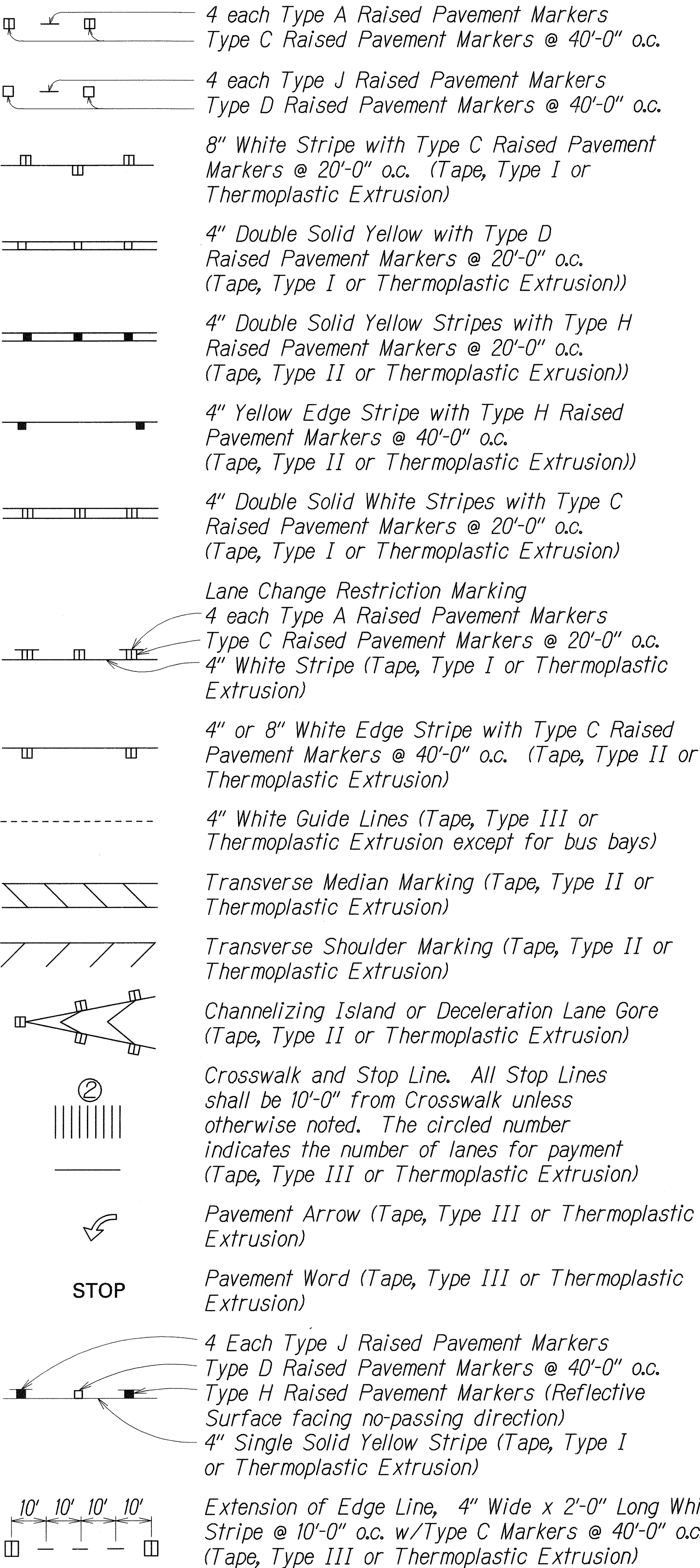


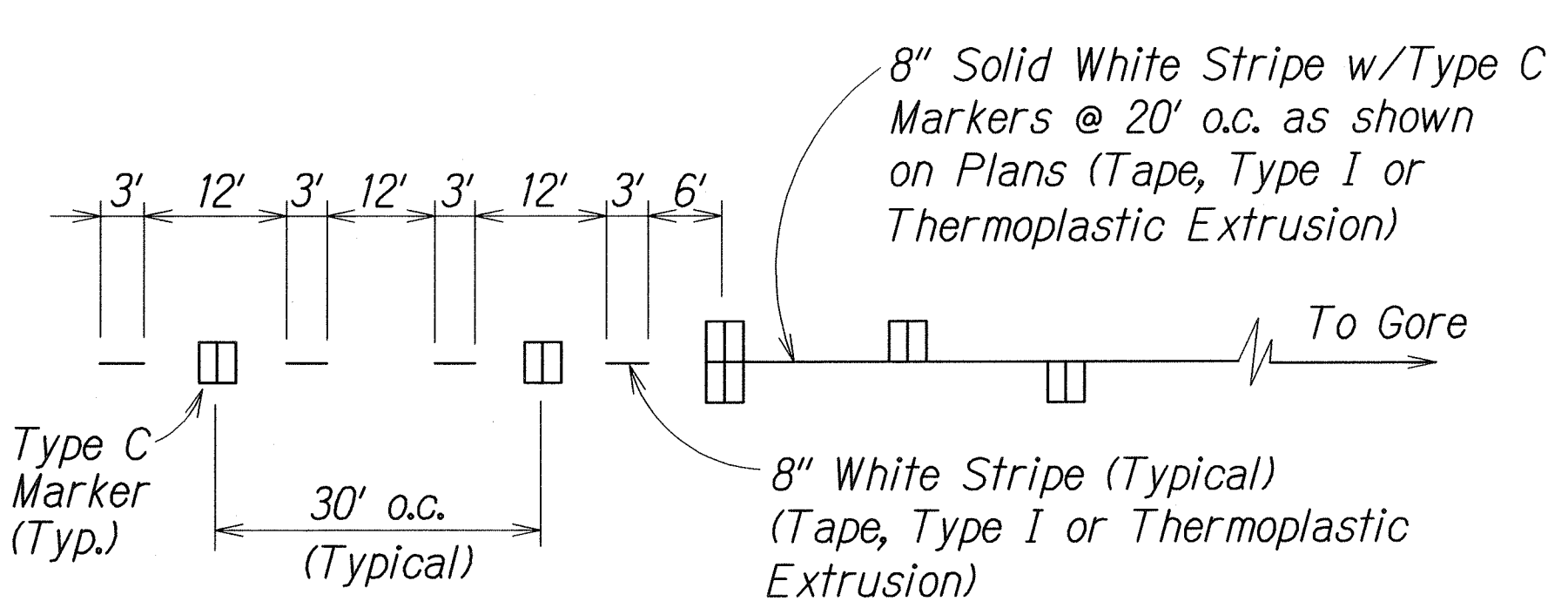
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(23)	2011	ADD. 6	19

LEGEND



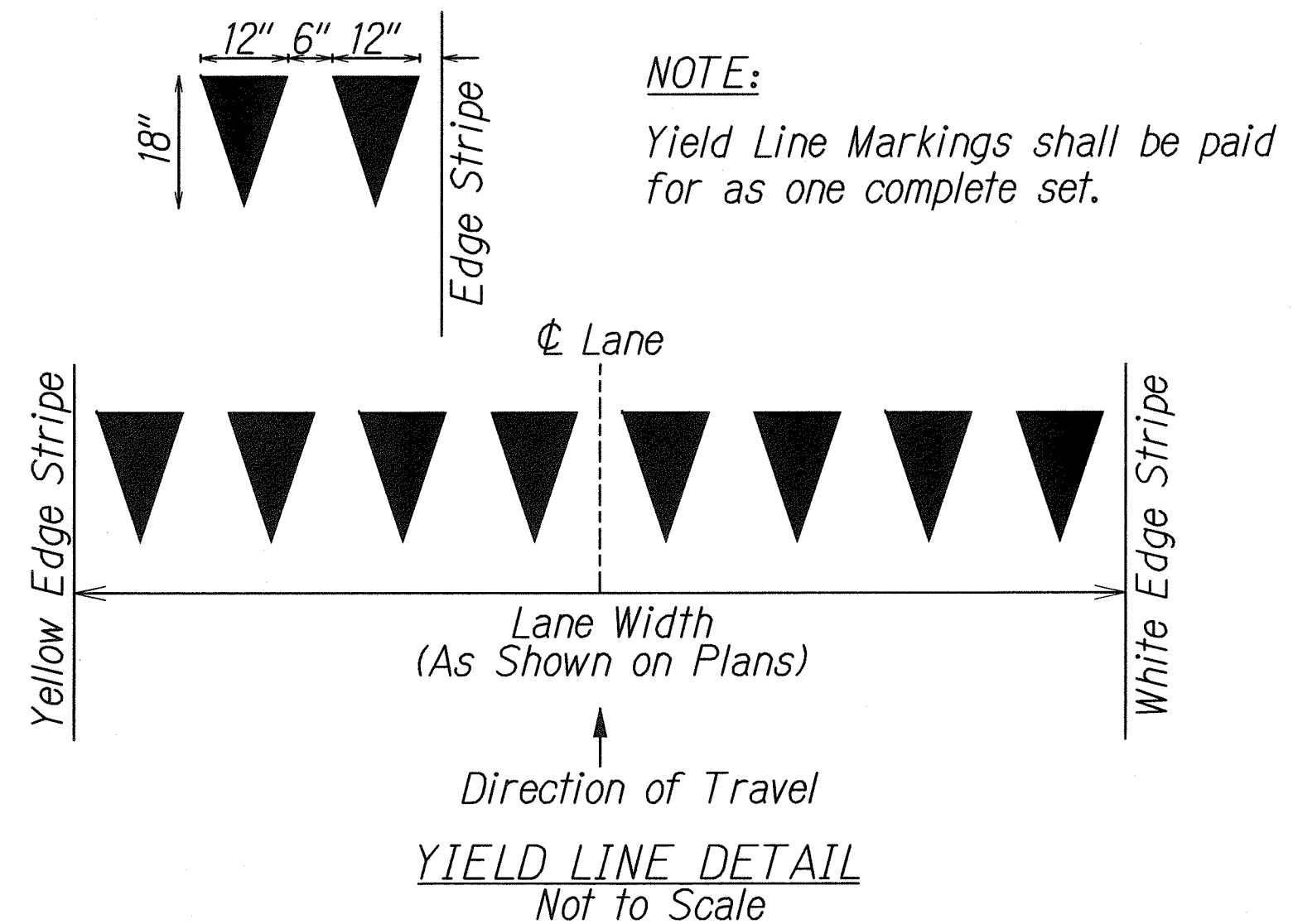
NOTES

- Layout of pavement markings and striping shall be done by the Contractor and approved by the Engineer prior to any installation work.
- 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.
- Raised pavement markers shall not be installed within crosswalks.
- Final locations of all signs shall be approved by the Engineer prior to any installation work.
- 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.
- Final locations of all Stop Lines shall be approved by the Engineer prior to installation.
- All pavement striping shall be as noted on the legend or plans.
- 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.
- All pedestrian warning signs with supplemental sign shall be on a fluorescent yellow-green retroreflective background with a black legend and border.



LANE DROP MARKING

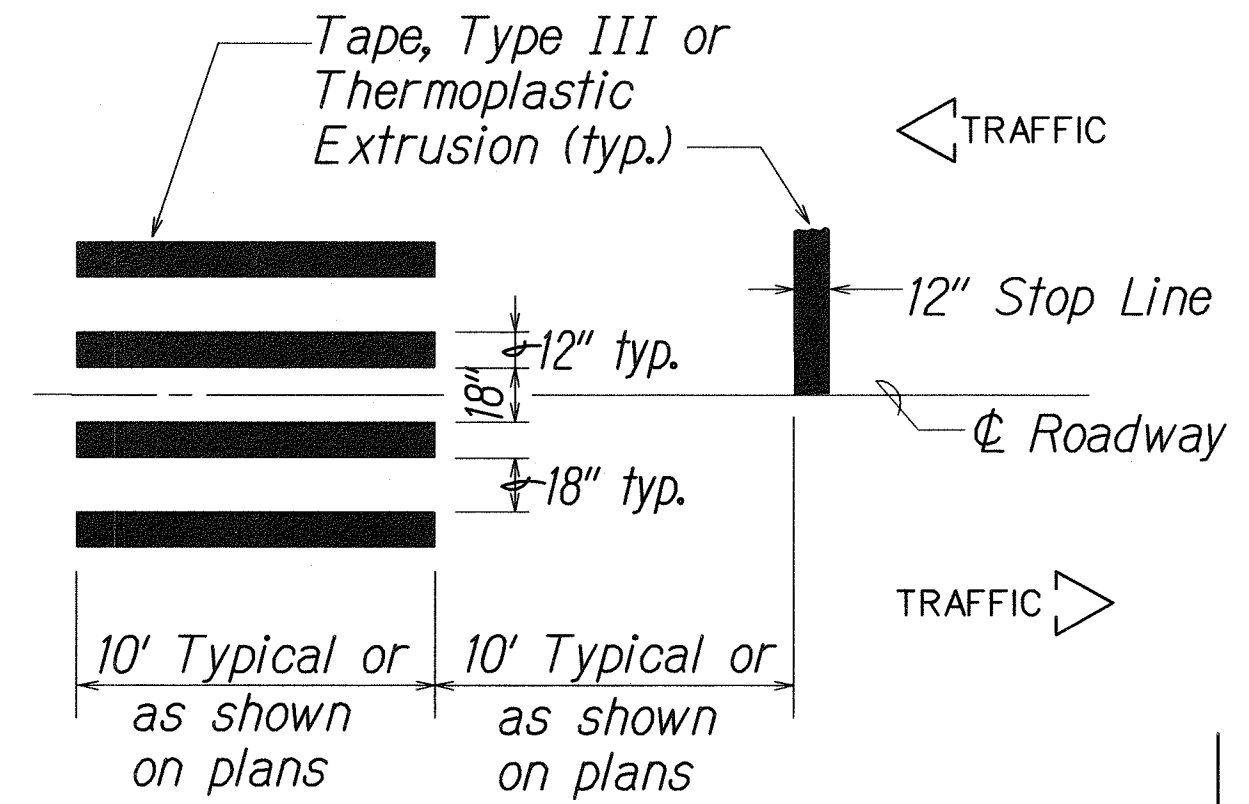
Not to Scale



NEW TRAFFIC SIGNAL ASSEMBLY W/ LED SIGNAL LIGHTS & TRAFFIC SIGNAL BACK PLATE**

STREET NAME/INTERSECTION	IN BOUND (IB)	OUT BOUND (OB)
Leihoku Street	2	2
Waianae Mall	2	2
Puhano Street	1	2
Lualualei Homestead Road	2	1
Pokai Bay/Waianae Valley Road	1	1
Old Government Road	1	1
Waianae Intermediate School	2	2
Ala Akau Street	2	2
Waianae High School	2	2
Makaha Valley Road	2	2

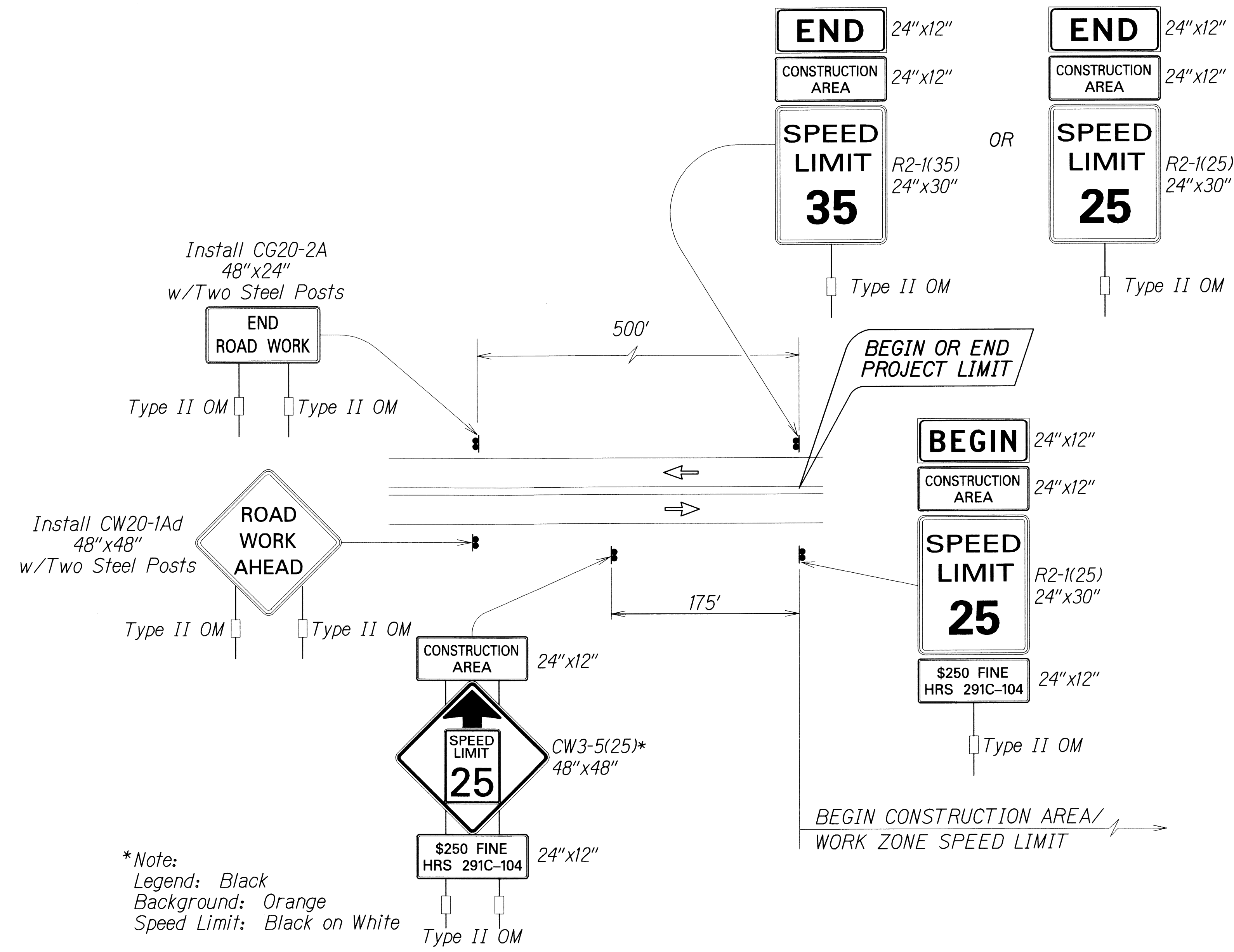
** Replace existing mast arm mounted traffic signal head with new traffic signal head with LED optical units and traffic signal back plate.



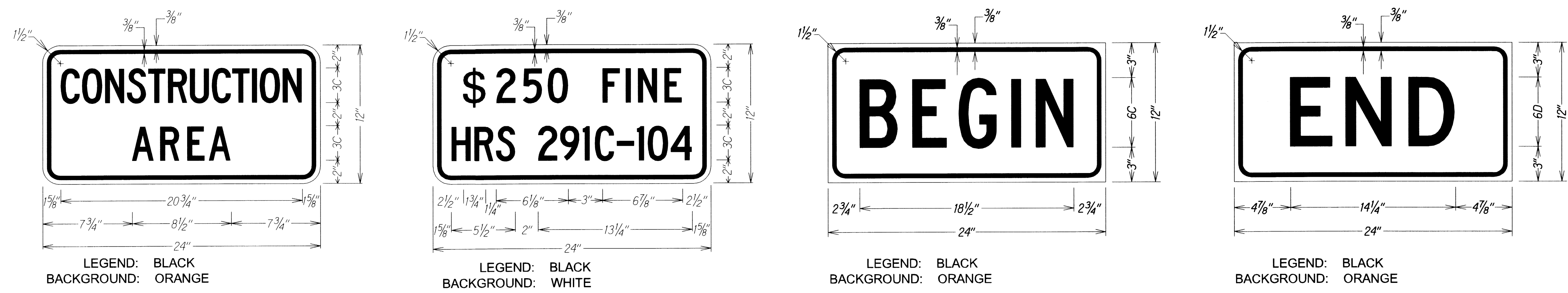
CROSSWALK STRIPING DETAIL

1/9/12	3 Remove RM-2 legend & added traffic signal note
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION PAVEMENT MARKING LEGEND, DETAILS & NOTES FARRINGTON HIGHWAY SAFETY IMPROVEMENTS Leihoku Street to Kili Drive Federal Aid Project No. HSIP-093-1(23) Scale: As Shown Date: May 2011 SHEET No. 71 OF 14 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(23)	2011	7	19



TYPICAL DETAIL FOR CONSTRUCTION SIGNS
ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY



Work Zone Note:

1. This Work Zone Sign Plan is intended for use on long-term stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions.
2. All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-1(25) and CW3-5(25) with "CONSTRUCTION AREA" and "\$250 FINE HRS 291C-104" Supplemental Signs).
3. Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.
4. Each construction warning sign shall have a minimum of two (2) Type II OM. Each work zone speed limit assembly shall have a minimum of one (1) Type II OM. Installation of each Type II OM shall be considered incidental to Item No. 645.1000 - Traffic Control.
5. Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.
6. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
7. The removal and restoration of existing regulatory speed limit signs with new posts along with the installation, maintenance and removal of work zone speed limit sign assemblies shall be considered incidental to Item No. 645.1000 - Traffic Control.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

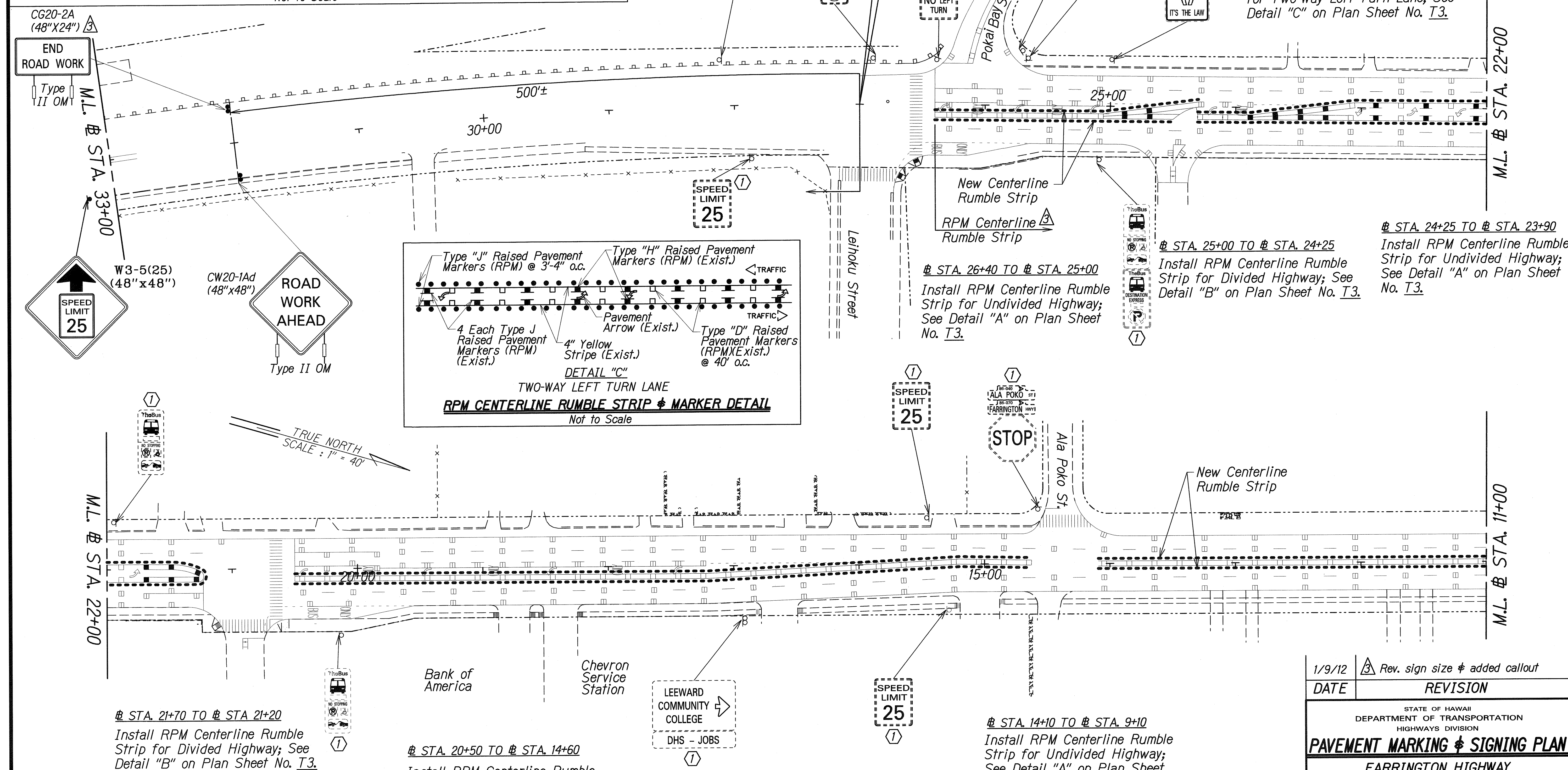
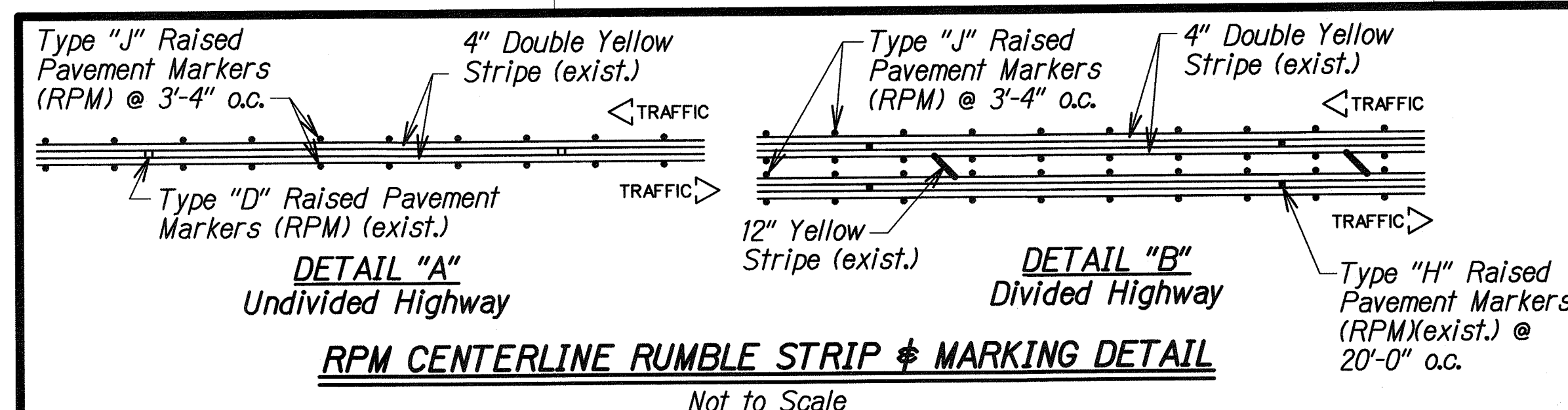
**LOW SPEED UNDIVIDED HIGHWAY
WORK ZONE SIGNING PLAN, NOTES&DETAILS**

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Leihoku Street to Kili Drive
Federal Aid Project No. HSIP-093-1(23)

Not To Scale Date: May 2011

SHEET No. T2 OF 14 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-093-1(23)	2011	ADD. 8	19



KEY:

① Exist. Sign(s) & Post(s) to Remain

② Install New Sign(s) w/ Post(s)

③ Install New Sign(s)

LEGEND FOR AS-BUILT POSTINGS

~~~~~ Squiggly line for as-built deletion

==== Double line for as-built deletion

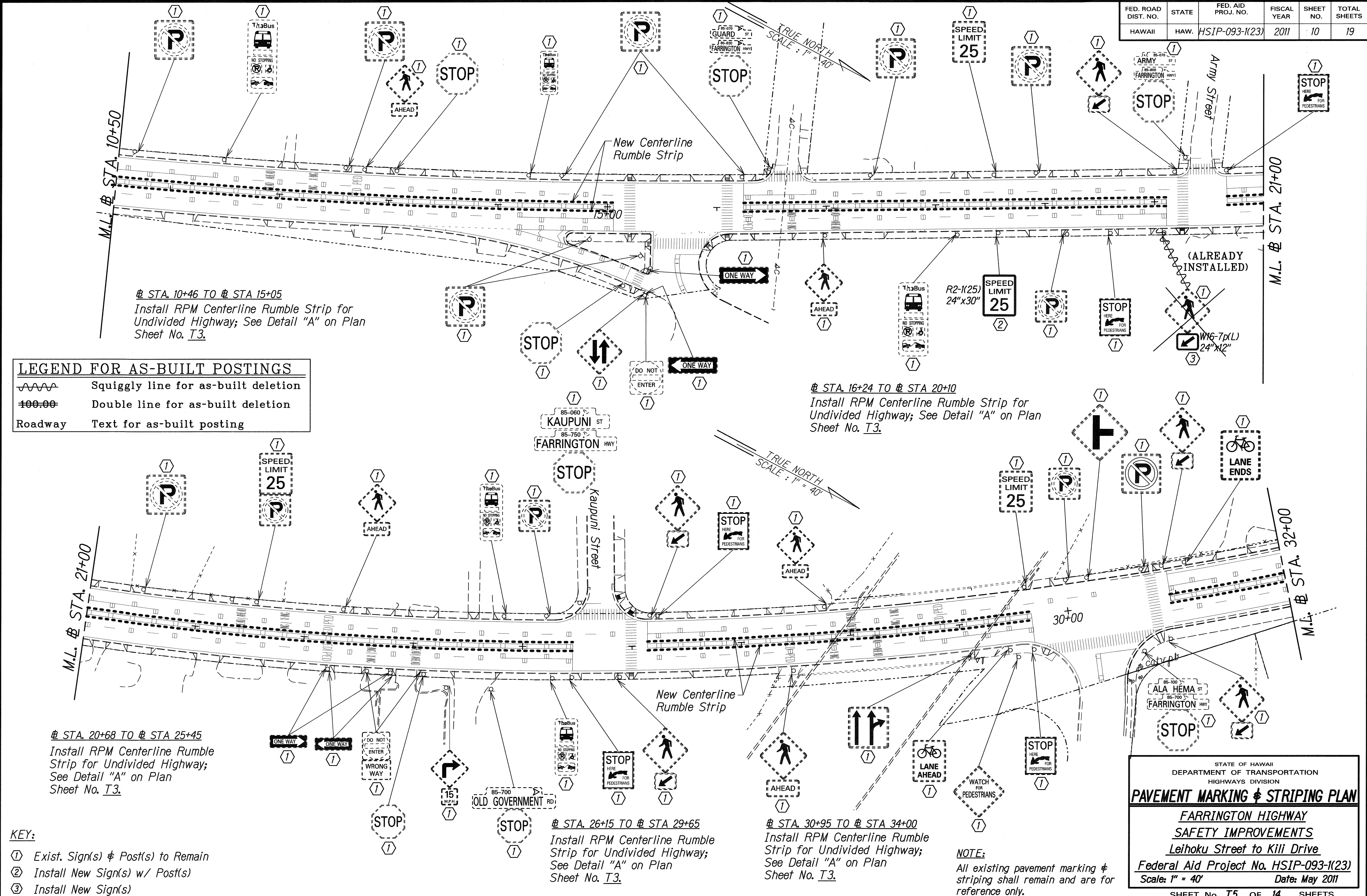
Roadway Text for as-built posting

**NOTE:**  
All existing pavement marking & striping shall remain and are for reference only.

|                                                                      |                                |
|----------------------------------------------------------------------|--------------------------------|
| 1/9/12                                                               | Rev. sign size & added callout |
| DATE                                                                 | REVISION                       |
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |                                |
| <b>PAVEMENT MARKING &amp; SIGNING PLAN</b>                           |                                |
| <b>FARRINGTON HIGHWAY</b>                                            |                                |
| <b>SAFETY IMPROVEMENTS</b>                                           |                                |
| <b>Leihoku Street to Kili Drive</b>                                  |                                |
| <b>Federal Aid Project No. HSIP-093-1(23)</b>                        |                                |
| Scale: 1" = 40'                                                      | Date: May 2011                 |
| SHEET No. T3 OF 14 SHEETS                                            |                                |



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HSIP-093-1(23)     | 2011        | 10        | 19           |



|                   |  |
|-------------------|--|
| DATE              |  |
| SURVEY PLOTTED BY |  |
| DRAWN BY          |  |
| DESIGNED BY       |  |
| CHECKED BY        |  |
| NOTED BY          |  |
| DATE              |  |

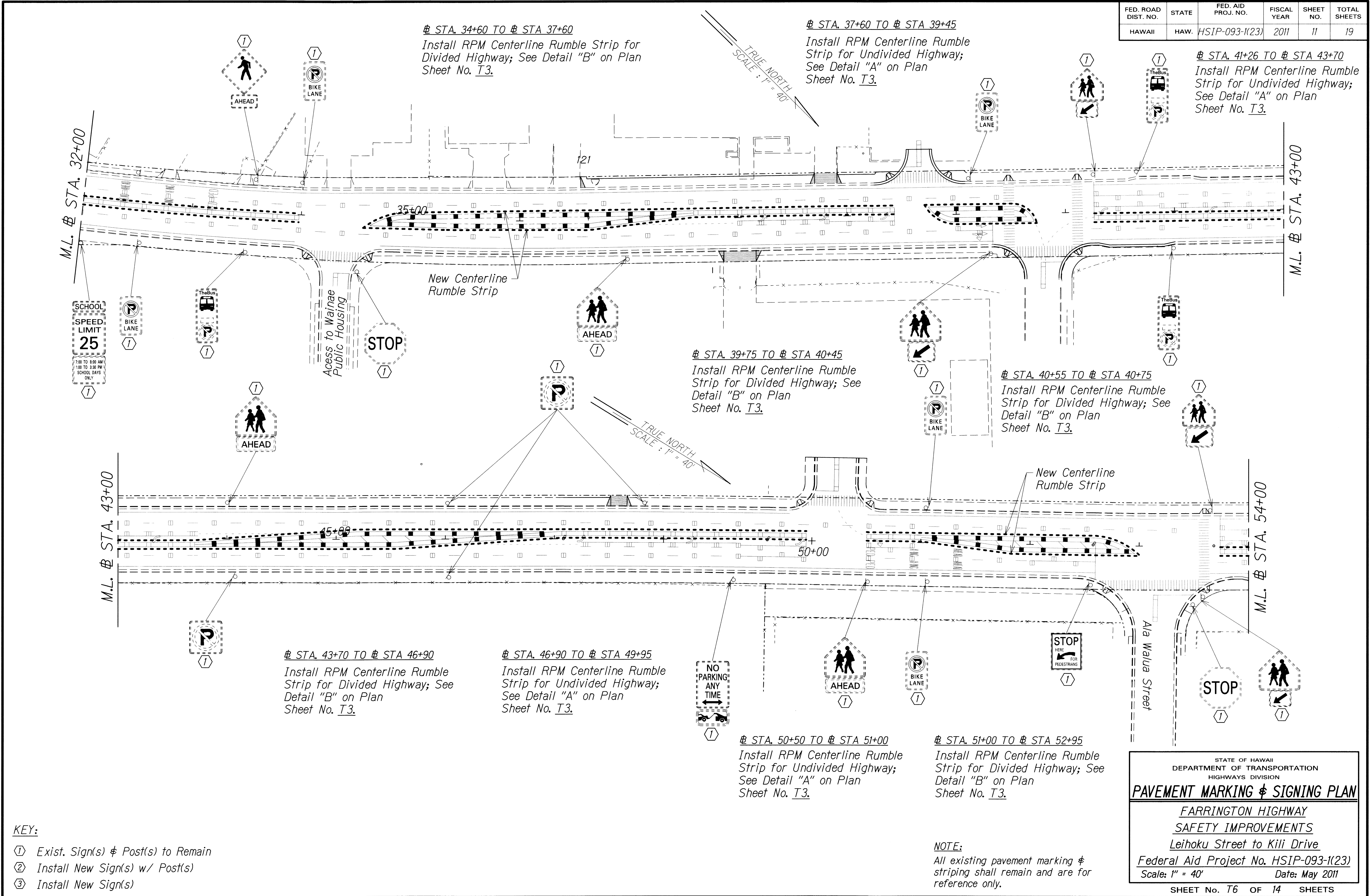
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**PAVEMENT MARKING & STRIPING PLAN**

**FARRINGTON HIGHWAY**  
**SAFETY IMPROVEMENTS**  
**Leihoku Street to Kili Drive**  
**Federal Aid Project No. HSIP-093-1(23)**  
**Scale: 1" = 40'**  
**Date: May 2011**

SHEET No. 75 OF 14 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HSIP-093-1(23)     | 2011        | 11        | 19           |



|                   |       |
|-------------------|-------|
| DATE              | _____ |
| SURVEY PLOTTED BY | _____ |
| DESIGNED BY       | _____ |
| QUANTITIES BY     | _____ |
| CHECKED BY        | _____ |
| NOTE BOOK         | _____ |
| FILED             | _____ |

- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
  - ② Install New Sign(s) w/ Post(s)
  - ③ Install New Sign(s)

NOTE:  
All existing pavement marking & striping shall remain and are for reference only.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

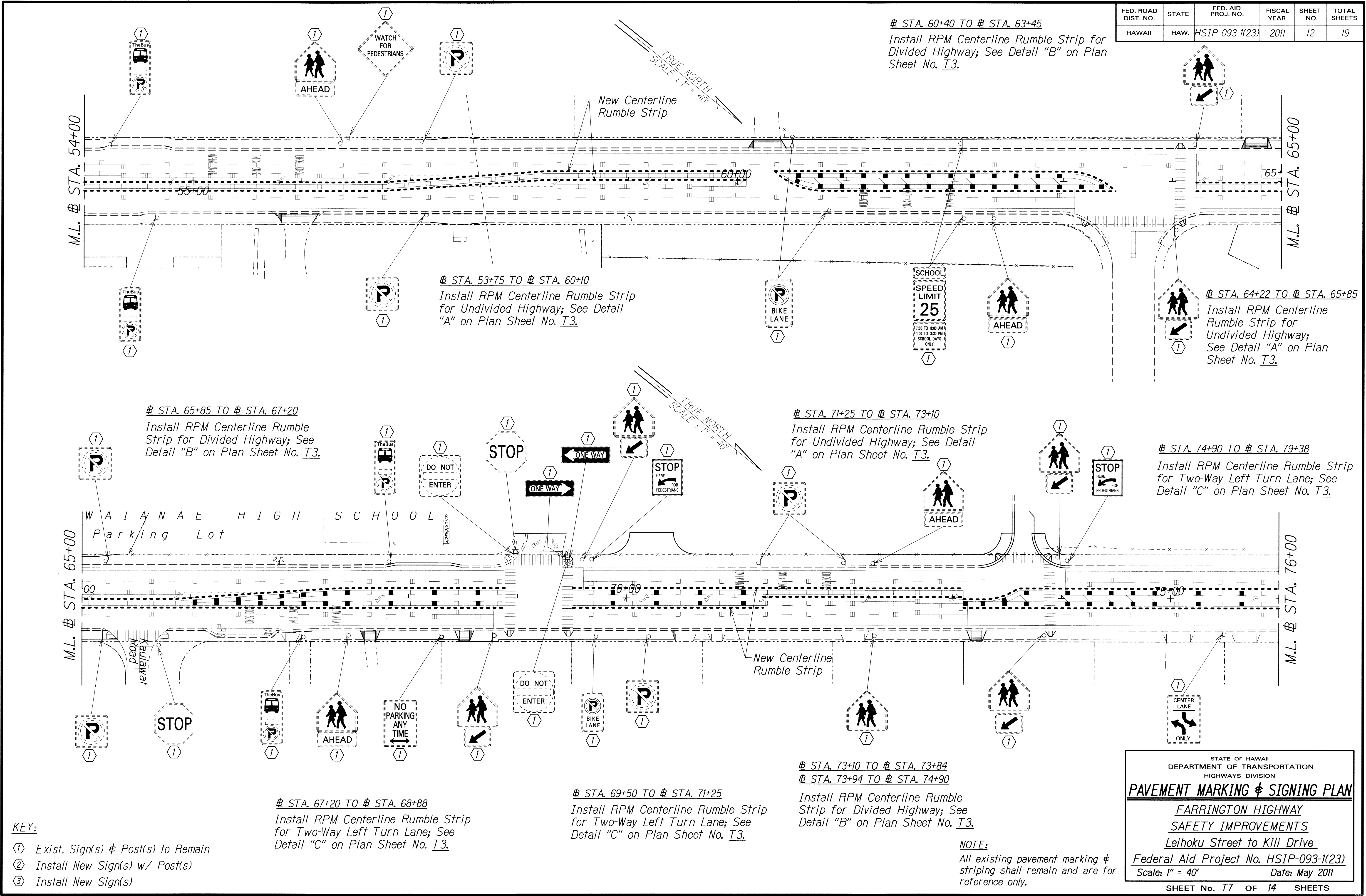
PAVEMENT MARKING & SIGNING PLAN

FARRINGTON HIGHWAY  
SAFETY IMPROVEMENTS  
Leihoku Street to Kili Drive

Federal Aid Project No. HSIP-093-1(23)  
Scale: 1" = 40'      Date: May 2011

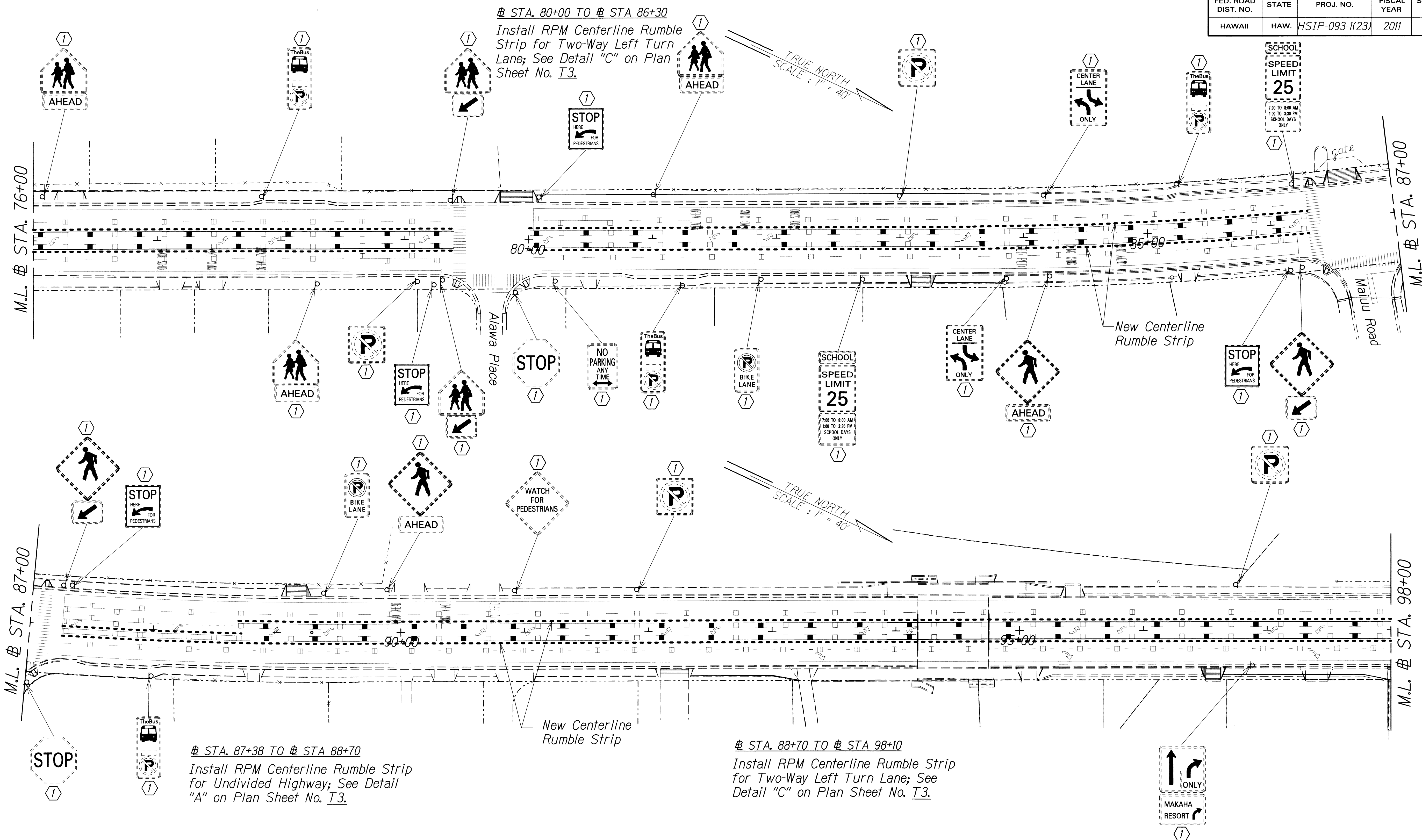
SHEET No. T6 OF 14 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HSIP-093-1(23)     | 2011        | 12        | 19           |



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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HSIP-093-1(23)     | 2011        | 13        | 19           |



|                    |         |
|--------------------|---------|
| SURVEY OBTAINED BY | DATE    |
| GENERAL PLAN       | .....   |
| TRACED BY          | .....   |
| DESIGNED BY        | .....   |
| QUANTITIES BY      | .....   |
| CHECKED BY         | .....   |
| NOTE BOOK          | .....   |
| NO.                | 2/26/06 |

- KEY:
- ① Exist. Sign(s) & Post(s) to Remain
  - ② Install New Sign(s) w/ Post(s)
  - ③ Install New Sign(s)

NOTE:  
All existing pavement marking & striping shall remain and are for reference only.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN  
  
FARRINGTON HIGHWAY  
SAFETY IMPROVEMENTS  
Leihoku Street to Kili Drive  
Federal Aid Project No. HSIP-093-1(23)  
Scale: 1" = 40'      Date: May 2011  
SHEET No. T8 OF 14 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HSIP-093-1(23)     | 2011        | 14        | 19           |

# STA. 98+10 TO # STA 99+65

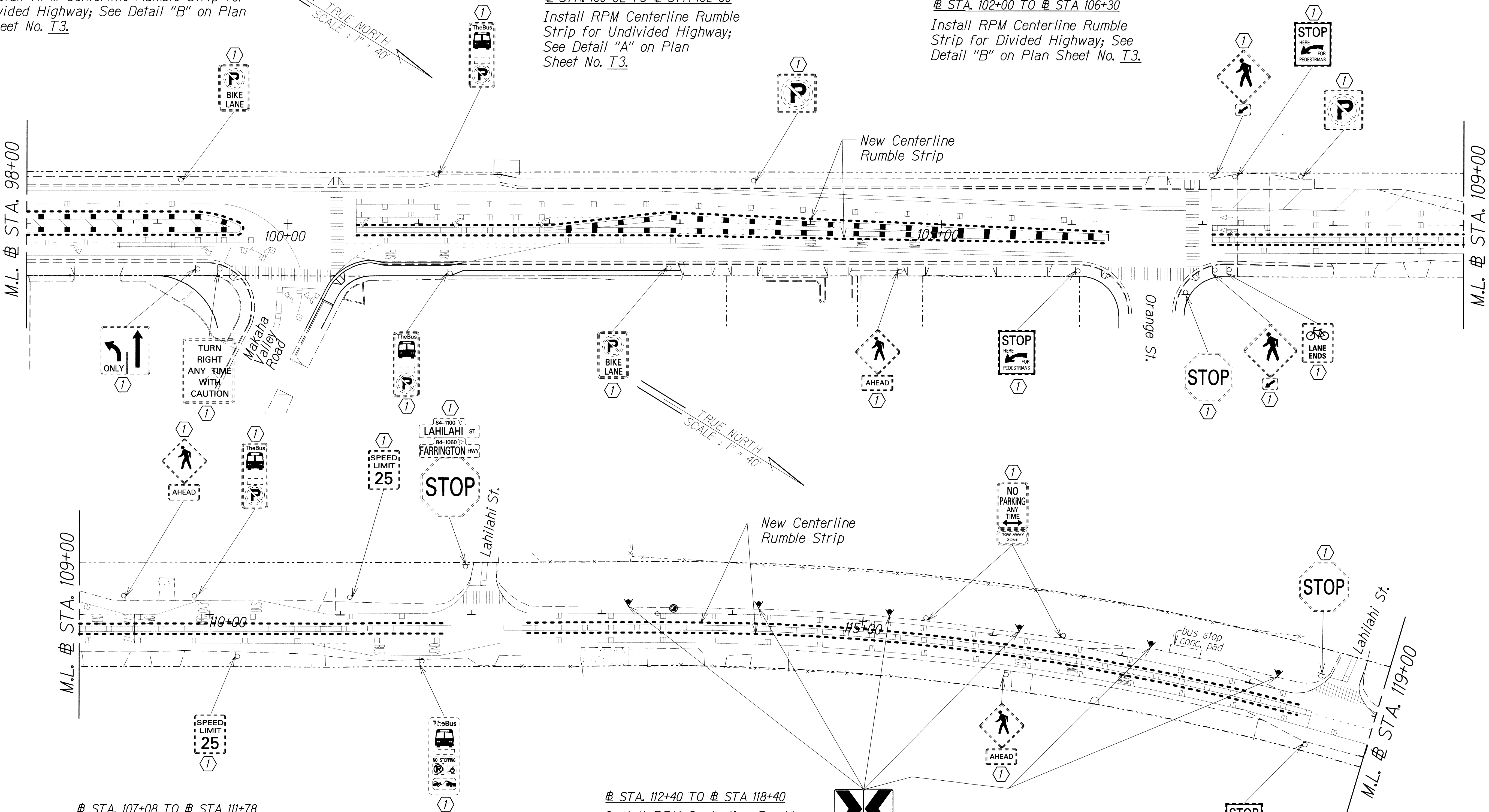
Install RPM Centerline Rumble Strip for Divided Highway; See Detail "B" on Plan Sheet No. T3.

# STA. 100+52 TO # STA 102+00

Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T3.

# STA. 102+00 TO # STA 106+30

Install RPM Centerline Rumble Strip for Divided Highway; See Detail "B" on Plan Sheet No. T3.

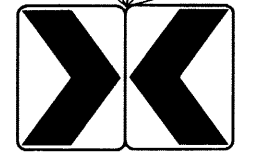


# STA. 107+08 TO # STA 111+78

Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T3.

# STA. 112+40 TO # STA 118+40

Install RPM Centerline Rumble Strip for Undivided Highway; See Detail "A" on Plan Sheet No. T3.

  
 W1-8-A \*\*  
 (30"x36")  
 @ 100' Apart

KEY:

- ① Exist. Sign(s) & Post(s) to Remain
- ② Install New Sign(s) w/ Post(s)
- ③ Install New Sign(s)

\*\* FLUORESCENT YELLOW SIGN SHEETING

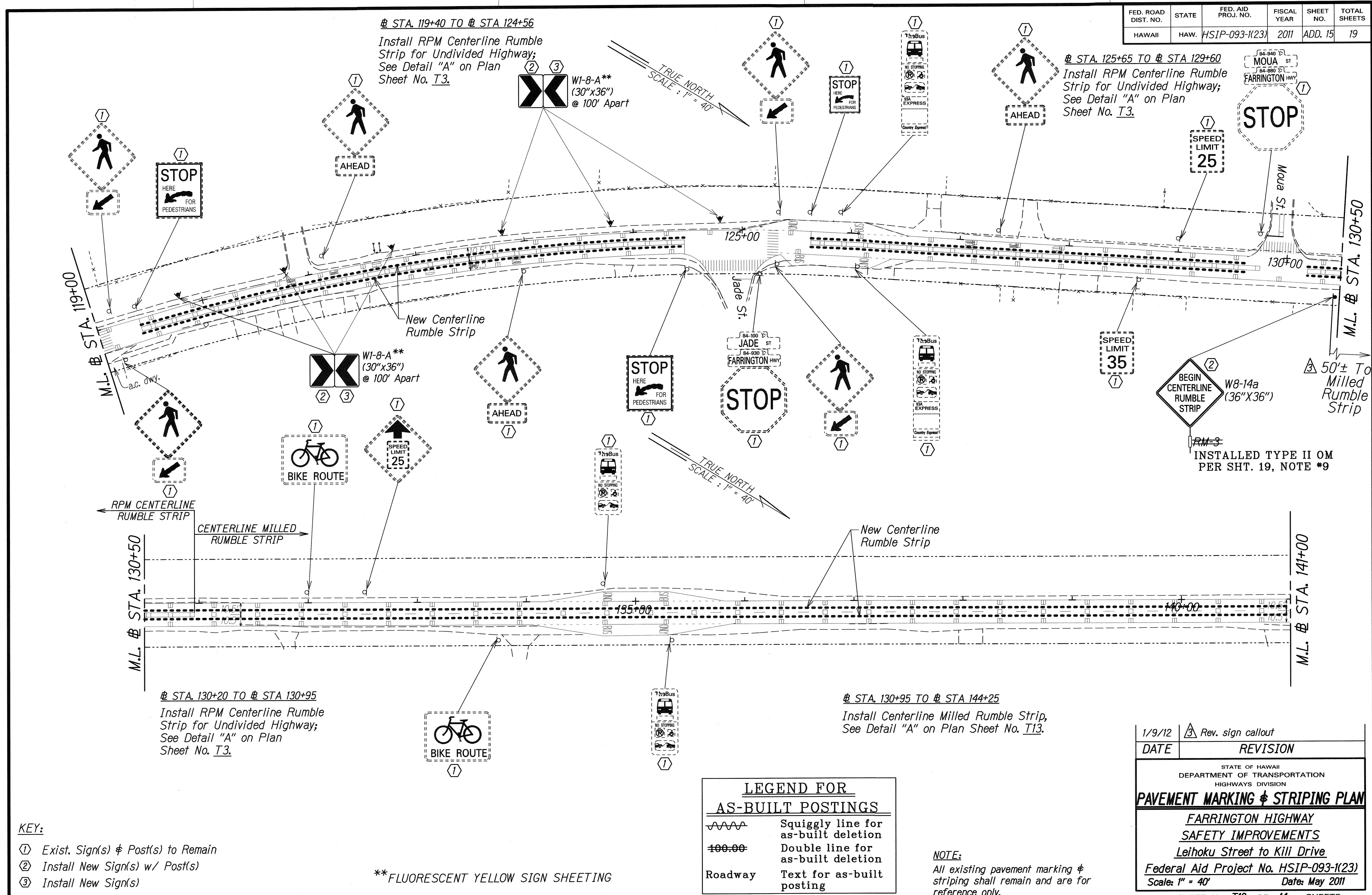
NOTE:  
All existing pavement marking & striping shall remain and are for reference only.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

PAVEMENT MARKING & SIGNING PLAN  
FARRINGTON HIGHWAY  
SAFETY IMPROVEMENTS  
Leihoku Street to Kili Drive  
Federal Aid Project No. HSIP-093-1(23)  
Scale: 1" = 40'      Date: May 2011

|             |      |
|-------------|------|
| DESIGNED BY | DATE |
| DRAWN BY    |      |
| CHECKED BY  |      |
| IN CHARGE   |      |
| NOTED BY    |      |
| DATE        |      |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HSIP-093-K(23)     | 2011        | ADD. 15   | 19           |



# STA. 119+40 TO # STA 124+56  
Install RPM Centerline Rumble Strip for Undivided Highway;  
See Detail "A" on Plan Sheet No. T3.

# STA. 125+65 TO # STA 129+60  
Install RPM Centerline Rumble Strip for Undivided Highway;  
See Detail "A" on Plan Sheet No. T3.

# STA. 130+20 TO # STA 130+95  
Install RPM Centerline Rumble Strip for Undivided Highway;  
See Detail "A" on Plan Sheet No. T3.

# STA. 130+95 TO # STA 144+25  
Install Centerline Milled Rumble Strip,  
See Detail "A" on Plan Sheet No. T13.

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
  - ② Install New Sign(s) w/ Post(s)
  - ③ Install New Sign(s)

\*\*FLUORESCENT YELLOW SIGN SHEETING

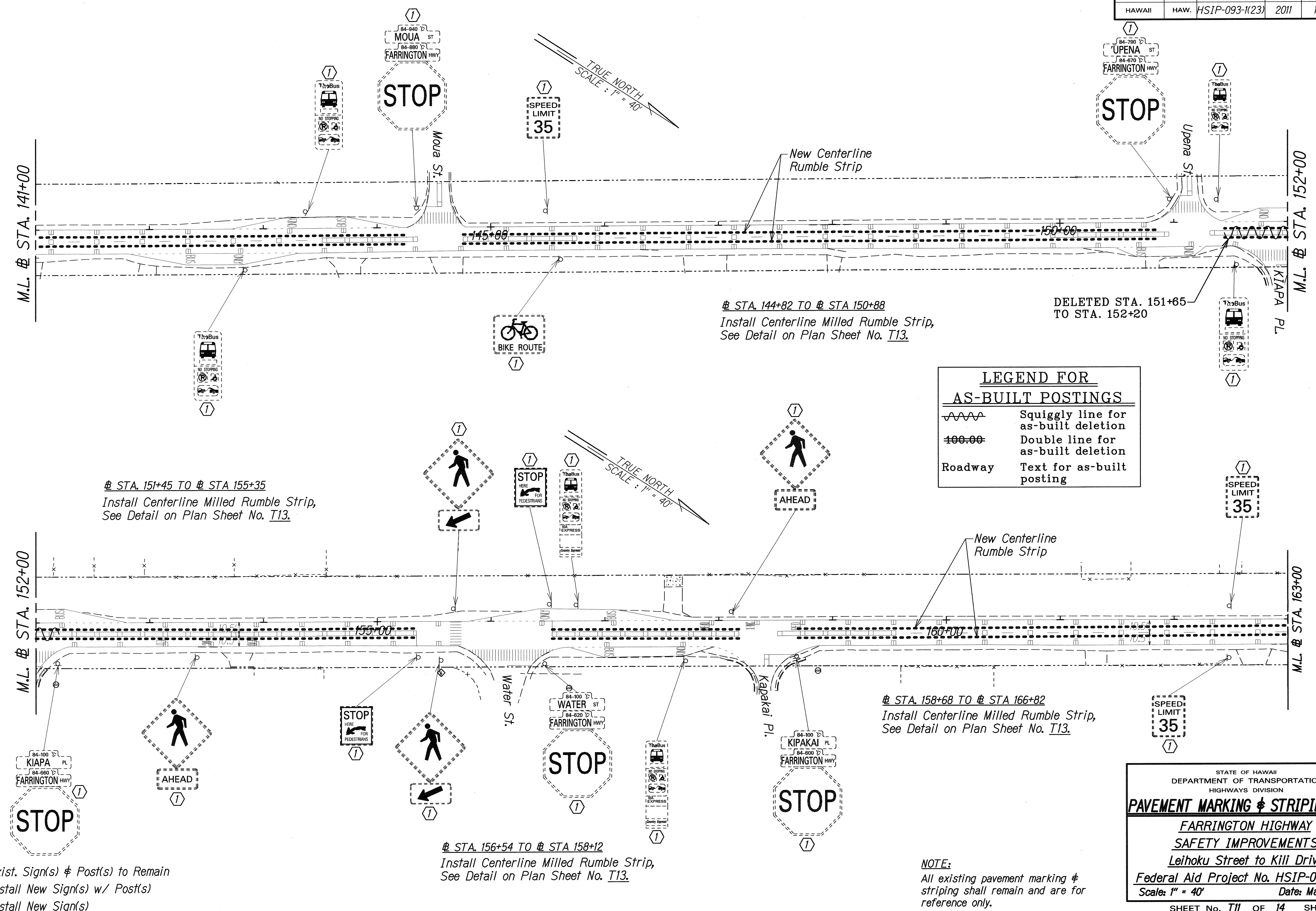
| LEGEND FOR AS-BUILT POSTINGS |                                     |
|------------------------------|-------------------------------------|
|                              | Squiggly line for as-built deletion |
|                              | Double line for as-built deletion   |
| Roadway       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

**NOTE:**  
All existing pavement marking & striping shall remain and are for reference only.

| 1/9/12                                                                                                                                 | Rev. sign callout |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| DATE                                                                                                                                   | REVISION          |
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION                                                                   |                   |
| <b>PAVEMENT MARKING &amp; STRIPING PLAN</b>                                                                                            |                   |
| FARRINGTON HIGHWAY<br>SAFETY IMPROVEMENTS<br>Leihoku Street to Kili Drive<br>Federal Aid Project No. HSIP-093-K(23)<br>Scale: 1" = 40' |                   |
| SHEET No. T10 OF 14 SHEETS                                                                                                             |                   |

|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY          |      |
| DESIGNED BY       |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | HSIP-093-1(23)     | 2011        | 16        | 19           |



**LEGEND FOR AS-BUILT POSTINGS**

~~~~~ Squiggly line for as-built deletion

==== Double line for as-built deletion

Roadway Text for as-built posting

- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Install New Sign(s) w/ Post(s)
 - ③ Install New Sign(s)

② STA. 156+54 TO ② STA. 158+12
Install Centerline Milled Rumble Strip,
See Detail on Plan Sheet No. T13.

② STA. 158+68 TO ② STA. 166+82
Install Centerline Milled Rumble Strip,
See Detail on Plan Sheet No. T13.

NOTE:
All existing pavement marking & striping shall remain and are for reference only.

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| DESIGNED BY | |
| QUANTITIES BY | |
| CHECKED BY | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING & STRIPING PLAN

FARRINGTON HIGHWAY

SAFETY IMPROVEMENTS

Leihoku Street to Kili Drive

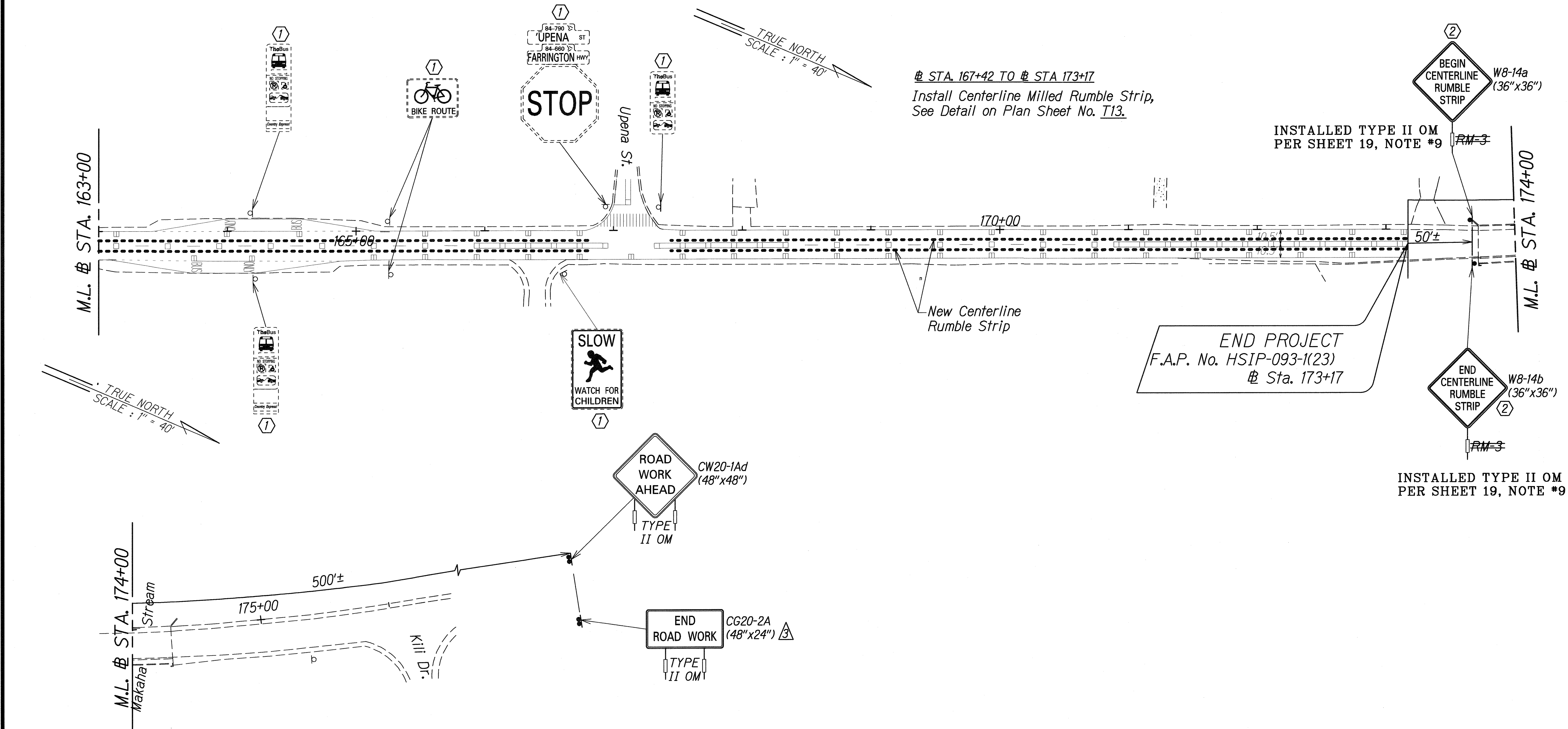
Federal Aid Project No. HSIP-093-1(23)

Scale: 1" = 40' Date: May 2011

SHEET No. T11 OF 14 SHEETS

"AS-BUILT"

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(23) | 2011 | ADD. 17 | 19 |



| | | |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK | DRAWN BY | |
| DESIGNED BY | CHECKED BY | |
| DATE | | |

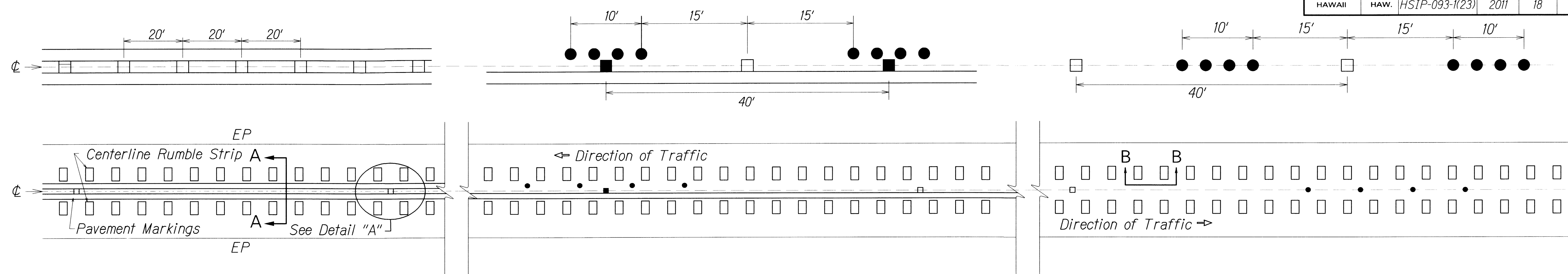
- KEY:**
- ① Exist. Sign(s) & Post(s) to Remain
 - ② Install New Sign(s) w/ Post(s)
 - ③ Install New Sign(s)

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

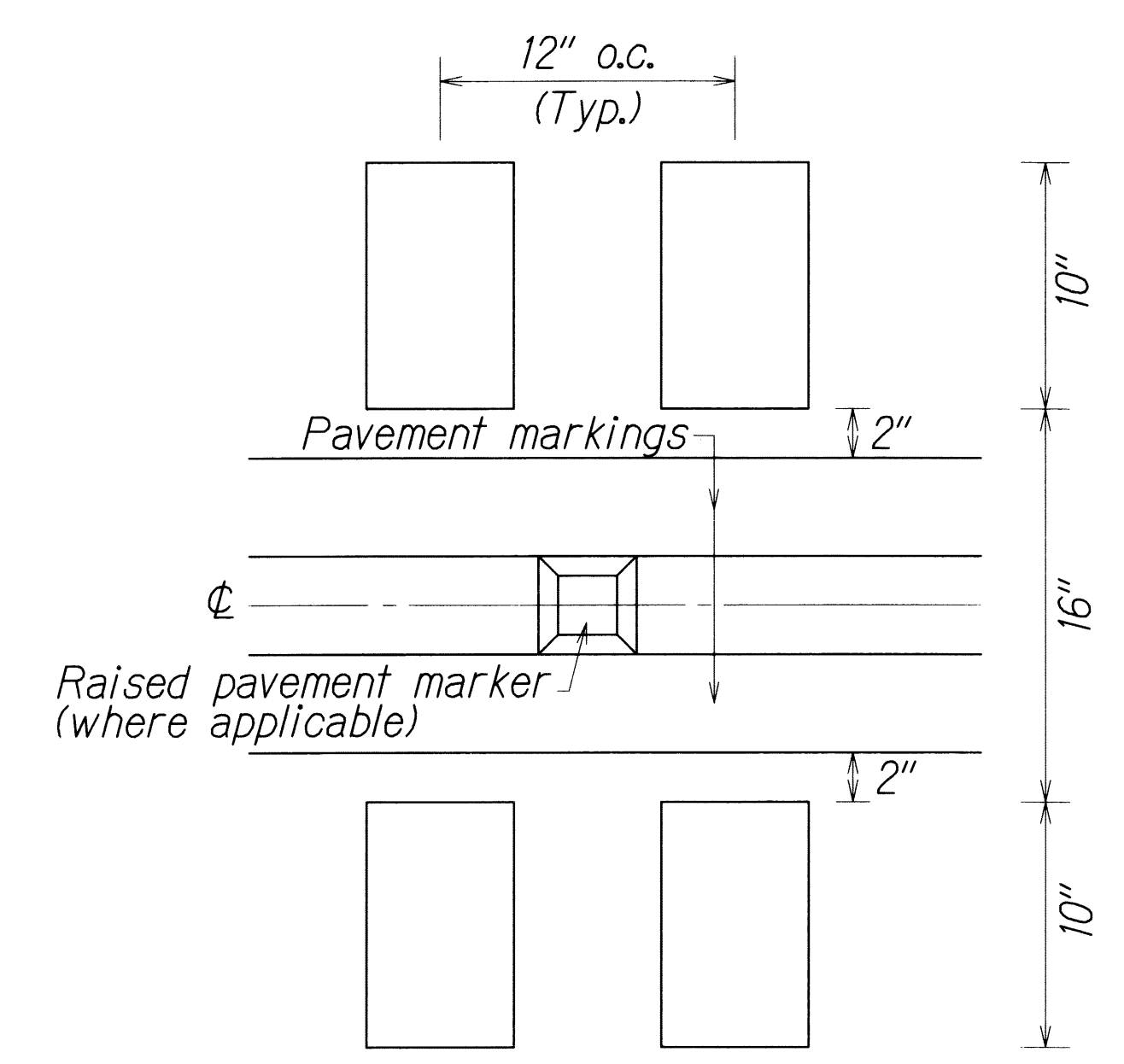
NOTE:
All existing pavement marking & striping shall remain and are for reference only.

| | |
|--|----------------|
| 1/9/12 | Rev. sign size |
| DATE | REVISION |
| STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION | |
| PAVEMENT MARKING & STRIPING PLAN | |
| FARRINGTON HIGHWAY | |
| SAFETY IMPROVEMENTS | |
| Leihoku Street to Kili Drive | |
| Federal Aid Project No. HSIP-093-1(23) | |
| Scale: 1" = 40' | Date: May 2011 |
| SHEET No. T12 OF 14 SHEETS | |

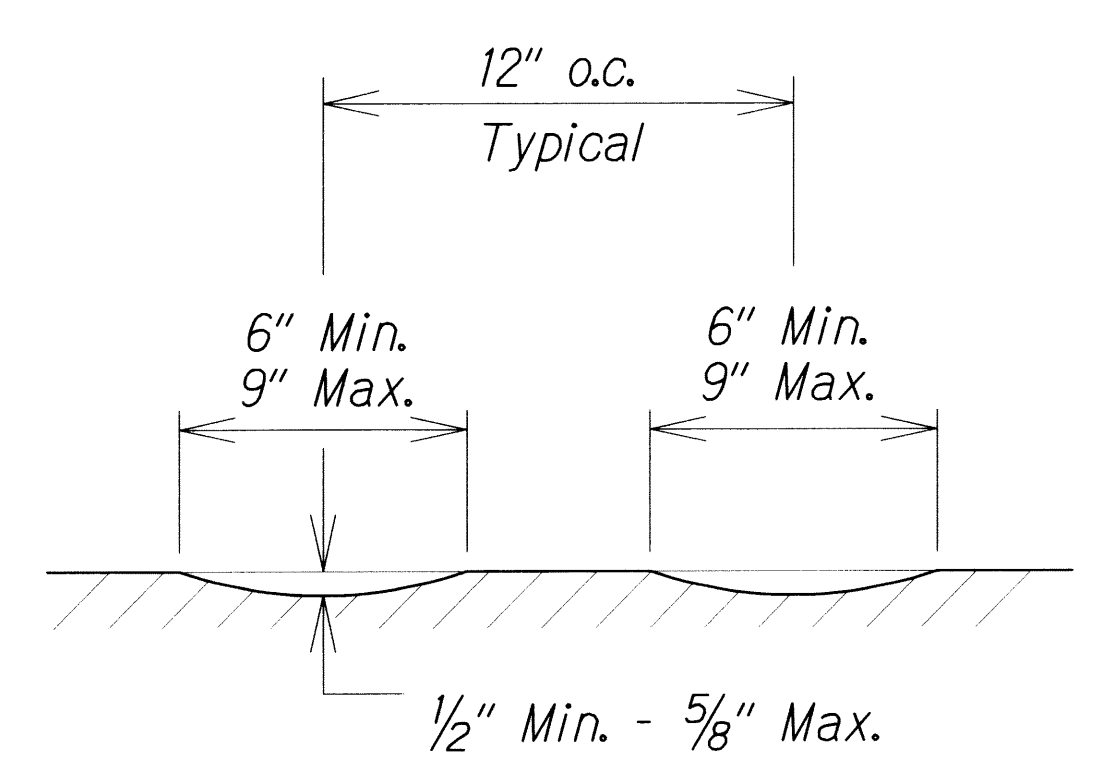
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(23) | 2011 | 18 | 19 |



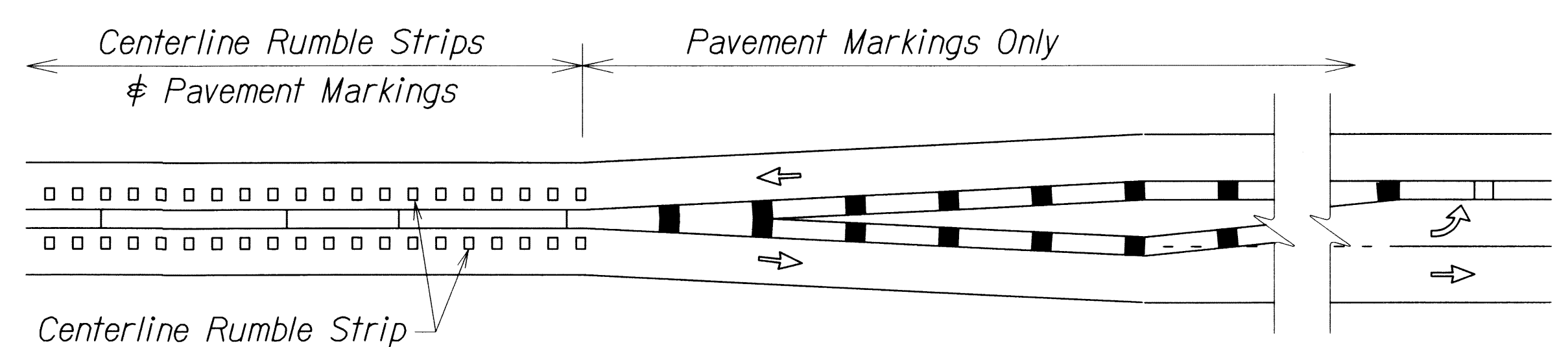
PLAN - CENTERLINE MILLED RUMBLE STRIP
Not to Scale



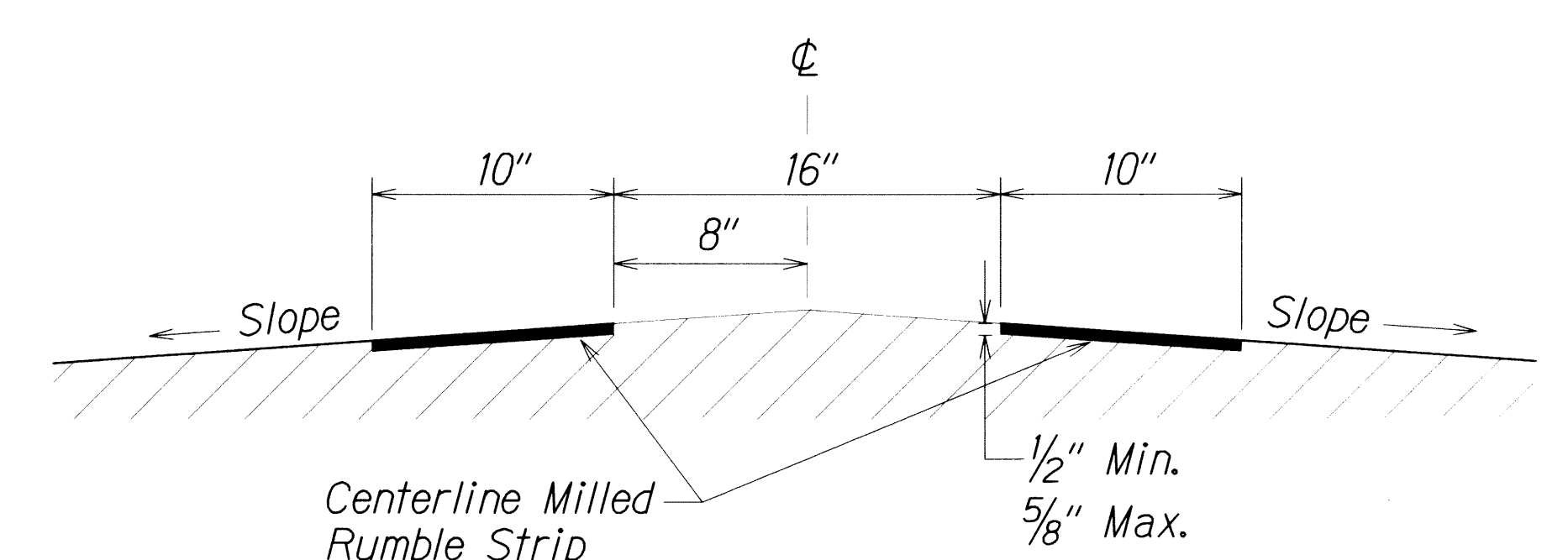
DETAIL "A"
Not to Scale



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



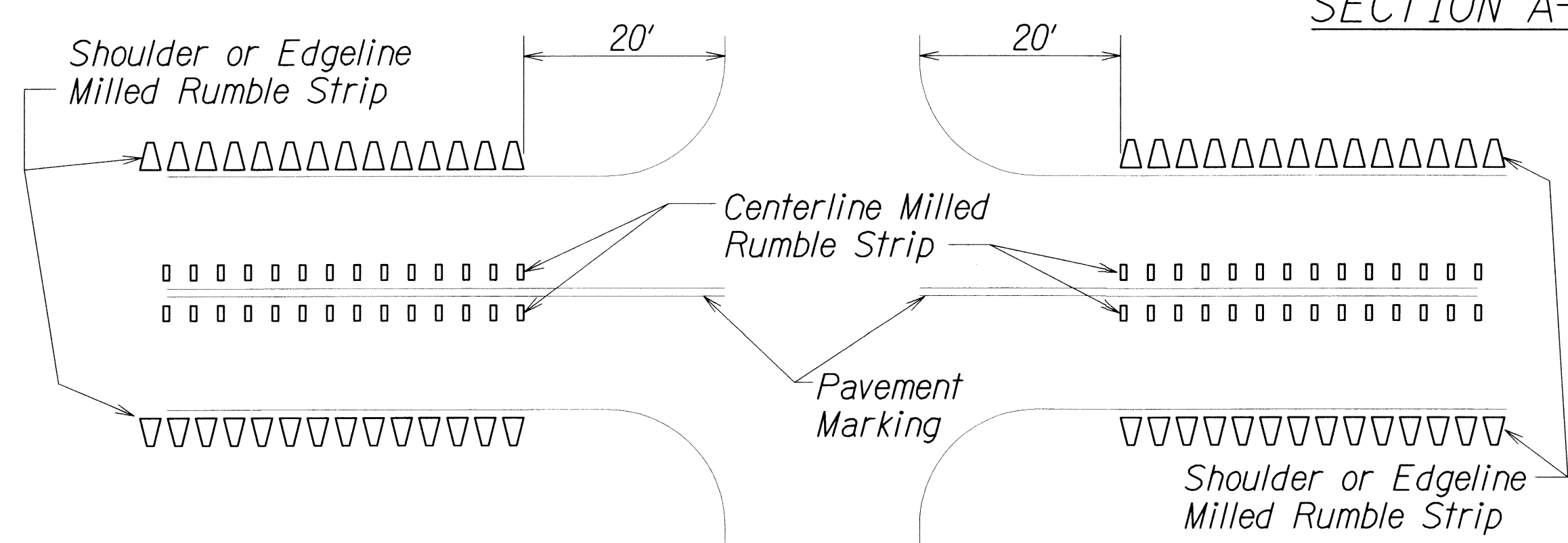
CENTERLINE MILLED RUMBLE STRIP INSTALLATION LIMIT
Not to Scale



SECTION A-A - CENTERLINE MILLED RUMBLE STRIP
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. 615.0110 - 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.



MILLED RUMBLE STRIP INSTALLATION LIMITS
Not to Scale

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

DOUBLE 10-INCH CENTERLINE

MILLED RUMBLE STRIP DETAIL

FARRINGTON HIGHWAY

SAFETY IMPROVEMENTS

Leihoku Street to Kili Drive

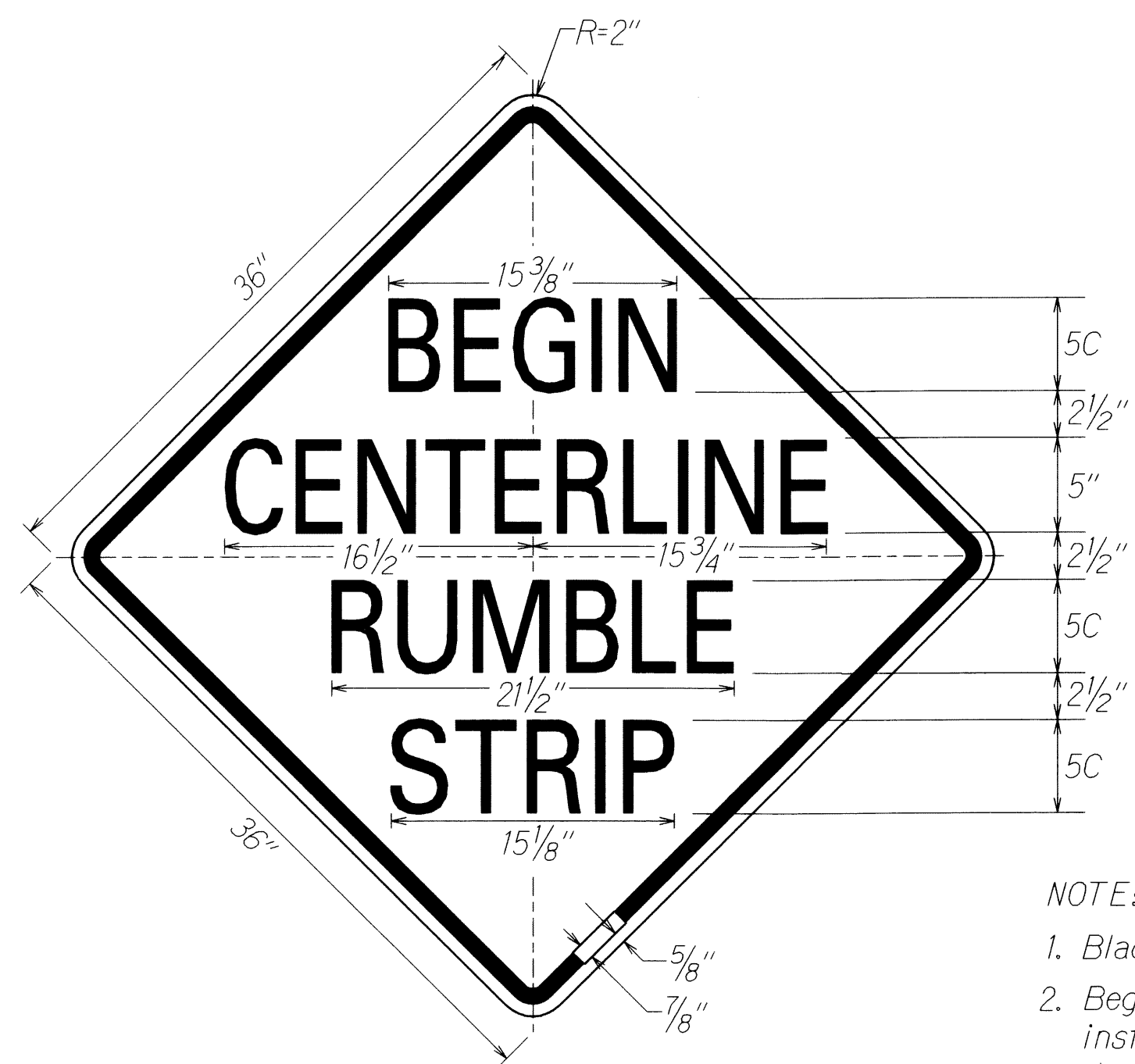
Federal Aid Project No. HSIP-093-1(23)

Scale: As Shown Date: May 2011

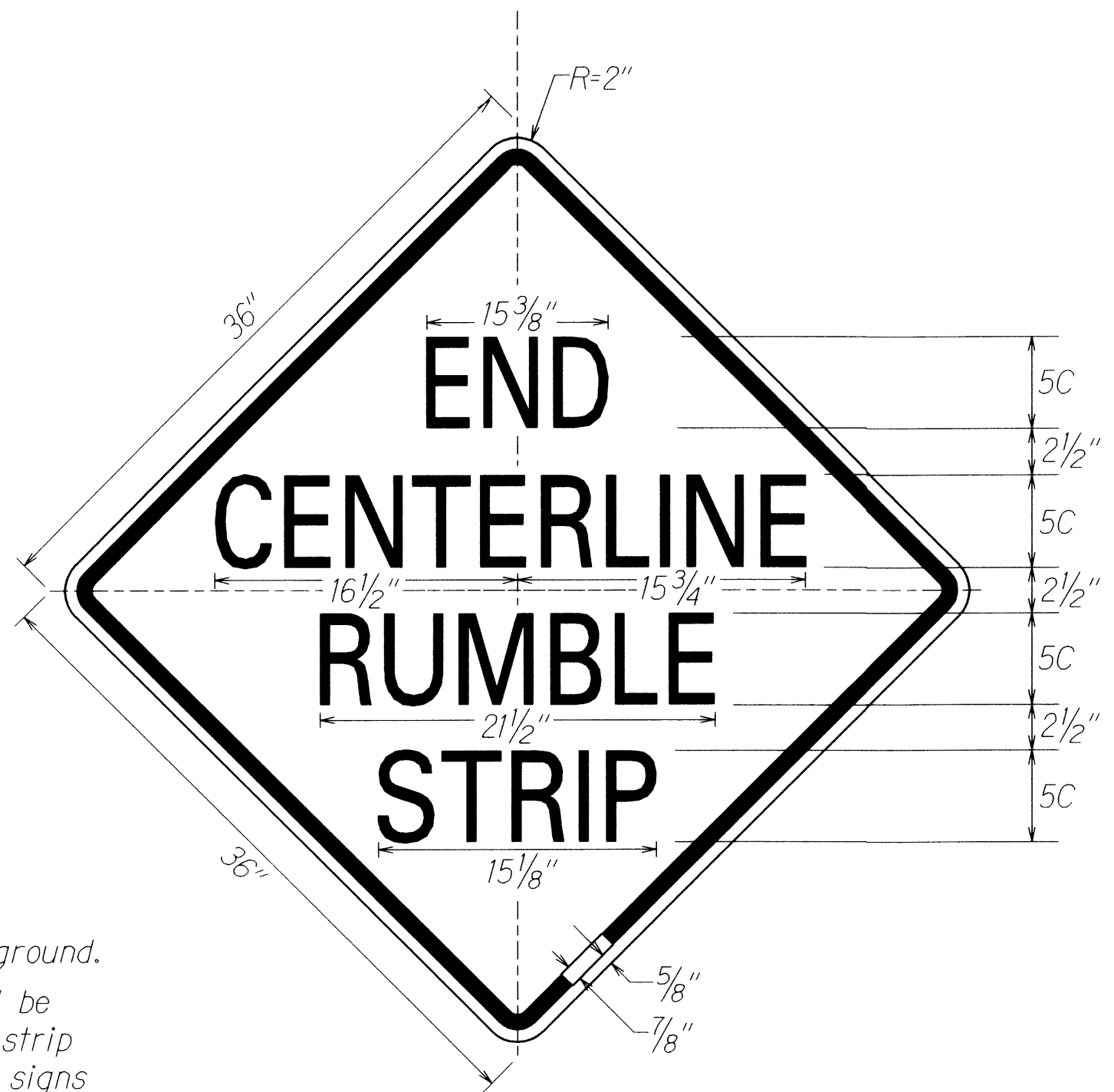
SHEET No. T13 OF 14 SHEETS

| | |
|-------------------|-------|
| DATE | _____ |
| SURVEY PLOTTED BY | _____ |
| DESIGNED BY | _____ |
| TRACED BY | _____ |
| NOTED BY | _____ |
| CHECKED BY | _____ |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(23) | 2011 | 19 | 19 |



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 631 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 and equipment provided by the State. Payment to be incidental to various contract items.

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| PLAN | |
| DESIGNED BY | |
| QUANTITIES BY | |
| CHECKED BY | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CENTERLINE RUMBLE STRIP
SIGN DETAILS AND NOTES

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Leihoku Street to Kili Drive

Federal Aid Project No. HSIP-093-1(23)

Not to Scale

Date: June 2009

SHEET No. T14 OF 14 SHEETS