

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(078)	2017	ADD. 3	12

GENERAL NOTES

1. The scope of work for this project includes removing existing guardrail and end treatments and installing new metal guardrails and constructing new end treatments.

2. The Contractor is reminded of the requirements of Subsection 105.16 - Subcontracts.

3. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 104.11 - Utilities and Services; and Section 645 - Work Zone Traffic Control.

4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.

5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.

6. All lanes shall be open to traffic during peak hours from 6:30 A.M. to 8:30 A.M., during afternoon peak hours from 3:30 P.M. to 6:00 P.M., and during off work hours. Only one lane of highway shall be closed at any other time. Failure of the Contractor to open all lanes of traffic during the times specified above shall result in assessment of liquidated damages as specified in Section 108.09 of the Special Provisions.

Lane shifting is allowed during guardrail work to allow traffic in both directions. The Contractor is allowed to close auxiliary and sheltered lanes if necessary. A traffic control plan shall be approved by the Engineer before shifting and/or closure of auxiliary and sheltered lanes.

7. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting operations.

8. Prior to construction, submit for the Engineer's review and acceptance Manufacturer's engineered drawings for typical guardrail terminal end treatment installations.

9. Earth swale shall be graded to drain. Graded swales and shoulder shall be grassed. This work shall be considered incidental to the various contract items.

10. Existing drainage system will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.

11. The Contractor shall provide for access to and from all existing driveways, sidewalks and ADA access routes, and side streets and cross streets at all times. This work shall be considered incidental to the various contract items.

12. The exact locations and limits of guardrail to be removed and limits of new guardrail to be intalled shall be determined in the field by the Engineer.

13. All removal and installation of guardrail and end treatments shall be completed within 1 working day per location. This work includes removal of existing guardrail, terminal end treatments, concrete foundations and traffic signs and installation of new metal guardrails and new terminal end treatments.

No section where guardrails have been removed shall be left unattended at the end of each work day. Should a location require more than 1 working day to complete the work, any section of guardrail left open shall be shielded by NCHRP-350 compliant devices and all costs associated with such devices shall be borne by the Contractor. Should a location require more than 3 calendar days to complete the work, permanent work zone and construction signs shall be installed and the cost borne by the Contractor.

14. Any work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.

15. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designated in writing and approved by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Highways Division at telephone no. 241-3000.

16. All workers within the State right-of-way who are exposed to either vehicles using the roadway or to construction equipment shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of ANSI/ISEA 107-2004. "Workers" is defined as people on foot whose duties place them with the State right-of-way, such as, but not limited to construction and maintenance forces, equipment operators, survey crews, utility crews, responders to incidents (e.g., EMT and firemen), and law enforcement personnel directing traffic, investigating accidents, handling lane closures and obstructed roadways.

17. Prior to construction, the contractor shall contact the various utility agencies for location of existing utilities within the project limits. The Contractor shall locate and protect all existing utilities whether or not shown on the plans, Any costs incurred by damages to existing utilities will be borne by the Contractor. Contractor shall request from One-Call Center, Ph: 1-866-423-7287. The Contractor shall also call the County of Kauai, Department of Water, Ph: 245-5411 and the Wastewater Division, Ph: 241-6642 for toning waterlines and sewerlines respectively.

18. All works of toning, probing, hand digging and all other means of utility verifications shall not be paid for separately, but shall be considered incidental to the various contract items.

19. For guardrail work along Kuhio Highway from M.P. 6.18 tp M.P. 6.53, and for guardrail work along Kuamoo Road from M.P. 0.04 to M.P. 3.91, the work is required to proceed under the monitoring provisions as outlined in the approved Archaeological Monitoring Plan (AMP) for this project. As required by the AMP, prior to work commencing within the affected areas, the on-site archaeologist shall hold a coordination meeting to orient the construction crew to the requirements of the AMP. The Contractor is reminded that the on-site archaeologist(s) who will be implementing the AMP shall have the authority to stop work immediately in the area of any findings and also has the authority to slow and/or suspend construction activities as needed. Copies of the AMP are available at the HDOT, Kauai District Office.

For all other locations of work, should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find. The Contractor shall immediately notify the Planning Department at (808) 241-4050 and State Historic Preservation Division at (808) 692-8015, which will assess the significance of the find and recommend the appropriate mitigation measures, if necessary.

20. Removal and disposal of existing traffic signs, steel rail elements, W-Beam sections, end treatments, concrete foundations, steel rail post and backfilling and compacting of resulting holes with suitable material accepted by the Engineer shall be considered incidental to the various contract items. In addition to backfilling and compacting, where there is existing asphalt under guardrails, any resulting holes shall be sealed with pothole patch material accepted by the Engineer and shall be considered incidental to the guardrail work.

21. The intent of this contract is to replace and install new guardrail and guardrail end treatments to best fit the existing conditions. Other than handwork, no machine grading is anticipated to be required.

LEGEND

- Existing Power Pole

Existing Electric Manhole

Adjusted Elec. MH Frame/Cover

Existing Electric Pullbox

Existing Telephone Manhole

Adjusted Tel. MH Frame/Cover

Existing Telephone Pullbox

Existing 12" Water Line

Existing Water Manhole

Adjusted Water MH Frame/Cover

Existing Water Air Valve

Adjusted Water Air Valve

Existing Water Valve Box

Adjusted Water Valve Box

Existing Water Meter Box

Adjusted Water Meter Box

New Type "X" Water Meter Box

Existing Traffic Sign

New Traffic Sign

New Grated Drop Inlet

Adjusted/Reconstructed Drain Inlet or Replaced Steel Grate
- Existing Metal Guardrail

New Metal Guardrail

Adjusted and/or Relocated Metal Guardrail

Existing Fire Hydrant

Existing Sewer Line

New 12" Sewer Line

Existing Sewer Manhole

Adjusted Sewer Manhole

New Sewer Manhole

Existing Monument

Adjusted Monument

New Monument

Existing 24" Drain Line

Existing Storm Drain Manhole

Adjusted Storm Drain Manhole

Existing Grated Drop Inlet

8/28/17	△ - Add Note No. 21
8/28/17	△ - Revise Note No. 20
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GENERAL NOTES & LEGEND GUARDRAIL & SHOULDER IMPROVEMENTS AT VARIOUS LOCATIONS, PART 4 Federal Aid Project No. STP-0700(078) Date: August 2017	
SHEET No. 1 OF 1 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(078)	2017	ADD. 7	12

GUARDRAIL WORK ITEMS - KAUMUALII HIGHWAY, ROUTE 50

M.P.	O/S	END	DEMOLITION	QTY
3.0	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
5.60	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
5.60	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
5.78	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
5.80	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
5.78	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
5.80	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
6.24	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
6.25	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
6.45	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
6.75	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
6.88	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
6.88	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
8.78	LT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF & 5 Ea
12.0	RT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF & 5 Ea
12.08	LT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF & 5 Ea

NOTE: TYPICAL FOR ALL LOCATIONS EXCEPT WHERE REPLACING ENTIRE GUARDRAIL SECTION:

1. Install MSKT-SP-MGS, SoftStop or approved equal terminal as per Manufacturer's Specifications - 1 Ea
2. Install Midwest Guardrail System (MGS) Transition From 31" Height to Existing Strong-Post Guardrail, 27³/₄" Height (See Sheet No. 10)
3. All new 12'-6" W-beam guardrail shall have 5 slotted holes.

*FOR THE FOLLOWING LOCATIONS, REPLACE ENTIRE GUARDRAIL SECTION
(Note: All new 12'-6" W-beam guardrail shall have 5 slotted holes)

- △ M.P. 6.18 to M.P. 6.21 Lt:
MSKT-SP-MGS, SoftStop or approved equal terminal as per Manufacturer's Specifications: 2 Ea
Guardrail, 31" Strong Post MGS with 6-Ft Posts: 37.5 LF


△ M.P. 6.46 to M.P. 6.49 Rt:
MSKT-SP-MGS, SoftStop or approved equal terminal as per Manufacturer's Specifications: 2 Ea
Guardrail, 31" Strong Post MGS with 6-Ft Posts: 75 LF

- △ M.P. 11.41 TO M.P. 11.51 Rt:
MSKT-SP-MGS, SoftStop or approved equal terminal as per Manufacturer's Specifications: 2 Ea
Guardrail, 31" Strong Post MGS with 6-Ft Posts: 37.5 LF

△ M.P. 11.5 to M.P. 11.517 Lt:
MSKT-SP-MGS, SoftStop or approved equal terminal as per Manufacturer's Specifications: 2 Ea
Guardrail, 31" Strong Post MGS with 6-Ft Posts: 12.5 LF

GUARDRAIL WORK ITEMS - KUHIO HIGHWAY, ROUTE 56

M.P.	O/S	END	DEMOLITION	QTY
1.05	LT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF & 5 Ea
1.16	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
1.32	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
1.59	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
1.66	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
2.89	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*6.18	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*6.21	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*6.46	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*6.49	RT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF & 5 Ea
6.53	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
11.0	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
11.04	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*11.49	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*11.51	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*11.50	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
*11.517	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
12.06	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea
12.65	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF & 7 Ea

8/28/17  - Replace Entire Guardrail Section

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL WORK ITEMS

GUARDRAIL & SHOULDER IMPROVEMENTS

AT VARIOUS LOCATIONS, PART 4

Federal Aid Project No. STP-0700(078)

Date: August 2017

SHEET No. 1 OF 3 SHEETS

ADD. 7

ORIGINAL PLAN

DATE

SURVEY PLOTTED BY

DRAWN BY

DESIGNED BY

CHECKED BY

NOTE BOOK

NOTES

DATE

BY

DATE

BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(078)	2017	ADD. 9	12

GUARDRAIL WORK ITEMS - KUHIO HIGHWAY, ROUTE 56 (CONTINUED)

M.P.	O/S	END	DEMOLITION	QTY
20.36	LT	Approach	Remove FLEAT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
20.67	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
20.71	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
20.72	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
20.86	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
20.88	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
22.00	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
22.04	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
23.012	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
23.02	RT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
23.08	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
23.15	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
*25.31	LT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
*25.34	LT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
25.31	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
25.34	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea

NOTE: TYPICAL FOR ALL LOCATIONS EXCEPT WHERE REPLACING ENTIRE GUARDRAIL SECTION:

1. Install MSKT-SP-MGS, SoftStop or approved equal terminal as per Manufacturer's Specifications - 1 Ea
2. Install Midwest Guardrail System (MGS) Transition From 31" Height to Existing Strong-Post Guardrail, 27³/₄" Height (See Sheet No. 10)
3. All new 12'-6" W-beam guardrail shall have 5 slotted holes

*FOR THE FOLLOWING LOCATION, REPLACE ENTIRE GUARDRAIL SECTION
(Note: All new 12'-6" W-beam guardrail shall have 5 slotted holes.)

▲ M.P. 25.31 to M.P. 25.34 Lt:
MSKT-SP-MGS, SoftStop or approved equal terminal as per
Manufacturer's Specifications: 2 Ea
Guardrail, 31" Strong Post MGS with 6-Ft Posts: 75 LF

GUARDRAIL WORK ITEMS - KUAMOO ROAD,, ROUTE 580

M.P.	O/S	END	DEMOLITION	
0.04	RT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
0.10	LT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
0.16	LT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
0.20	RT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
0.57	LT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
0.58	RT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
0.77	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
0.78	RT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
1.53	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
1.58	LT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
1.71	LT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
1.77	LT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
1.92	RT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
3.67	RT	Trailing	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
3.68	RT	Approach	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
3.80	RT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea
3.88	RT	Approach	Remove SRT-350 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	50 LF @ 7 Ea
3.91	RT	Trailing	Remove ET-2000 End Treatment with Wood Posts	1 Ea
			Remove Guardrail & Steel Posts	37.5 LF @ 5 Ea

8/28/17	▲ - Replace Entire Guardrail Section
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL WORK ITEMS

GUARDRAIL & SHOULDER IMPROVEMENTS

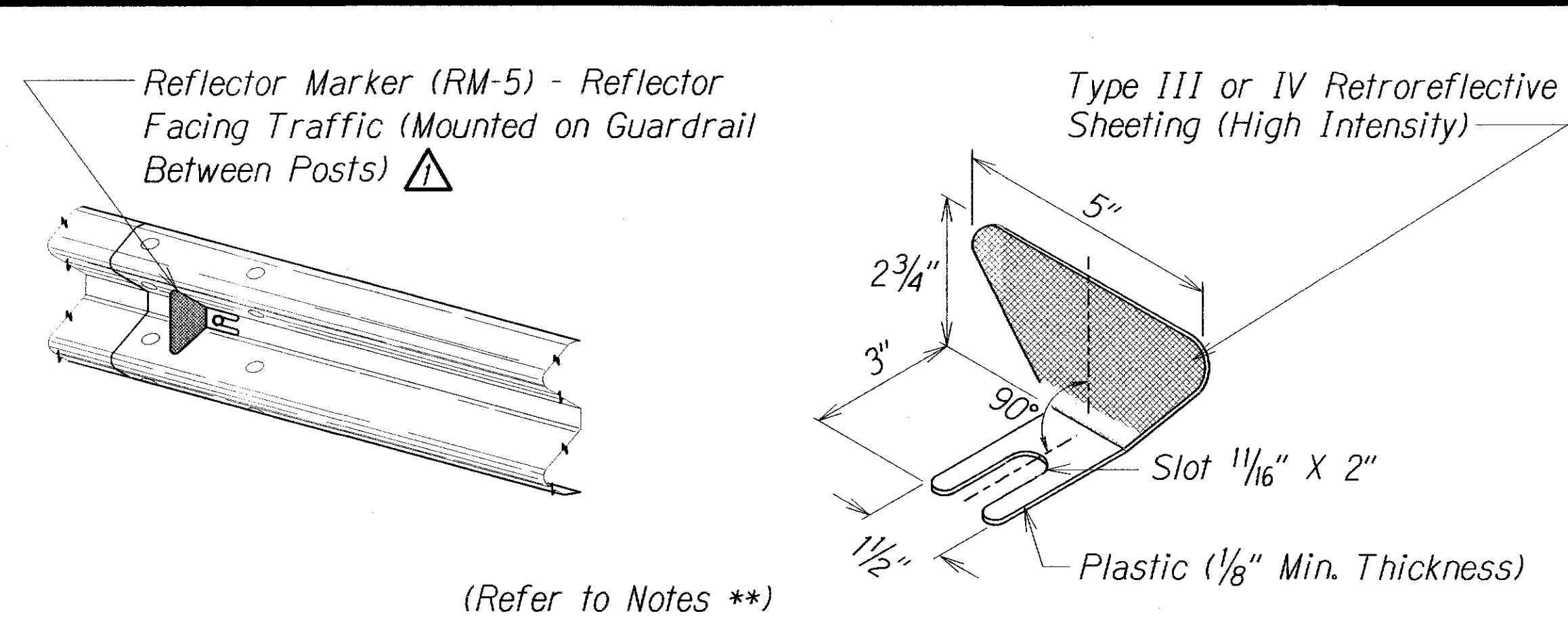
AT VARIOUS LOCATIONS, PART 4

Federal Aid Project No. STP-0700(078)

Date: August 2017

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	NOTED BY	
	CHECKED BY	

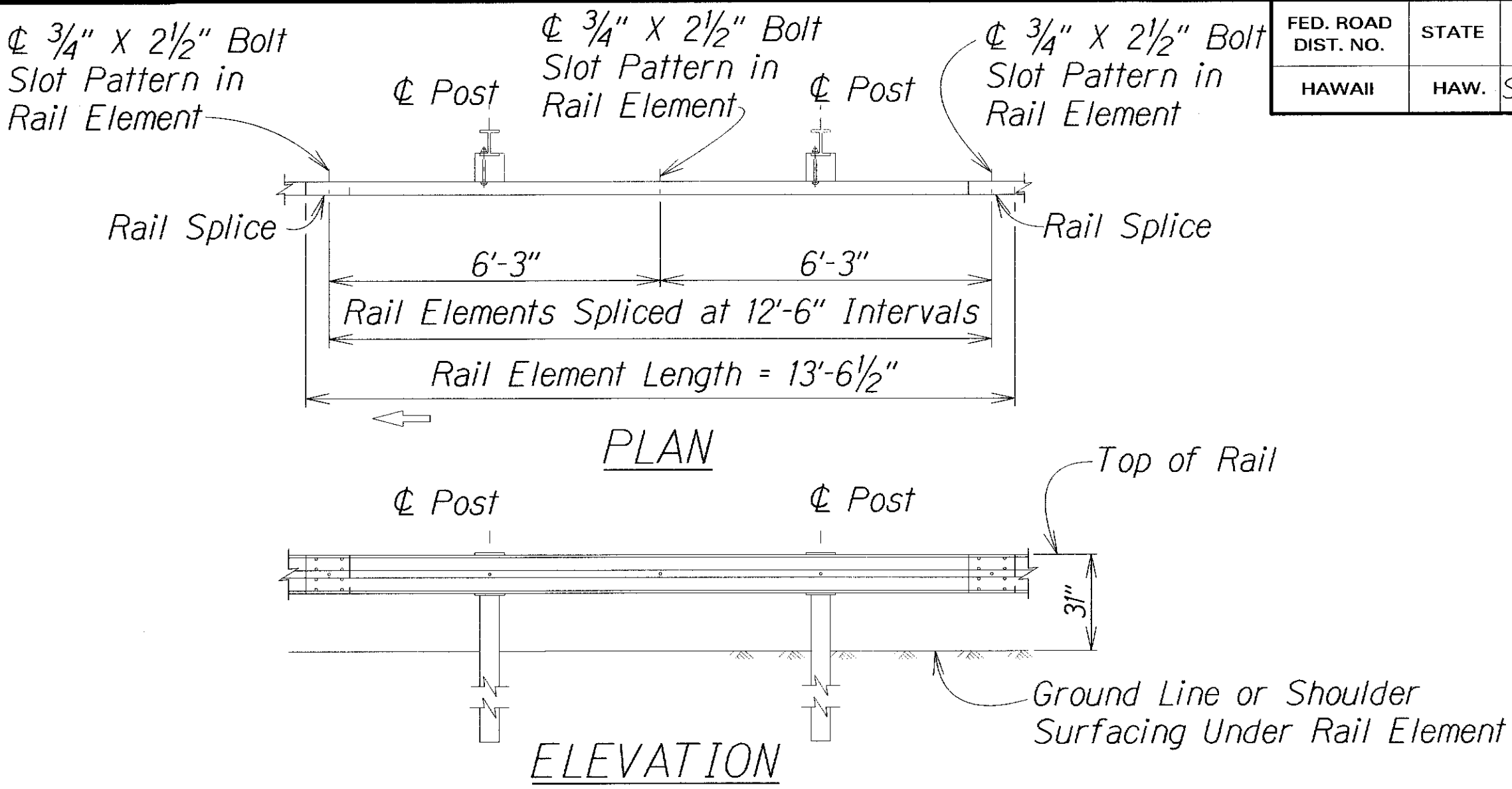
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(078)	2017	ADD. 10	12



REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION

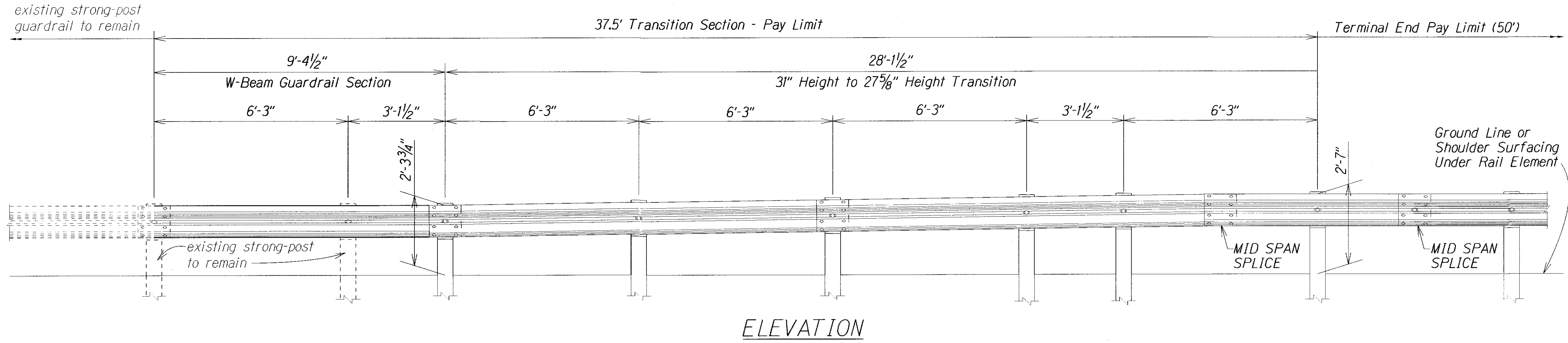
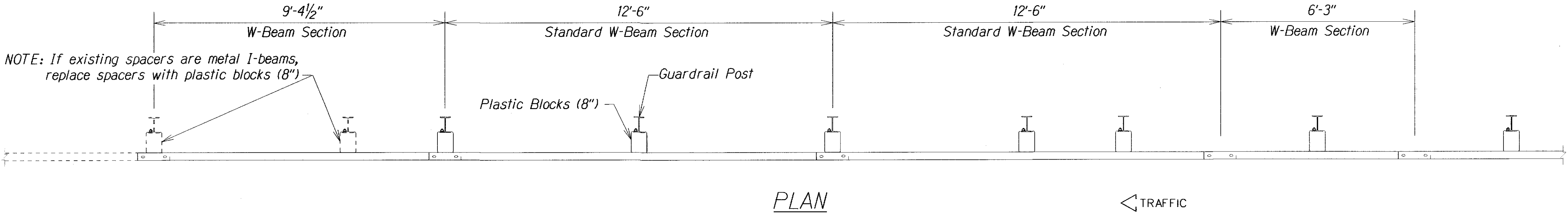
Not to Scale

Notes**:
 Reflector Marker (RM-5) mounted on guardrails shall be spaced every 25 feet. RM-5's shall not be installed on Terminal Sections. RM-5 shall be plastic.



MIDWEST GUARDRAIL SYSTEM (MGS) WITH STEEL POSTS AND PLASTIC BLOCKS (8")

Not to Scale



MIDWEST GUARDRAIL SYSTEM (MGS) TRANSITION FROM 31" HEIGHT TO EXISTING STRONG POST GUARDRAIL, 27 $\frac{3}{4}$ " HEIGHT

Scale: $\frac{1}{2}$ "=1'-0"

8/28/17	\triangle - Reflector Marker Typical Installation
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
MISCELLANEOUS DETAILS	
GUARDRAIL & SHOULDER IMPROVEMENTS	
AT VARIOUS LOCATIONS, PART 4	
Federal Aid Project No. STP-0700(078)	
Scale: As Noted	Date: August 2017
SHEET No. 1 OF 1 SHEETS	