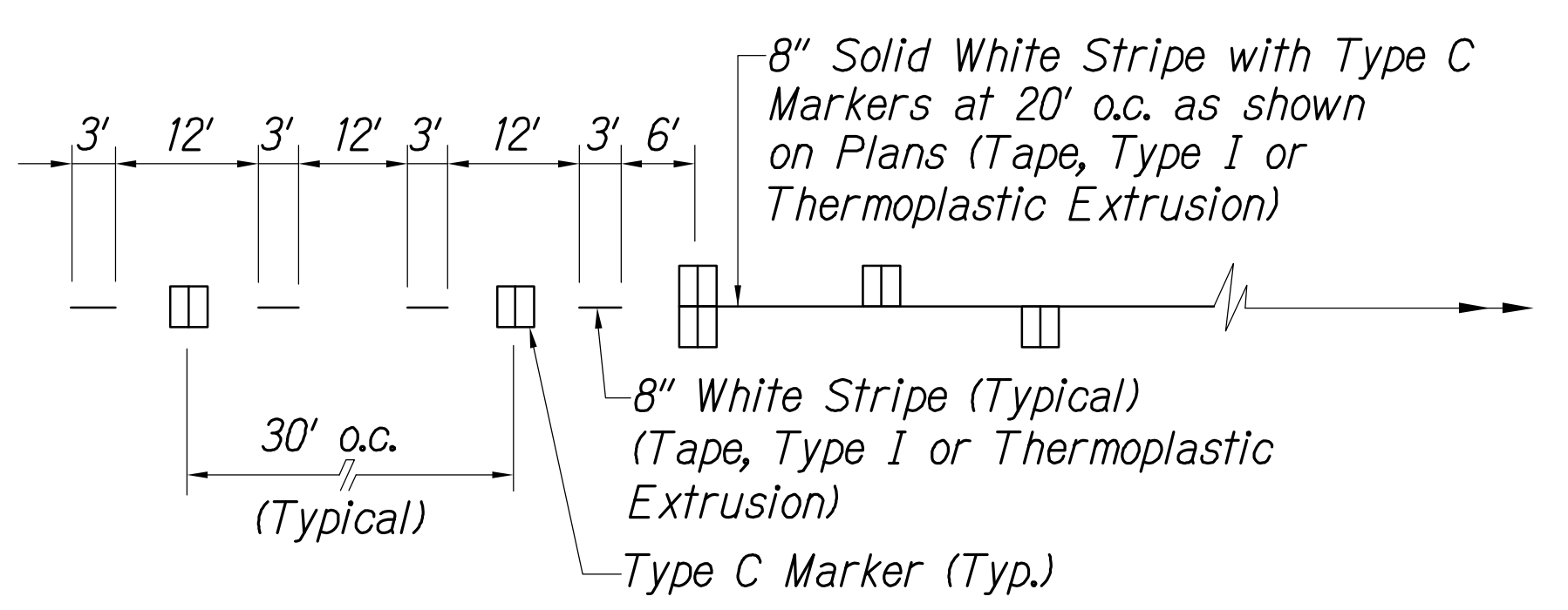


**PAVEMENT MARKING LEGEND**

- 4 each Type A Raised Pavement Markers  
Type C Raised Pavement Markers at 40'-0" o.c.
- 4 each Type J Raised Pavement Markers (RPM)  
Type D Raised Pavement Markers @ 40'-0" o.c.
- 8" White Stripe with Type C  
Raised Pavement Markers (RPM) at 20'-0" o.c.  
(Tape, Type I or Thermoplastic Extrusion)
- 4" Double Solid Yellow with Type D  
Raised Pavement Markers (RPM) at 20'-0" o.c.  
(Tape, Type I or Thermoplastic Extrusion)
- 4" Double Solid Yellow Stripe with Type H  
Raised Pavement Markers (RPM) at 20'-0" o.c.  
(Tape, Type II or Thermoplastic Extrusion)
- 4" Double Solid White Stripes w/ Type D  
Raised Pavement Markers (RPM) at 20'-0" o.c.  
(Tape, Type I or Thermoplastic Extrusion)
- 4" Yellow Edge Stripe with Type H Raised Pavement  
Markers (RPM) at 40'-0" o.c., unless otherwise  
noted (Tape, Type II or Thermoplastic Extrusion)
- 4" or 8" White Edge Stripe with Type C  
Raised Pavement Markers at 40'-0" o.c.  
(Tape, Type II or Thermoplastic Extrusion)
- 4" White Guide Lines (Tape, Type III or  
Thermoplastic Extrusion except for bus bays)
- Transverse Median Marking (Tape, Type II or  
Thermoplastic Extrusion)
- Transverse Shoulder Marking  
(Tape, Type II or Thermoplastic Extrusion)
- Channelizing Island or Deceleration Lane Gore  
(Tape, Type II or Thermoplastic Extrusion)
- 4 Each Type J Raised Pavement Markers  
Type D Raised Pavement Markers at 20'-0" o.c.  
Type H Raised Pavement Markings at 20'-0" o.c.  
(Reflective Surface Facing No-Passing Direction)  
4" Single Solid Yellow Stripe  
(Tape, Type I or Thermoplastic Extrusion)
- Lane Drop Marking, 8" Wide x 3'-0" Long White  
Stripe at 15'-0" o.c. with Type C Markers at  
30'-0" o.c. (Tape, Type I or Thermoplastic  
Extrusion)

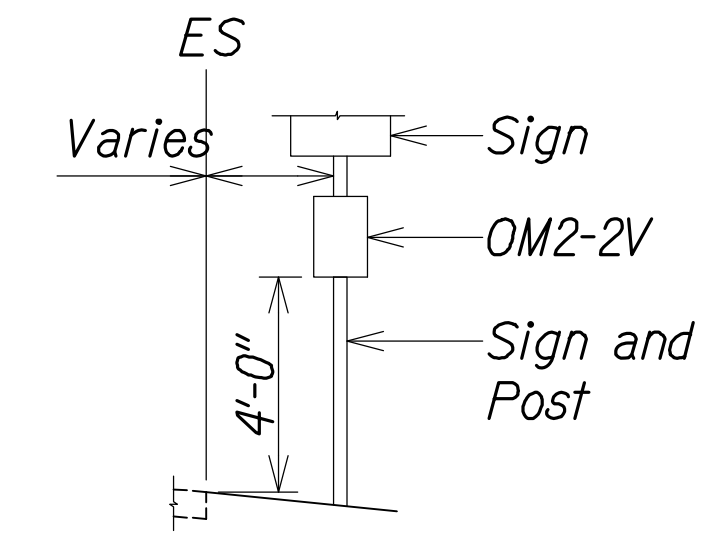


**LANE DROP MARKING**  
Not to Scale

**SIGNING AND PAVEMENT MARKING 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. The removal of existing pavement markings shall not be paid for separately but shall be considered 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 pavement striping shall be as noted on the legend or plans.
8. 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.
9. Removal of Existing Delineators and Posts as directed by the Engineer shall be considered incidental to the various signing items.
10. 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. Removal of existing signs and posts to be replaced shall be considered incidental to the various sign items.
11. Backing for all new regulatory and warning signs shall not be spliced.
12. 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 Street and Highways" (MUTCD)
  - b. "Standard Highway Signs"
  - c. "Standard Alphabets for Highways Signs"
13. All new and relocated signs and markers installed on pipe post or light standard are to be mounted with band brackets and steel braces.
14. The Contractor shall erect at the beginning of the project and at the end of the project advance construction warning signs 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 replaced 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 Oahu District Baseyard or as directed by the Engineer at the end of the project.

15. The Contractor shall install new Type II Object Markers on all utility poles that are within the State Highway Right-of-way as directed by the Engineer. This shall be considered incidental to the various sign items.
16. All traffic control devices including: signs, barricades, vertical panels, warning lights, arrow boards, changeable message signs, cones and tubular markers that meet the requirements of American Traffic Safety Services Association (ATSSA), "Quality Standard for Work Zone Traffic Control Devices, 1992" shall be used on this project. Compliance with this requirement will be considered incidental to the contract and no extra compensation will be allowed.
16. The Contractor shall install new Type II Object Markers on all sign posts. See Std. Det. TE-15 and diagram on this sheet.



**TYPICAL**  
Not to Scale

17. All sign posts shall be completely painted with Yellow Traffic Paint. Such work shall be considered incidental to the various sign items.
18. Removed signs and posts are to be delivered from the project to the Hilo Baseyard (50 Makaala Street) by the Contractor. Payment shall be considered incidental to the various sign items.
19. The Contractor shall install 1/2 milepost marker signs. Payment shall be considered incidental to various sign items.



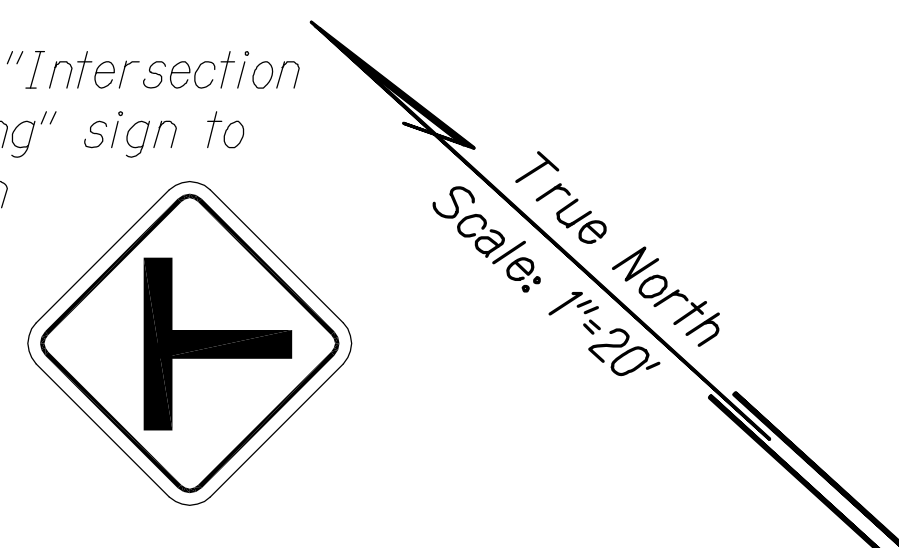
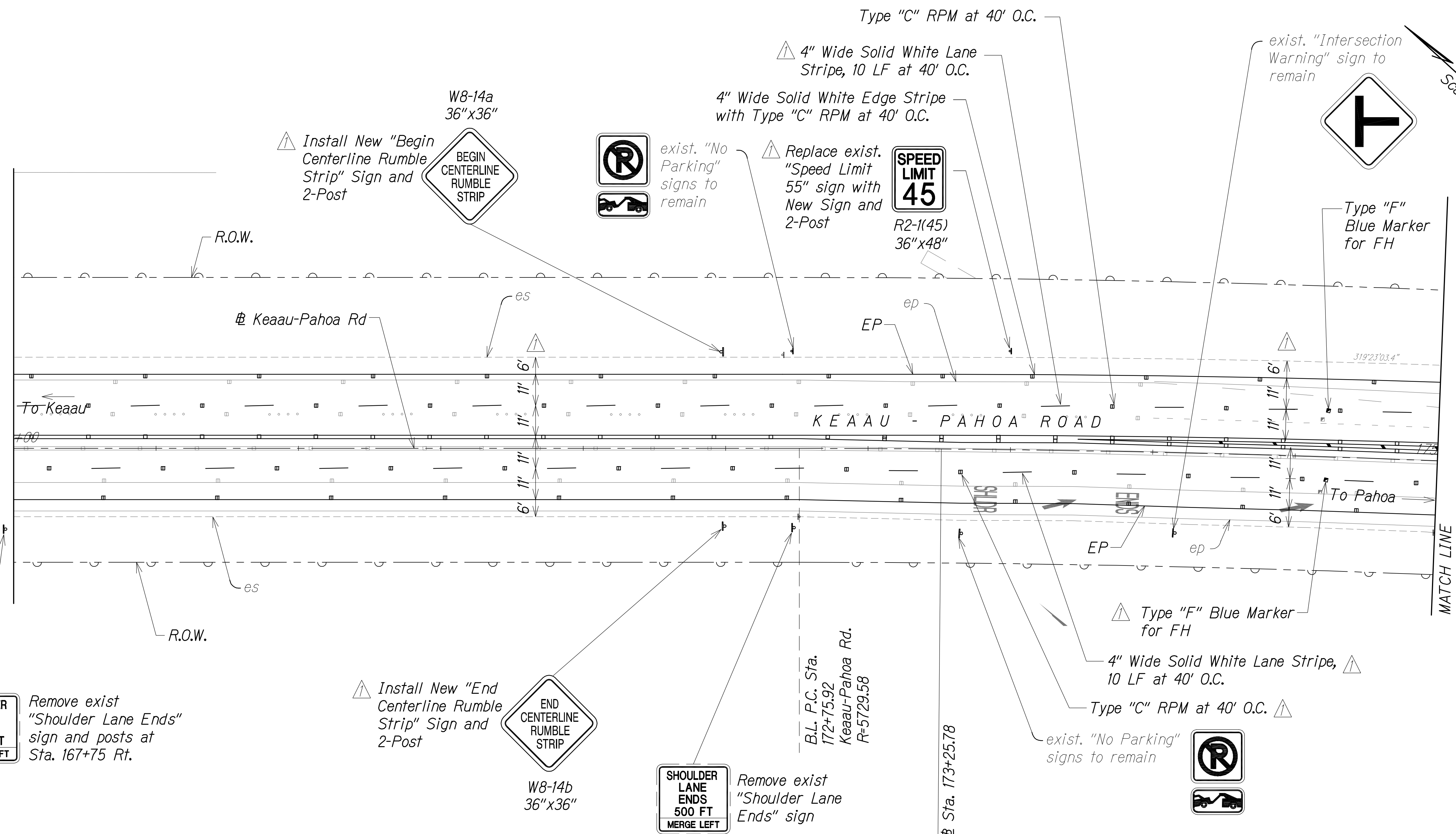
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APRIL 30, 2018  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

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DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING LEGEND**  
**DETAILS AND NOTES**  
**KEAAU-PAHOA ROAD, SHOULDER**  
**LANE CONVERSION, PHASE 2**  
**Show Drive Intersection Improvements**  
**Fed. Aid Proj. No. STP-0130(33)**  
Scale: None Date: March 2016



SHOULDER LANE ENDS 1000 FT MERGE LEFT

Remove exist "Shoulder Lane Ends" sign and posts at Sta. 167+75 Rt.

Install New "End Centerline Rumble Strip" Sign and 2-Post

END CENTERLINE RUMBLE STRIP

W8-14b 36"x36"

SHOULDER LANE ENDS 500 FT MERGE LEFT

Remove exist "Shoulder Lane Ends" sign

B.L. P.C. Sta. 172+75.92  
Keaau-Pahoa Rd.  
R-5729.58

Sta. 173+25.78

See Keaau-Pahoa Rd, Keaau-Pahoa Bypass Road to the Vicinity of Shower Drive Four Lane Re-Striping Work Order Plans

Begin Phase 2 Striping

**Notes:**

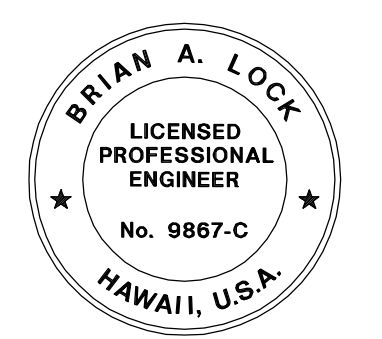
- Contractor shall grind down all exist. thermoplastic striping, word and arrow pavt markings, and remove all existing rpms.
- Contractor shall submit shop drawings of all signs to the State prior to fabrication.

**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

r6/8/17 Revised Lane Widths, Striping, Signing, Pavt Mrkg, Pullboxes, & Notes.

DATE	REVISION



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APRIL 30, 2018  
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

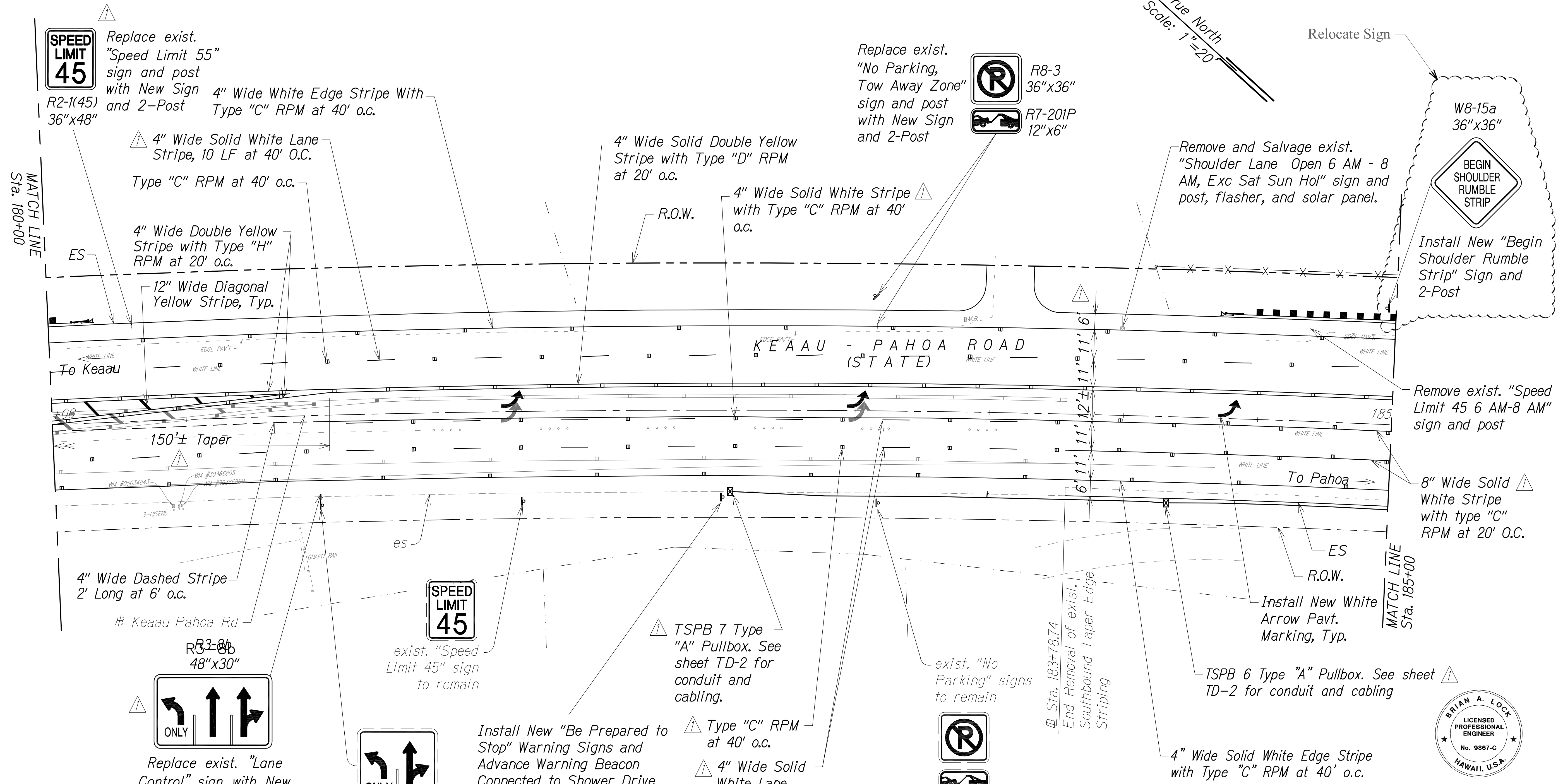
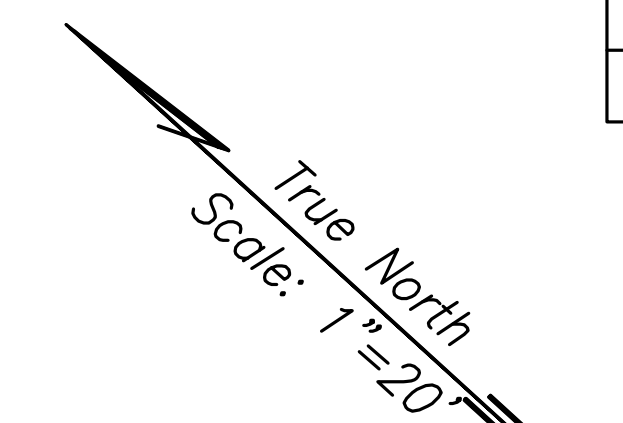
**PAVEMENT MARKING AND SIGNING PLAN**

KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2  
Shower Drive Intersection Improvements  
Fed. Aid Proj. No. STP-0130(33)  
Scale: 1"=20' Date: March 2016

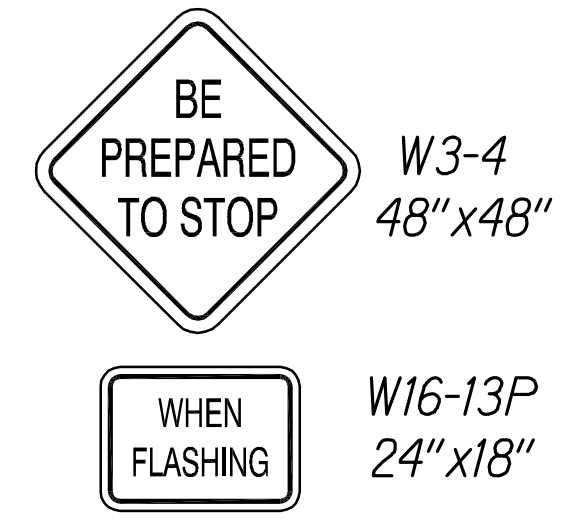
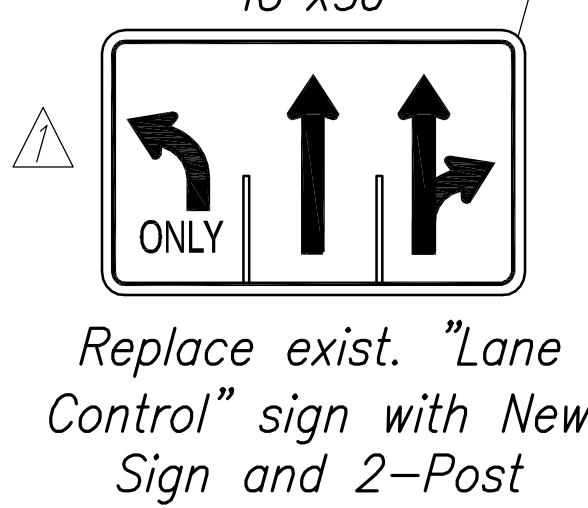
SHEET No. PM-2 OF 9 SHEETS

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- Notes:**
- Contractor shall grind down all exist. thermoplastic striping, word and arrow pavt markings, and remove all existing rpms.
  - Contractor shall submit shop drawings of all signs to the State prior to fabrication.



**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

DATE	REVISION
r6/8/17	Revised Lane Widths, Striping, Signing, Pavt Mrkg, Pullboxes, & Notes.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING AND SIGNING PLAN**  
KĒAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2  
Shower Drive Intersection Improvements  
Fed. Aid Proj. No. STP-0130(33)  
Scale: 1"=20' Date: March 2016

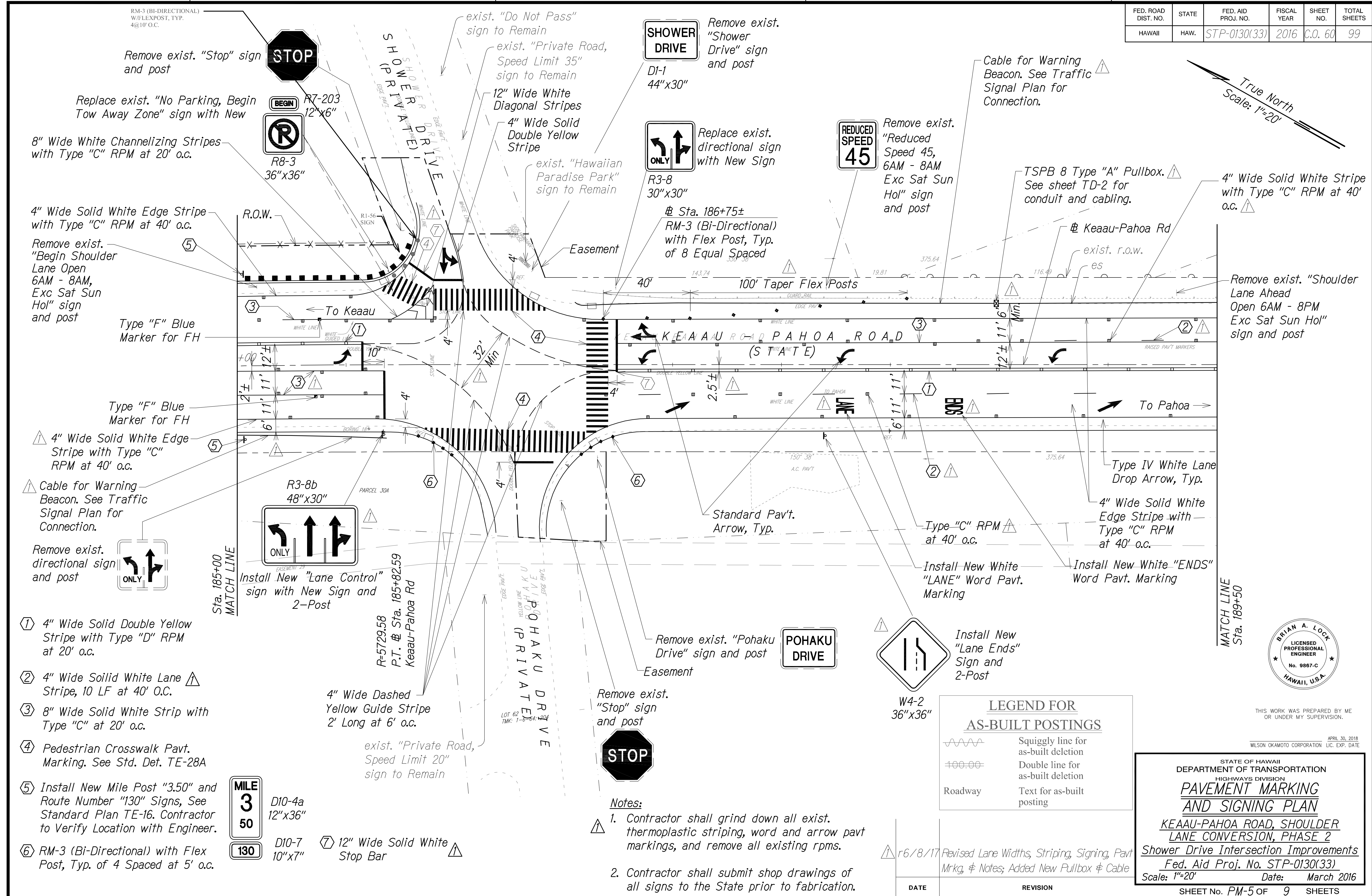
SHEET No. PM-4 OF 9 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(33)	2016	C.O. 60	99



- ① 4" Wide Solid Double Yellow Stripe with Type "D" RPM at 20' o.c.
- ② 4" Wide Solid White Lane Stripe, 10 LF at 40' O.C.
- ③ 8" Wide Solid White Strip with Type "C" at 20' o.c.
- ④ Pedestrian Crosswalk Pavt. Marking. See Std. Det. TE-28A
- ⑤ Install New Mile Post "3.50" and Route Number "130" Signs, See Standard Plan TE-16. Contractor to Verify Location with Engineer.
- ⑥ RM-3 (Bi-Directional) with Flex Post, Typ. of 4 Spaced at 5' o.c.

**MILE 3.50**  
D10-4a 12"x36"  
D10-7 10"x7"  
⑦ 12" Wide Solid White Stop Bar

**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

**Notes:**

- Contractor shall grind down all exist. thermoplastic striping, word and arrow pavt markings, and remove all existing rpms.
- Contractor shall submit shop drawings of all signs to the State prior to fabrication.

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

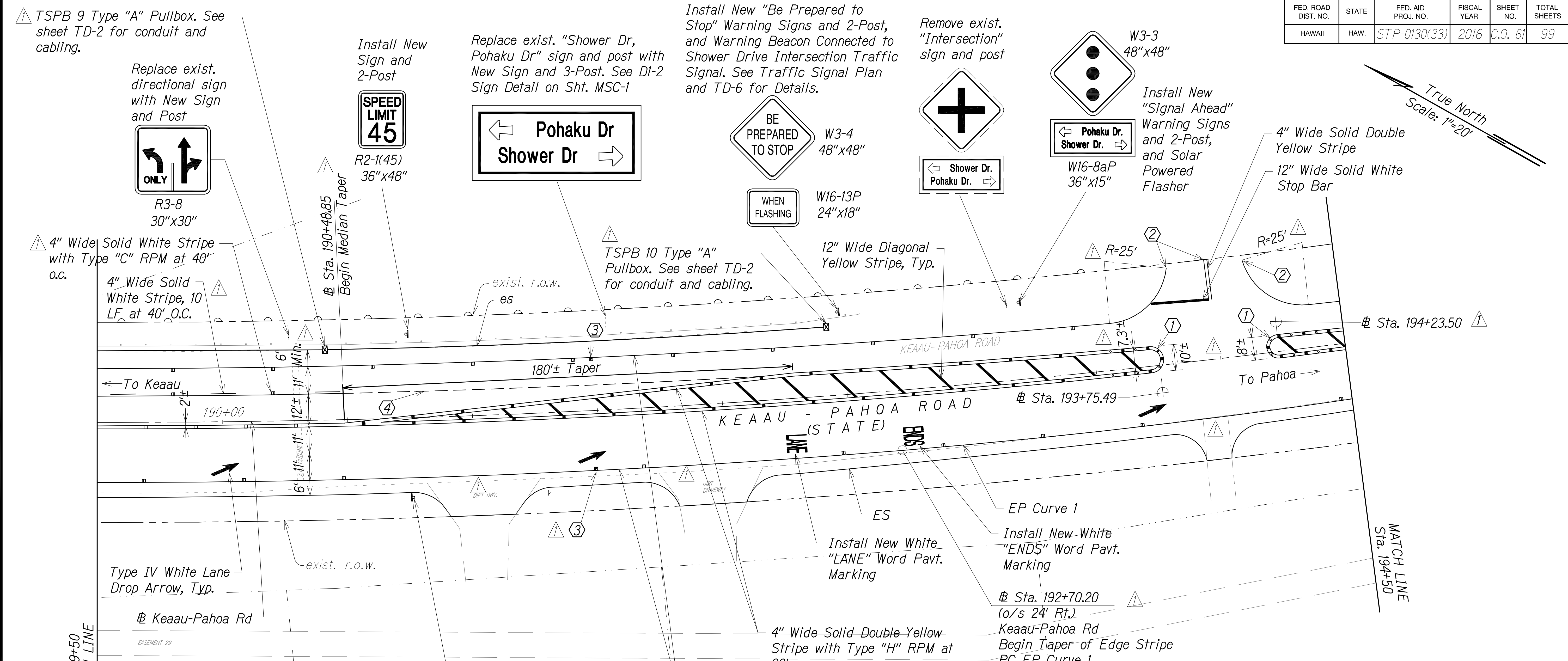
**PAVEMENT MARKING AND SIGNING PLAN**

KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2

Shower Drive Intersection Improvements  
Fed. Aid Proj. No. STP-0130(33)  
Scale: 1"=20' Date: March 2016

DATE REVISION

SHEET No. PM-5 OF 9 SHEETS



▲ TSPB 9 Type "A" Pullbox. See sheet TD-2 for conduit and cabling.

Replace exist. directional sign with New Sign and Post



R3-8  
30"x30"

▲ 4" Wide Solid White Stripe with Type "C" RPM at 40' o.c.

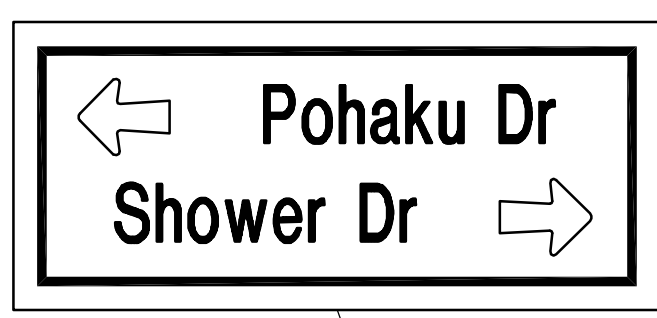
4" Wide Solid White Stripe, 10 LF at 40' O.C.

Install New Sign and 2-Post



R2-1(45)  
36"x48"

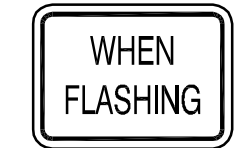
Replace exist. "Shower Dr, Pohaku Dr" sign and post with New Sign and 3-Post. See DI-2 Sign Detail on Sht. MSC-1



Install New "Be Prepared to Stop" Warning Signs and 2-Post, and Warning Beacon Connected to Shower Drive Intersection Traffic Signal. See Traffic Signal Plan and TD-6 for Details.

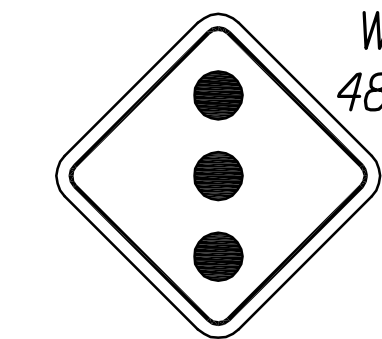
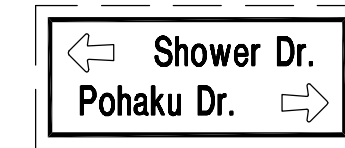
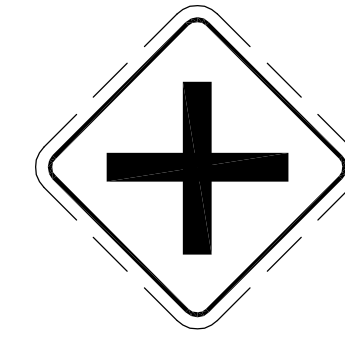


W3-4  
48"x48"



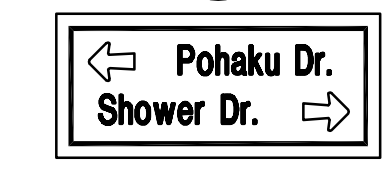
W16-13P  
24"x18"

Remove exist. "Intersection" sign and post

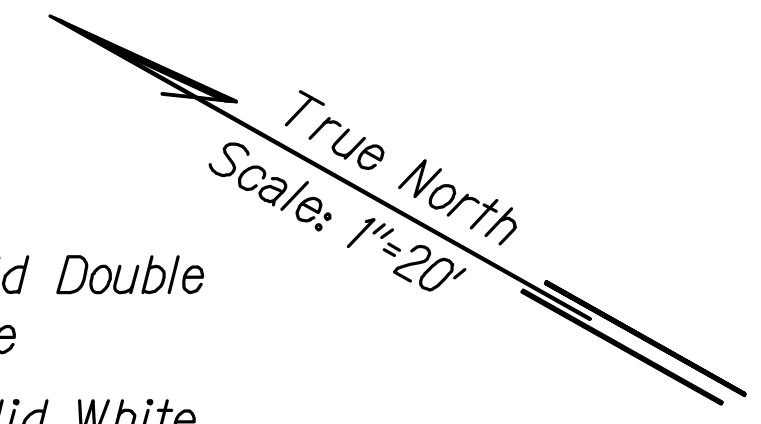


W3-3  
48"x48"

Install New "Signal Ahead" Warning Signs and 2-Post, and Solar Powered Flasher



W16-8aP  
36"x15"



True North  
Scale: 1"=20'

▲ TSPB 10 Type "A" Pullbox. See sheet TD-2 for conduit and cabling.

12" Wide Diagonal Yellow Stripe, Typ.

Sta. 189+50  
MATCH LINE

MATCH LINE  
Sta. 194+50

Type IV White Lane Drop Arrow, Typ.

Keaau-Pahoa Rd



R2-1(45)  
36"x48"

Install New Sign and 2-Post

Install New White "LANE" Word Pavt. Marking

Install New White "ENDS" Word Pavt. Marking

EP Curve 1  
Sta. 192+70.20  
(o/s 24' Rt.)  
Keaau-Pahoa Rd  
Begin Taper of Edge Stripe  
PC EP Curve 1

	EP Curve 1
Δ	8°41'048"
Δ/2	4°20'54"
R	2800'
T	212.91'
C	424.60'
LC	425.00'

4" Wide Solid White Edge Stripe with Type "C" RPM at 40' o.c.

**LEGEND FOR AS-BUILT POSTINGS**

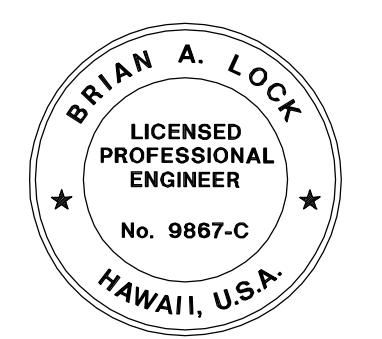
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

**Notes:**

- Contractor shall grind down all exist. ▲ thermoplastic striping, word and arrow pavt markings, and remove all existing rpms.
- Contractor shall submit shop drawings of all signs to the State prior to fabrication.

- ① Median Nose Delineation, See Std Plan TE-26
- ② Match exist. striping
- ③ Type "F" Blue Marker
- ④ 4" Wide Dashed White Stripe 2' Long at 6' o.c.

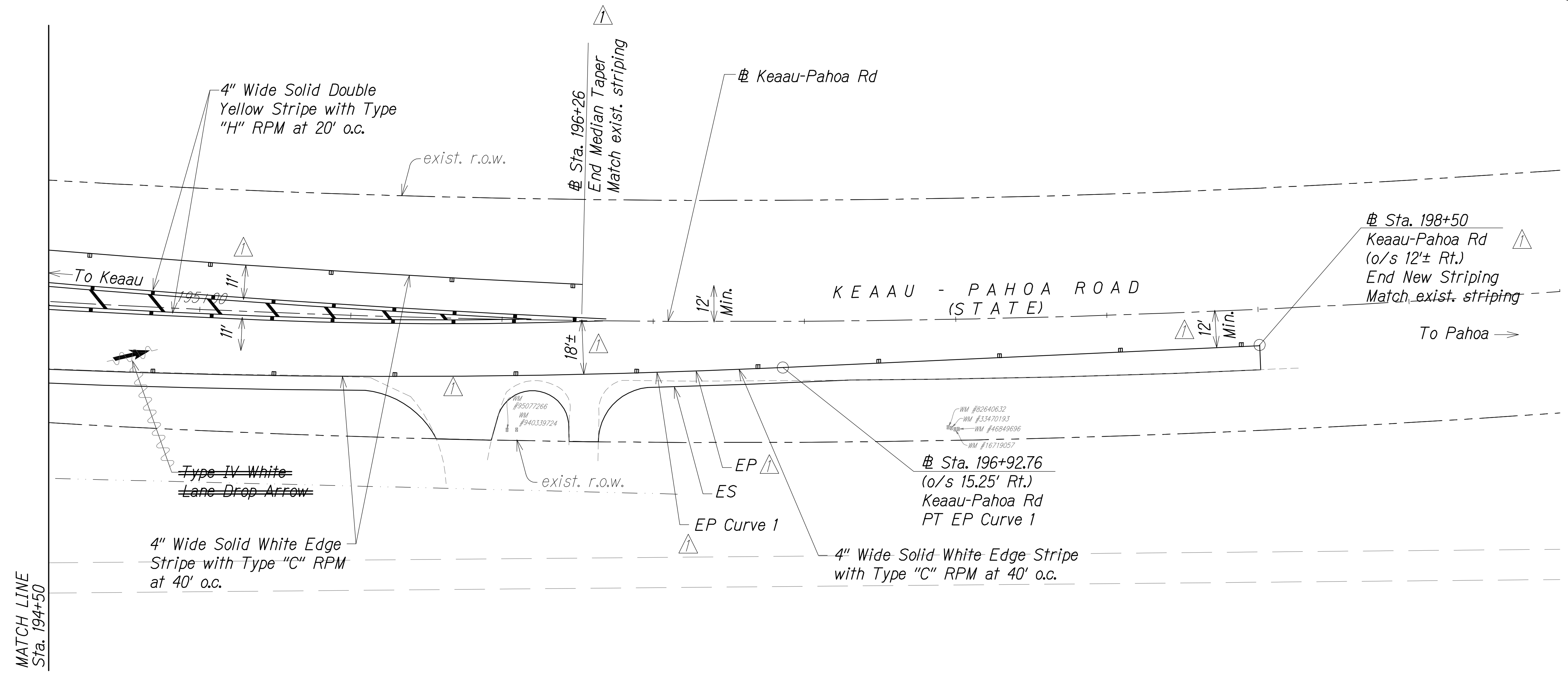
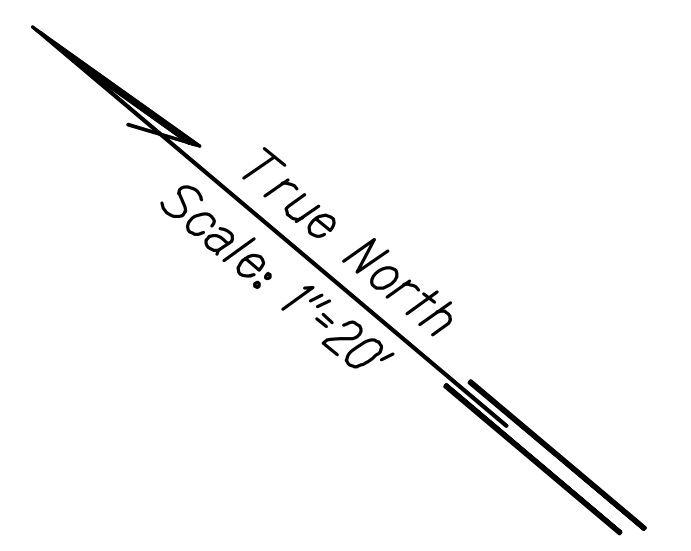
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**PAVEMENT MARKING AND SIGNING PLAN**  
KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2  
Shower Drive Intersection Improvements  
Fed. Aid Proj. No. STP-0130(33)  
Scale: 1"=20' Date: March 2016

DATE	REVISION
r6/8/17	Revised Lane Widths, Striping, Signing, Pavt Mrg, & Notes; Added New Pullboxes.



- Notes:**
- Contractor shall grind down all exist. thermoplastic striping, word and arrow pavt markings, and remove all existing rpms.
  - Contractor shall submit shop drawings of all signs to the State prior to fabrication.

	EP Curve 1
$\Delta$	8°41'048"
$\Delta/2$	4°20'54"
R	2800'
T	212.91'
C	424.60'
LC	425.00'

**LEGEND FOR AS-BUILT POSTINGS**

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

$\Delta$  r6/8/17 Revised Lane Widths, Striping, Signing, Pavt Mrkg, & Notes.

DATE	REVISION



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STATE OF HAWAII  
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**PAVEMENT MARKING AND SIGNING PLAN**  
KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2  
Shower Drive Intersection Improvements  
Fed. Aid Proj. No. STP-0130(33)  
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SIGN REPLACEMENT, REMOVAL, AND INSTALLATION SCHEDULE										
STATION	LEFT	RIGHT	MILE	TYPE	SIGN TO REMAIN	REMOVE	INSTALL (10 SQ. FT. OR LESS)		INSTALL (GREATER THAN 10 SQ. FT.)	
							W/POST	WO/POST	W/POST	WO/POST
167+75		●	3.85	R16-9 (exist.)		1				
172+50	●		3.94	W8-14a (36"x36")			1			
172+50		●	3.94	W8-14b (36"x36")			1			
172+75	●		3.95	R8-3 (exist.)	1					
172+75	●		3.95	R7-201P (exist.)	1					
172+75		●	3.95	R16-9 (exist.)		1				
173+25		●	3.96	R8-3 (exist.)	1					
173+25		●	3.96	R7-201P (exist.)	1					
173+50	●		3.96	R2-1(45) (36"x48")					1	
174+00		●	3.97	W2-2 (exist.)	1					
175+50	●		4.00	W8-15a (exist.)		1				
175+75	●		4.00	W8-14a (exist.)		1				
175+80		●	4.00	R1-1 (exist.)	1					
176+10		●	4.01	R16-9 (exist.)		1				
176+60		●	4.02	W8-14b (exist.)		1				
176+90		●	4.03	DI-2 (exist.)	1					
178+10		●	4.05	W2-1 (exist.)		1				
178+10		●	4.05	W16-8aP (exist.)		1				
179+00		●	4.07	W3-3 (48"x48")					1	
179+00		●	4.07	W16-8aP (36"x15")			1			
179+75		●	4.08	W3-5 (exist.)		1				
180+30	●		4.09	R2-1(55) (exist.)		1				
180+30	●		4.09	R2-1(45) (36"x48")					1	
181+00		●	4.10	R3-8 (exist.)		1				
181+00		●	4.10	R3-8b (48"x30")			1			
181+75		●	4.12	R2-1(45) (exist.)	1					
182+50		●	4.13	W3-4 (48"x48")					1	
182+50		●	4.13	W16-13P (24"x18")			1			
183+10	●		4.14	R8-3 (36"x36")		1	1			
183+10	●		4.14	R7-201P (12"x6")		1	1			
183+10		●	4.14	R8-3 (exist.)	1					
183+10		●	4.14	R7-201P (exist.)	1					
184+00	●		4.16	R16-10 (exist.)		1				
184+70	●		4.17	speed limit 45 (exist.)		1				
185+00	●		4.18	W8-15a (36"x36")			1			
185+00	●		4.18	D10-4a (12"x36")			1			
185+00	●		4.18	D10-7 (10"x7")			1			
185+00		●	4.18	D10-4a (12"x36")			1			
185+00		●	4.18	D10-7 (10"x7")			1			
185+10	●		4.18	R16-10 (exist.)		1				
185+50		●	4.19	R3-8 (exist.)		1				
185+68		●	4.19	R3-8b (48"x30")					1	
185+70	●		4.19	R8-3 (36"x36")		1	1			
185+70	●		4.19	R7-203 (12"x6")		1	1			
185+75	●		4.19	R1-1 (exist.)		1				
186+30	●		4.20	Haw. Par. Park (exist.)	1					

SIGN REPLACEMENT, REMOVAL, AND INSTALLATION SCHEDULE										
STATION	LEFT	RIGHT	MILE	TYPE	SIGN TO REMAIN	REMOVE	INSTALL (10 SQ. FT. OR LESS)		INSTALL (GREATER THAN 10 SQ. FT.)	
							W/POST	WO/POST	W/POST	WO/POST
186+30	●		4.20	DI-1 (44"x30")		1				
186+50		●	4.21	R1-1 (exist.)		1				
186+65		●	4.21	DI-1 (exist.)		1				
186+70	●		4.21	R3-8 (30"x30")		1	1			
187+70	●		4.23	red. spd. 45 (exist.)		1				
187+70		●	4.23	W4-2 (36"x36")				1		
189+30	●		4.26	R16-10 (exist.)		1				
190+25	●		4.28	R3-8 (30"x30")		1	1			
190+75	●		4.29	R2-1(45) (36"x48")					1	
190+75		●	4.29	R2-1(45) (36"x48")					1	
191+50	●		4.30	DI-2 (69"x30")		1			1	
192+50	●		4.32	W3-4 (48"x48")					1	
192+50	●		4.32	W16-13P (24"x18")				1		
193+15	●		4.33	W2-1 (exist.)		1				
193+15	●		4.33	W16-8P (exist.)		1				
193+20	●		4.33	W3-3 (48"x48")					1	
193+20	●		4.33	W16-8aP (36"x15")				1		

SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 TRACED BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_  
 ORIGINAL PLAN No. \_\_\_\_\_

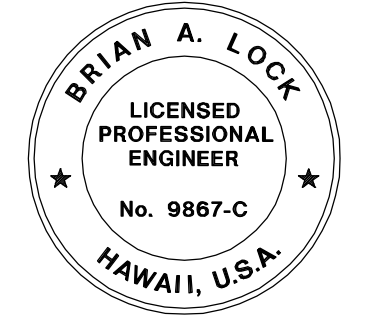
**LEGEND FOR AS-BUILT POSTINGS**

 Squiggly line for as-built deletion

 Double line for as-built deletion

Roadway Text for as-built posting

 r6/8/17 Revised Signs



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

APRIL 30, 2018  
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**TRAFFIC SIGN SUMMARY**

**KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2**

Shoulder Drive Intersection Improvements  
Fed. Aid Proj. No. STP-0130(33)

Scale: \_\_\_\_\_ Date: March 2016