

CURB RAMP AND SIDEWALK NOTES:

- 1. These typical details are intended as curb ramp guidelines for design and construction.
- 2. A 2% maximum cross slope shall be maintained perpendicular to pedestrian traffic. A maximum grade of 5% shall be maintained in the direction of pedestrian traffic, except at ramp locations.
- 3. Subject to field conditions, the Engineer shall determine the final location of curb ramps.
- 4. All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
- 5. 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.
- 6. Transitions from ramps to gutters and roadways shall be flush.
- 7. Curb ramps and sidewalks shall be constructed to eliminate ponding to the maximum extent feasible.
- 8. 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.
- 9. 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.
- 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. All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum 32-inch clear width is allowed for a distance of 24-inches.
- 17. Passing spaces along new sidewalks with 5' clear width or less shall be provided at maximum 200' intervals as required by ADA guidelines. The passing area shall be a minimum 5' wide by 5' long as feasible.
- 18. If possible, install utility poles, fire hydrants, light poles, sign posts, pullboxes, etc. off of sidewalk but within the right-of-way.

- 19. Objects protruding from utility poles and walls adjacent to the sidewalks (i.e. wall mounted fire hydrants, telephones, meters on poles, etc.) shall be mounted to meet the current American with Disabilities Act Accessibility Guidelines (ADAAG) and will be subject to Engineer's approval.
- 20. If a curb ramp is not constructed according to the plans, the Contractor shall reconstruct the curb ramp at no cost to the State. Construction tolerance for Portland Cement Concrete shall be based on 1/4 inch per 10 ft. (±0.2 %). Remedial measures will not be accepted.
- 21. Additional information is available from:
 - a) American with Disabilities Act Accessibility Guidelines (ADAAG), Jan. 1998, The Access Board.
 - b) Accessible Rights-of-Way: A Design Guide, Nov. 1999, The Access Board.
 - c) Designing Sidewalks and Trails for Access, Part 1, July 1999, FHWA.
 - d) Designing Sidewalks and Trails for Access, Part 2, Sept. 2001, FHWA.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(20)	2005	106	315



This work was prepared by me or under my supervision.
Exp. 04-30-10
Neal S. Fukunaga
Westly, B. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP AND
SIDEWALK NOTES

QUEEN KAAHUMANU HIGHWAY WIDENING
HENRY ST. to KEALAKEHE PKWY - PHASE I
Federal Aid Project No. NH-019-1(20)

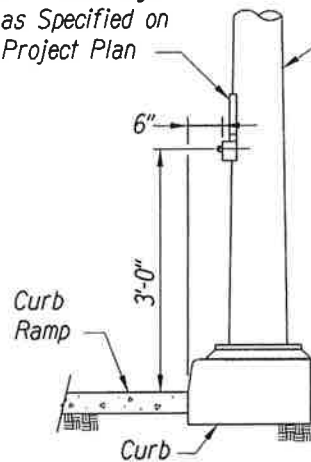
Scale: NTS Date: November 2009

SHEET No. 1 OF 8 SHEETS

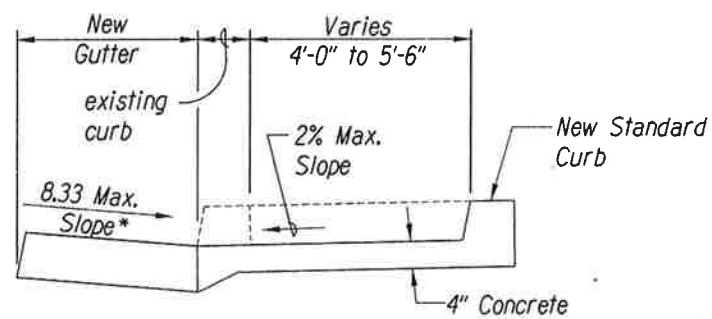
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(20)	2005	108	315

PPB with Sign as Specified on Project Plan

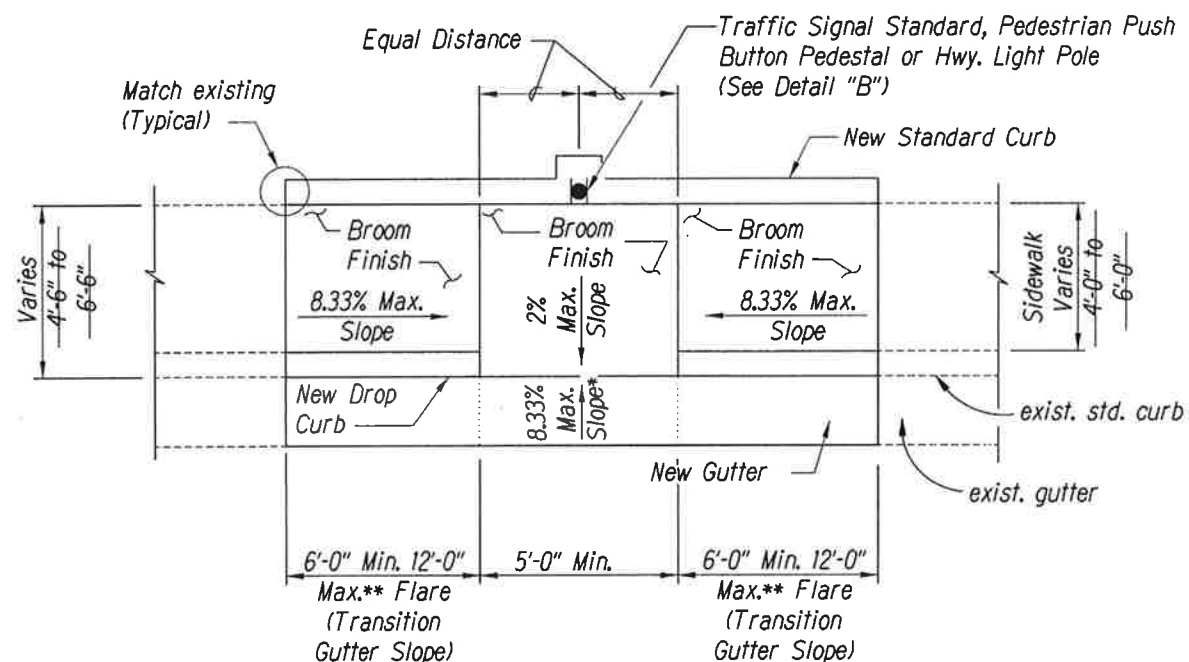
Type I, II, III TSS, Pedestrian Push Button Pedestal or Hwy. Light Pole



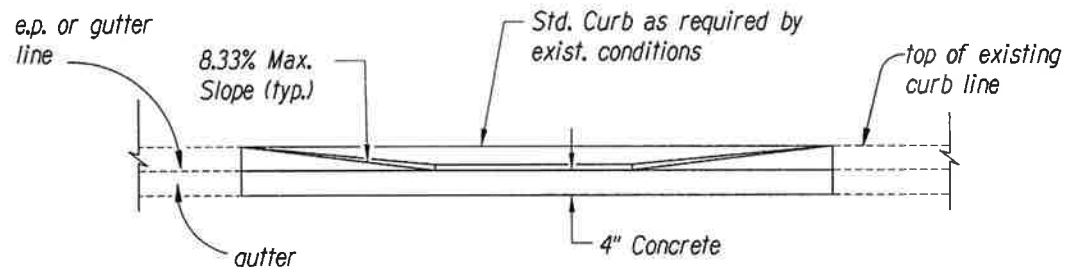
DETAIL "B"



TYPICAL SECTION



PLAN



ELEVATION

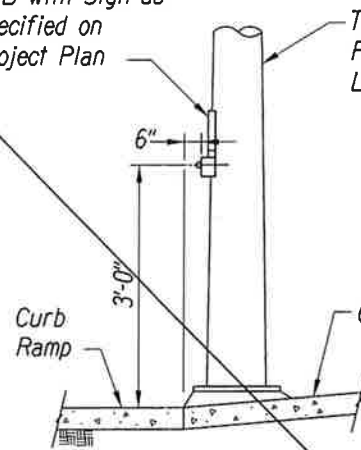
CURB RAMP - TYPE "B"

SIDEWALK WIDTH 4'-0" OR GREATER
BUT LESS THAN 6'-0" WIDTH

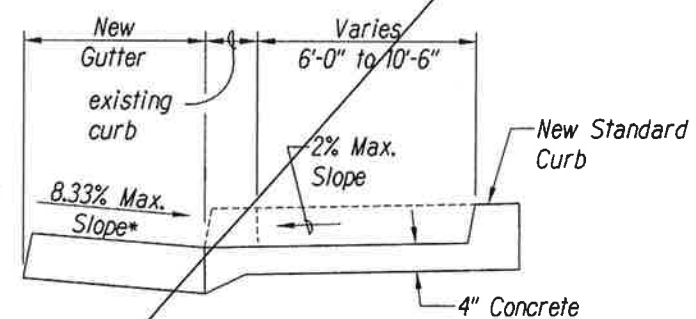
- * See Curb Ramp and Sidewalk Note No. 9
- ** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.

PPB with Sign as Specified on Project Plan

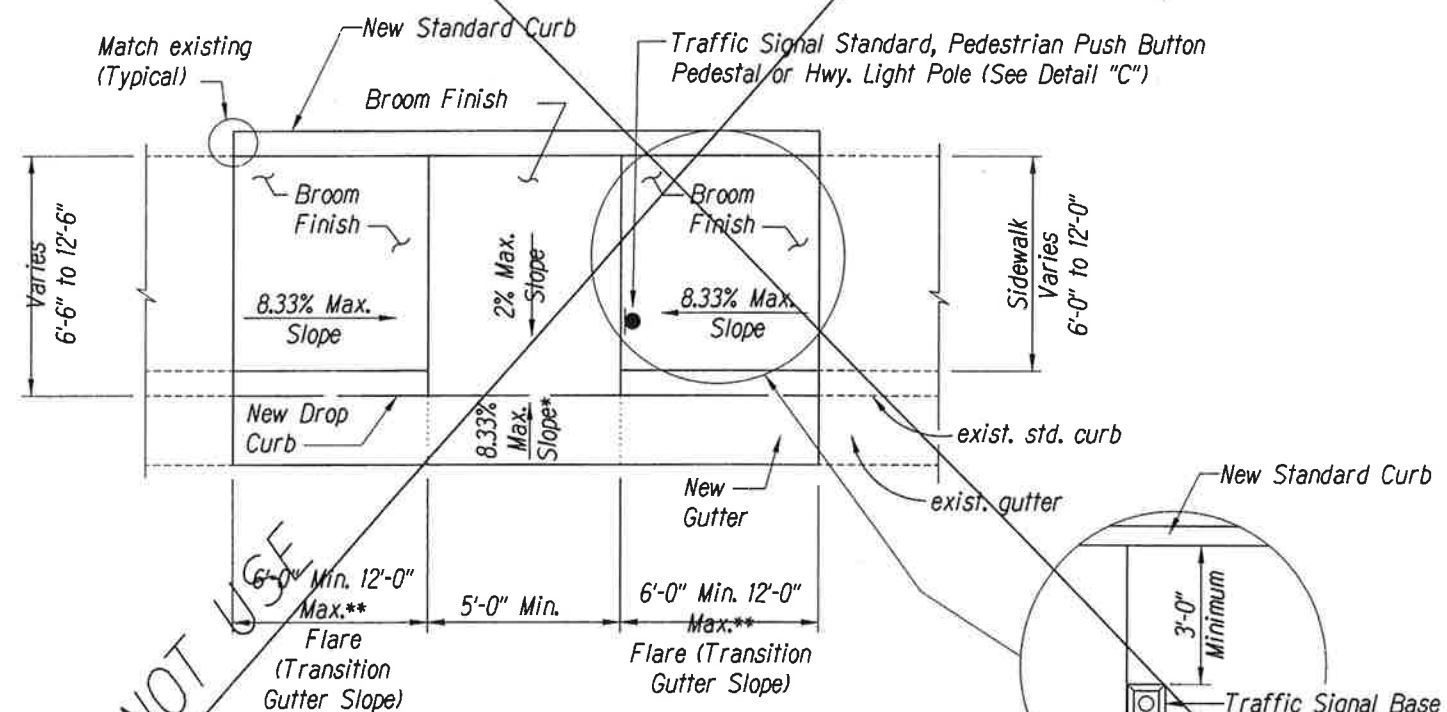
Type I, II, III TSS, Pedestrian Push Button Pedestal or Hwy. Light Pole



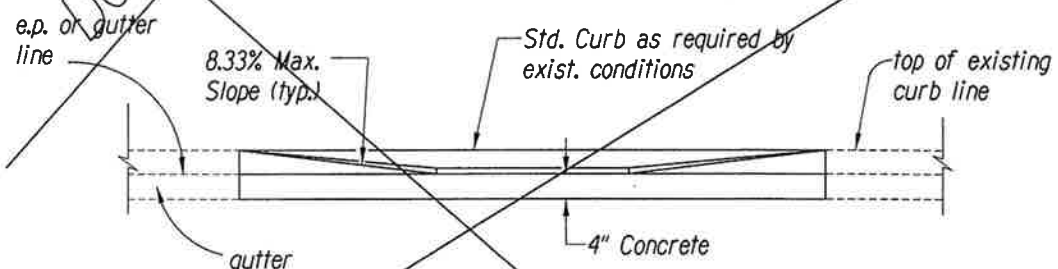
DETAIL "C"



TYPICAL SECTION



PLAN



ELEVATION

CURB RAMP - TYPE "B" MODIFIED

SIDEWALK WIDTH 6'-0" OR GREATER
BUT LESS THAN 12'-0" WIDTH



This work was prepared by me or under my supervision.
Exp. 04-30-10
Wesley R. Segrest & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

QUEEN KAAHUMANU HIGHWAY WIDENING
HENRY ST. to KEALAKEHE PKWY - PHASE I
Federal Aid Project No. NH-019-K(20)

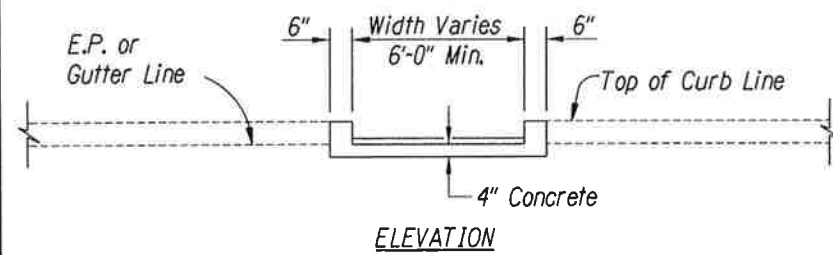
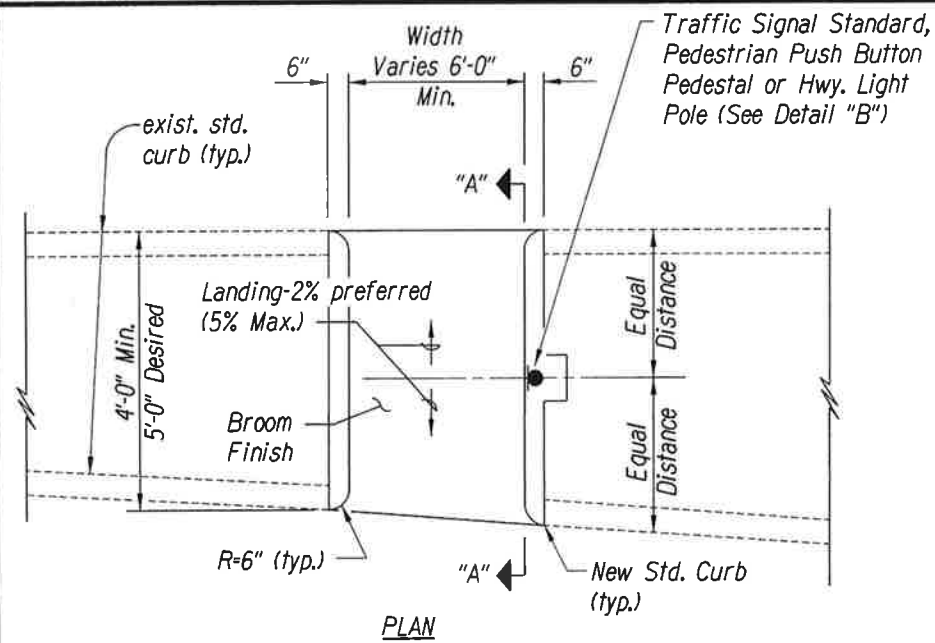
Scale: NTS Date: November 2009

SHEET No. 3 OF 6 SHEETS

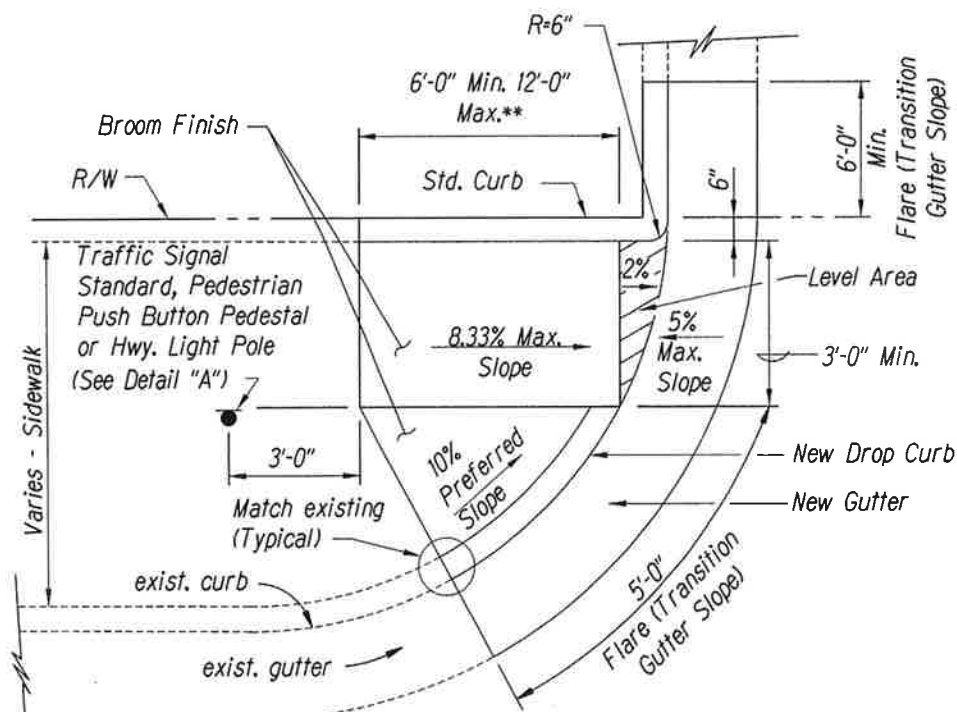
AS-BUILT

108

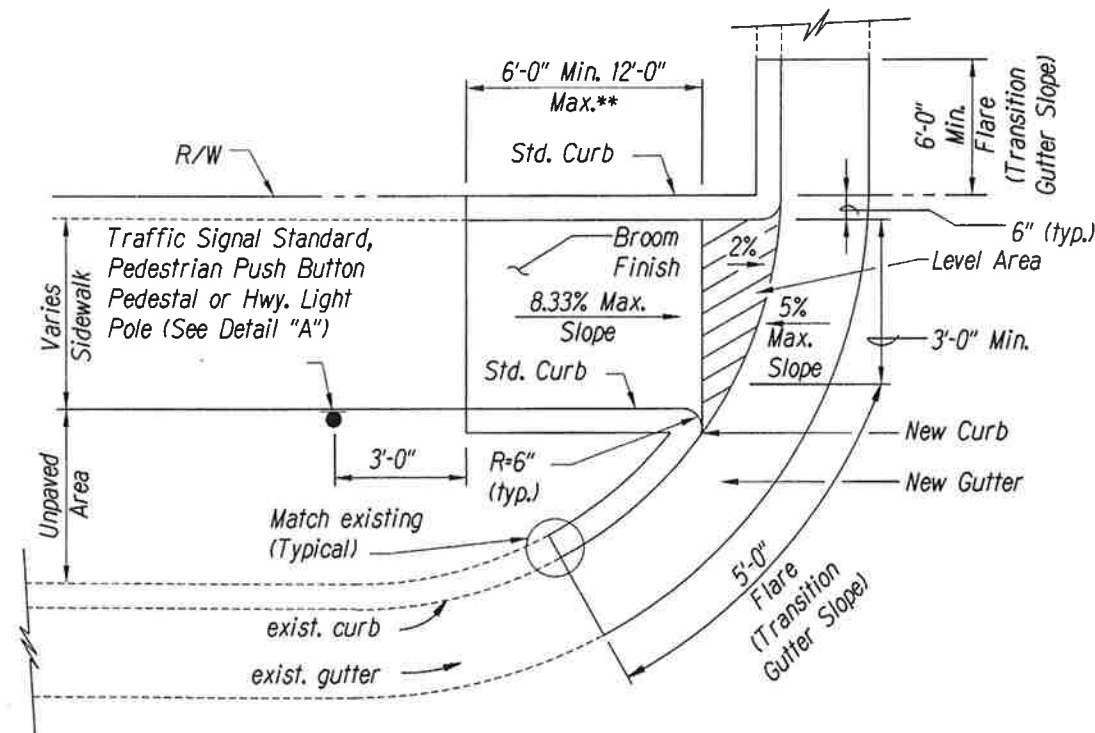
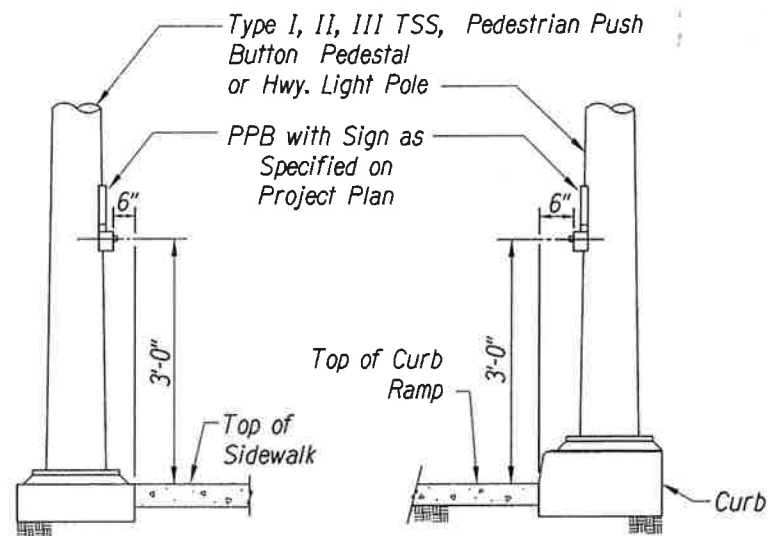
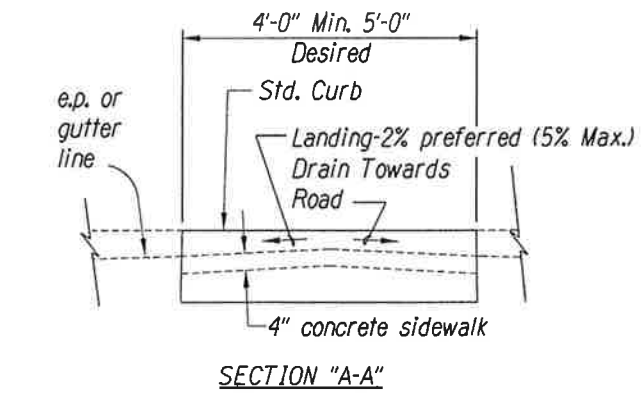
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(20)	2005	109	315



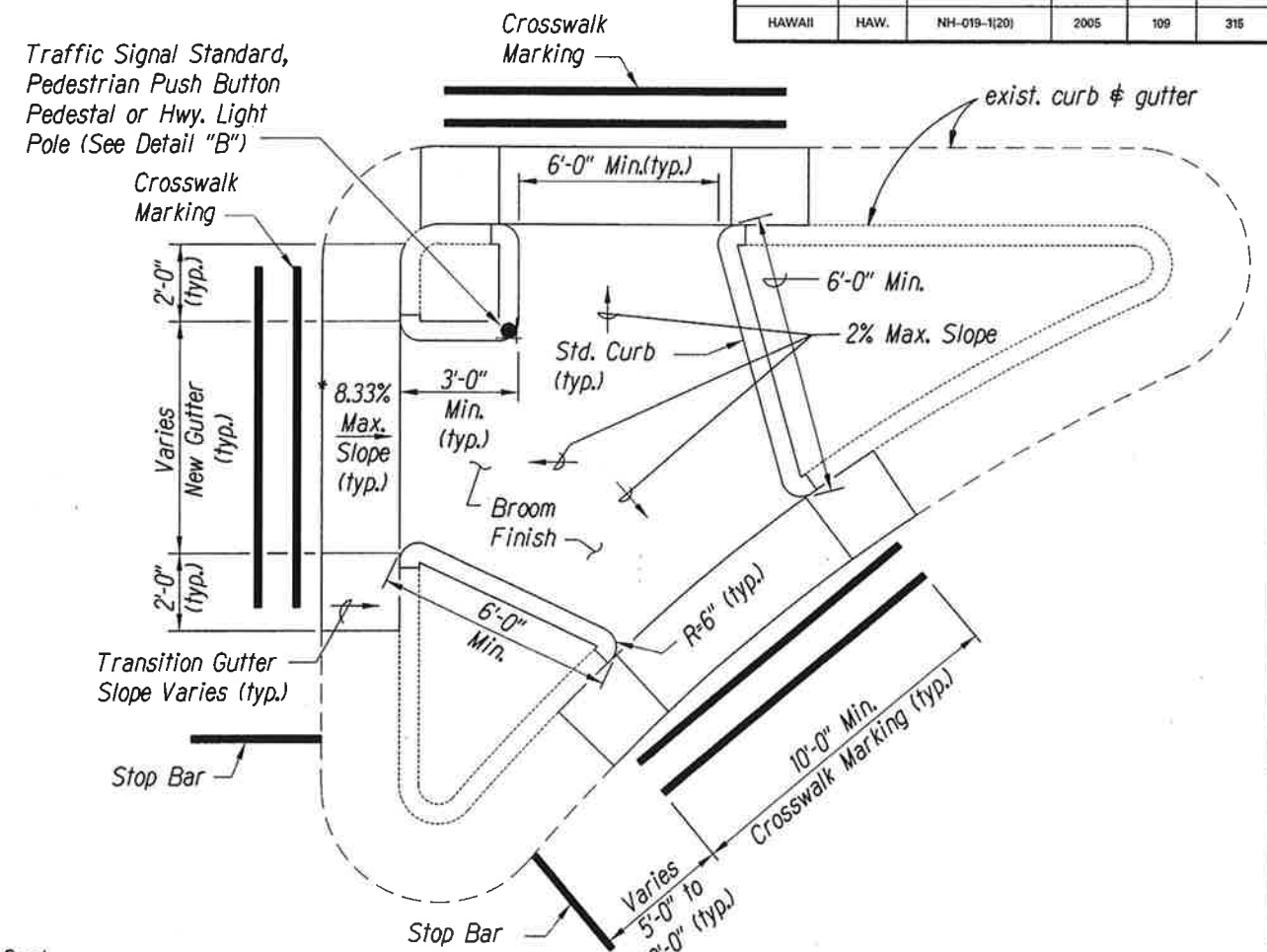
CURB RAMP - TYPE "C"
USE AT MEDIAN CROSSINGS, ISLANDS



CURB RAMP - TYPE "D"



CURB RAMP - TYPE "D" MODIFIED



CURB RAMP - TYPE "C" MODIFIED

* See Curb Ramp and Sidewalk Note No. 9

**** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at the maximum of 12 feet.**



This work was prepared by me
or under my supervision.
Exp. 04-30-10

Wesley R. Sedgwa & Associates

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

QUEEN KAAHUMANU HIGHWAY WIDENING
HENRY ST. to KEALAKEHE PKWY - PHASE I
Federal Aid Project No. NH-019-1(20)

Scale: NTS

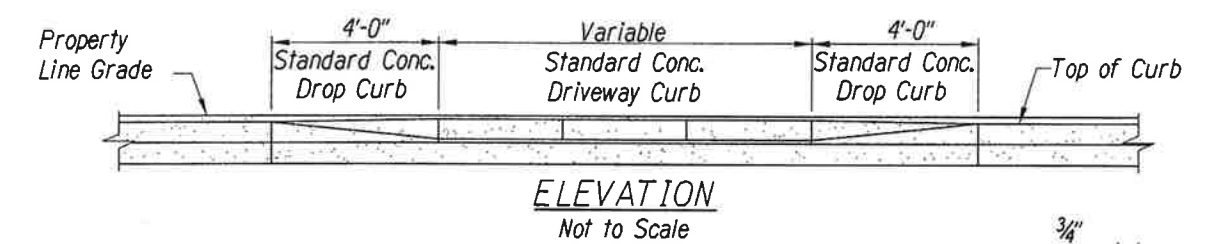
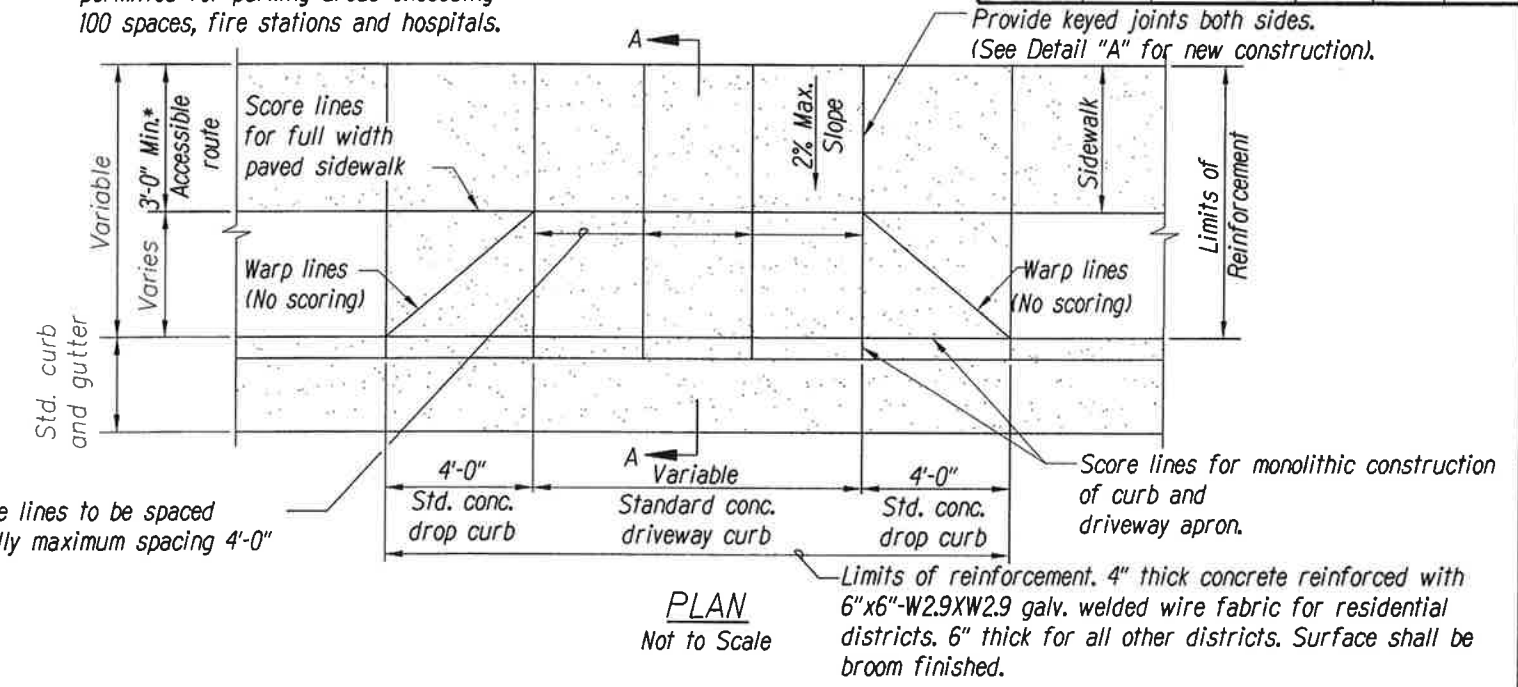
Date: November 2009

SHEET No. 4 OF 6 SHEETS

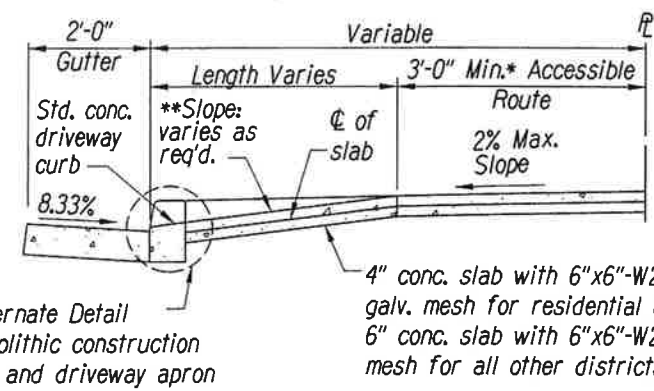
AS-BUILT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(20)	2005	110	315

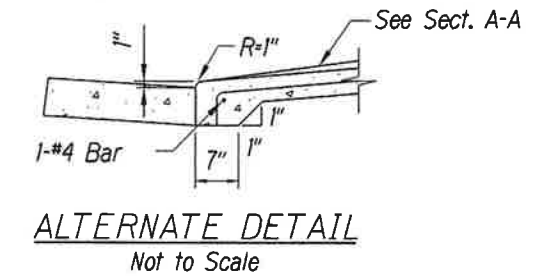
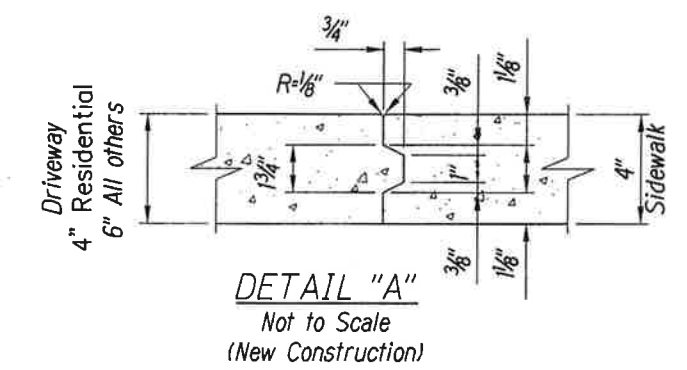
Curb return type driveway may be permitted for parking areas exceeding 100 spaces, fire stations and hospitals.



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

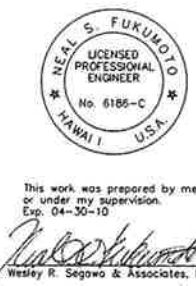


SECTION A-A
Not to Scale



DRIVEWAY APRON

- NOTES:
- 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.
 - This detail is only one method for providing ADA access. Other methods can be used. These methods are shown in references listed in Curb Ramp and Sidewalk Note No. 21.



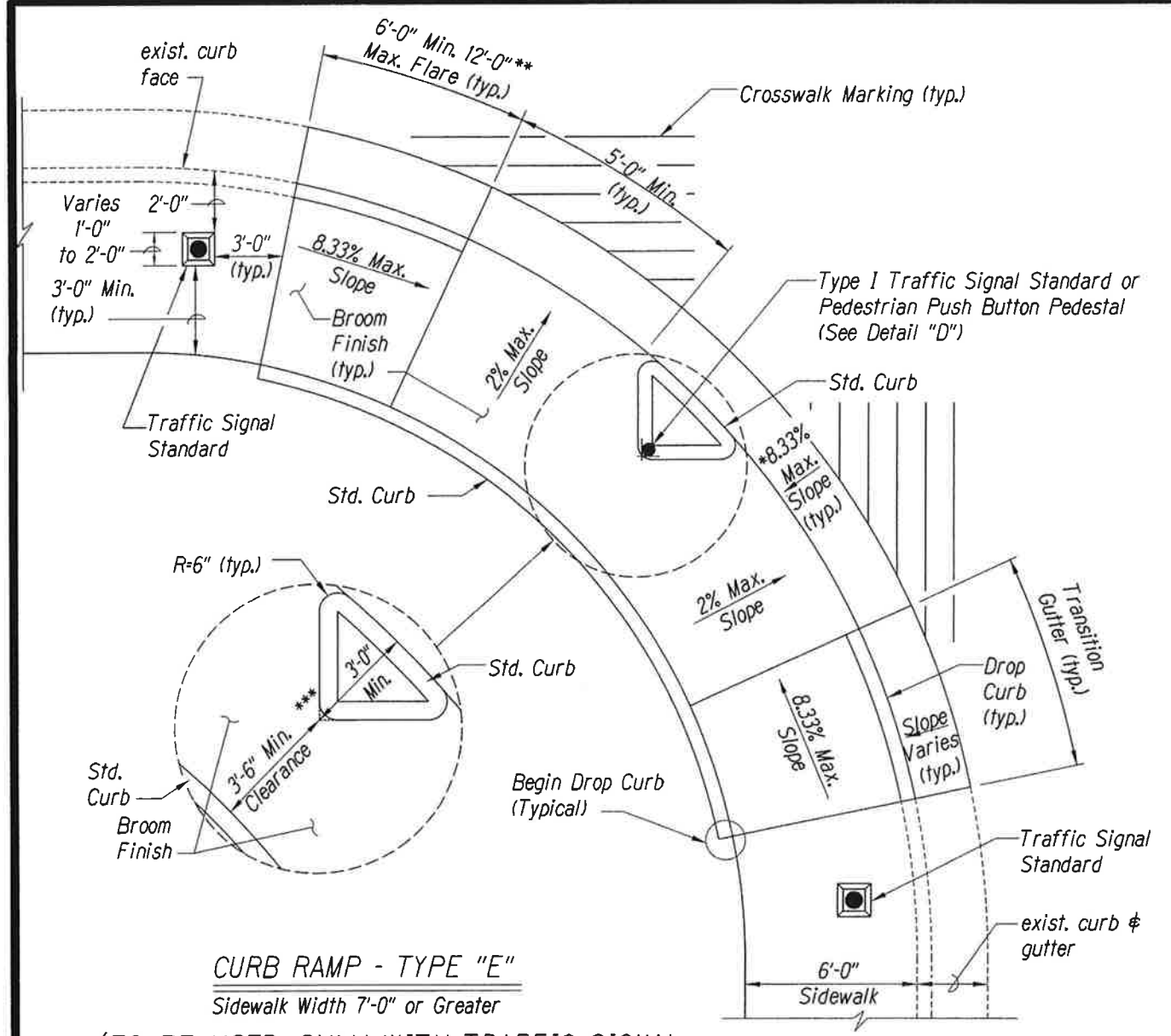
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

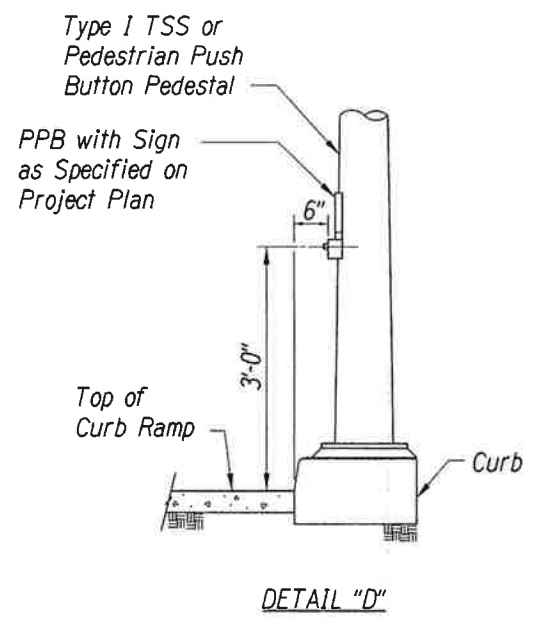
QUEEN KAAHUMANU HIGHWAY WIDENING
HENRY ST. to KEALAKEHE PKWY - PHASE I
Federal Aid Project No. NH-019-1(20)

Scale: NTS Date: November 2009

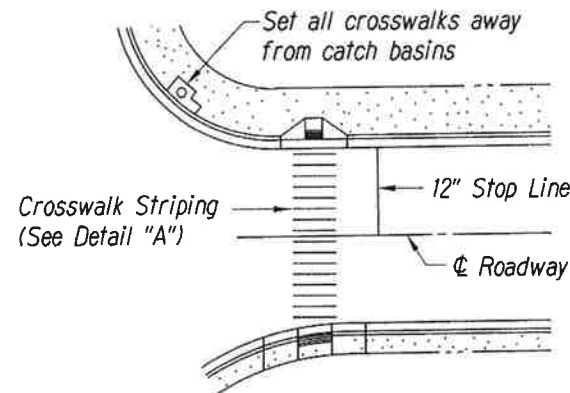
SHEET No. 5 OF 6 SHEETS



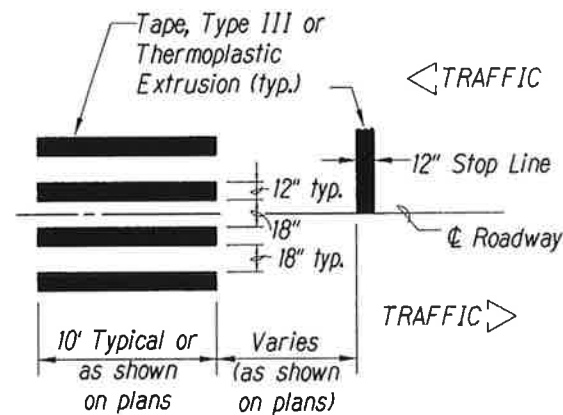
- * See Curb Ramp and Sidewalk Note No. 2
- ** The slope of the ramp shall take precedence over the length of the ramp. If the maximum slope of a ramp cannot be met within a length of 12 feet, then the slope of the ramp shall be set when the length of the ramp is set at a maximum of 12 feet.
- *** The 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.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(20)	2005	111	315



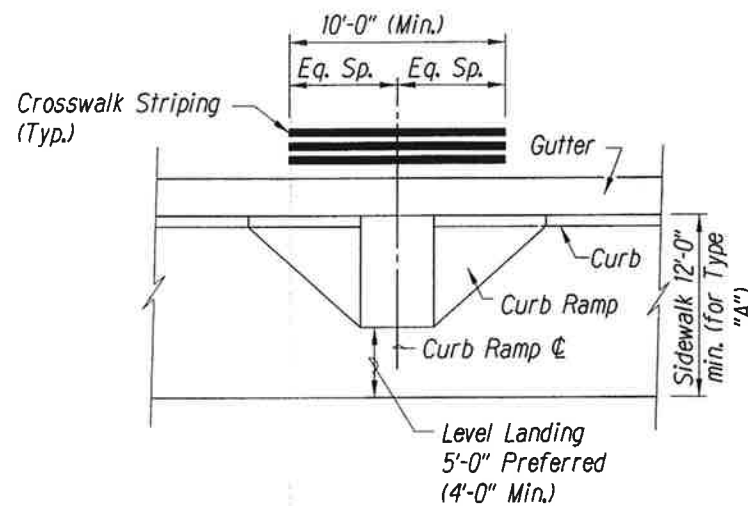
PLAN



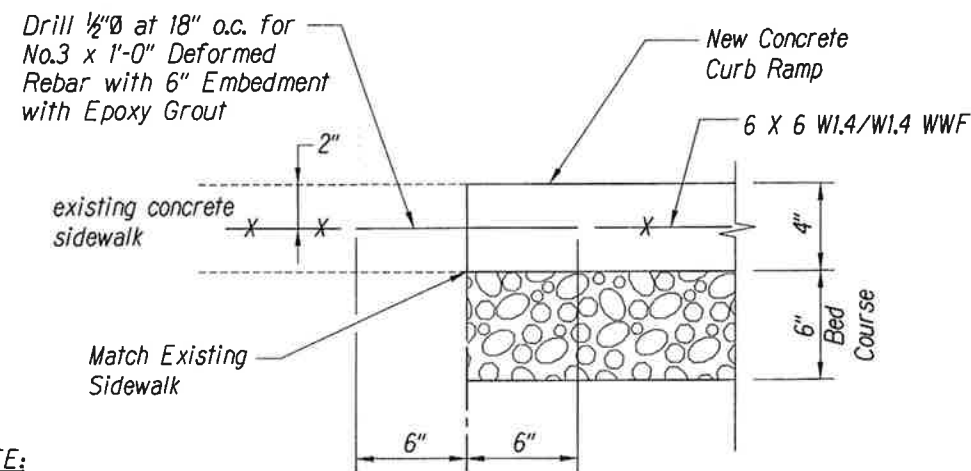
DETAIL "A"

CROSSWALK STRIPING DETAIL

NOTE:
Longitudinal lines shall be parallel to traffic flow.

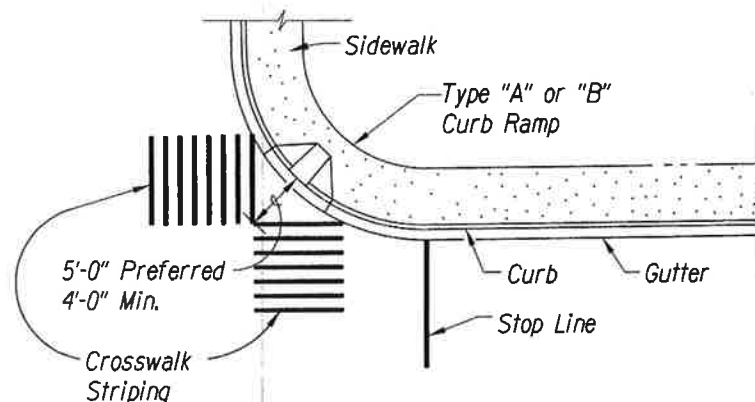


TYPICAL CROSSWALK STRIPING
AT CURB RAMP

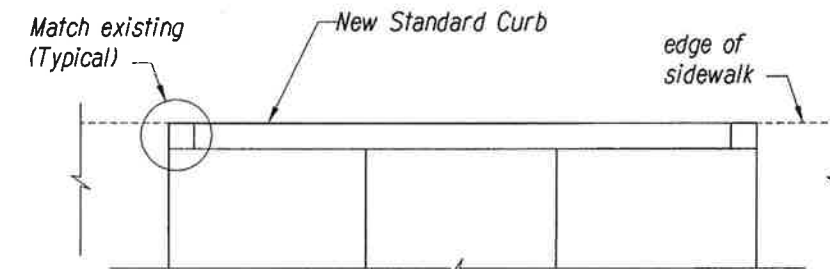


NOTE:
All curb ramps shall be reinforced.

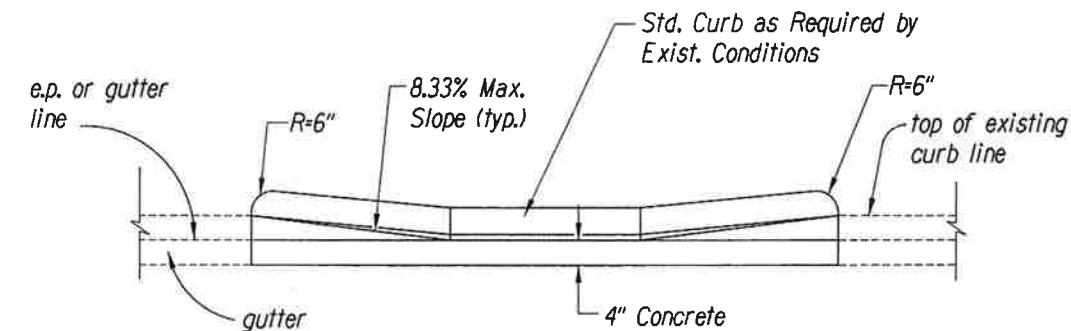
TYPICAL CONSTRUCTION JOINT
AT EXISTING SIDEWALK



TYPICAL CROSSWALK STRIPING
AT DIAGONAL CURB RAMP



PLAN



ELEVATION

DETAIL - BACK CURB

NOTE:
This detail can be used in situations where the edge of sidewalk cannot be flush with the face of (back) curb due to right of way restrictions.

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



This work was prepared by me or under my supervision.
Exp. 04-30-10

Neil S. Fukumoto
Wesley R. Segawa & Associates, Inc.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB RAMP DETAILS

QUEEN KAAHUMANU HIGHWAY WIDENING
HENRY ST. to KEALAKEHE PKWY - PHASE I
Federal Aid Project No. NH-019-1(20)

Scale: NTS Date: November 2009

SHEET No. 6 OF 6 SHEETS