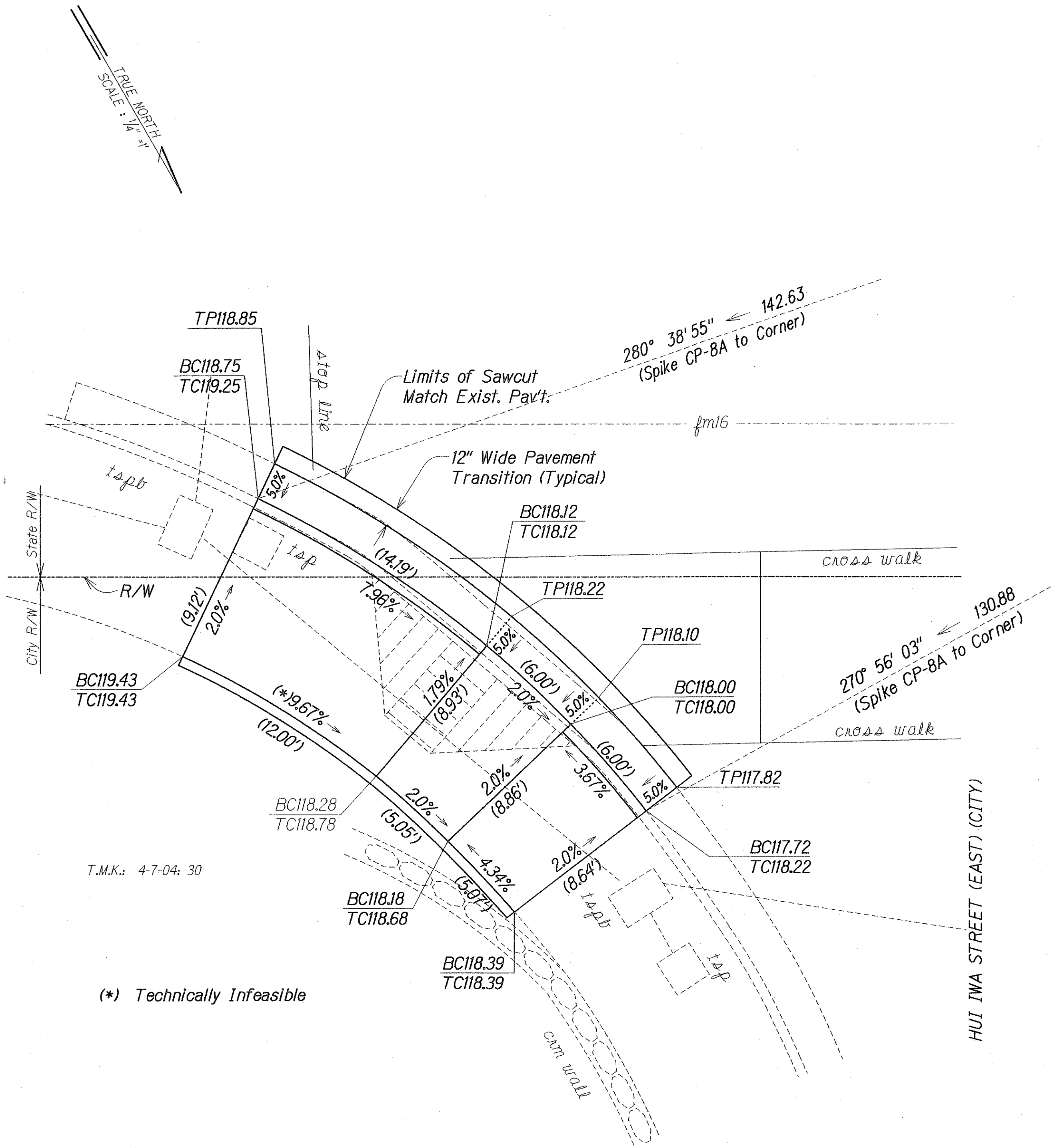
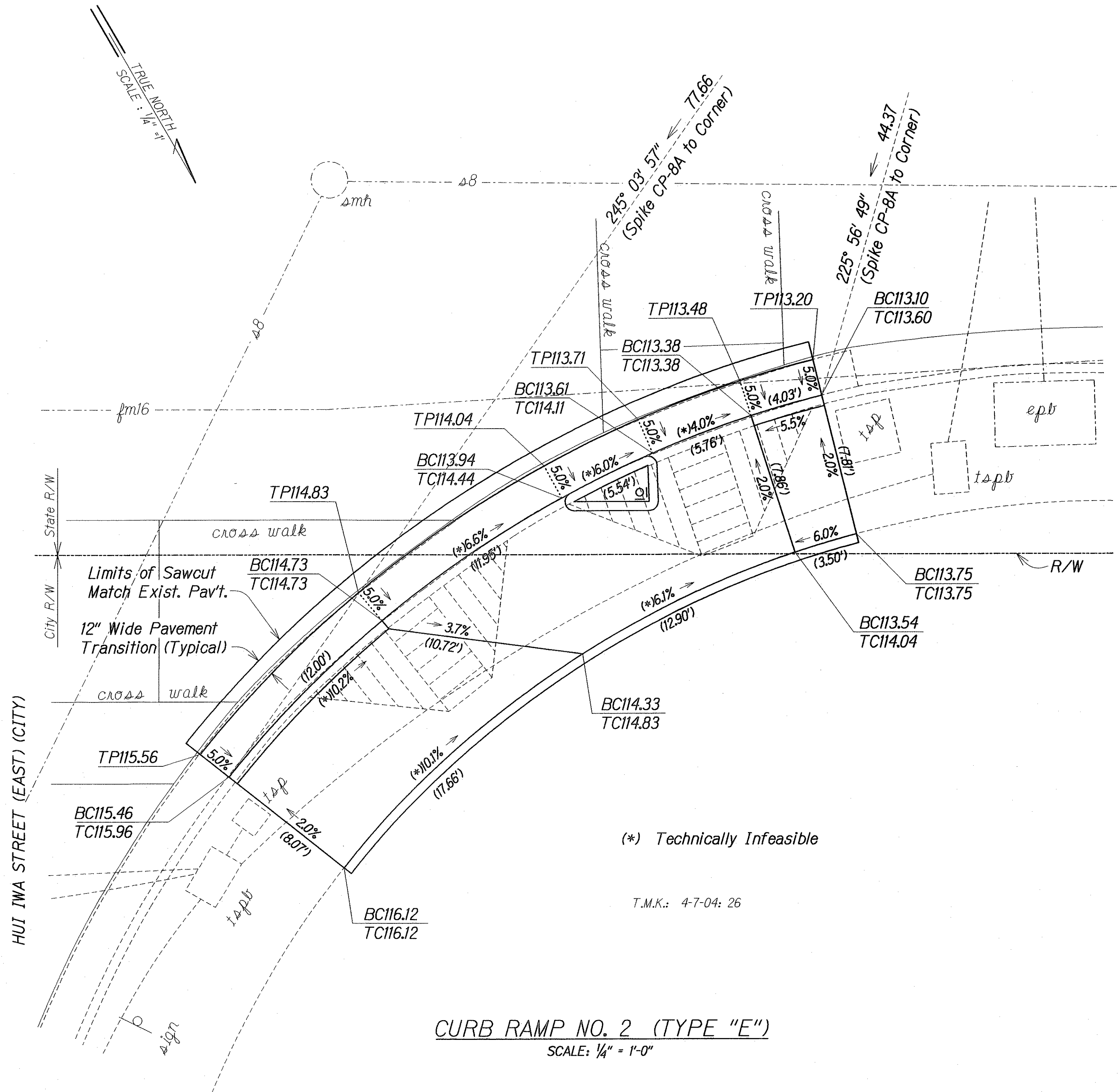


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-00M	2004	34	98



CURB RAMP NO. 1 (TYPE "B" MODIFIED)
SCALE: 1/4" = 1'-0"



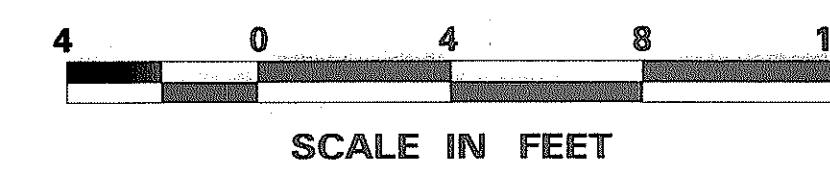
CURB RAMP NO. 2 (TYPE "E")
SCALE: 1/4" = 1'-0"

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	

APPROVED: DATE:

CHIEF, TRAFFIC REVIEW BRANCH, DPP
FOR WORK WITHIN CITY R/W ONLY

M. J. [Signature] 7/3/03
CHIEF, CIVIL ENGINEERING BRANCH, DPP



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION AND
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION
Glenn K. Ikeda
P.E., Inc.
dba PARK ENGINEERING
LICENSE EXPIRES: 4-30-04

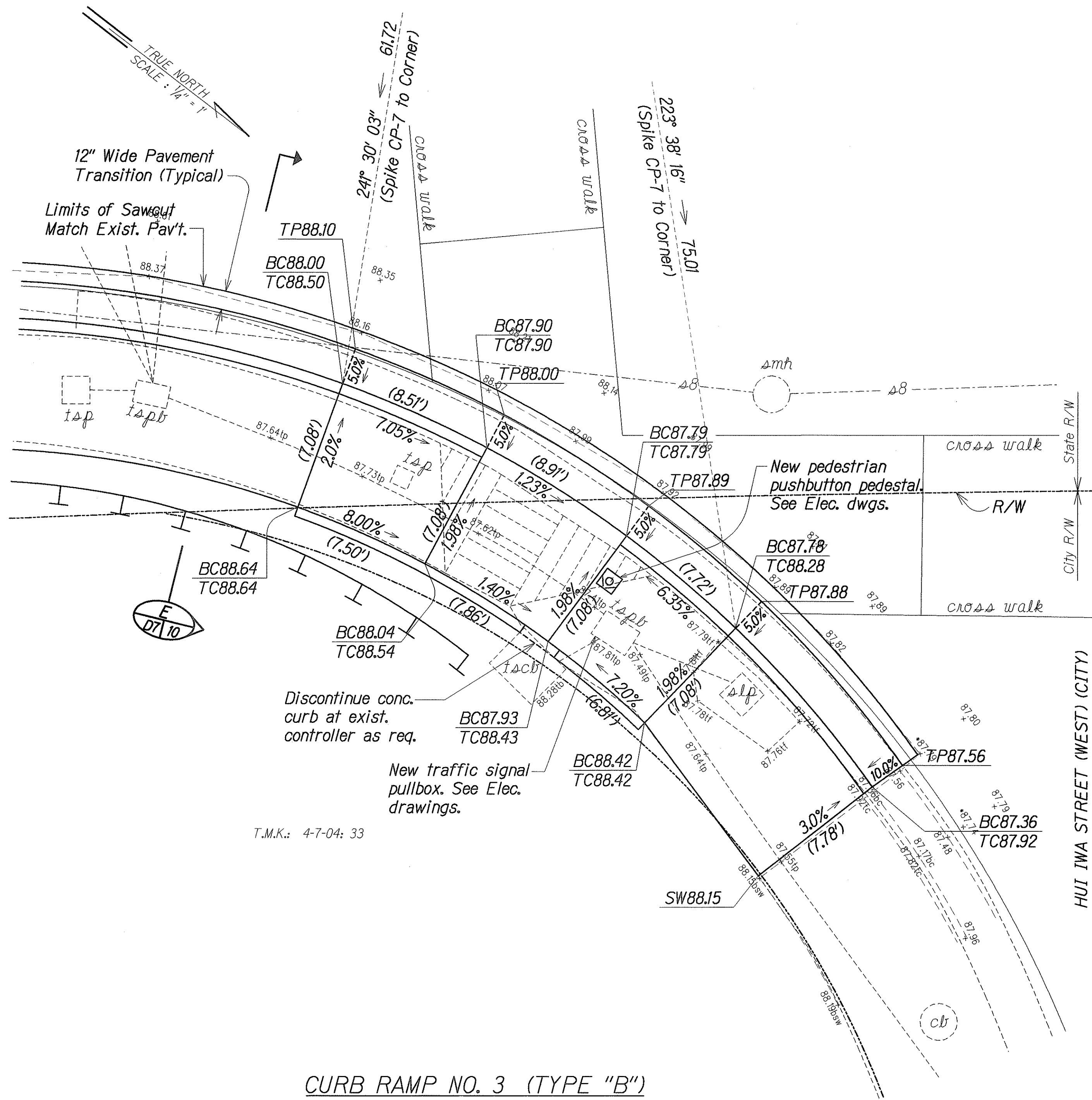
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SITE SPECIFIC CURB RAMP DETAILS

KAHEKILI HIGHWAY LIGHTING IMPROVEMENTS
Haiku Road to Ahuimanu Place
Project No. 83F-02-00M
Scale: As Noted Date: Sept. 2002

SHEET No. 07 OF 08 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-00M	2004	C.O.35	98



FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-00M	2004	36	98

CURB RAMP NOTES:

1. These typical details are intended as curb ramp guidelines for design and construction.
2. Curb ramps shall be installed at 90° to the sidewalk or to the maximum extent feasible, in alterations.
3. Subject to field conditions, the Engineer shall determine the final location of curb ramps.
4. The maximum slopes of adjoining gutters or road surface immediately fronting the curb ramp shall not exceed 5% for Type A and D ramps and 8.33% for Type B, C, and E ramps. The counterslope may be exceeded when the change of grade does not exceed 13% over a distance of 2 ft. Exceeding the 13% change in grade will cause a person in a wheelchair to tip forward and/or fall backward.
5. All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
6. Where necessary, existing pullboxes, handholes, manholes, etc. shall be adjusted to match curb ramp grade. Adjustments shall not be paid for separately but shall be considered incidental to the various curb ramp items unless indicated otherwise.
7. Transitions from ramps to gutters and roadways shall be flush.
8. Curb ramps and sidewalks shall be designed and constructed to eliminate ponding to the maximum extent feasible.
9. The pedestrian push button shall meet operational and reach requirements of the American with Disabilities Act Accessibility Guidelines (ADAAG):
 - a) Forward Reach. The maximum height for forward reach shall be 48".
 - b) Side Reach. The maximum height for side reach shall be 54".
 - c) Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf.
10. There shall be a 30"x48" level ground surface (2% max. cross slope, both directions) for a forward or side approach, as appropriate, to a pedestrian push button.
11. Construction joints are required to join curb ramps with sidewalks.
12. Unless otherwise noted, new gutters are required as shown.
13. All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.
14. Surface of sidewalks and curb ramps shall be firm, stable, and slip-resistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
15. Bed course material is required for curb ramps, sidewalks, and gutters.
16. If a curb ramp is not constructed according to the plans, the Contractor shall reconstruct the curb ramp at no cost to the State. Submit the alternate design to the State for approval. Construction tolerance for Portland Cement Concrete shall be based on 1/4 inch per 10 ft. (±0.2%). Remedial measures will not be accepted.
17. Additional information is available from:
 - a) American with Disabilities Act Accessibility Guidelines (ADAAG), September 1998, The Access Board.
 - b) Accessible Rights-of-Way: A Design Guide, November 1999, The Access Board.
 - c) Designing Sidewalks and Trails for Access, July 1999, FHWA.
18. A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

td1/usr2/traffic/std/curbrampnoted.dgn
R 10-16-00 1E-00
sh. 1 of 6

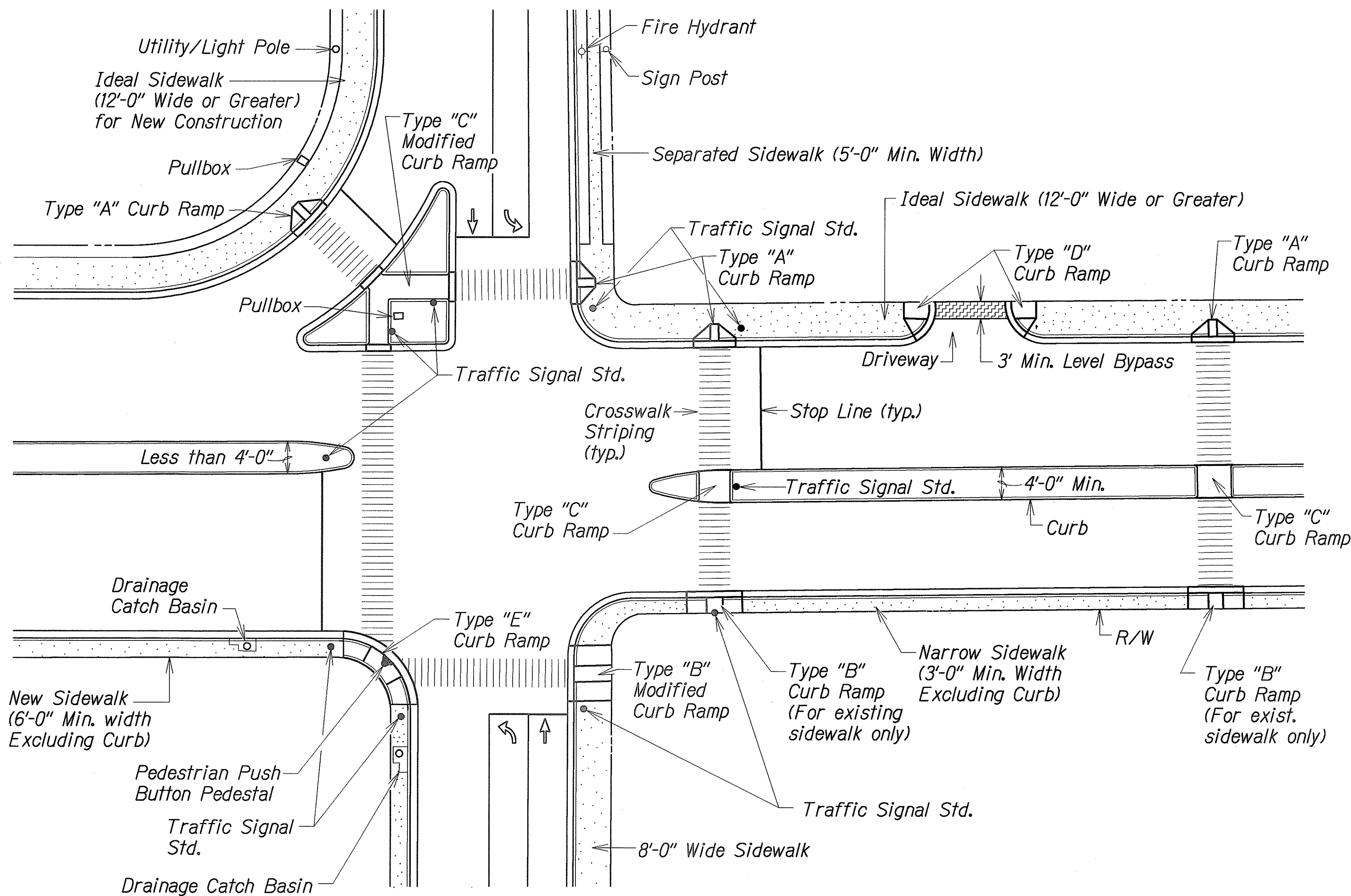


THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION AND
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION

Glenn K. Ikeda
Park, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES: 4-30-04

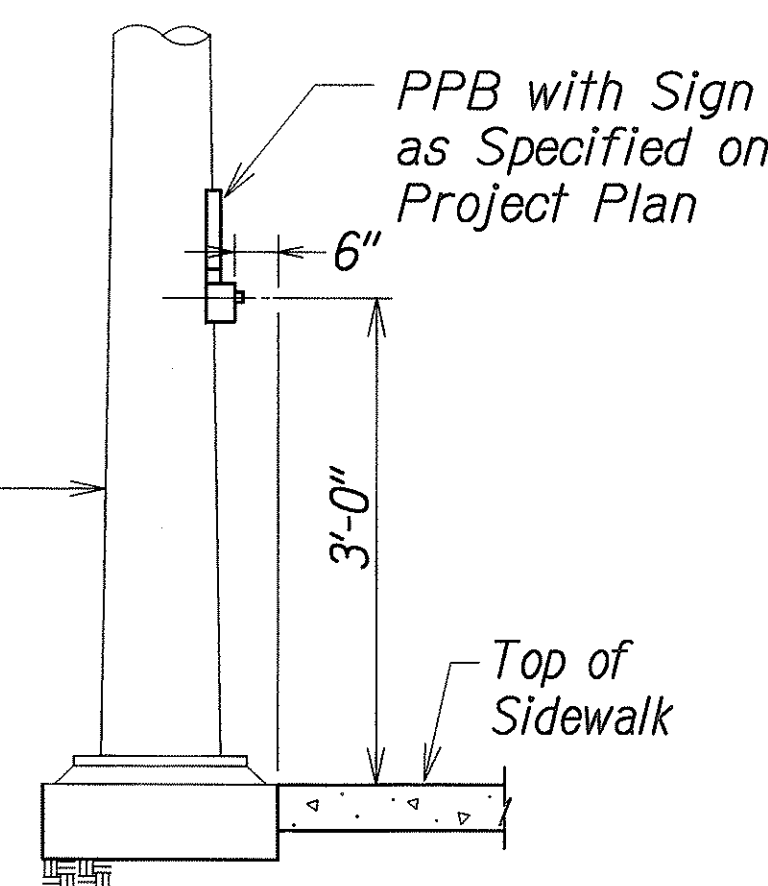
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>CURB RAMP NOTES</u>	
KAHEKILI HIGHWAY LIGHTING IMPROVEMENTS Haiku Road to Ahuimanu Place Project No. 83F-02-00M	
Scale: None	Date: Sept. 2002
SHEET No. 1 OF 6 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-00M	2004	37	98

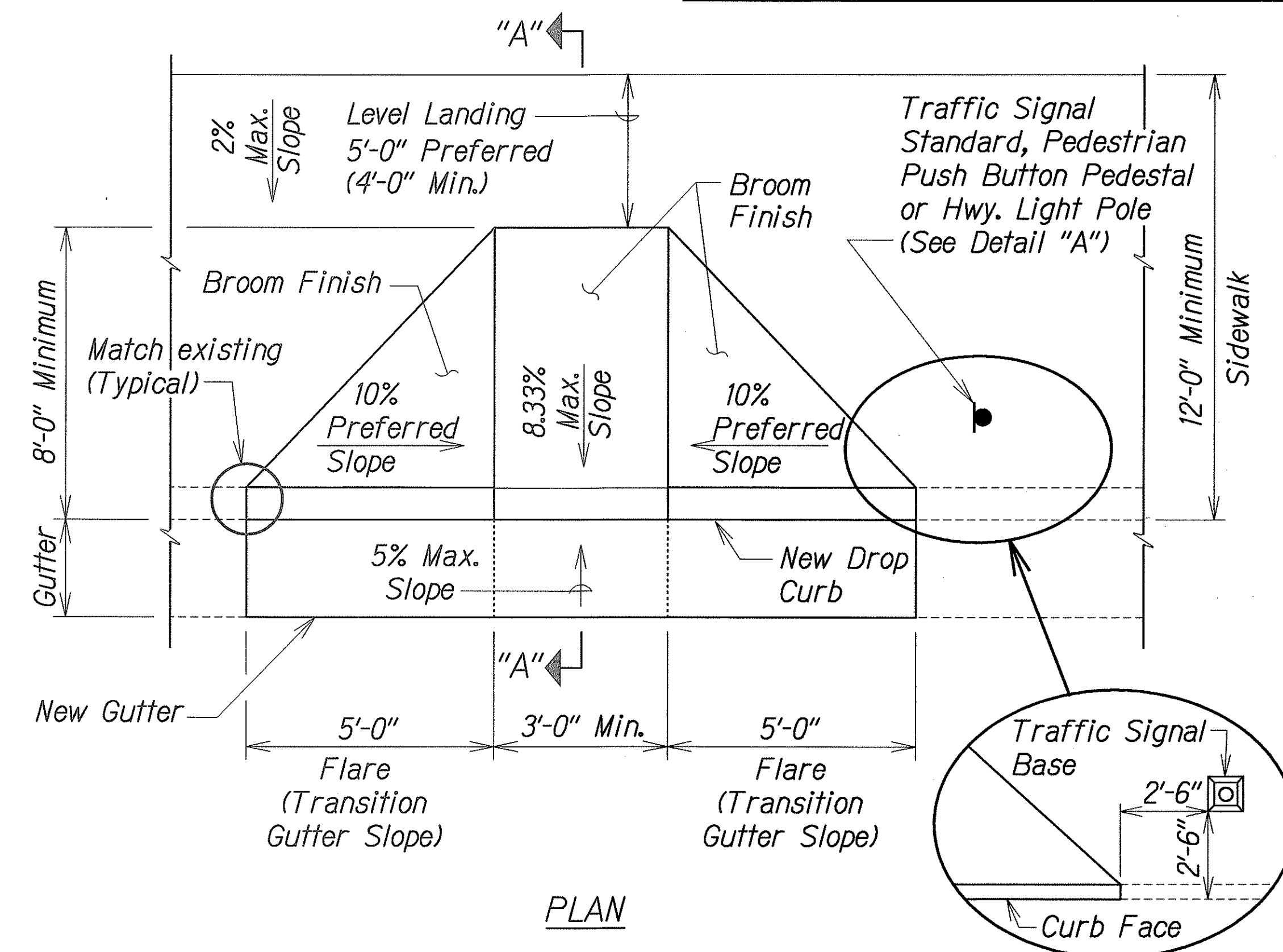


TYPICAL CURB RAMPS

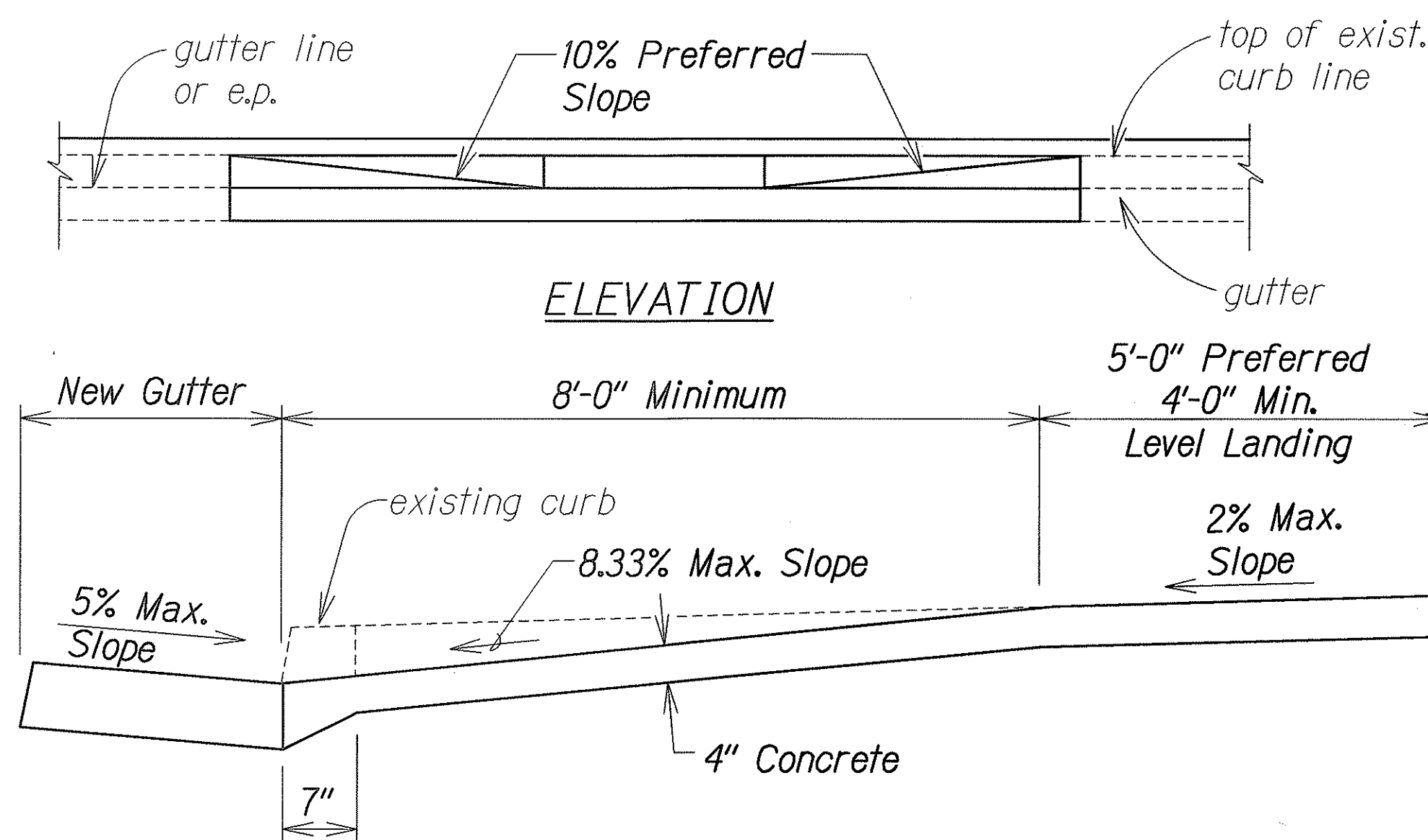
Type I, II, III TSS,
Pedestrian Push Button
Pedestal or Hwy. Light Pole



DETAIL "A"



PLAN



SECTION "A-A"

CURB RAMP - TYPE "A"
SIDEWALK WIDTH 12'-0" OR GREATER

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

KAHEKILI HIGHWAY LIGHTING IMPROVEMENTS
Haiku Road to Ahuimanu Place
Project No. 83F-02-00M

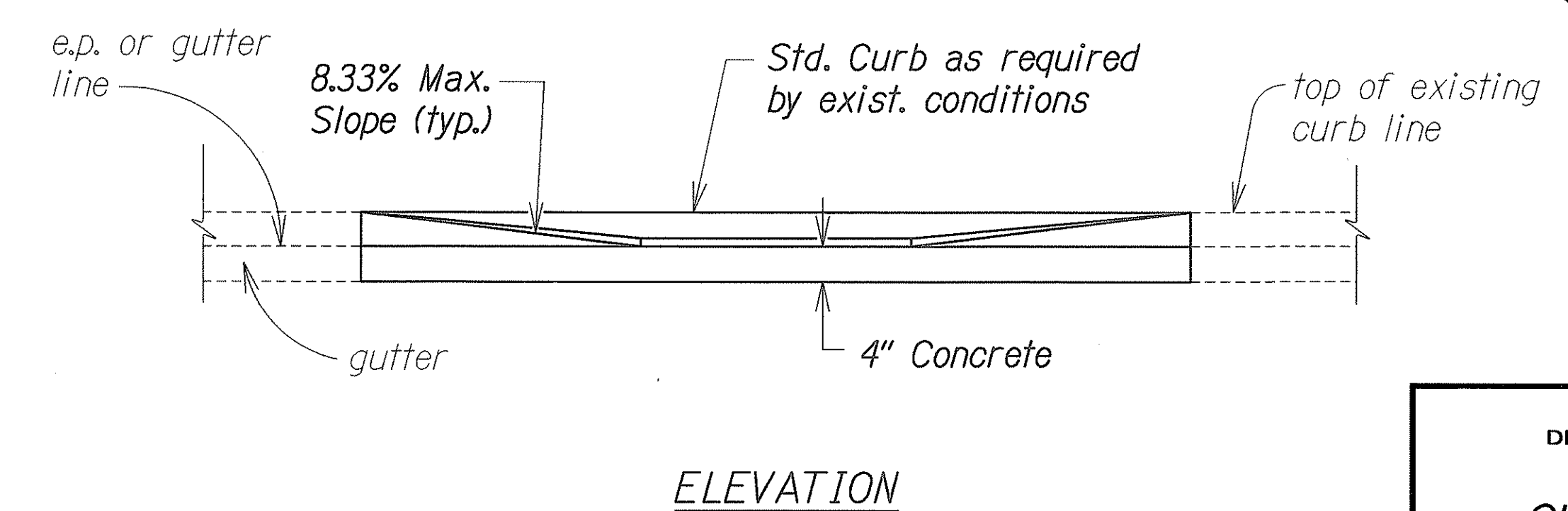
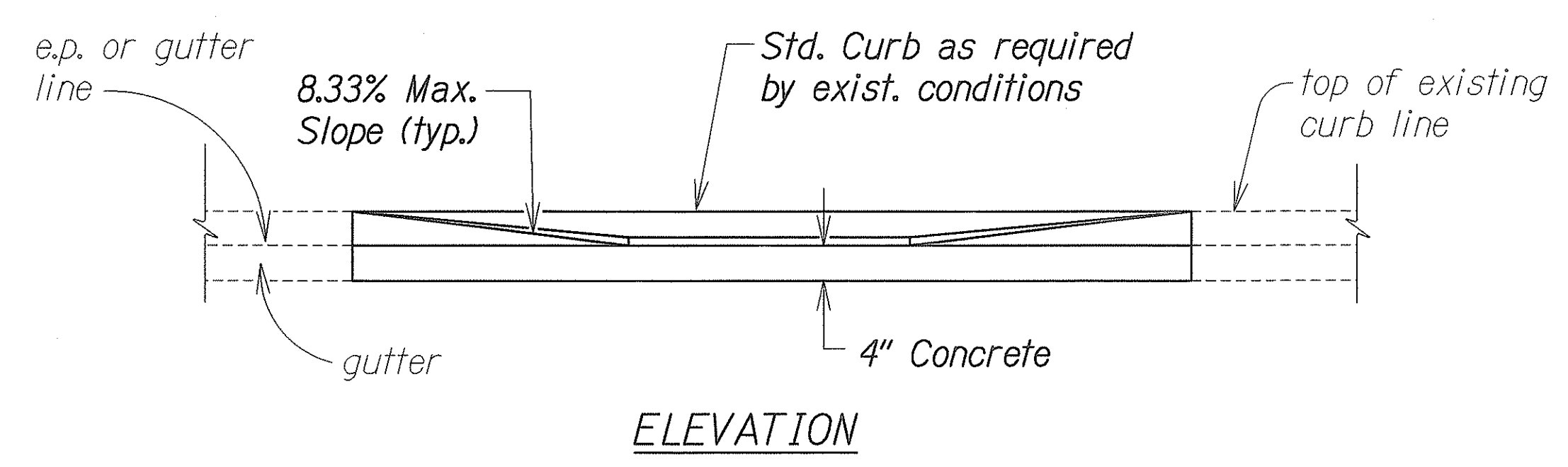
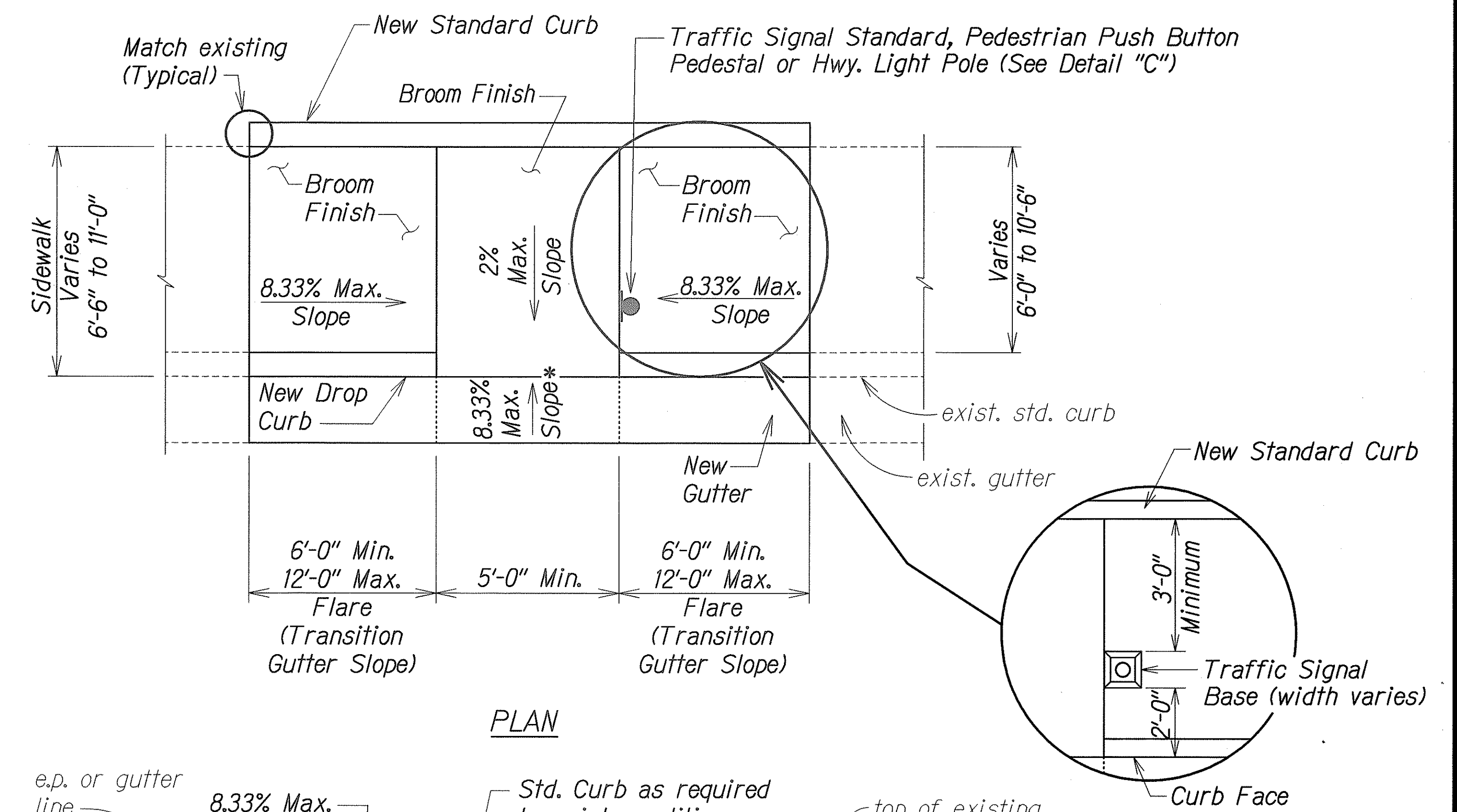
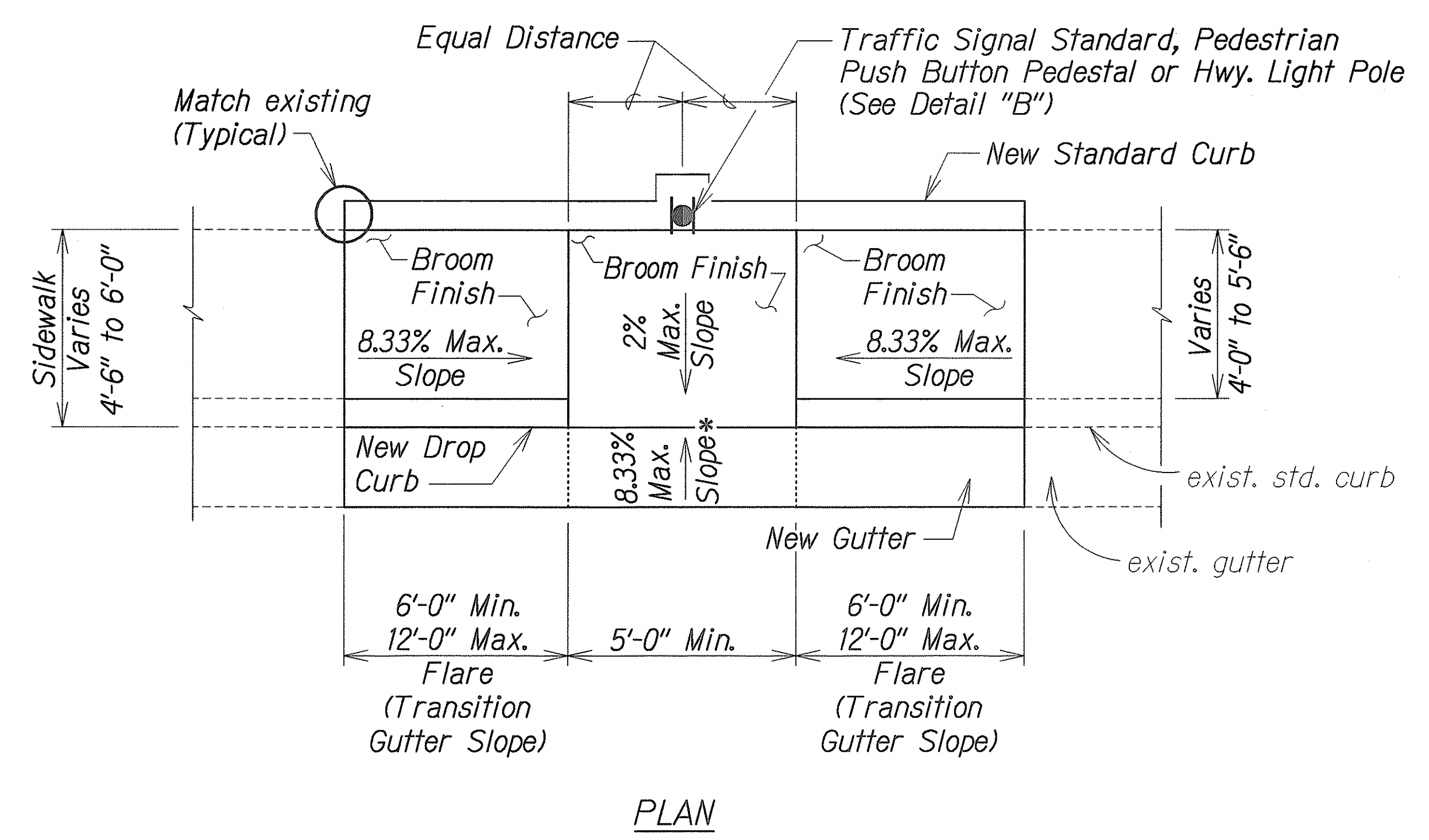
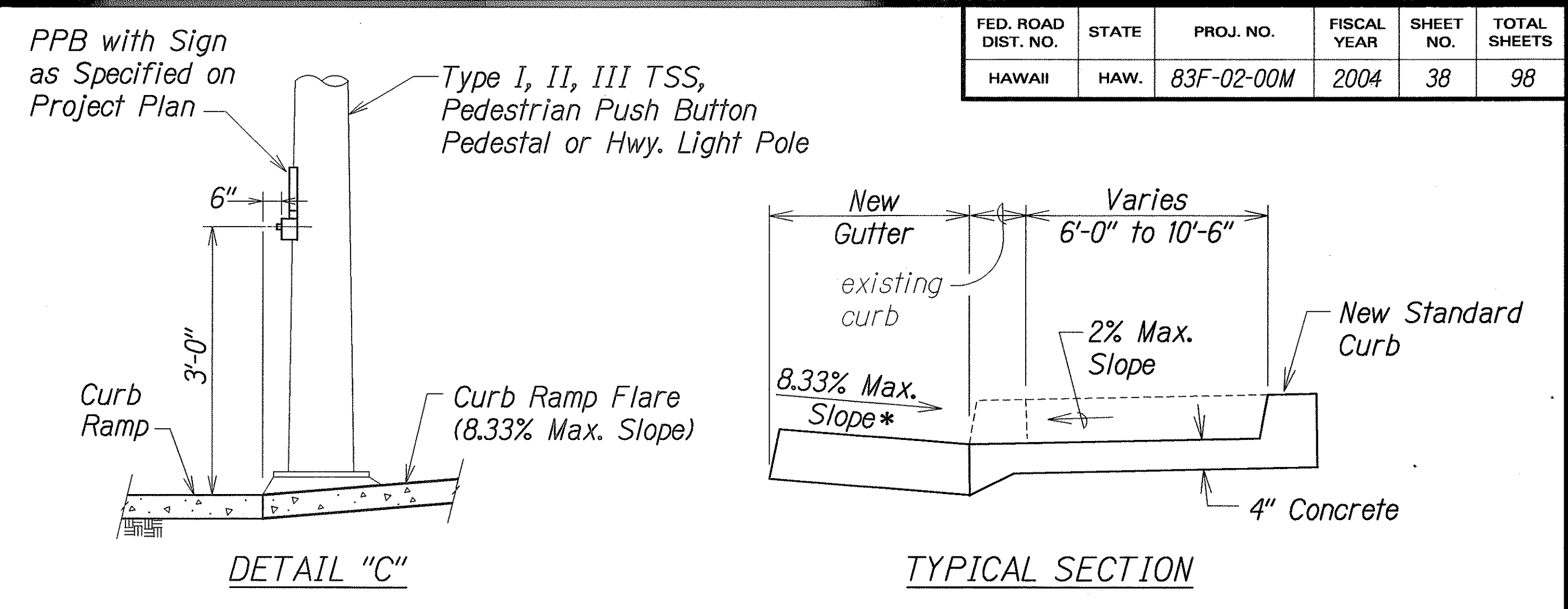
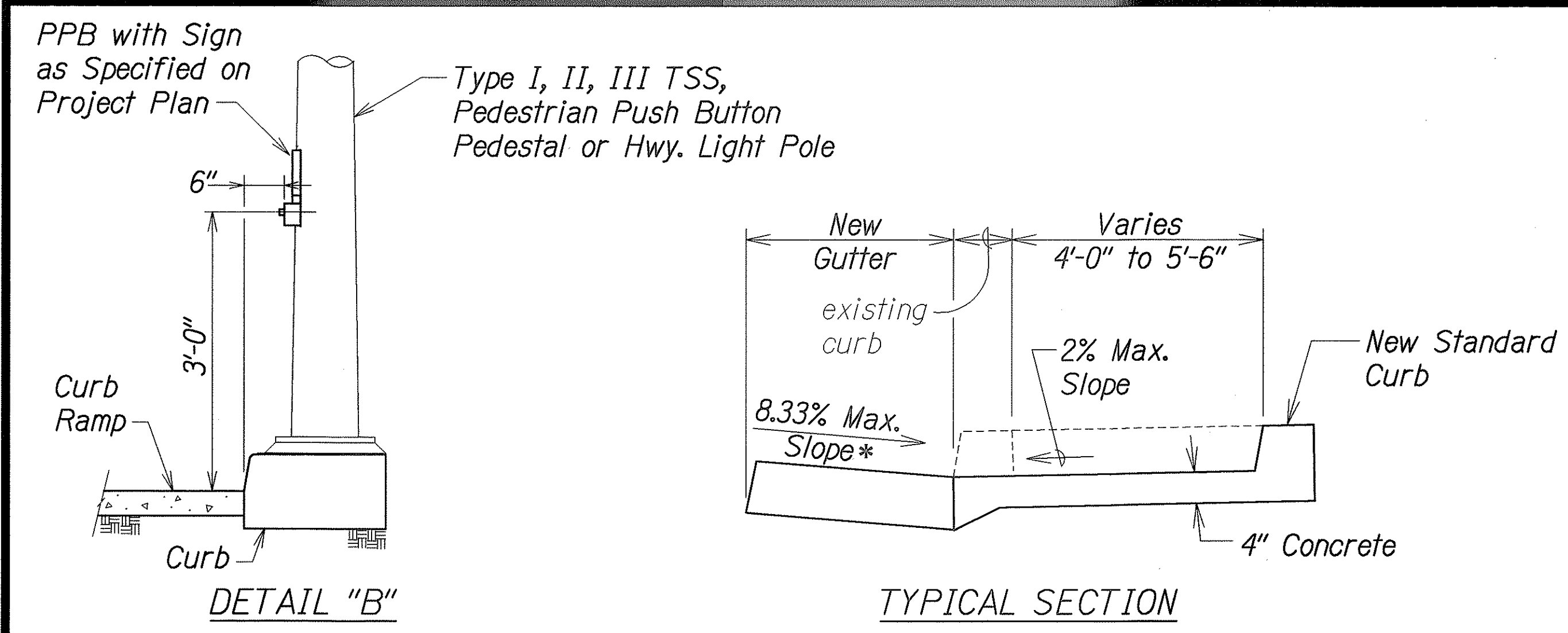
Scale: None Date: Sept. 2002

SHEET No. 2 OF 6 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES BY	
NOTE BOOK	
ORIGINAL PLAN	

R 10-16-00 TE-88 sht. 2 of 6

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-00M	2004	38	98



CURB RAMP - TYPE "B"
 SIDEWALK WIDTH 5'-0" OR GREATER
 BUT LESS THAN 7'-0" WIDTH

CURB RAMP - TYPE "B" MODIFIED
 SIDEWALK WIDTH 7'-0" OR GREATER
 BUT LESS THAN 12'-0" WIDTH

* See Curb Ramp Note No. 10

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

CURB RAMP DETAILS

KAHEKILI HIGHWAY LIGHTING IMPROVEMENTS
 Haiku Road to Ahuimanu Place
 Project No. 83F-02-00M

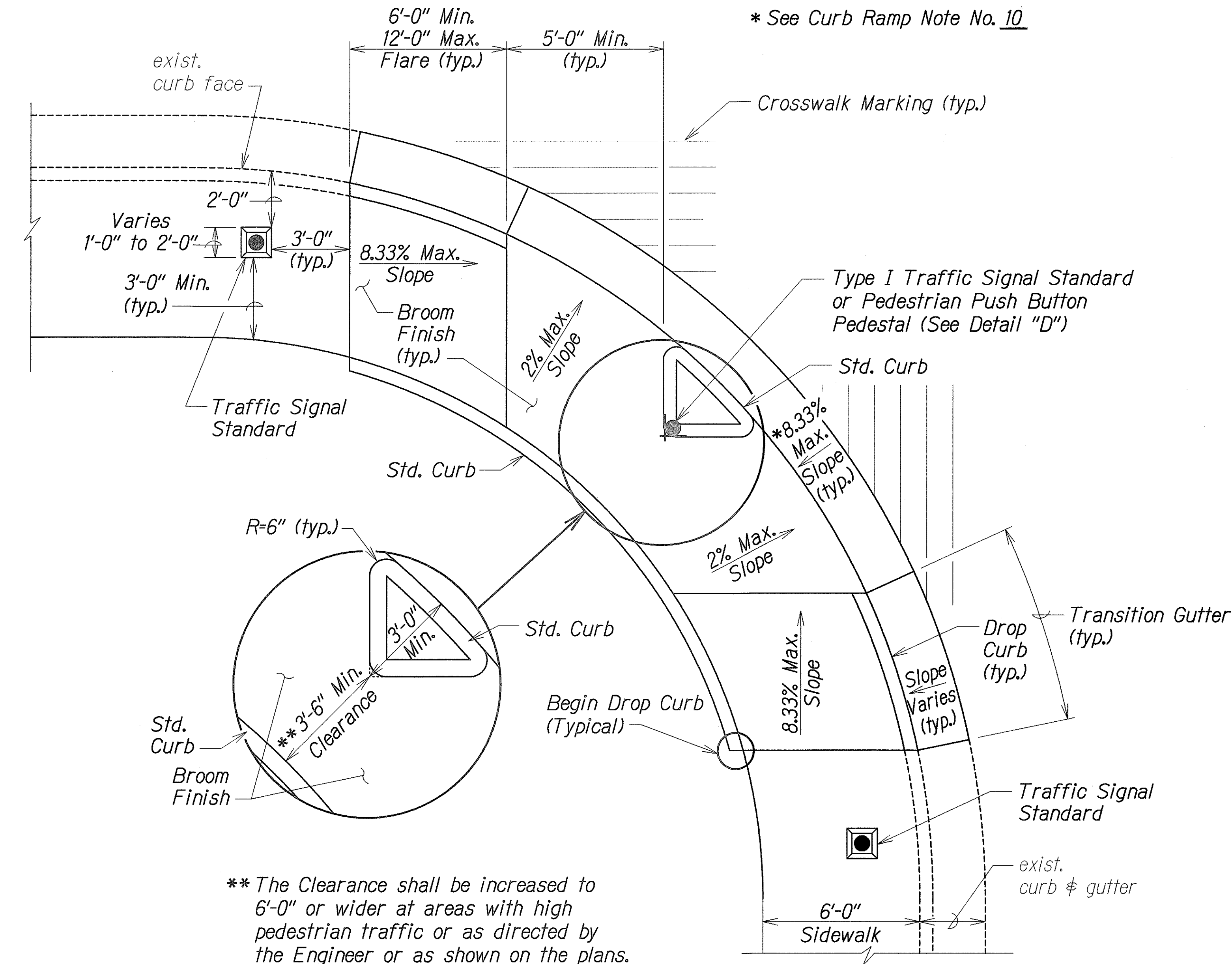
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SHEET No. 3 OF 6 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
NOTE BOOK	
CHECKED BY	

R 10-16-00 TE-69 sht. 3 of 6

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-00M	2004	40	98



** The Clearance shall be increased to 6'-0" or wider at areas with high pedestrian traffic or as directed by the Engineer or as shown on the plans.

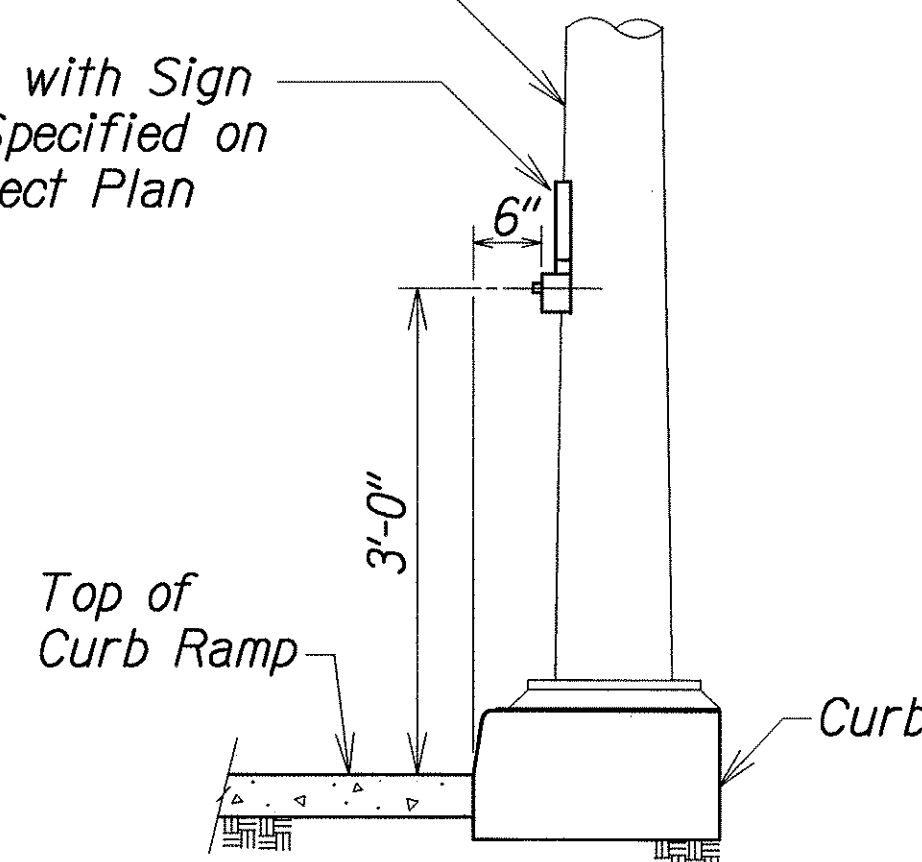
CURB RAMP - TYPE "E"

SIDEWALK WIDTH 7'-0" OR GREATER

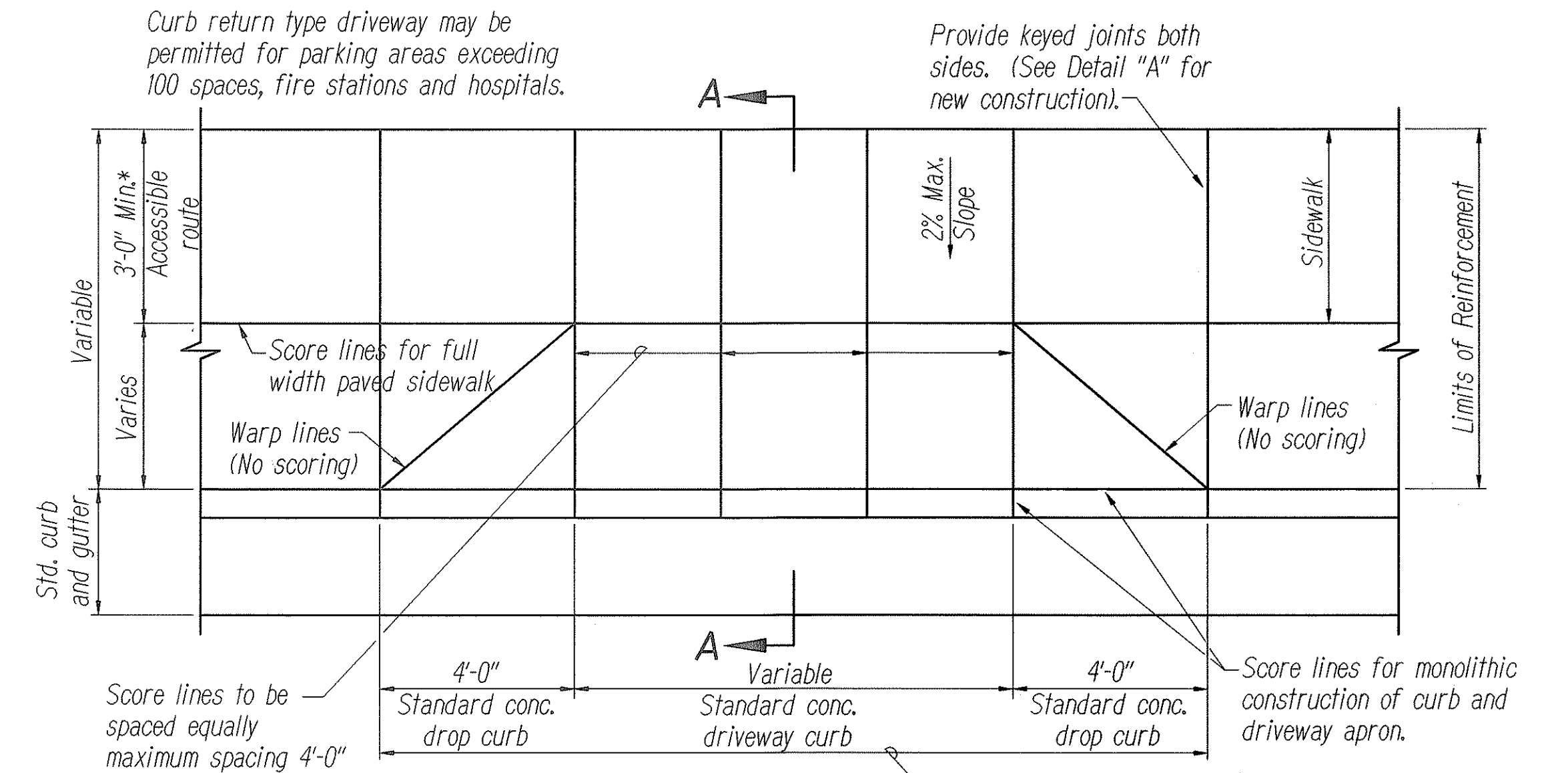
(TO BE USED ONLY WITH TRAFFIC SIGNAL STANDARD OR PEDESTRIAN PUSH BUTTON PEDESTAL ON TRIANGULAR "ISLAND")

Type I TSS or Pedestrian Push Button Pedestal

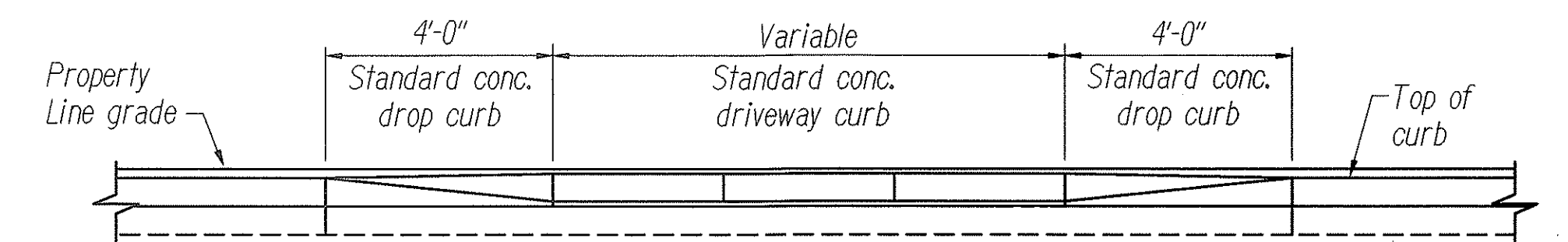
PPB with Sign as Specified on Project Plan



DETAIL "D"

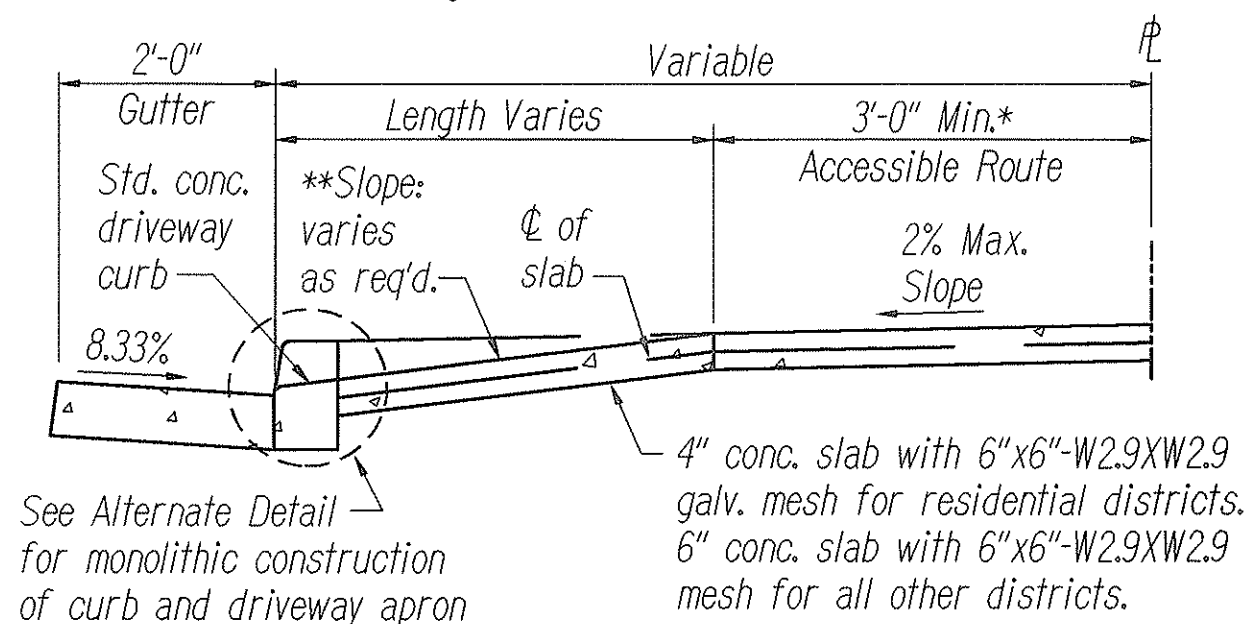


PLAN
NOT TO SCALE

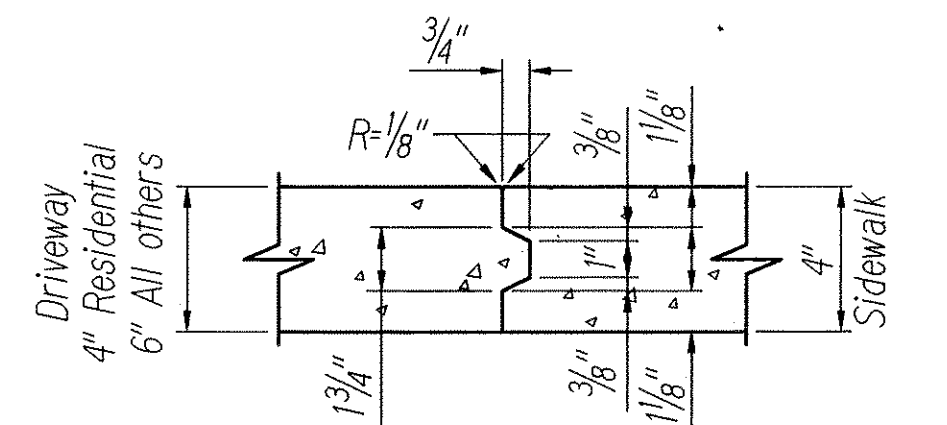


ELEVATION
NOT TO SCALE

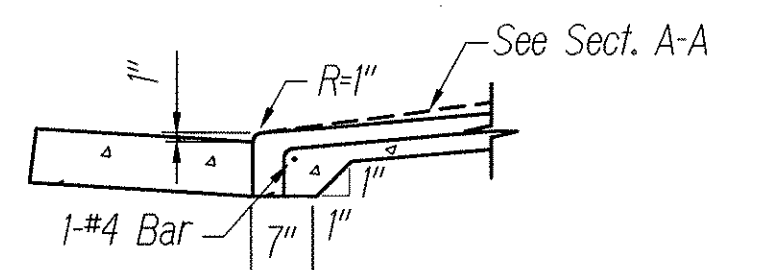
- * Match width of existing sidewalk whenever possible.
- ** Breakover and departure angles should not exceed 10 degrees or 17%.



SECTION A-A
NOT TO SCALE



DETAIL "A"
NOT TO SCALE
(NEW CONSTRUCTION)



ALTERNATE DETAIL
NOT TO SCALE

DRIVEWAY APRON

NOTE:

For extension to existing driveway, scoring and finish shall match existing scoring and finish. For driveway constructed in built up areas, scoring conforming to scoring at adjacent driveways may be authorized.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

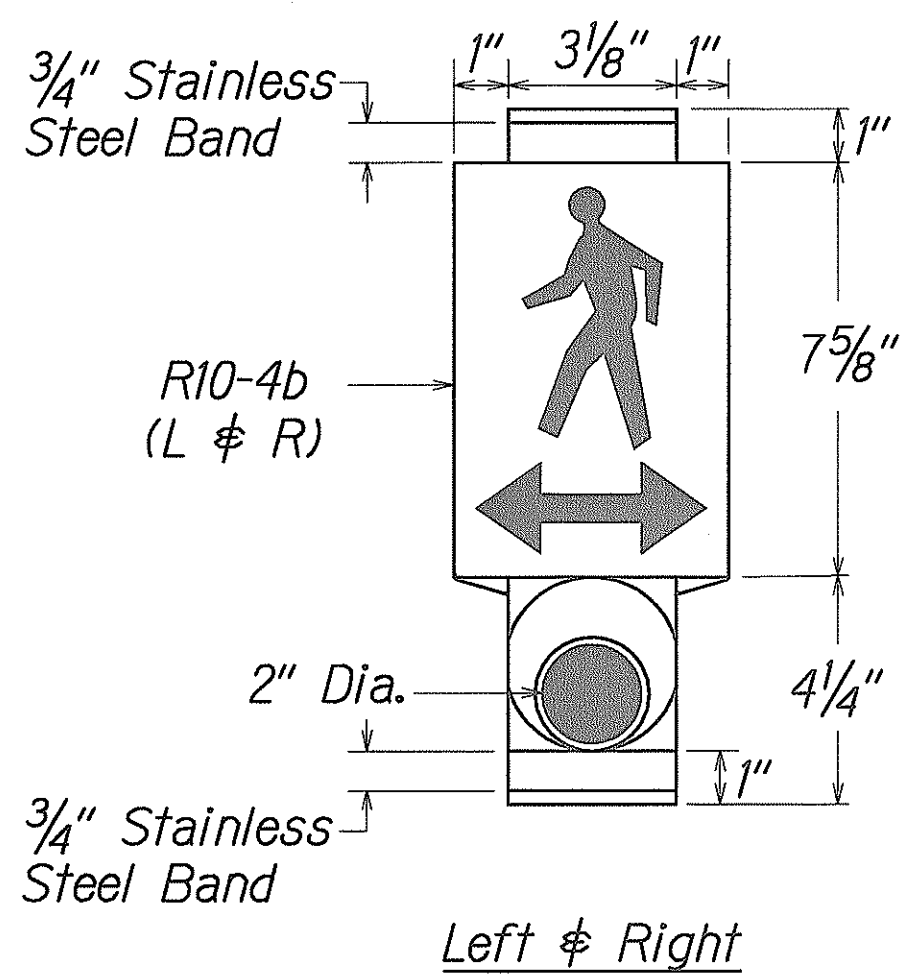
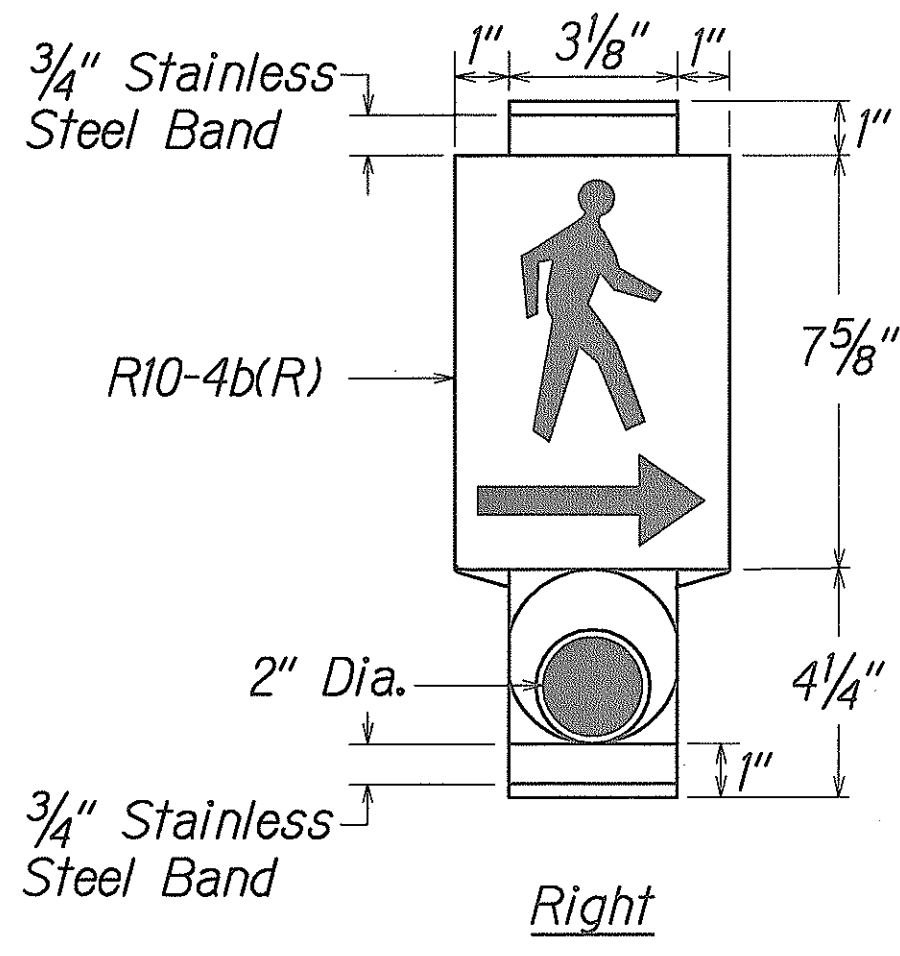
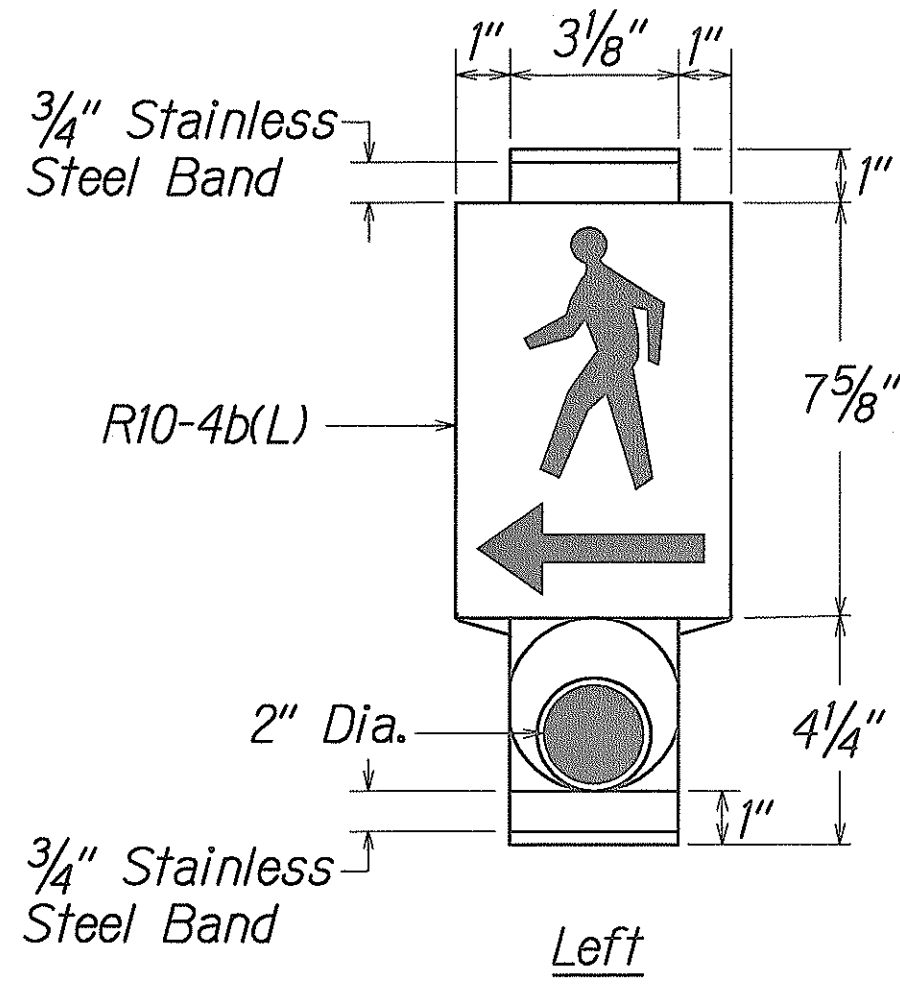
CURB RAMP DETAILS

KAHEKILI HIGHWAY LIGHTING IMPROVEMENTS
Haiku Road to Ahuimanu Place
Project No. 83F-02-00M

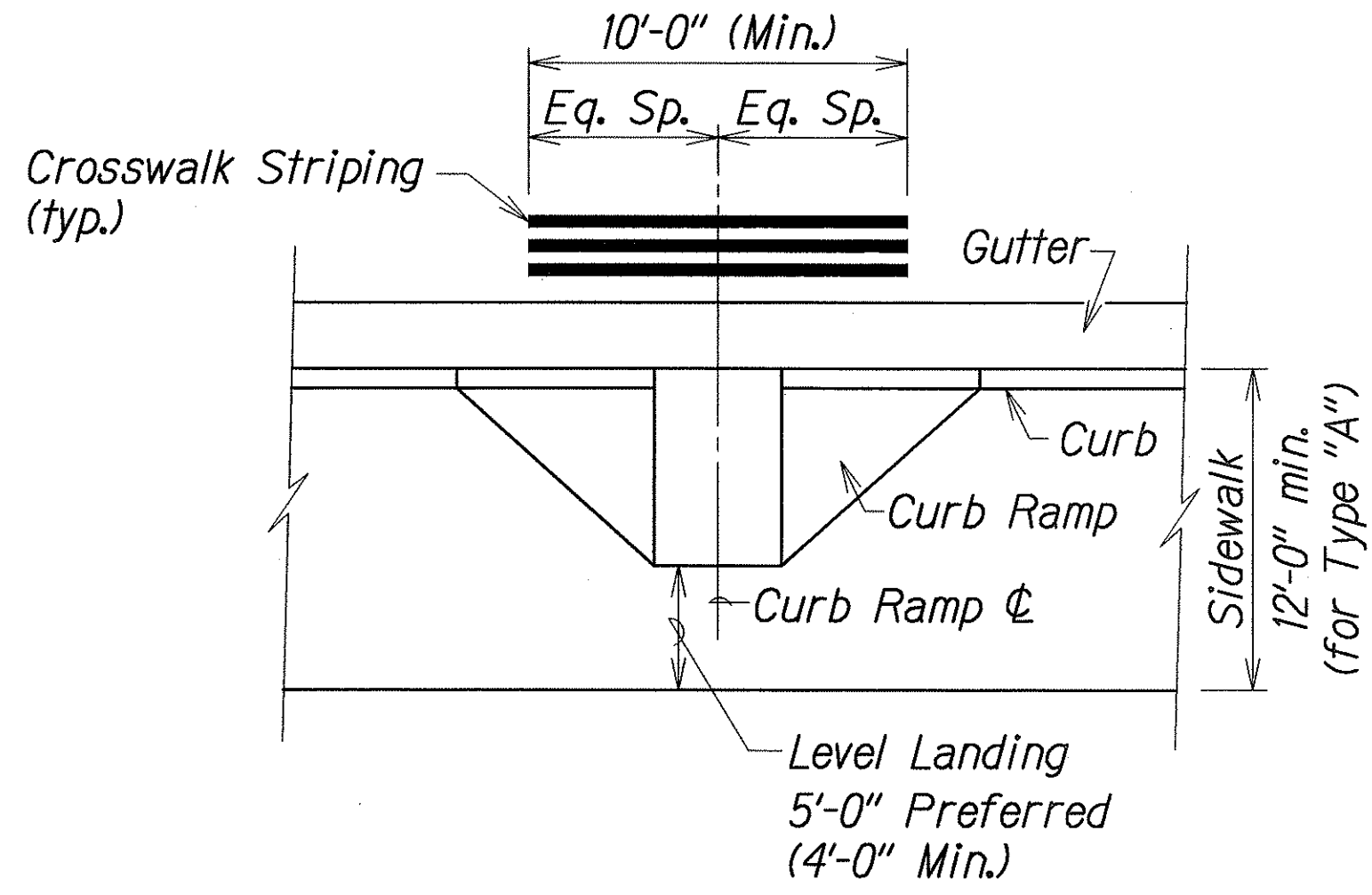
Scale: None Date: Sept. 2002

SHEET No. 5 OF 6 SHEETS

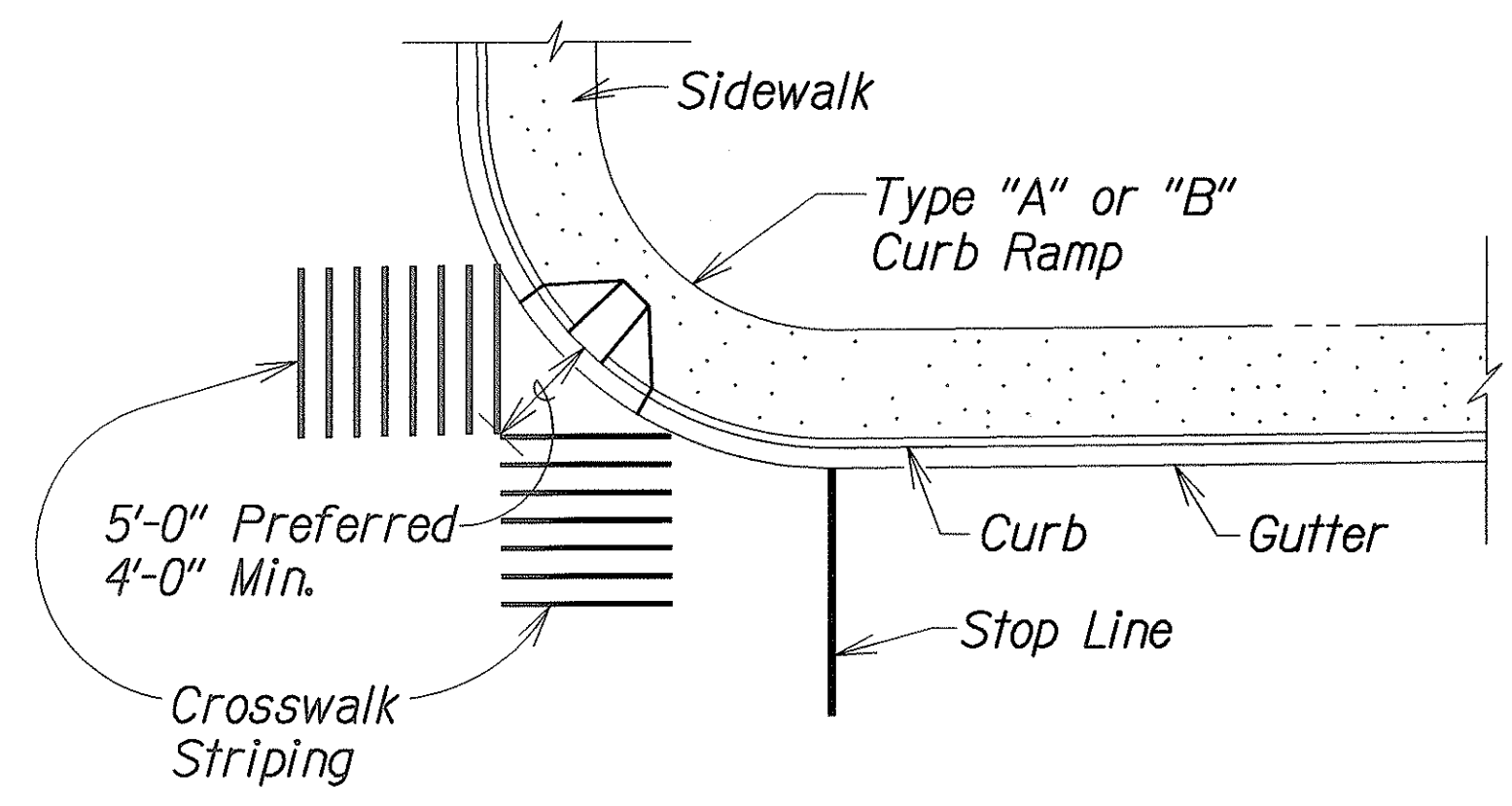
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-00M	2004	41	98



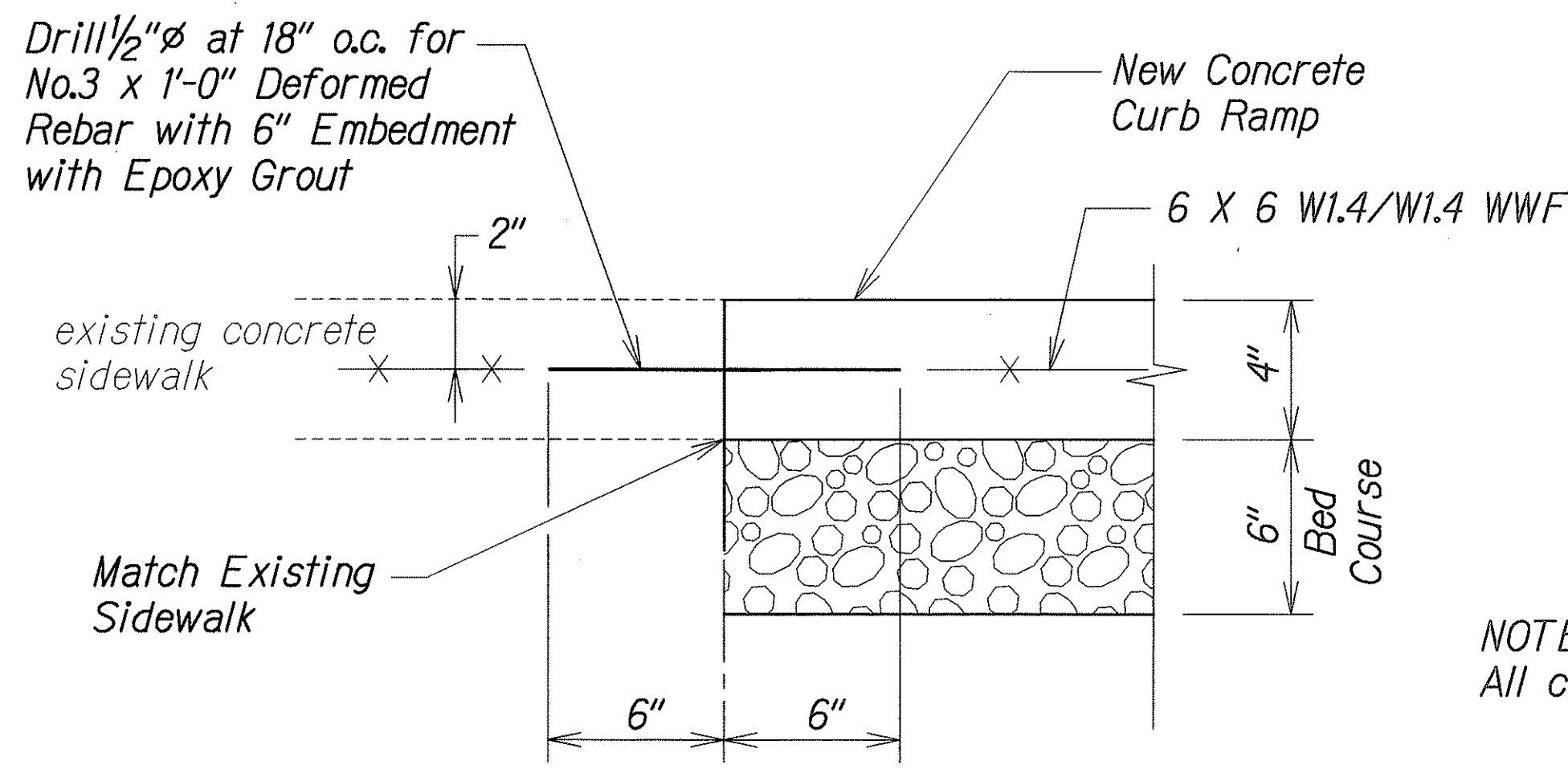
PEDESTRIAN PUSH BUTTON WITH SIGN
 Man, Arrow & Push Button - White
 Background - Black



**TYPICAL CROSSWALK STRIPING
 AT CURB RAMP**



**TYPICAL CROSSWALK STRIPING
 AT DIAGONAL CURB RAMP**



**TYPICAL CONSTRUCTION JOINT
 AT EXISTING SIDEWALK**

NOTE:
 All curb ramps shall be reinforced.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

KAHEKILI HIGHWAY LIGHTING IMPROVEMENTS
Haiku Road to Ahuimanu Place
Project No. 83F-02-00M

Scale: None
Date: Sept. 2002

SHEET No. 6 OF 6 SHEETS

R 10-16-00 TE-XX sht. 6 of 6
 tdl/usr2/traffic/std/curbpmisc.dgn

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	