables is the maximum sign area for the corresponding "H".

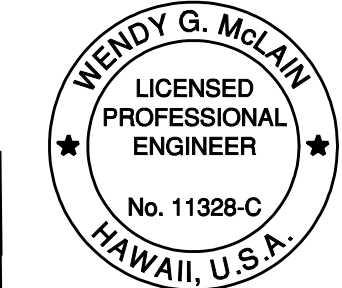
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DATE	REVISION	APP'D.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLAN TE-03B

GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

STANDARD PLAN TE-03B 05/31/07



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *Wendy G. McLain* 4/30/2016

EXPIRATION DATE OF THE LICENSE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY SPECIAL
(HDOT STD TE-03B)
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

SPECIAL
633-G

R2-5a
24"x30"
R2-5a-A
48"x60"

R2-10
24"x30"

R3-9b
24"x36"

R5-8
30"x24"

R7-107a
12"x30"

R7-8
12"x18"
R7-8-A
24"x30"

R8-3a
24"x24"
24"x18"
R8-3a-A
48"x48"
24"x18"

R9-3a
18"x18"
18"x12"
R9-3a-A
24"x24"
24"x18"

R9-3b(R)
18"x12"

R10-11a
24"x30"

R16-2
24"x30"

R16-3
18"x24"

R16-4
18"x24"

R16-5
36"x42"

R18-6
24"x30"

R18-7
24"x30"

R18-1
24"x18"

W1-8(R)
18"x24"
W1-8(R)-A
30"x36"
W1-8(R)-B
36"x48"

W7-4
78"x48"

W7-4b
78"x60"

W8-6
30"x30"
W8-6-A
36"x36"
W8-6-B
48"x48"

W4-7(L)
48"x48"

W11-7
36"x36"
24"x18"
W11-7-A
48"x48"
24"x18"

W11-8
36"x36"
24"x18"
W11-8-A
48"x48"
24"x18"

W11-9
36"x36"
W11-9-A
48"x48"

W14-2
30"x30"

W14-4
36"x36"
W14-4-A
48"x48"

W15-1
36"x36"

W17-2(L)
60"x60"

W18-1
48"x60"

CW18-1(1/2)
60"x60"

S1-1
36"x36"
S1-1-A
48"x48"

S3-1
30"x30"
S3-1-A
36"x36"

S4-1
24"x10"

S4-2
24"x10"

S4-3
24"x8"

S4-4
24"x10"

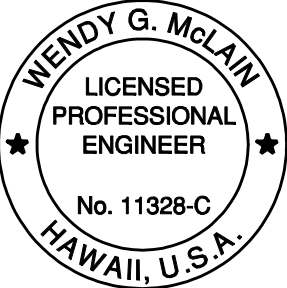
GENERAL NOTES

- Sign details shall conform to the latest editions of the following FHWA publications:
a. "Standard Alphabets for Highway Signs," and as amended.
b. "Standard Highway Signs," and as amended.
c. "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
- All signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicate numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized with reflective sheeting.
- All signs shall be erected without educational plaques unless called for in the plans.

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DATE	REVISION	APP'D.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLAN TE-06
MISCELLANEOUS SIGNS



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4/30/2016
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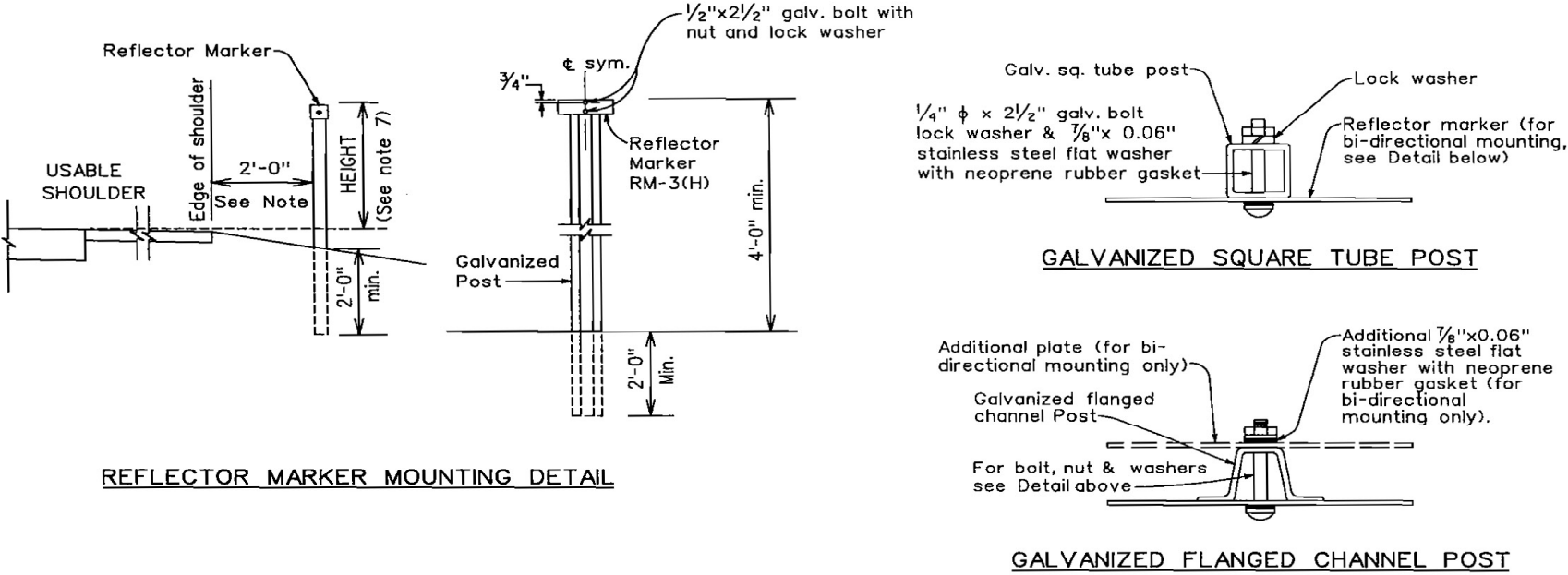
STANDARD PLAN TE-06 07/11/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY SPECIAL
(HDOT STD TE-06)
MISCELLANEOUS SIGNS

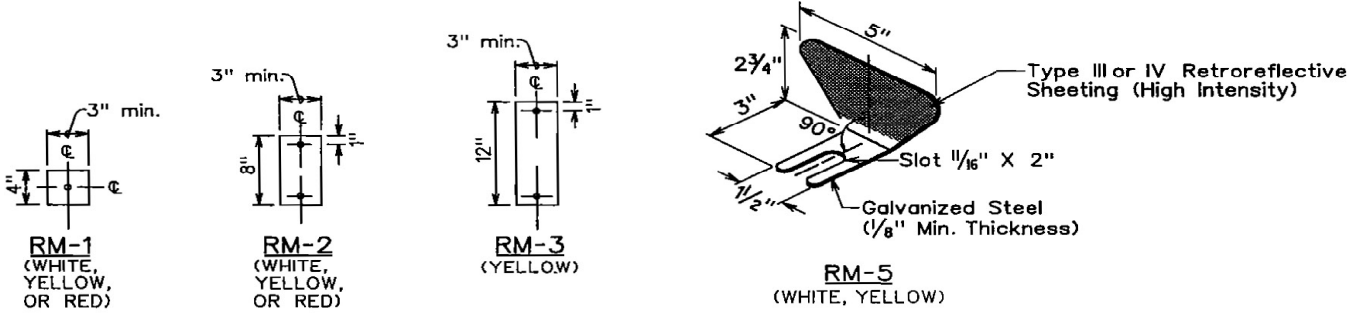
SPECIAL
633-H

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V16	V23



TYPICAL MOUNTING DETAILS

- GENERAL NOTES:**
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
 2. (R) or (L) indicates right or left and shall be as shown on the plans.
 3. Reflector markers RM-1 and RM-2 shall be:
a) Yellow if placed along the left edge of divided roadways, one-way roadways and ramps in the direction of travel.
b) White if placed along the right edge of divided roadways, one-way roadways and ramps in the direction of travel.
 4. For RM-4, the stripes shall slope downward at an angle of 45° toward the side of the obstruction that traffic is to pass.
 5. For reflector marker RM-9, reflective sheeting material may be used as an alternate.
 6. (H) indicates horizontal mounting of reflector marker.
 7. Height-4'-0" min. for RM-1, RM-2 and RM-3. Height-5'-6" min. for RM-4 and RM-9.
 8. Final locations of reflector markers shall be approved by the Engineer.

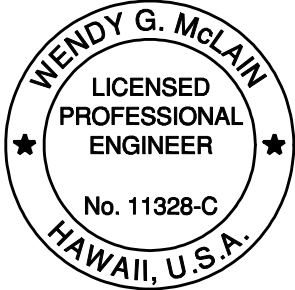


REFLECTOR MARKERS

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DATE	REVISION	APP'D.



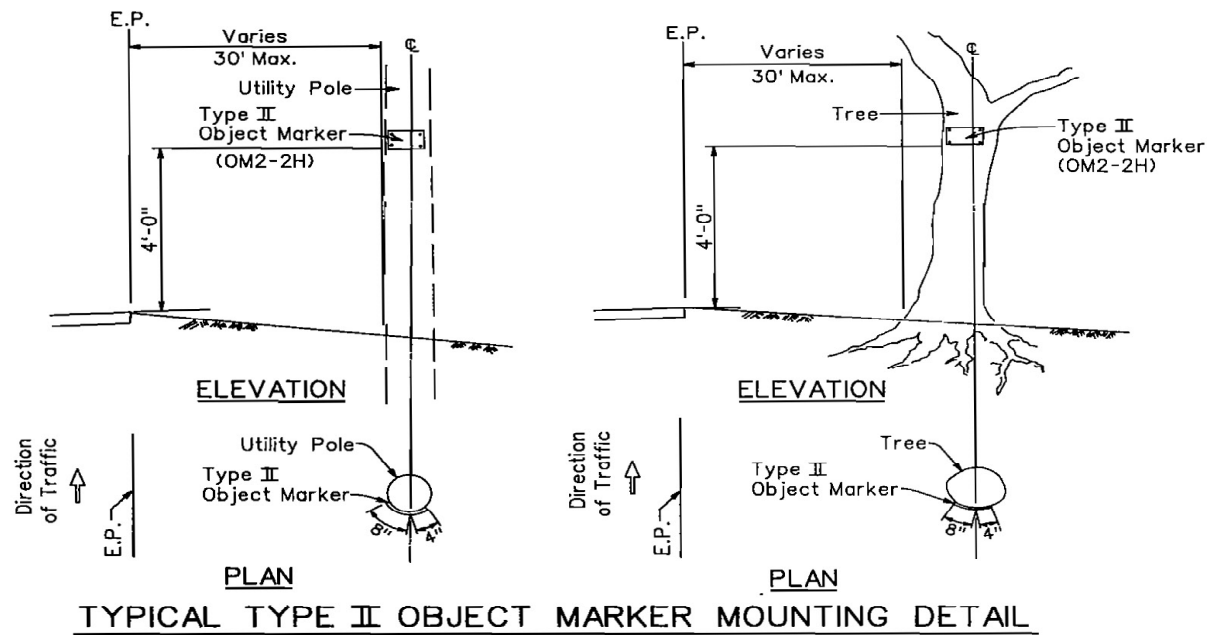
STANDARD PLAN TE-14 07/11/08



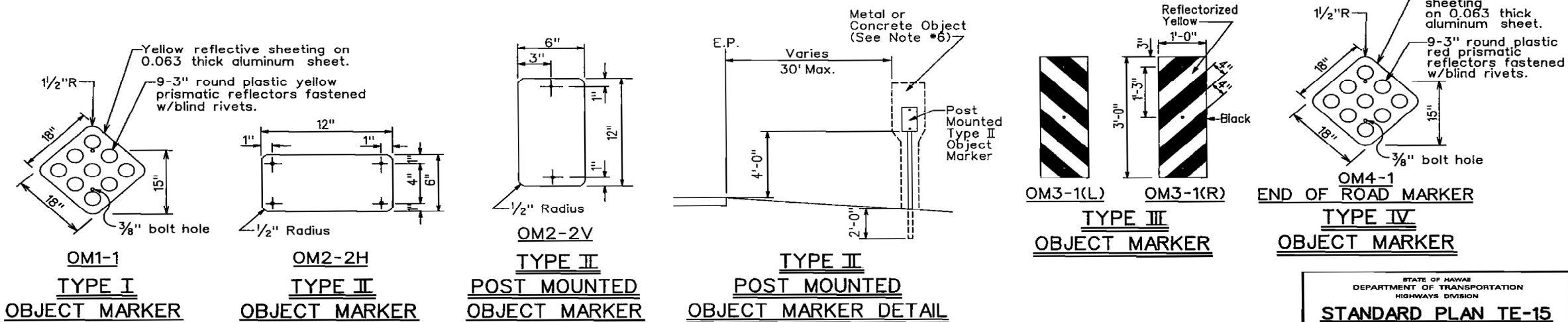
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EXPIRATION DATE OF THE LICENSE: 4/30/2016

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL (HDOT STD TE-14) MISCELLANEOUS REFLECTOR MARKERS	
	SPECIAL 633-I

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V17	V23

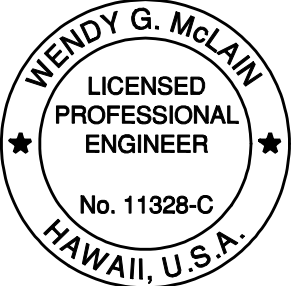


- GENERAL NOTES**
- All objects (utility poles or trees) that are within the State highway right of way and within 30 feet of the roadway edge of pavement shall be marked as directed by the Engineer.
 - The Contractor shall prepare the mounting surface of each object as directed by the Engineer and place the Type II Object Marker as shown on this plan.
 - Type II Object Markers shall be mounted on utility poles and trees with 1 3/4" galv. roofing nails (4 ea.).
 - Branches of trees which obscure the object markers shall be trimmed. (Payment shall be incidental to Type II Object Markers as shown in the proposal.)
 - Type II Object Markers for utility poles and trees, etc., shall be made of amber reflective sheeting material overlaid on 0.020" aluminum sheeting.
 - Objects such as concrete posts, concrete or rock walls and boxes, metal posts (greater than 2" in diameter), or metal boxes shall be marked with post mounted object markers. Post mounted Type II Object Markers shall conform to the following requirements:
 - It shall consist of amber reflective sheeting material overlaid on 0.063" thick sheet aluminum backing of the dimensions shown on the plans.
 - It shall be mounted on either metal posts or flexible delineator posts with 1/4"x2" galv. bolts, nuts and washers. Metal posts shall be galvanized and shall be either 1 1/2"x1 1/2", 12 gauge square tube posts or 1.12 lbs. per ft. flanged channel posts.



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DATE	REVISION	APP'D.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD PLAN TE-15
OBJECT MARKERS



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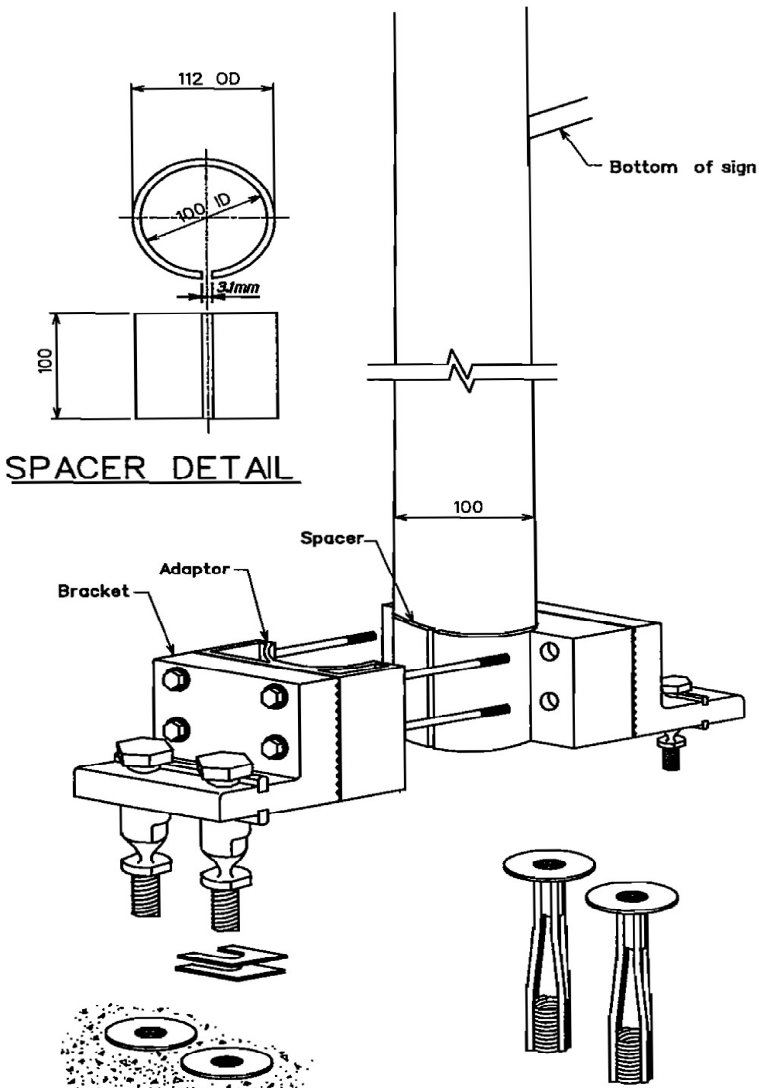
STANDARD PLAN TE-15 07/11/08

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

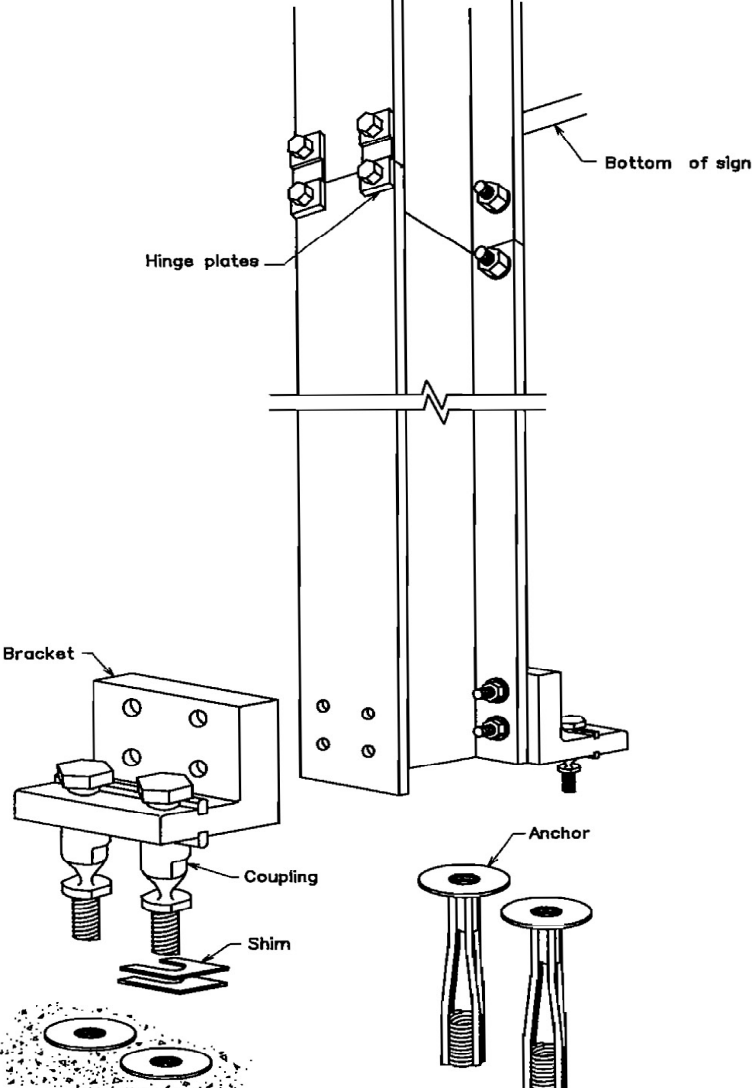
U.S. CUSTOMARY SPECIAL
(HDOT STD TE-15)
MISCELLANEOUS REFLECTOR MARKERS

SPECIAL
633-J

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V18	V23



TRANSPO TYPE APx4.5 (S/B) (OR EQUAL)
Use for 100 mm diameter aluminum tube

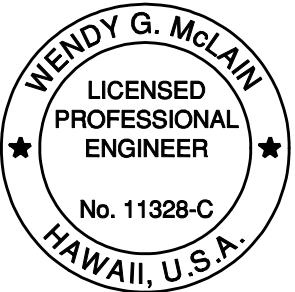


TRANSPO TYPE A16-LP (OR EQUAL)
Use for W150x14 Steelbeam

- Notes:
1. Assemble according to Manufacturer's instructions.
 2. Coordinate size and location of sign with appropriate sign breakaway mount per Manufacturer's instructions.
 3. All dimensions and steelmember sizes are shown in metric.

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DATE	REVISION	APP'D.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD PLAN TE-21A
SIGN BREAKAWAY MOUNTS

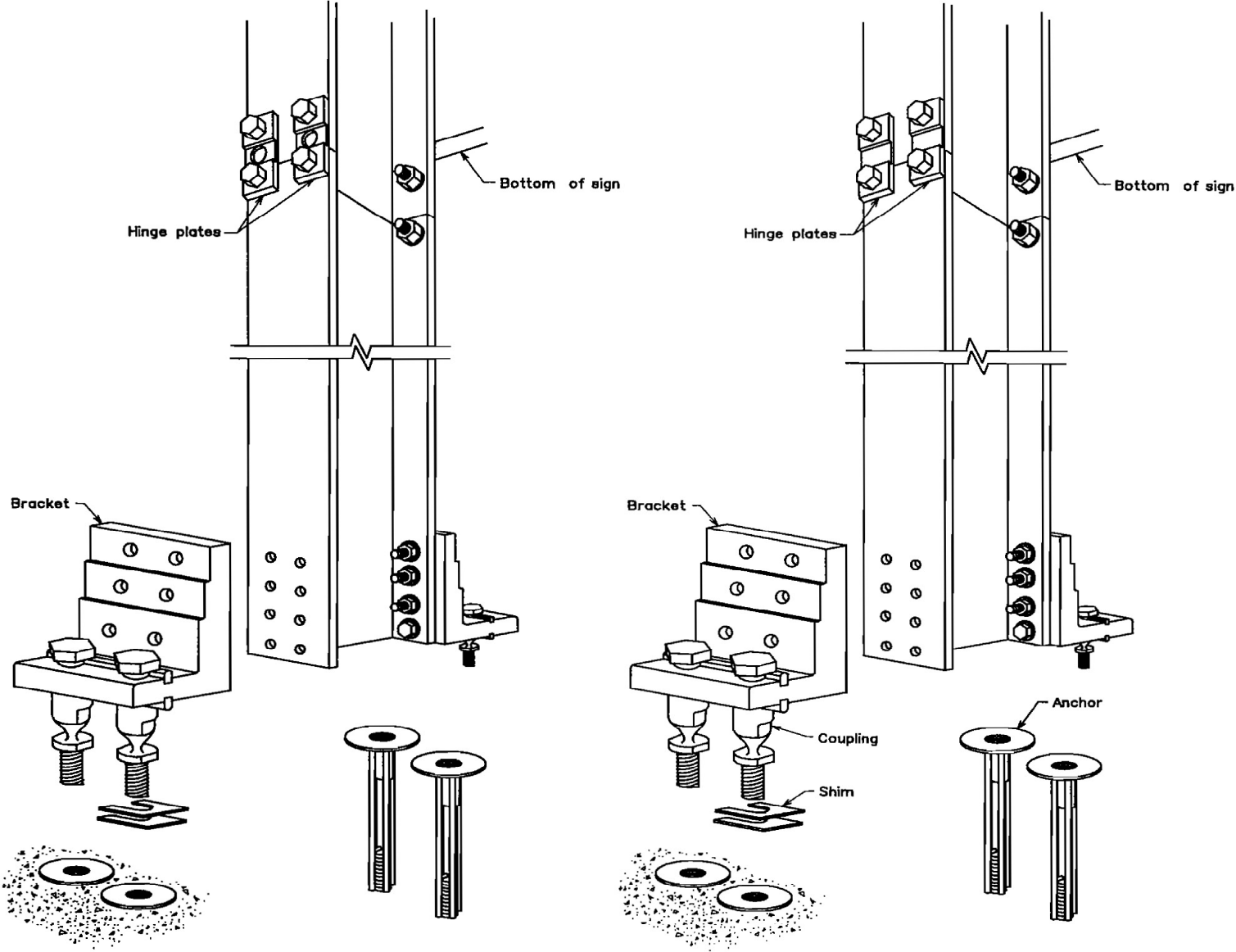


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STANDARD PLAN TE-21A 05/31/07

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL (HDOT STD TE-21A) BREAK-AWAY SIGN SUPPORTS FOR GROUND MOUNTED GUIDE SIGNS	
	SPECIAL 633-K

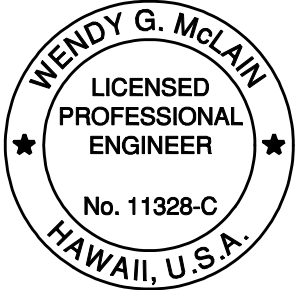
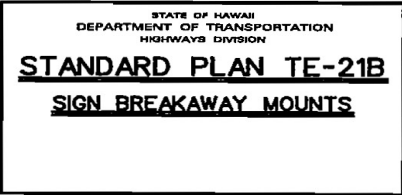
STATE	PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD 6(8)	V19	V23



TRANSPO TYPE B-525-LP (OR EQUAL)
Use for W150x18, W150x22, W200x27,
or W200x31 steel beams

- Notes:
1. Assemble according to Manufacturer's instructions.
 2. Coordinate size and location of sign with appropriate sign breakaway mount per Manufacturer's instructions.
 3. All dimensions and steel member sizes are shown in metric.

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DATE	REVISION	APP'D.



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STANDARD PLAN TE-21B 05/31/07

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
U.S. CUSTOMARY SPECIAL (HDOT STD TE-21B) BREAK-AWAY SIGN SUPPORTS FOR GROUND MOUNTED GUIDE SIGNS	
	SPECIAL 633-L