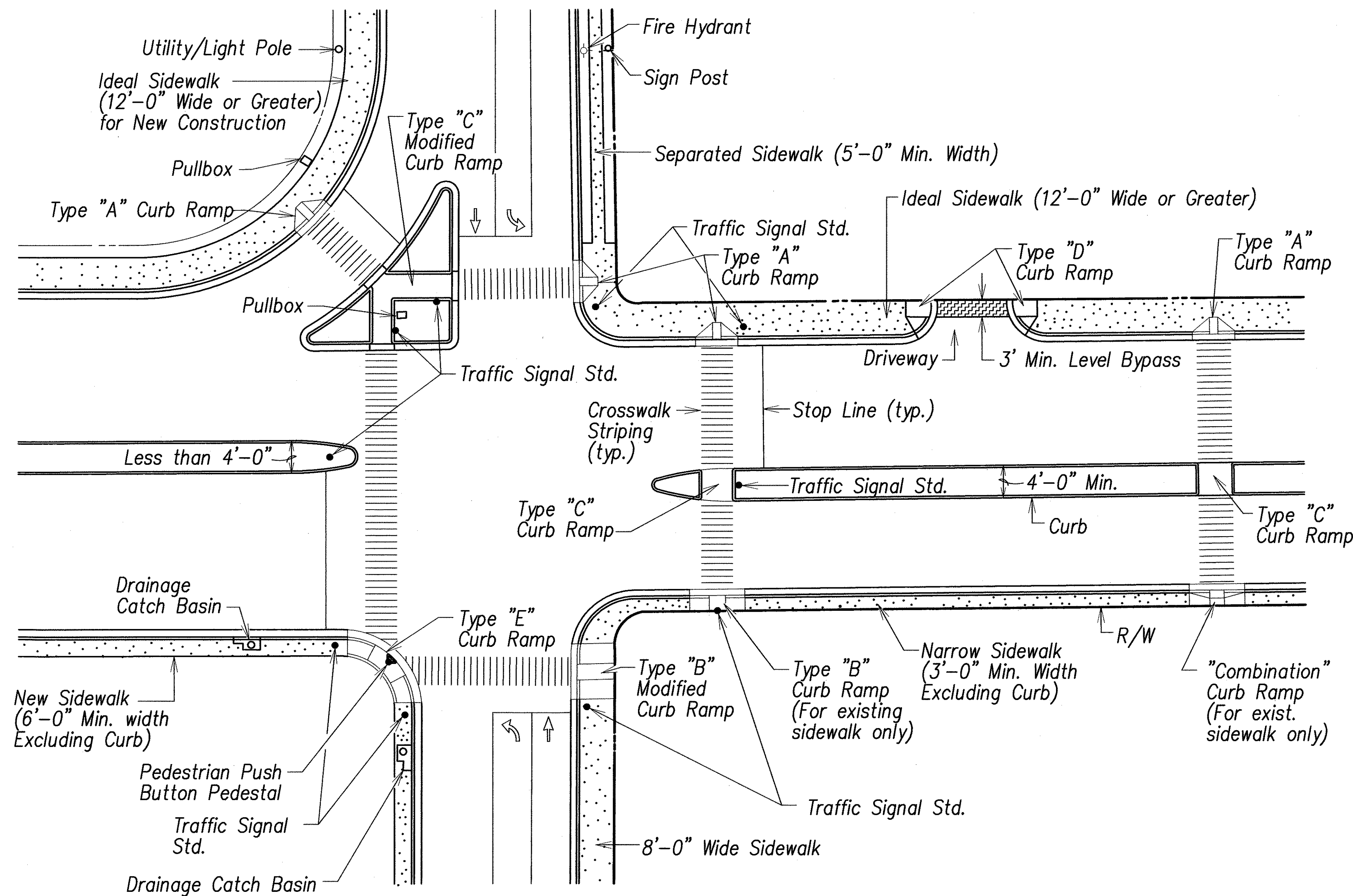


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	18	180

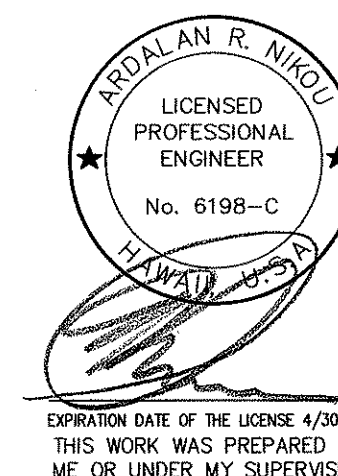


TYPICAL CURB RAMPS

ORIGINAL PLAN	DATE
SURVEY PLATTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
No.	

EARTH TECH

A Tyco Infrastructure Services Company  
841 Bishop Street, Suite 500  
Honolulu, HI 96813



EXPIRATION DATE OF THE LICENSE 4/30/2008  
THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

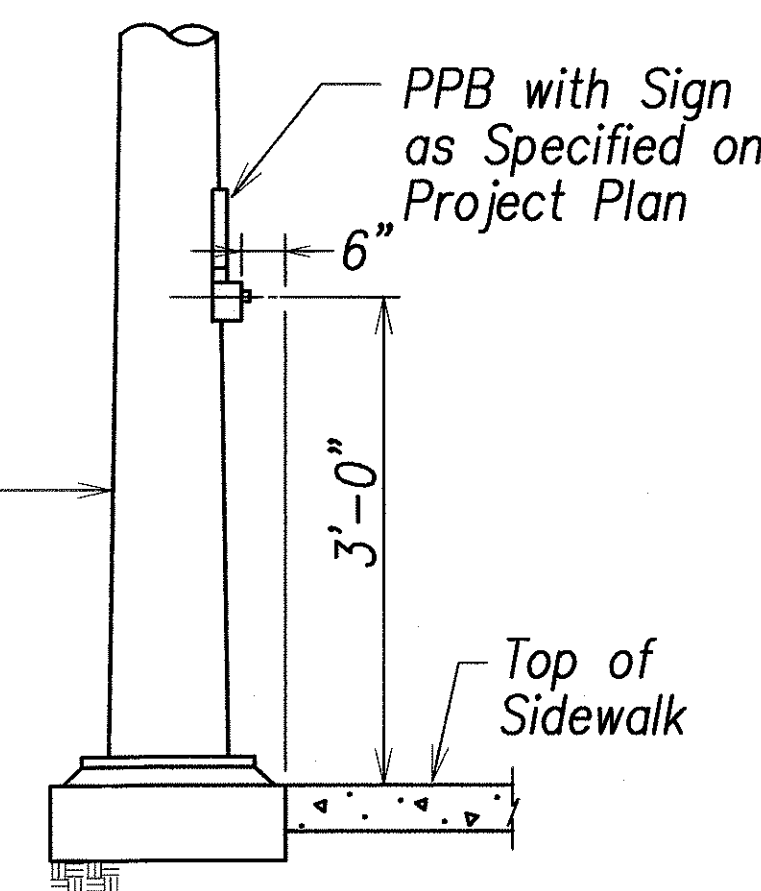
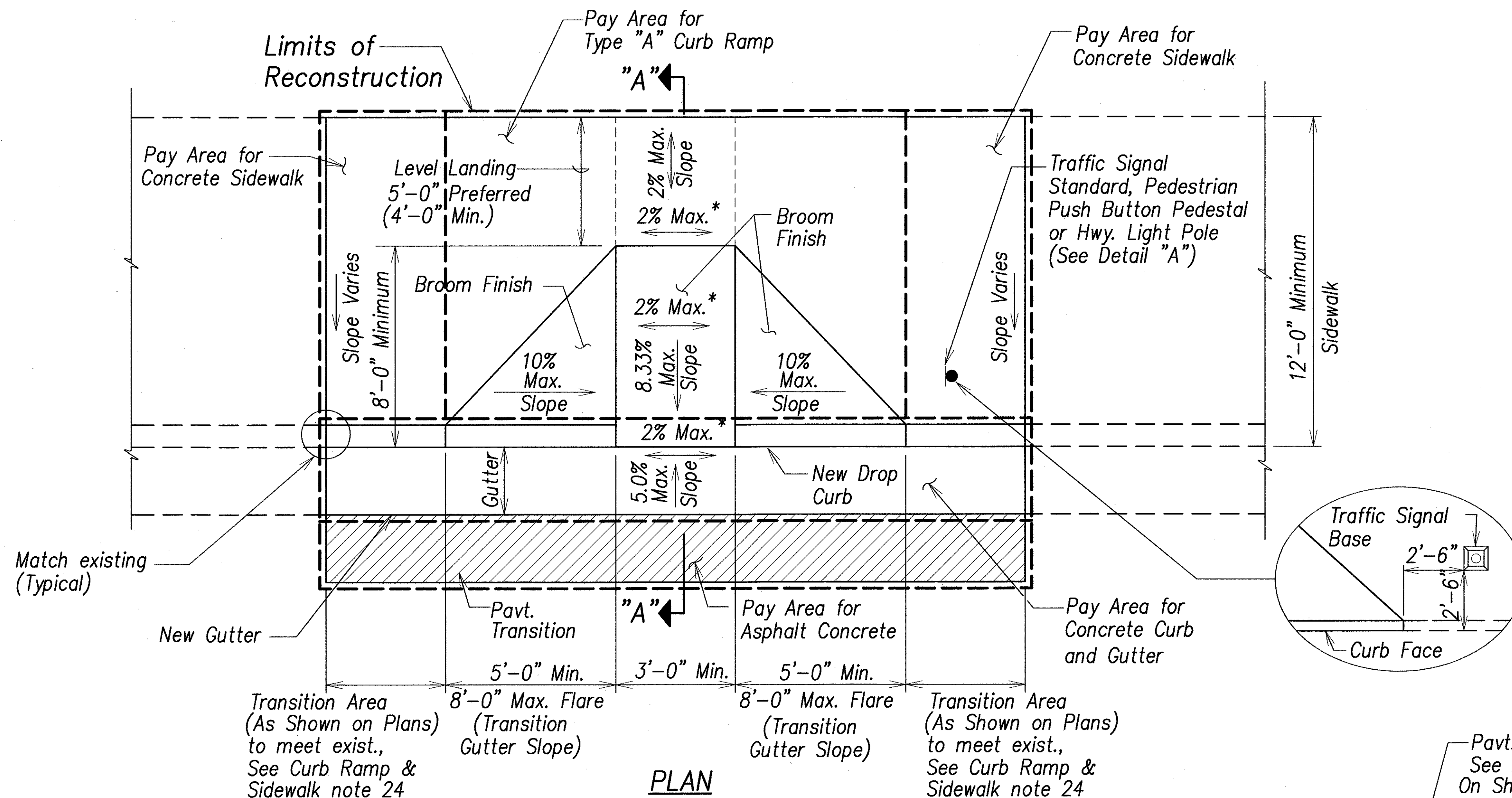
TYPICAL CURB RAMP LAYOUT

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: August 2004

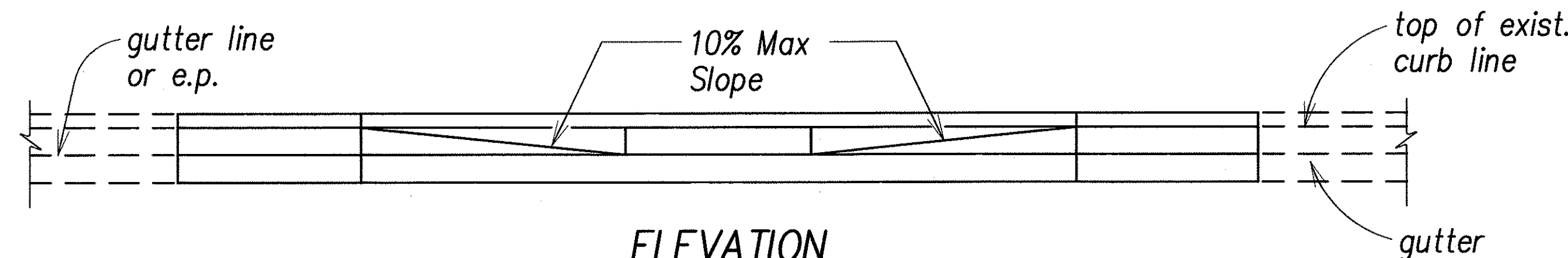
SHEET No. C-17 OF 139 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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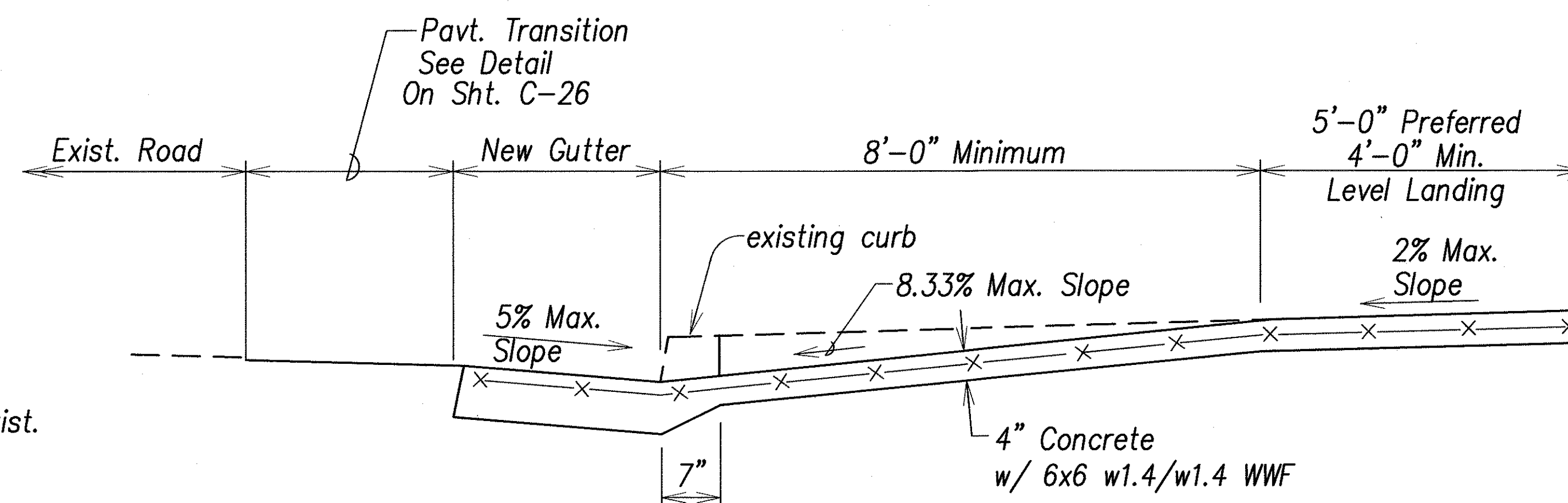


DETAIL "A"

\* If roadway slope >2% conform to roadway slope and file a Technical Infeasibility (TI) Statement



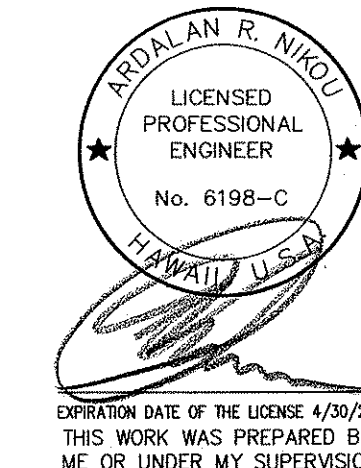
ELEVATION



SECTION "A-A"

EARTH TECH

A Tyco Infrastructure Services Company  
841 Bishop Street, Suite 500  
Honolulu, HI 96813



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

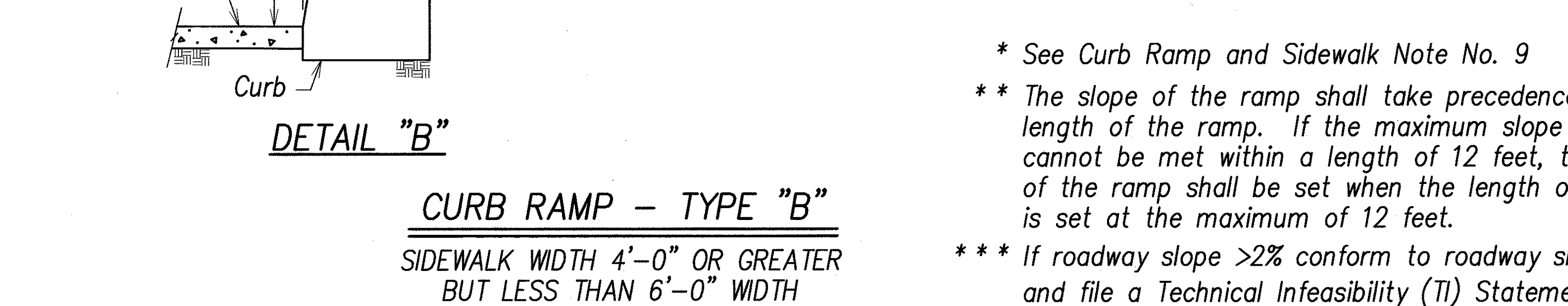
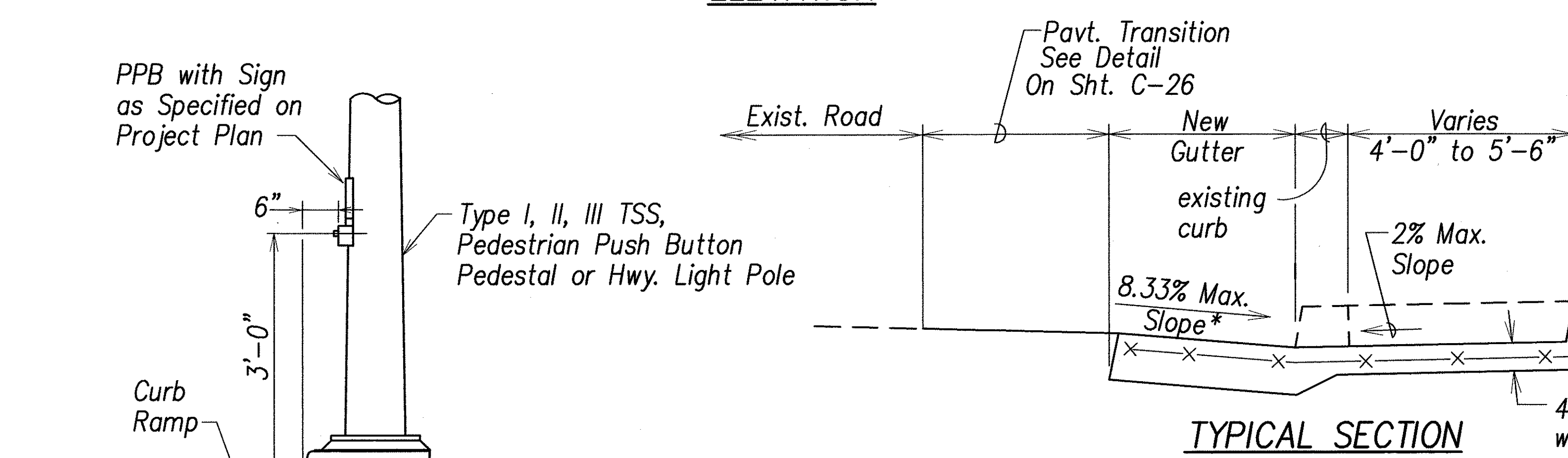
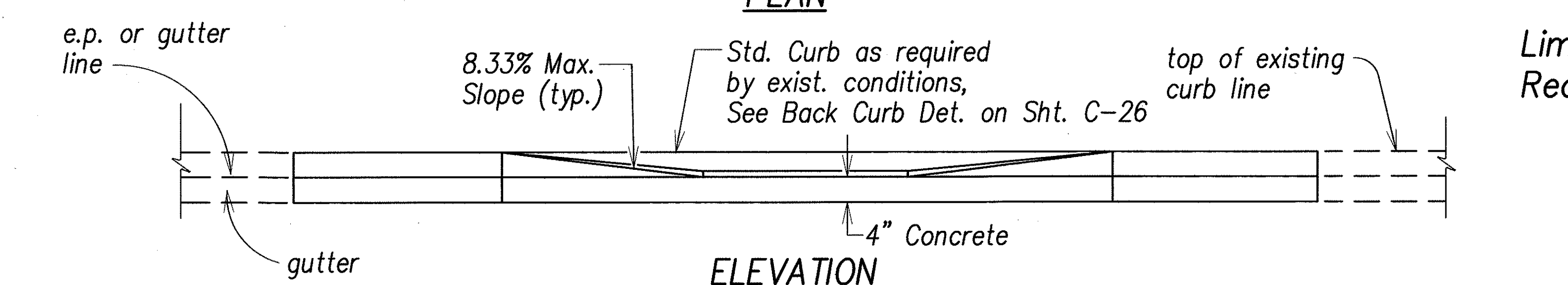
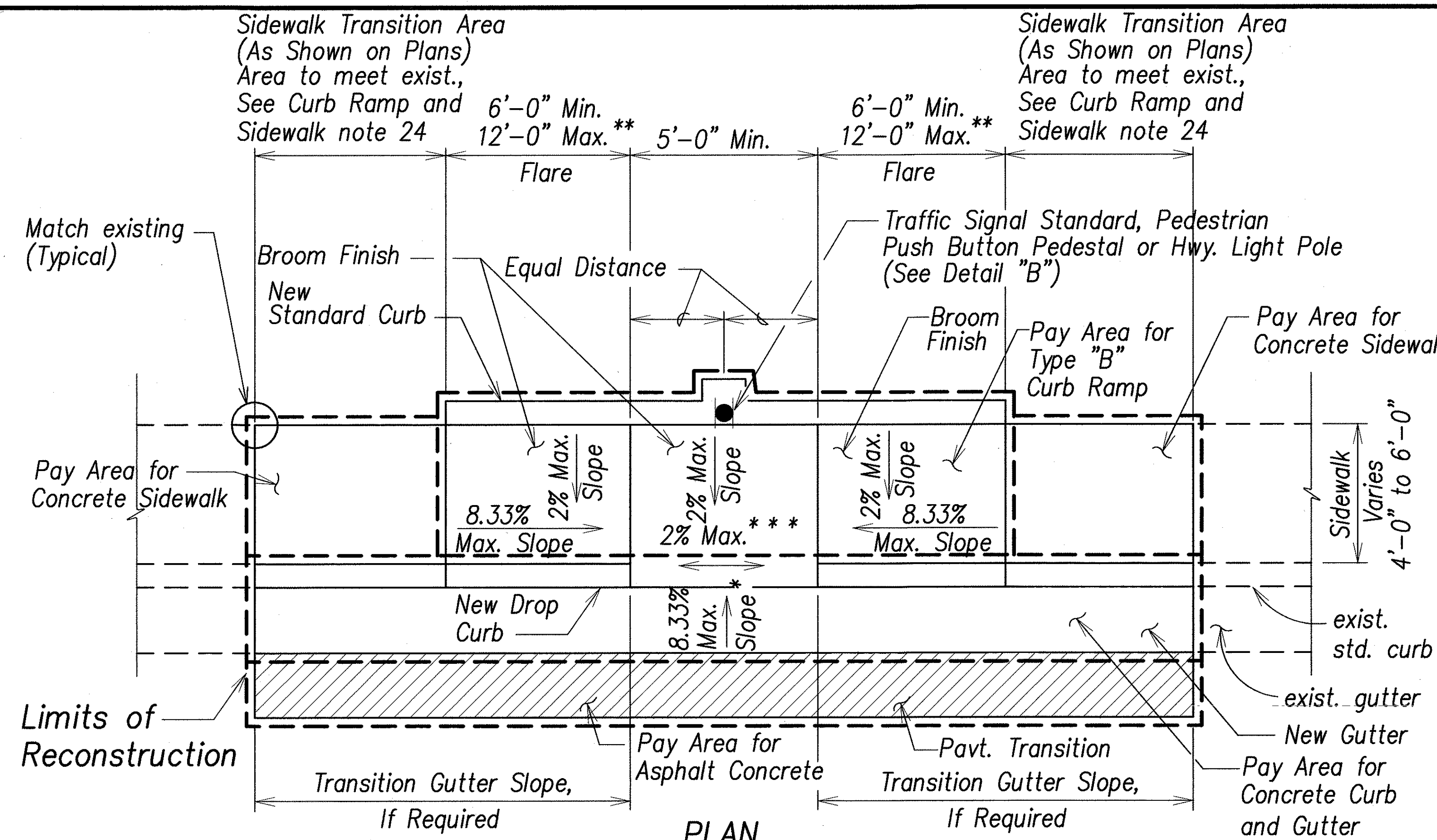
**CURB RAMP DETAILS - 1**

*Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: August 2004

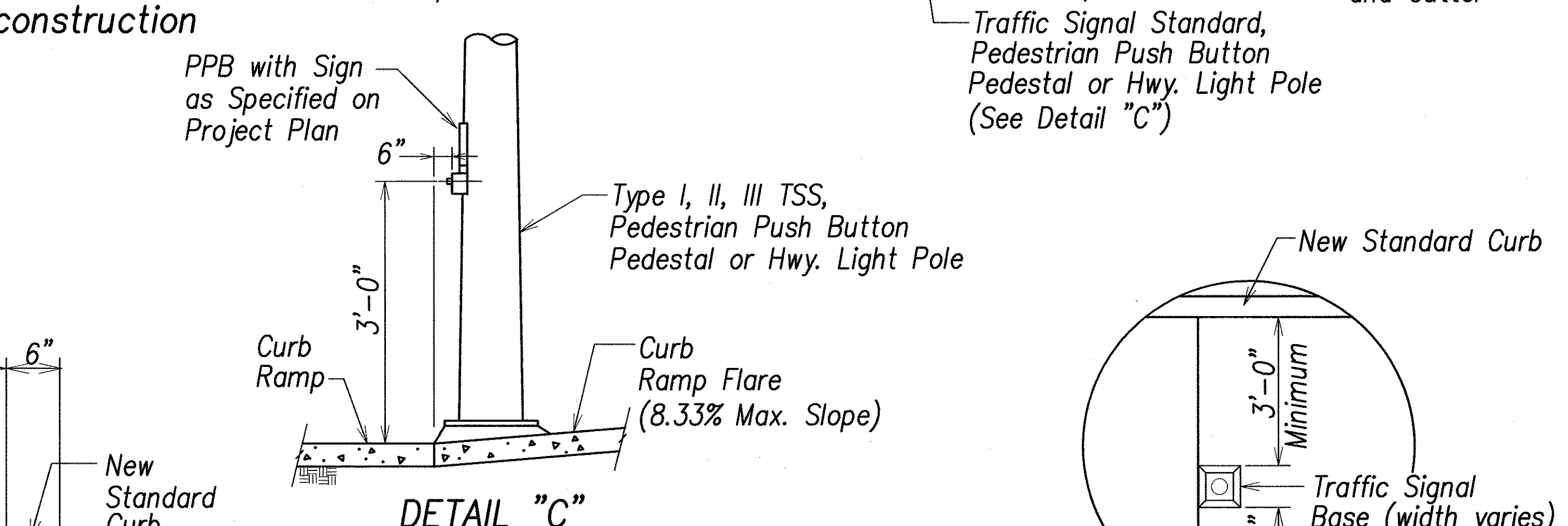
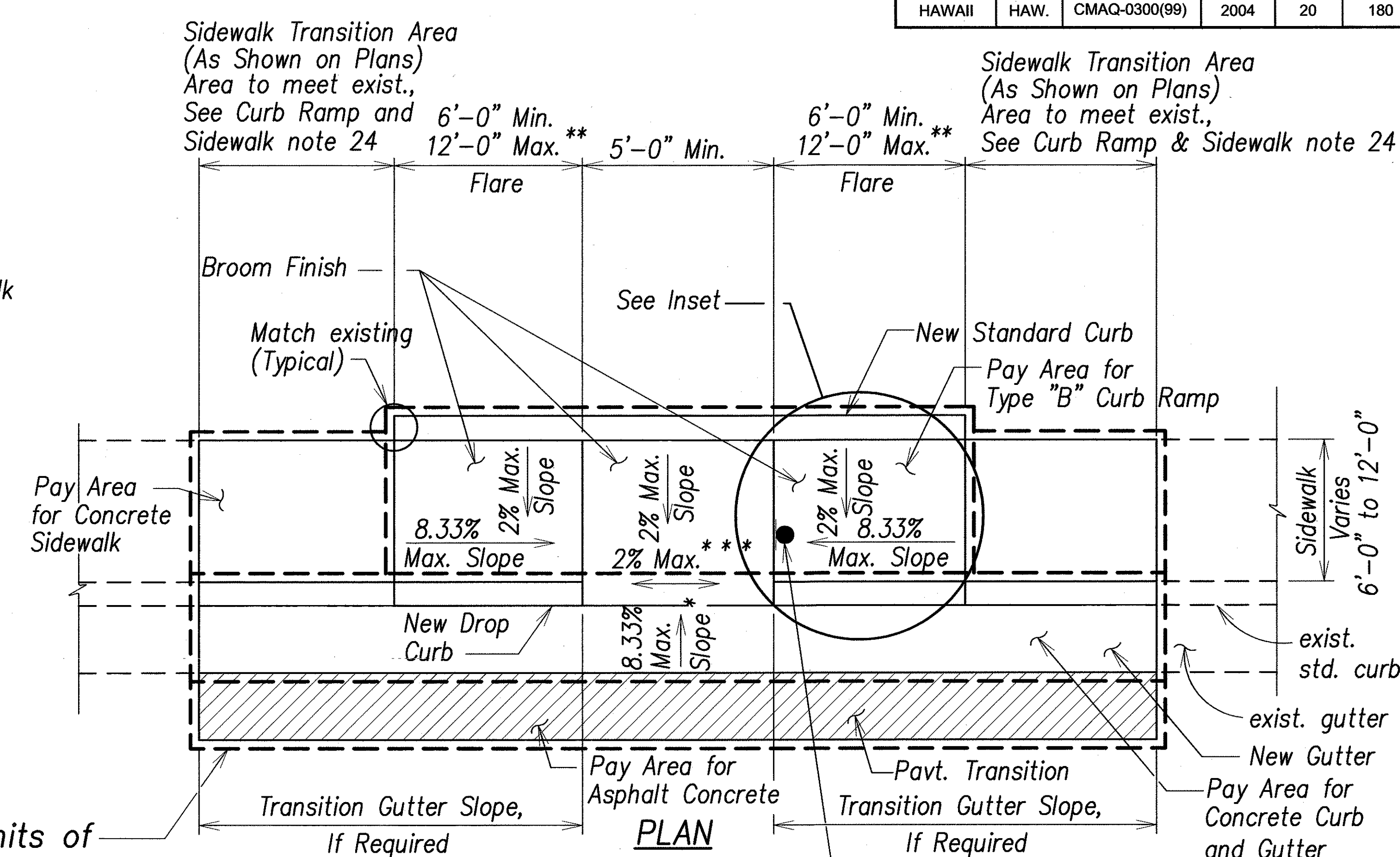
SHEET No. C-18 OF 139 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	20	180

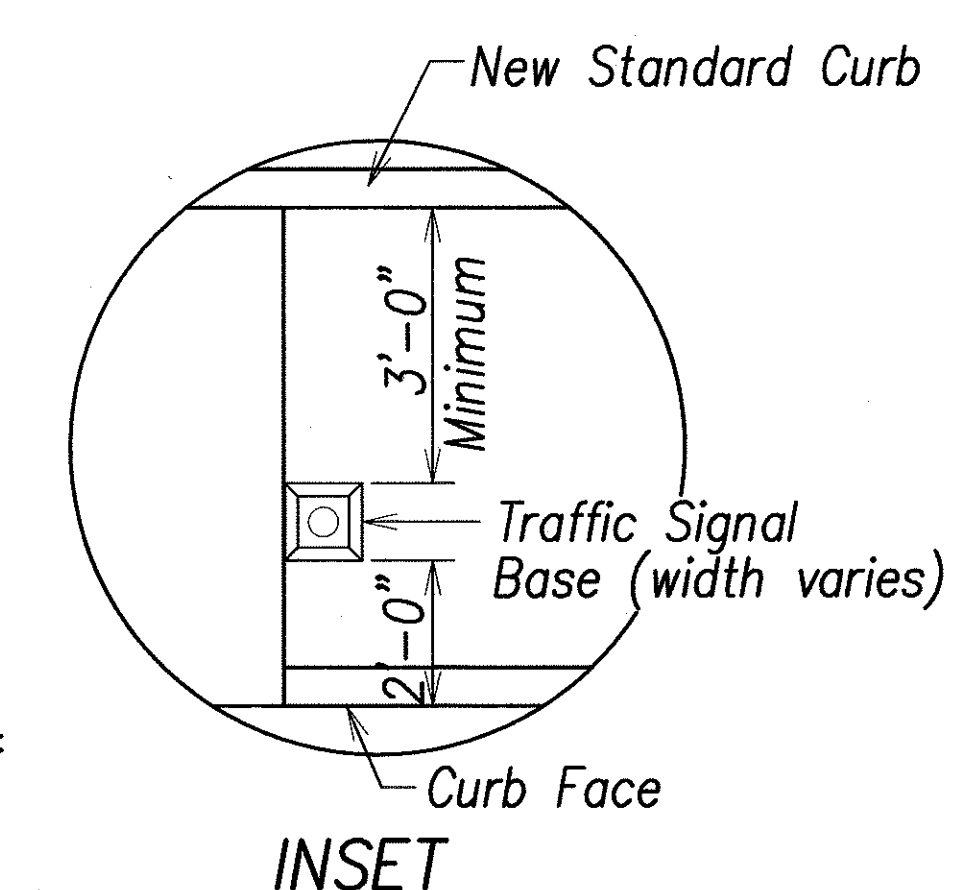


**CURB RAMP - TYPE "B"**  
SIDEWALK WIDTH 4'-0" OR GREATER  
BUT LESS THAN 6'-0" WIDTH

- \* 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.
- \*\*\* If roadway slope >2% conform to roadway slope and file a Technical Infeasibility (TI) Statement



**CURB RAMP - TYPE "B" MODIFIED**  
SIDEWALK WIDTH 6'-0" OR GREATER  
BUT LESS THAN 12'-0" WIDTH



**EARTH TECH**  
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841 Bishop Street, Suite 500  
Honolulu, HI 96813

**ARULAN R. NIKOU**  
LICENSED PROFESSIONAL ENGINEER  
No. 6198-C  
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2008  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**CURB RAMP DETAILS - 2**  
*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: August 2004

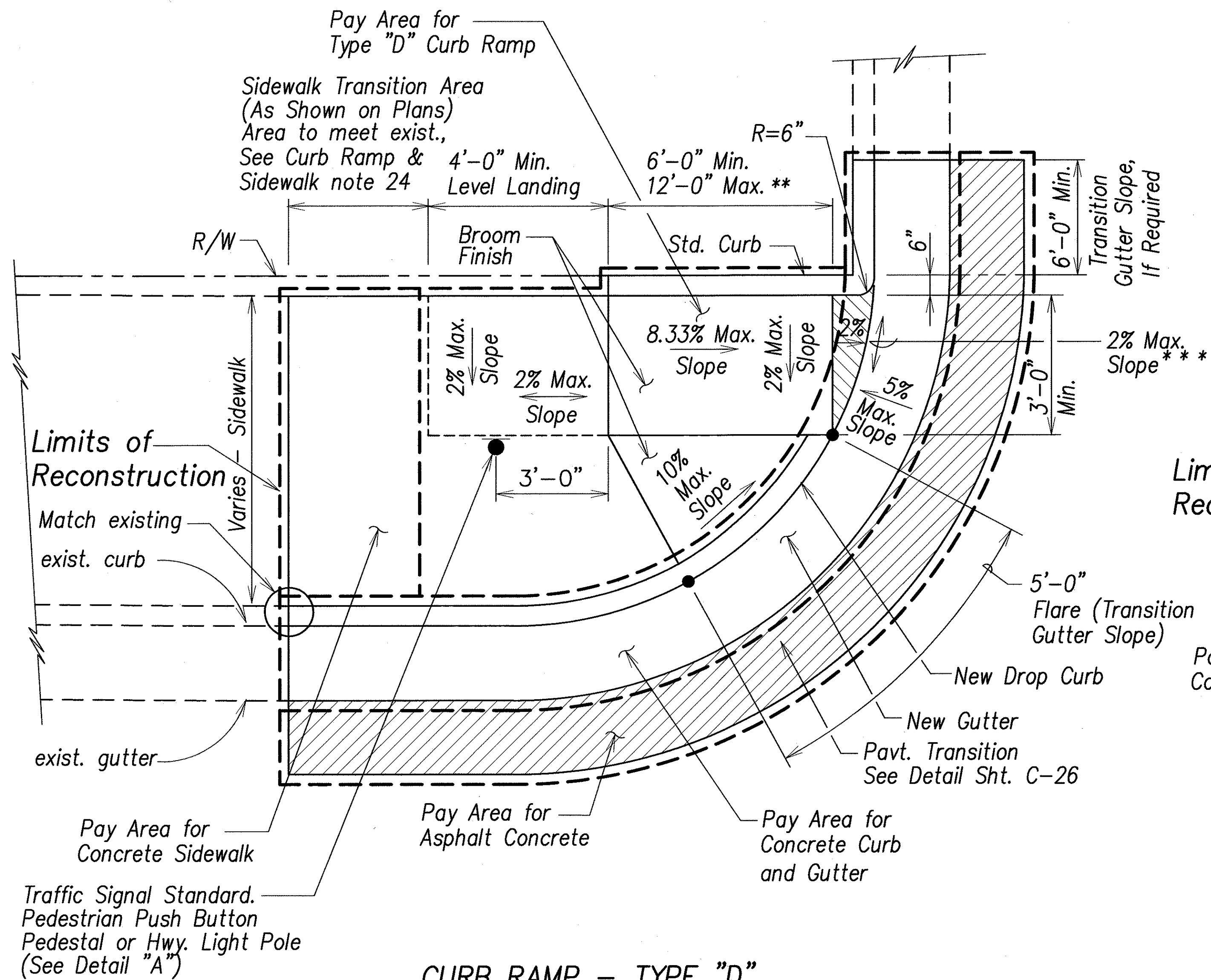
SHEET No. C-19 OF 139 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

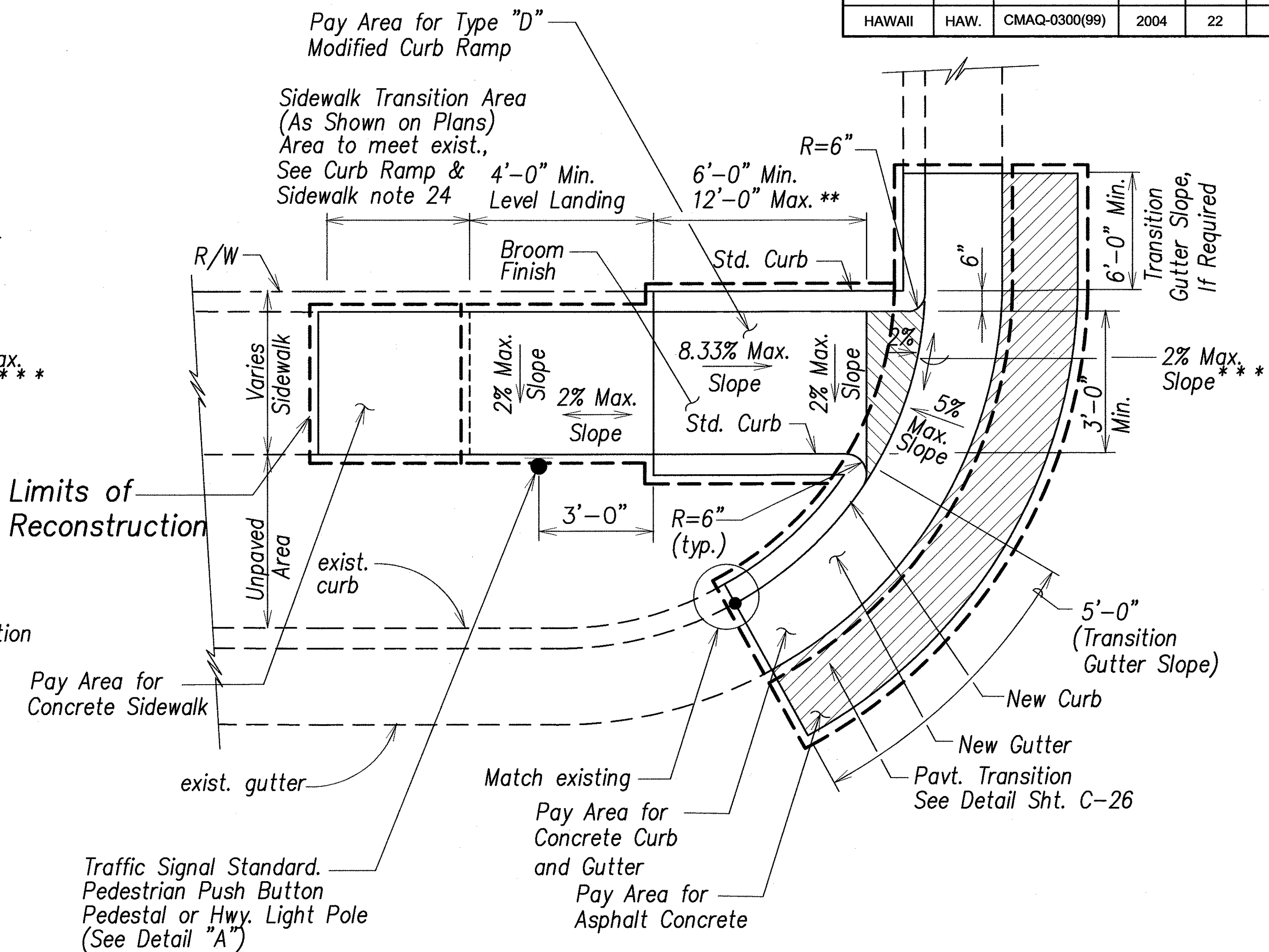




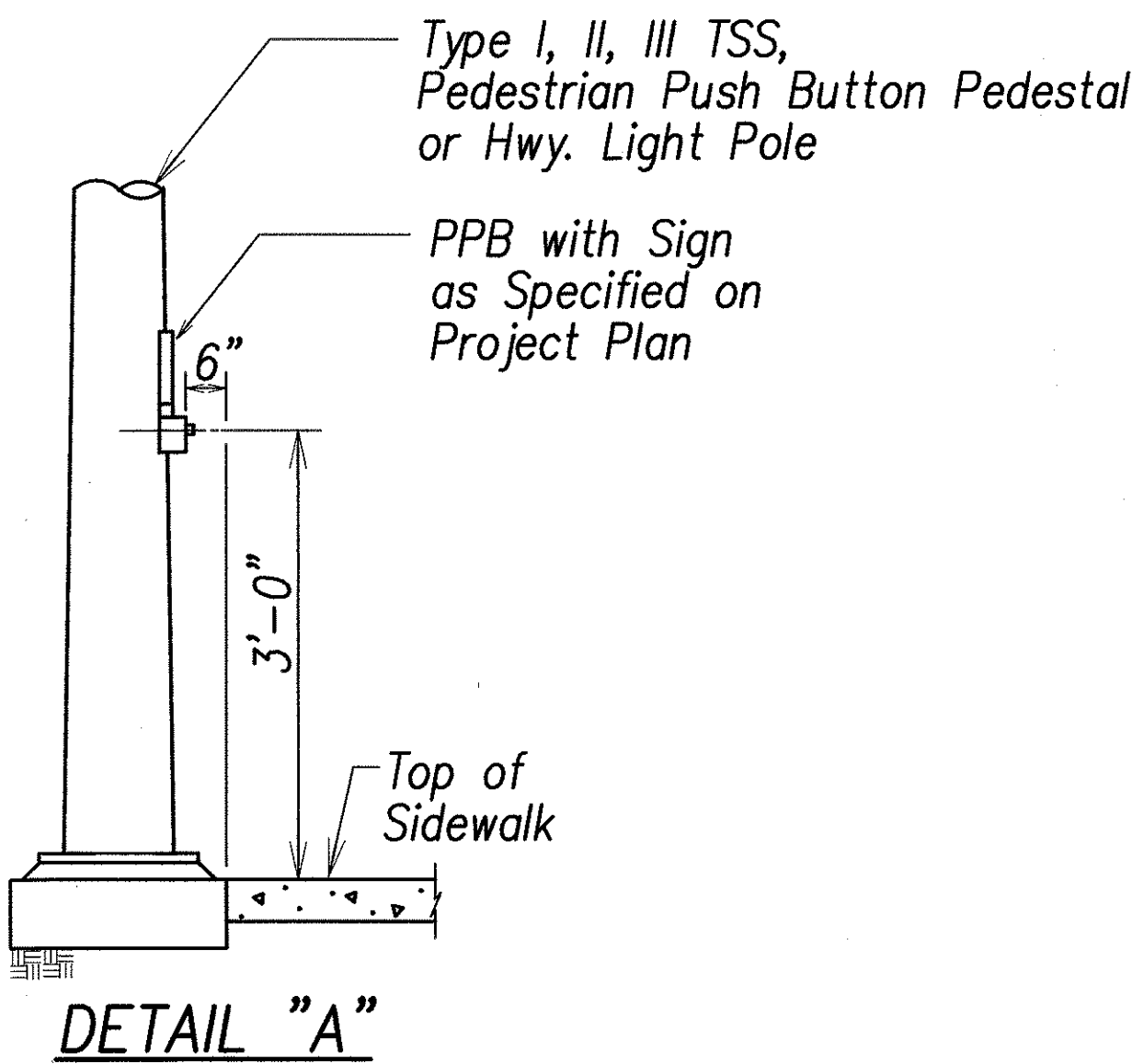
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	22	180



**CURB RAMP - TYPE "D"**

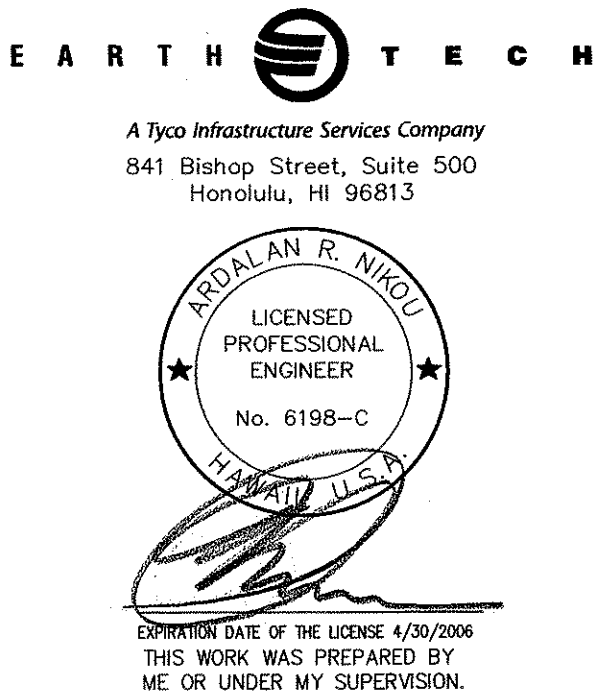


**CURB RAMP - TYPE "D" MODIFIED**



- \* 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.
- \*\*\* If roadway slope >2% conform to roadway slope and file a Technical Infeasibility (TI) Statement

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**CURB RAMP DETAILS - 4**

*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8*  
Fed. Aid Proj. No. CMAQ-0300(99)

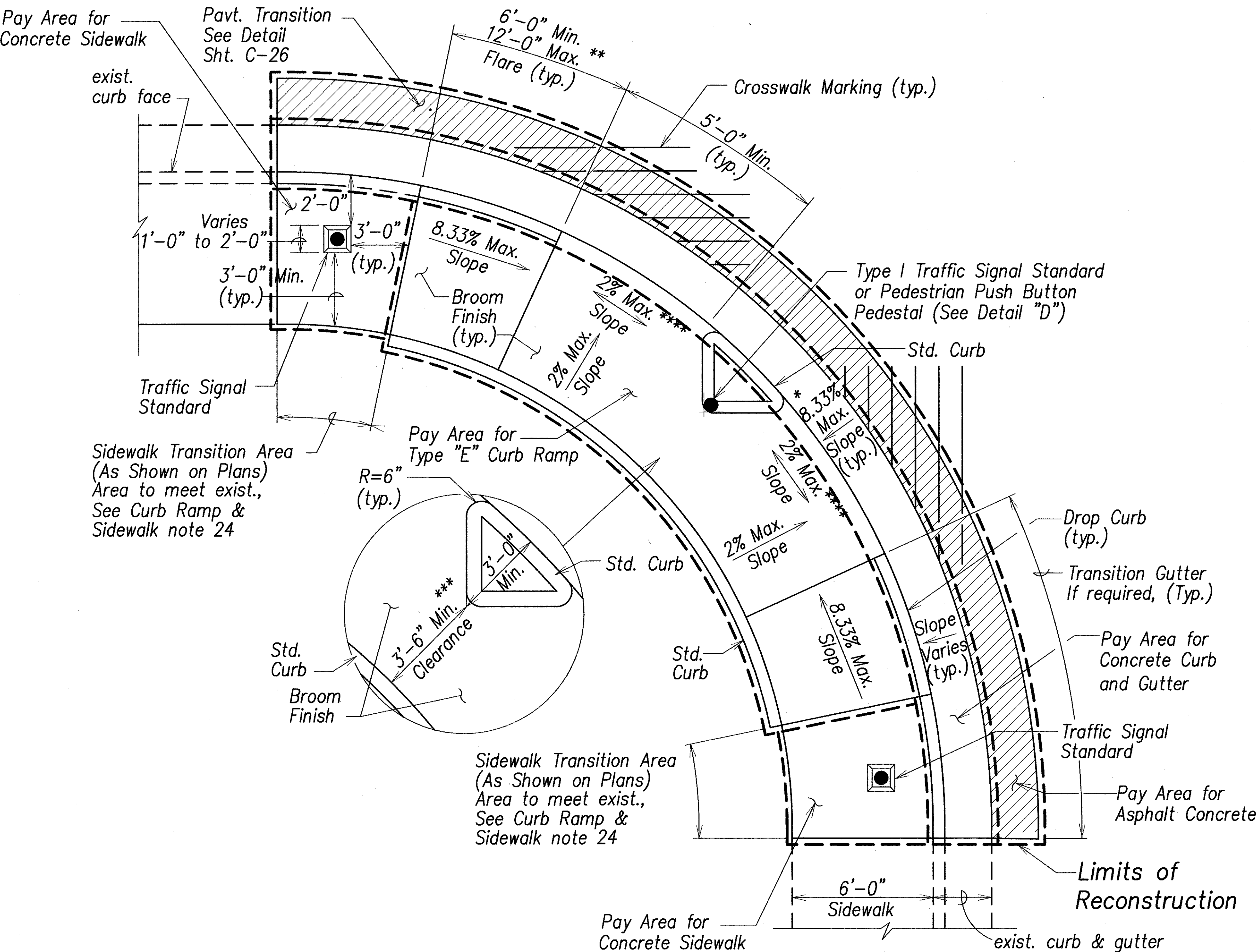
Scale: As Noted Date: August 2004

SHEET No. C-21 OF 139 SHEETS

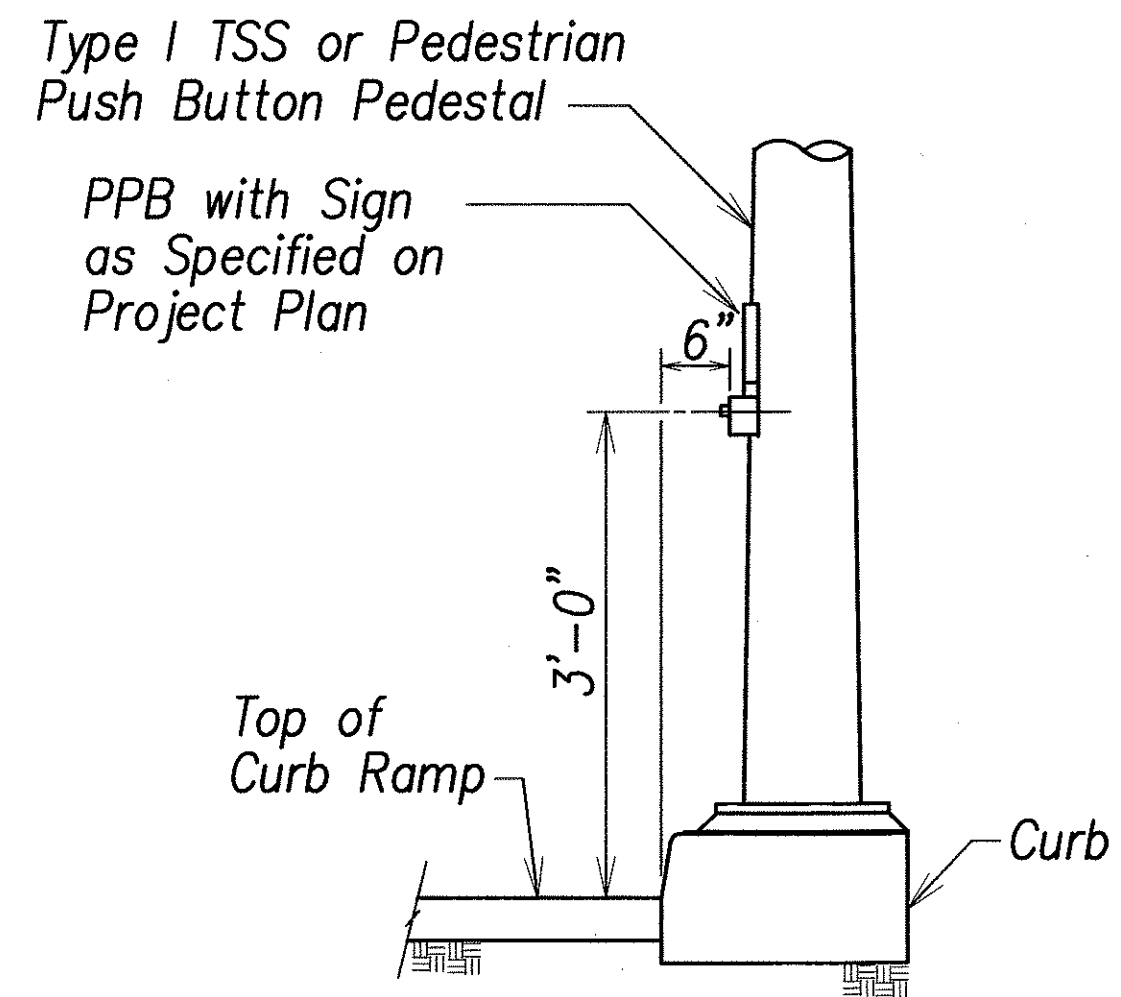




FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	24	180



- \* See Curb Ramp and Sidewalk Note No. 9 Sht. C-6
- \*\* 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.
- \*\*\* 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.
- \*\*\*\* If roadway slope is >2% conform to roadway slope and file Technical Infeasibility (TI) Statement.



DETAIL "D"

**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")

EARTH TECH  
 A Tyco Infrastructure Services Company  
 841 Bishop Street, Suite 500  
 Honolulu, HI 96813

ARULAN R. NIKU  
 LICENSED PROFESSIONAL ENGINEER  
 No. 6198-C  
 HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE 4/30/2006  
 THIS WORK WAS PREPARED BY  
 ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

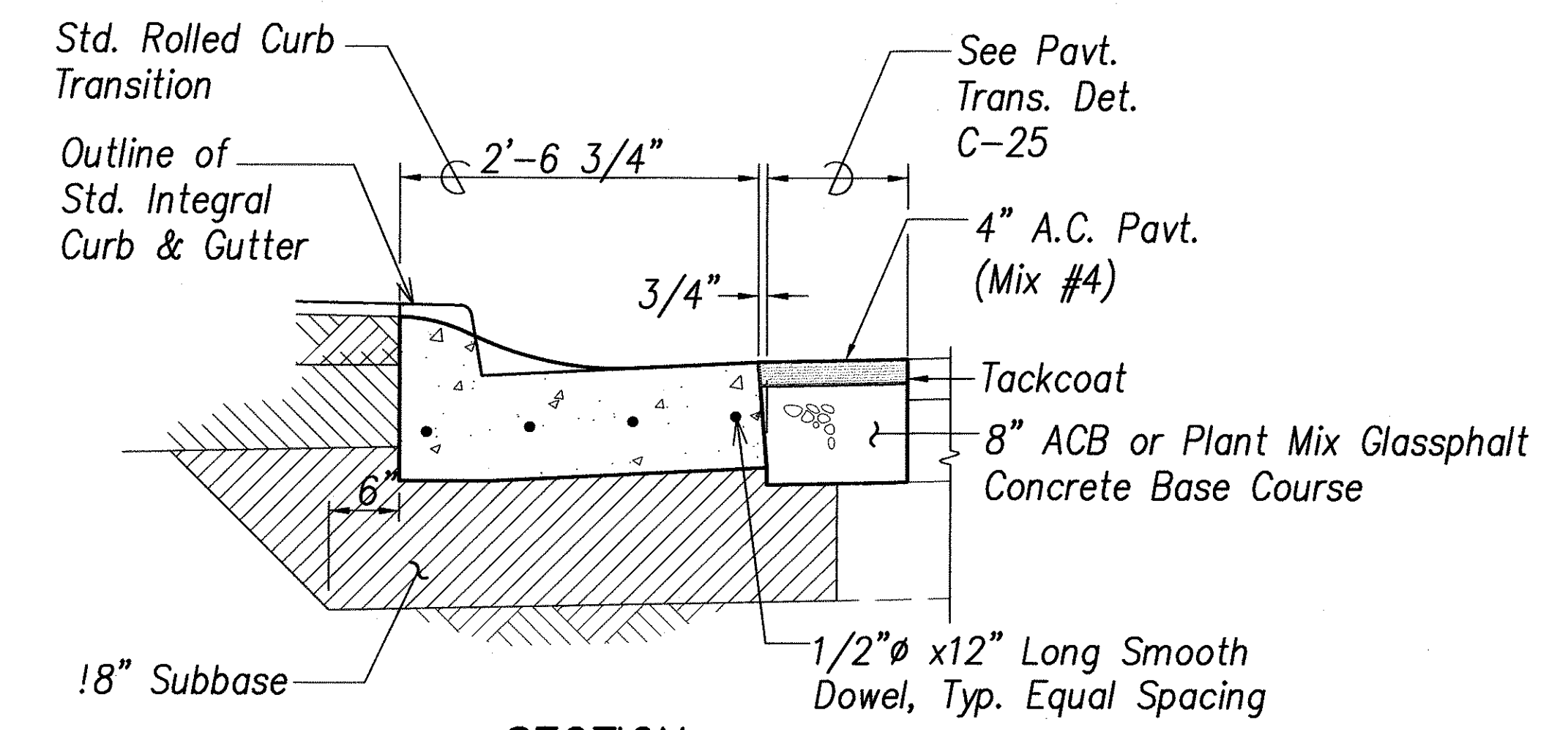
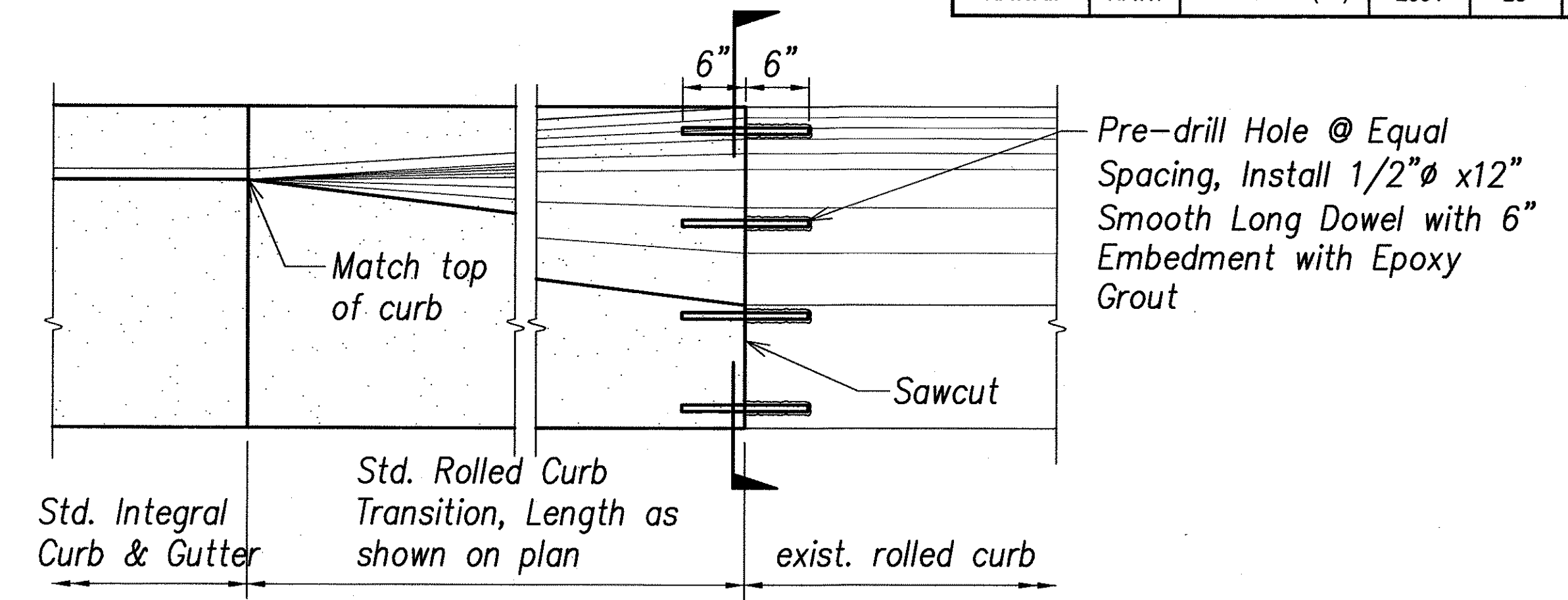
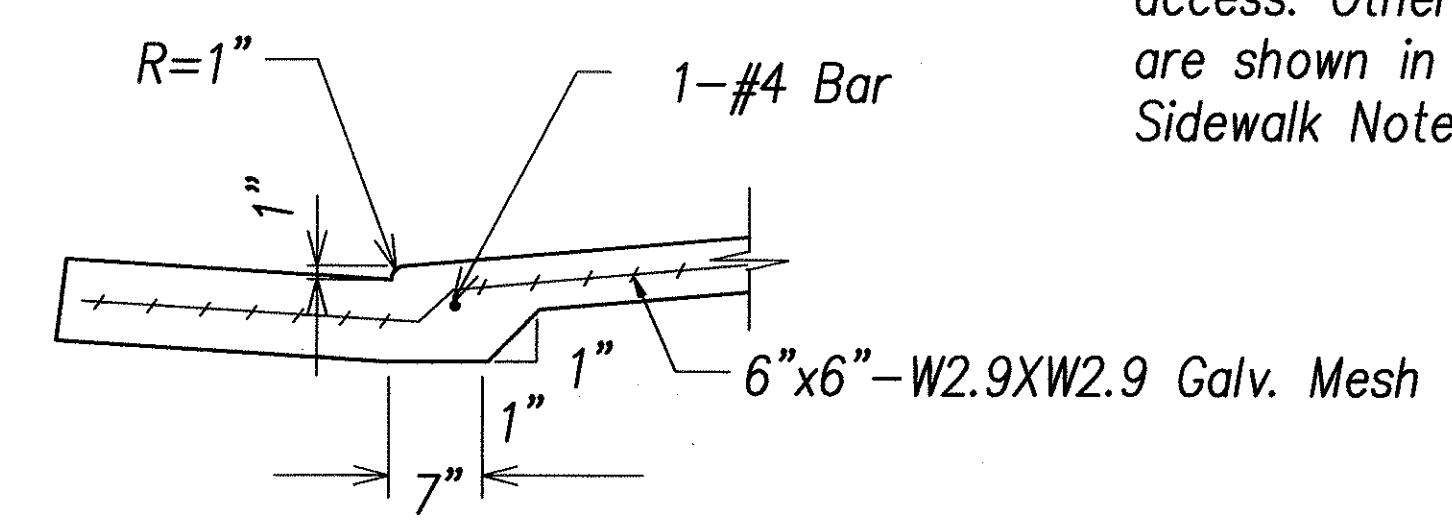
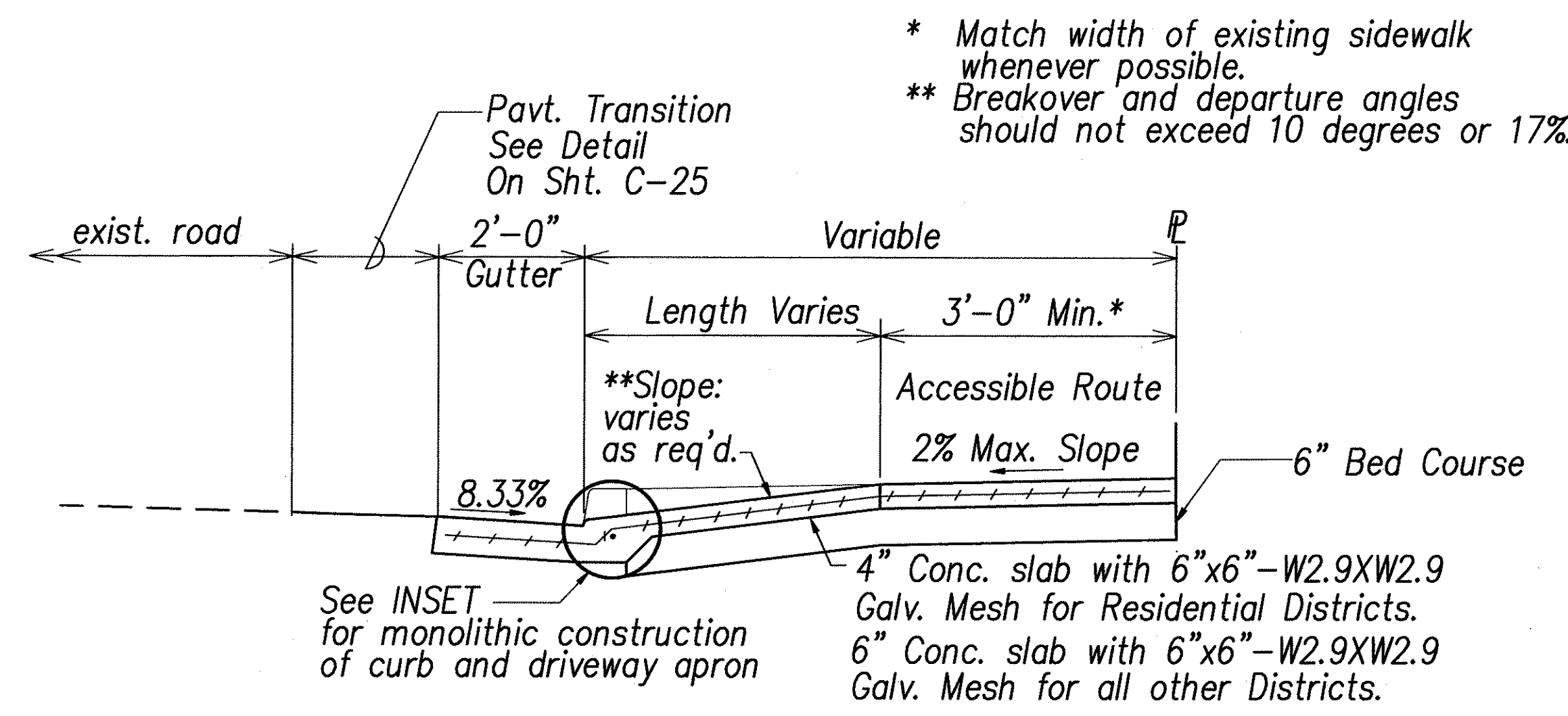
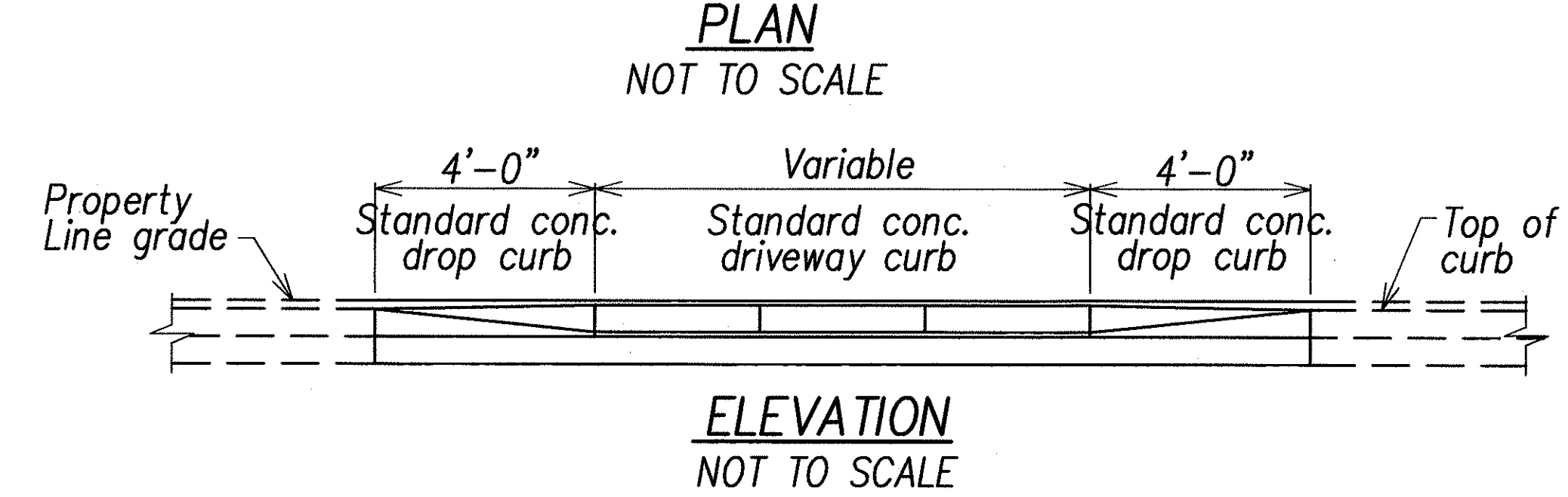
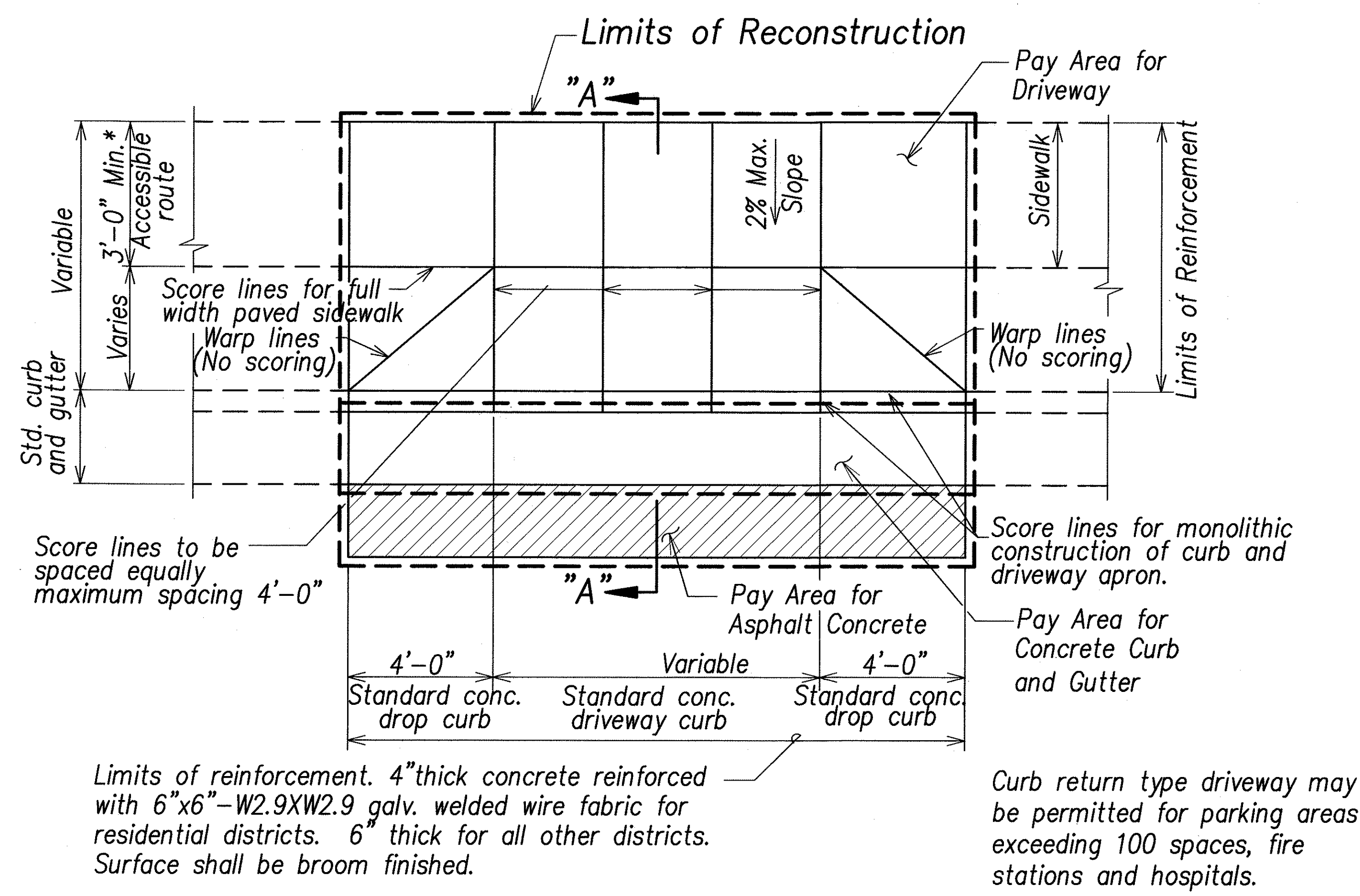
**CURB RAMP DETAILS – 6**

*Pedestrian Facilities & ADA Compliance  
 at Various Locations on Oahu, Unit 8  
 Fed. Aid Proj. No. CMAQ-0300(99)*

Scale: As Noted Date: August 2004

SHEET No. C-23 OF 139 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	25	180



**ROLLED CURB TRANSITION CONNECTION DETAIL**  
NOT TO SCALE

- 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.

**EARTH TECH**  
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Honolulu, HI 96813

**AROLAN R. NIKU**  
LICENSED PROFESSIONAL ENGINEER  
No. 6198-C  
HAWAII, U.S.A.

EXPIRATION DATE OF THE LICENSE: 4/30/2009  
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRIVEWAY APRON**

*Pedestrian Facilities & ADA Compliance at Various Locations on Oahu, Unit 8 Fed. Aid Proj. No. CMAQ-0300(99)*

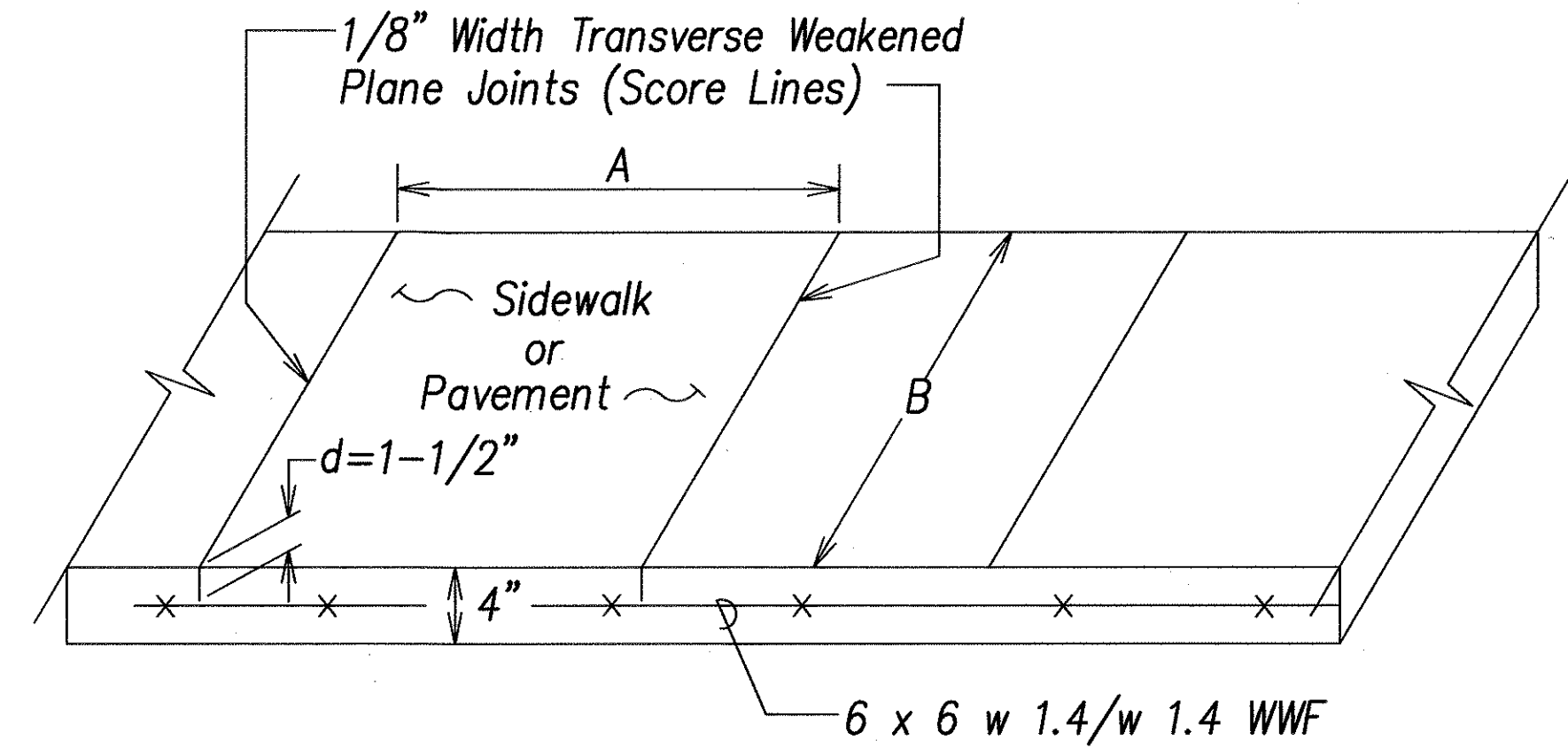
Scale: As Noted Date: August 2004

SHEET No. C-24 OF 139 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

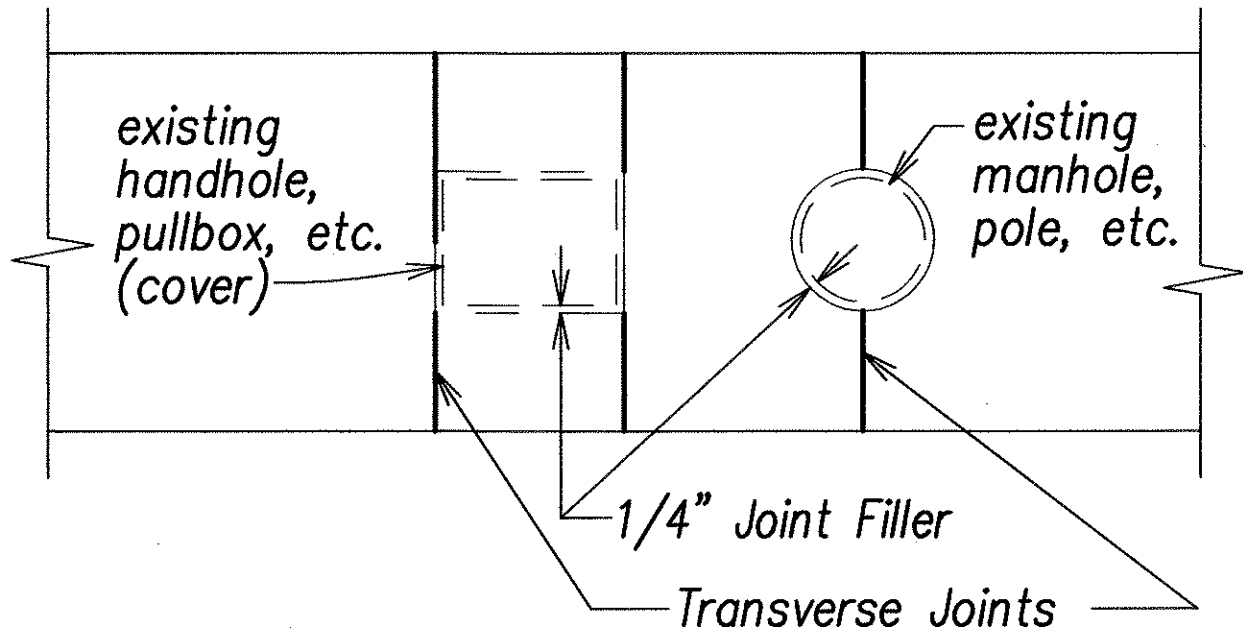


FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	26	180

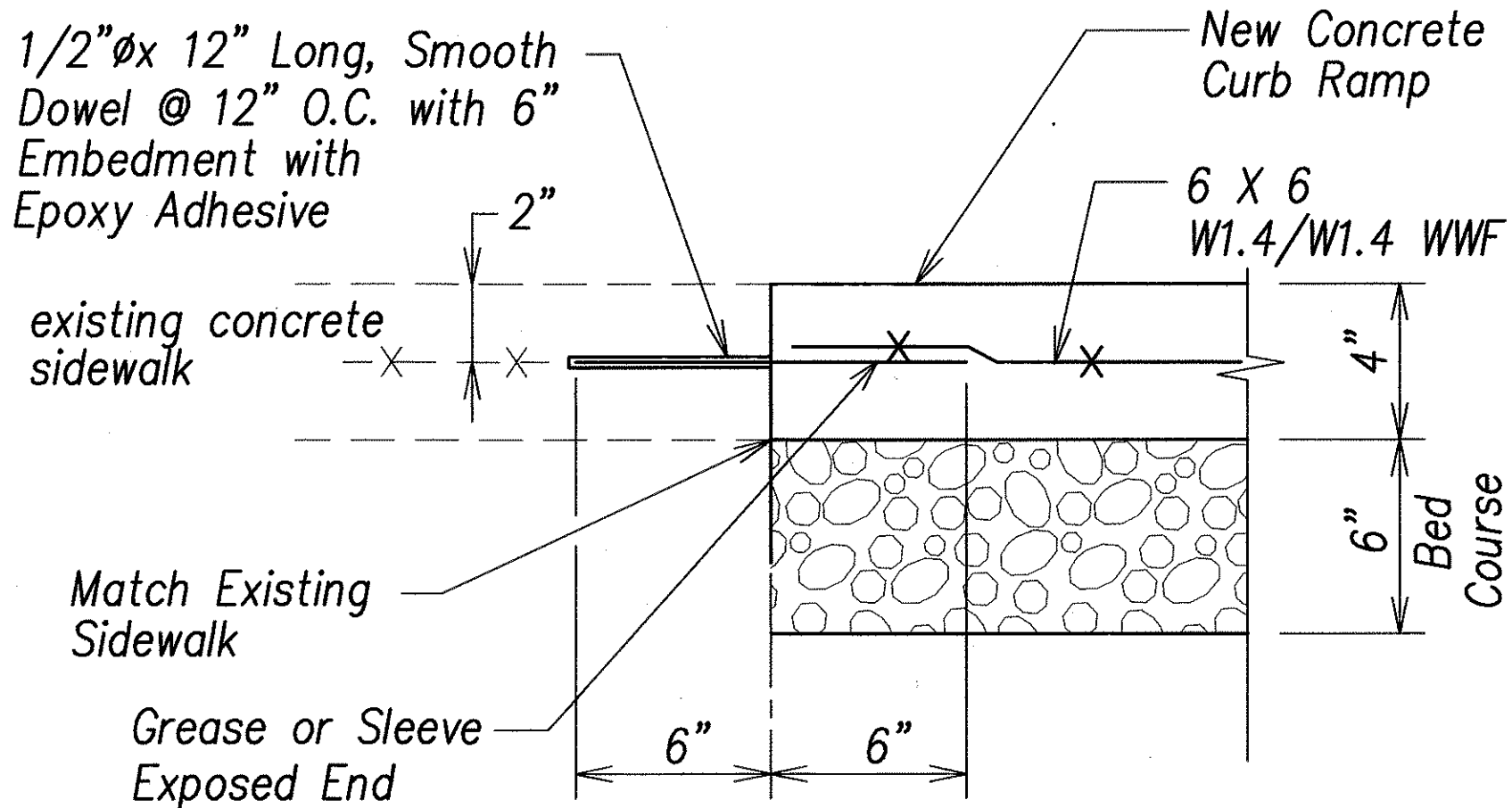


Note: A = 6' if B ≤ 8'.  
If B > 8', Add Longitudinal Joint

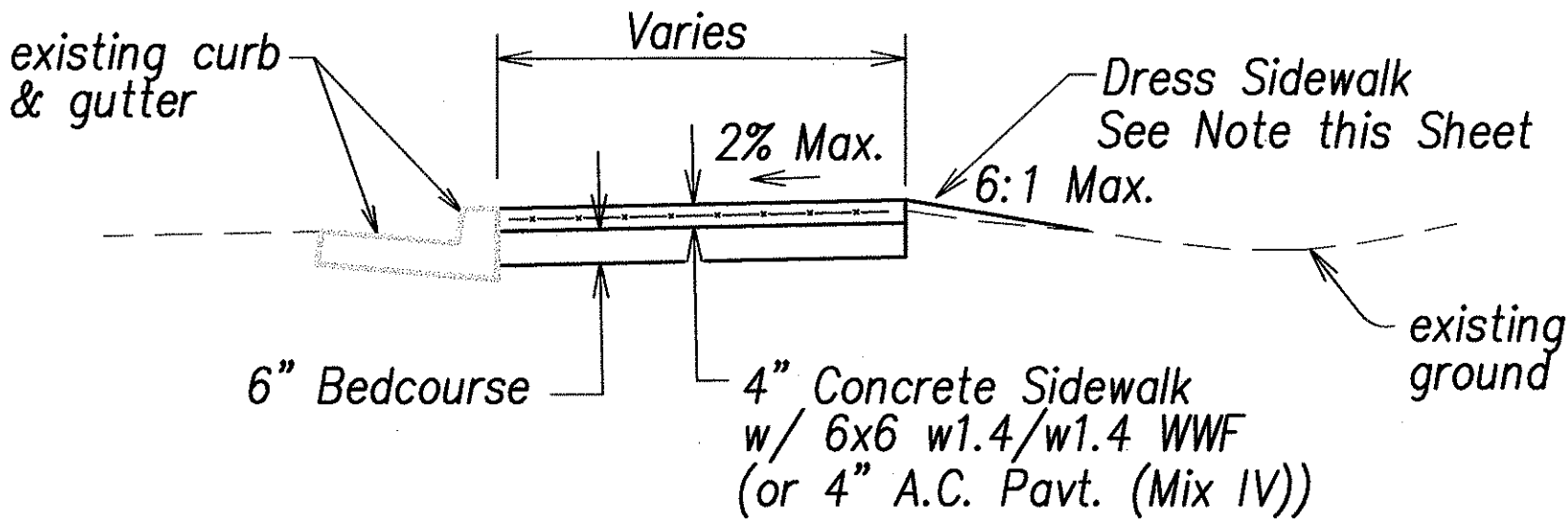
**SIDEWALK SCORE LINE DETAIL**  
Not to scale



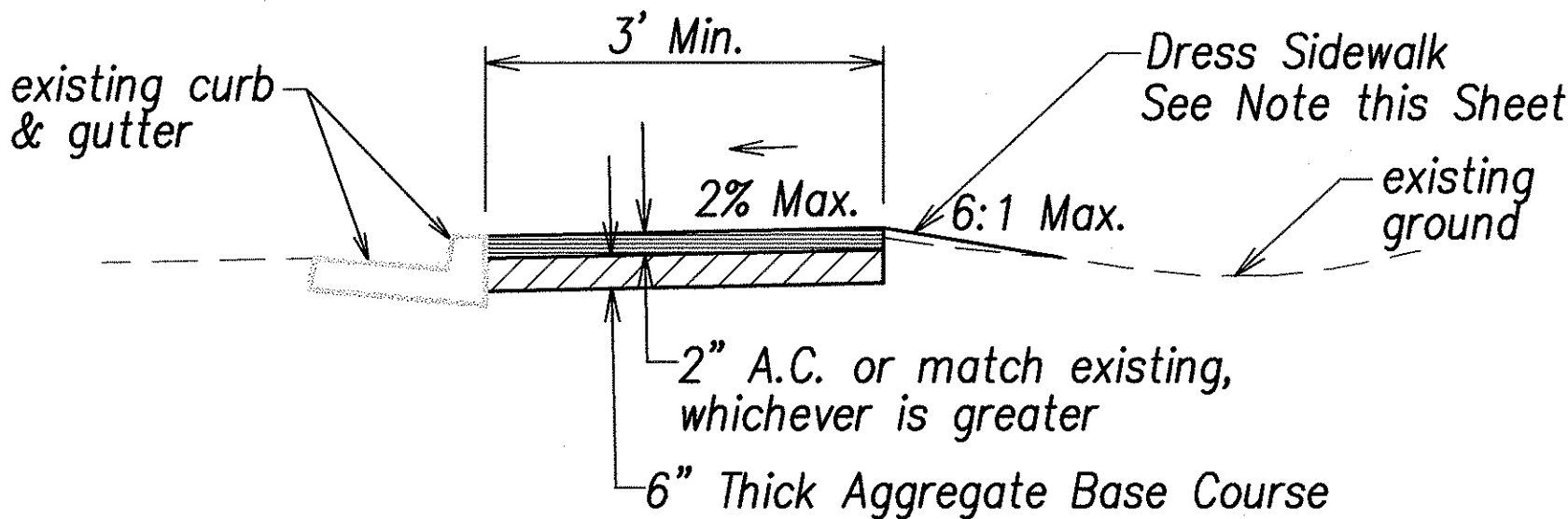
**SIDEWALK ISOLATION JOINT DETAIL**  
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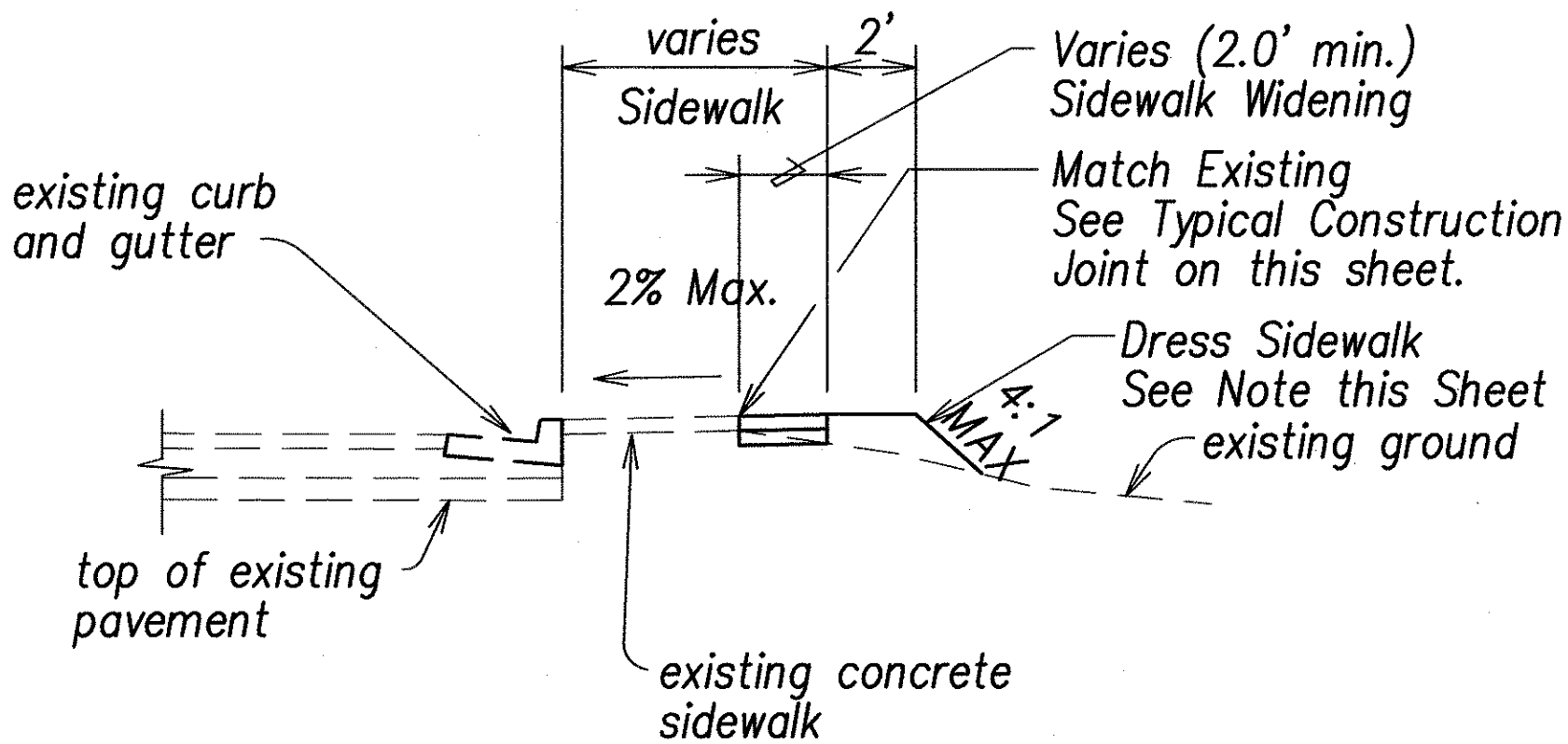
**TYPICAL CONSTRUCTION JOINT AT EXISTING SIDEWALK**  
Not to scale



**SIDEWALK DETAIL**  
Not to scale

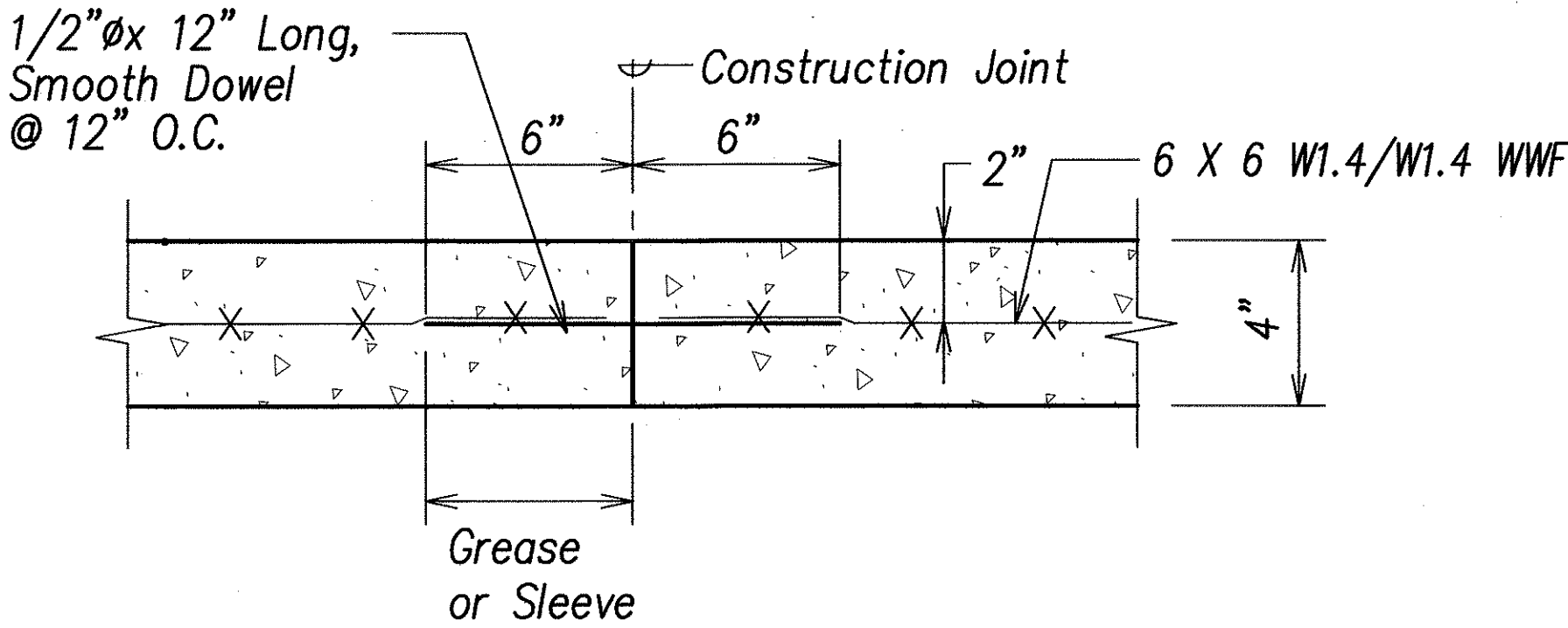


**A.C. SIDEWALK DETAIL**  
Not to scale



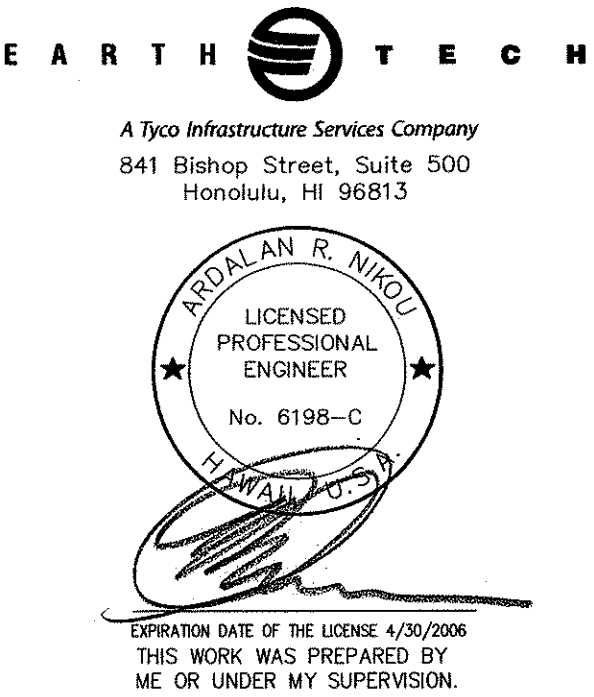
**SIDEWALK WIDENING SECTION**  
Not to scale

- NOTES:
1. Dressing of sidewalk shall consist of clearing, grubbing, grading, reshaping and compacting the area adjacent to the improvement with suitable material as shown on the plans and/or as directed by the Engineer. If existing ground is asphalt or concrete surface, dress sidewalk with A.C. pavement, Mix No. IV. This work shall be considered incidental to the new sidewalk.
  2. Transverse and Longitudinal Weakened Plane Joints for sidewalk shall be considered incidental to the New Sidewalk.
  3. Installation of dowels and tie bars including drilling, and epoxy grout shall be incidental to Sidewalk.



**TRANSVERSE CONSTRUCTION JOINT DETAIL**  
Not to scale

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	



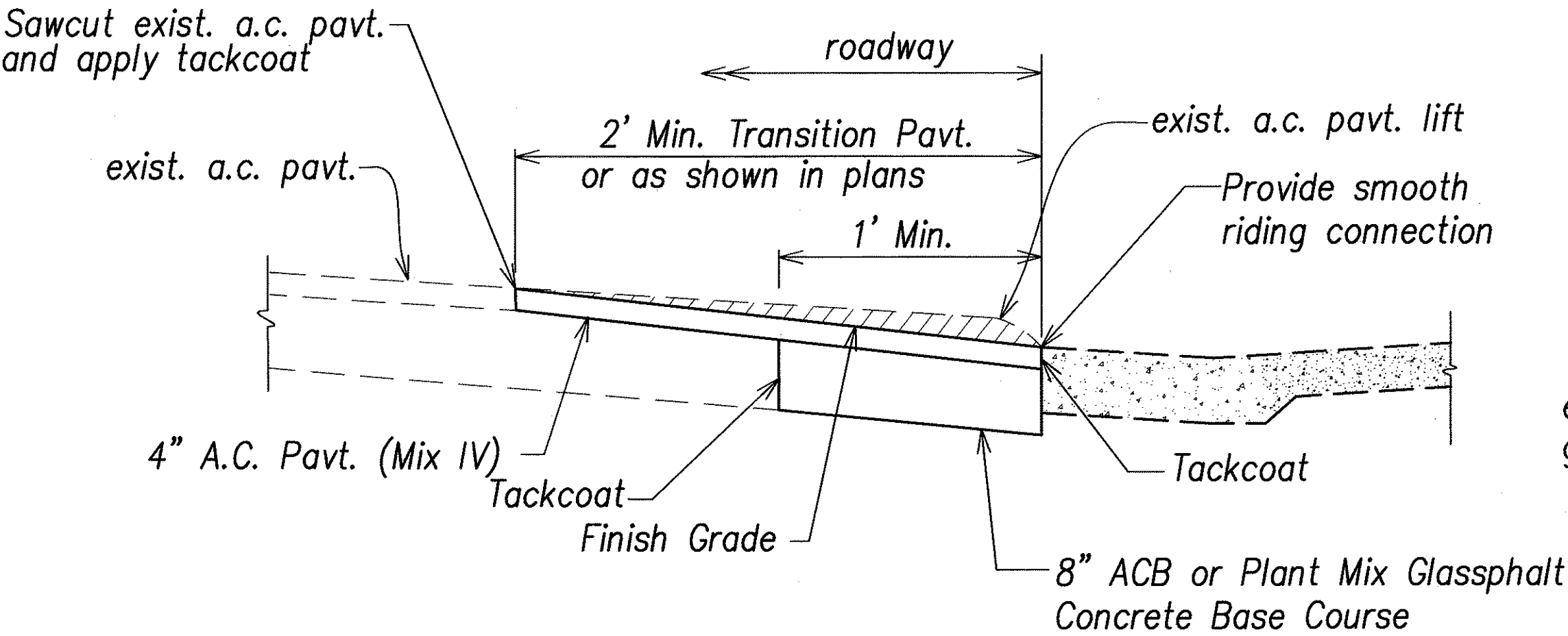
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIDEWALK DETAILS**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

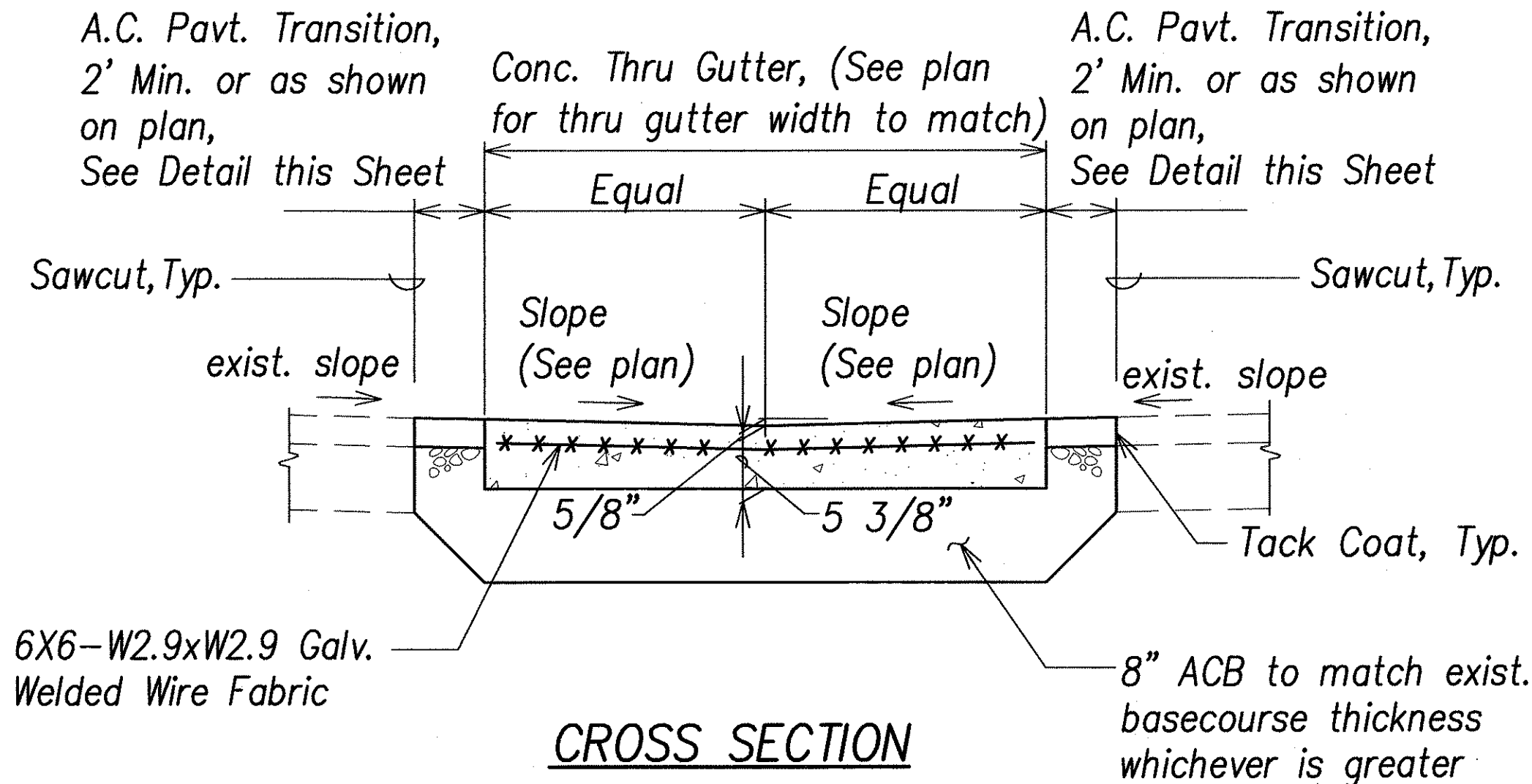
Scale: As Noted  
Date: August 2004

SHEET No. C-25 OF 139 SHEETS

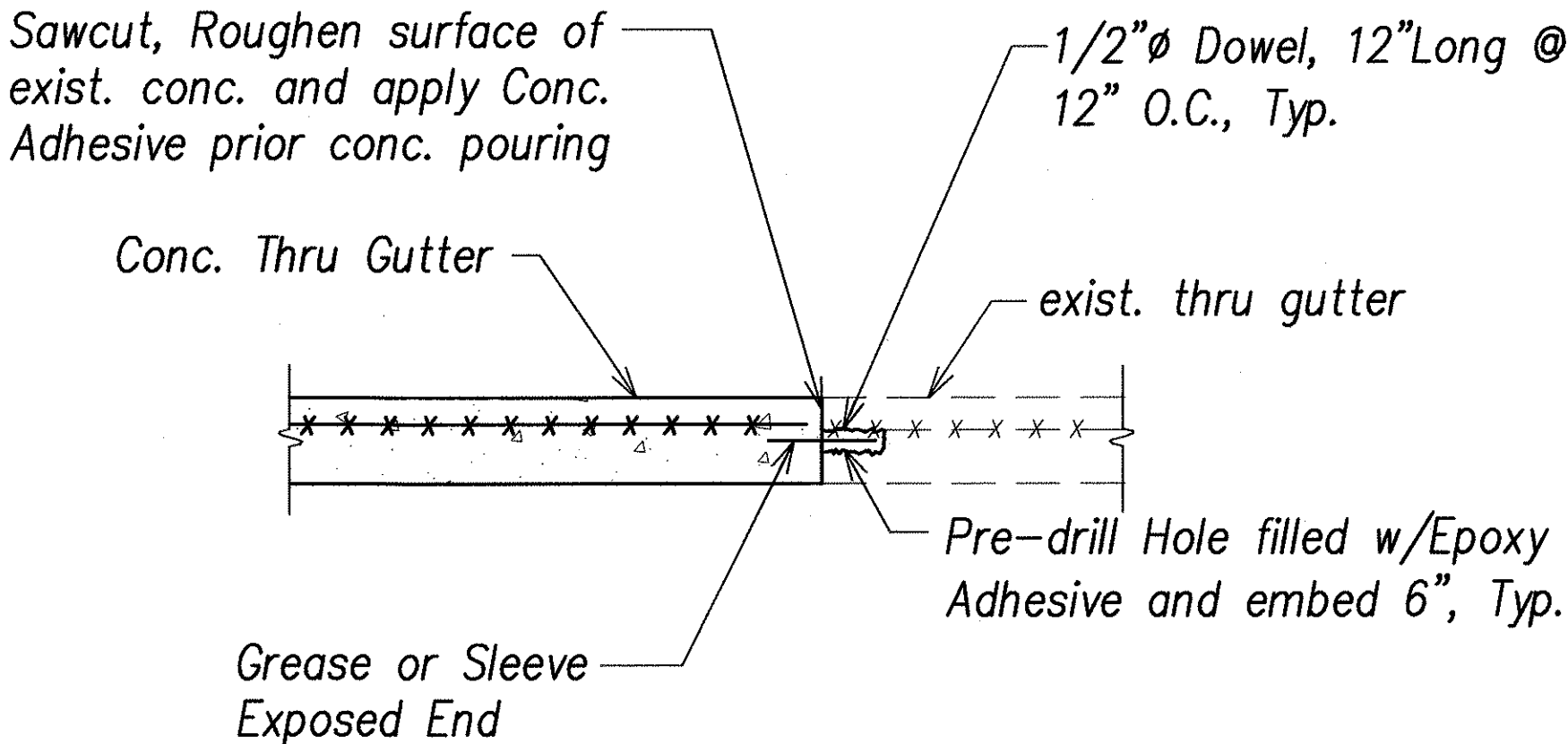
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	27	180



**PAVEMENT TRANSITION DETAIL**  
Not to scale

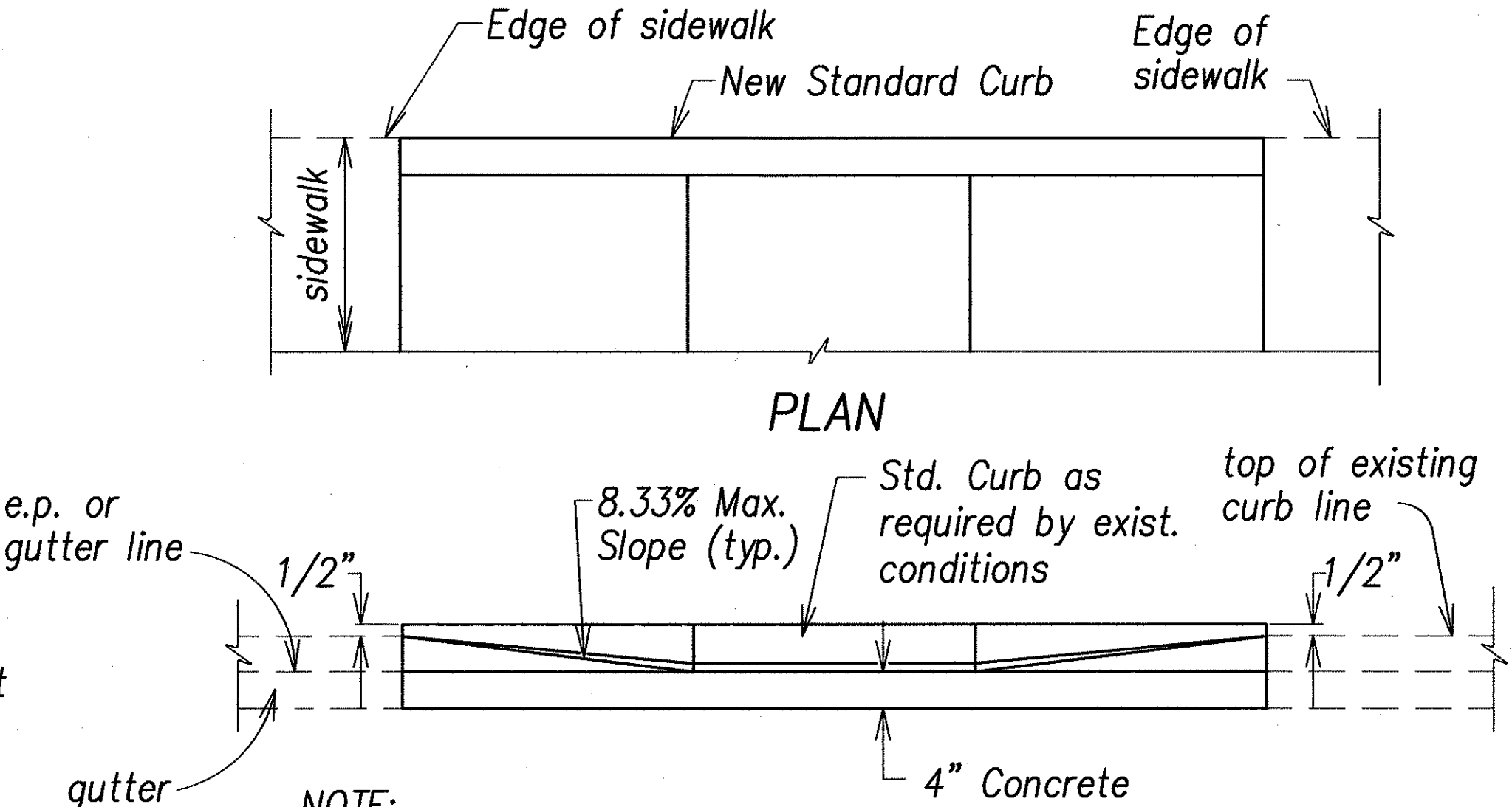


**CROSS SECTION**



**LONGITUDINAL SECTION**

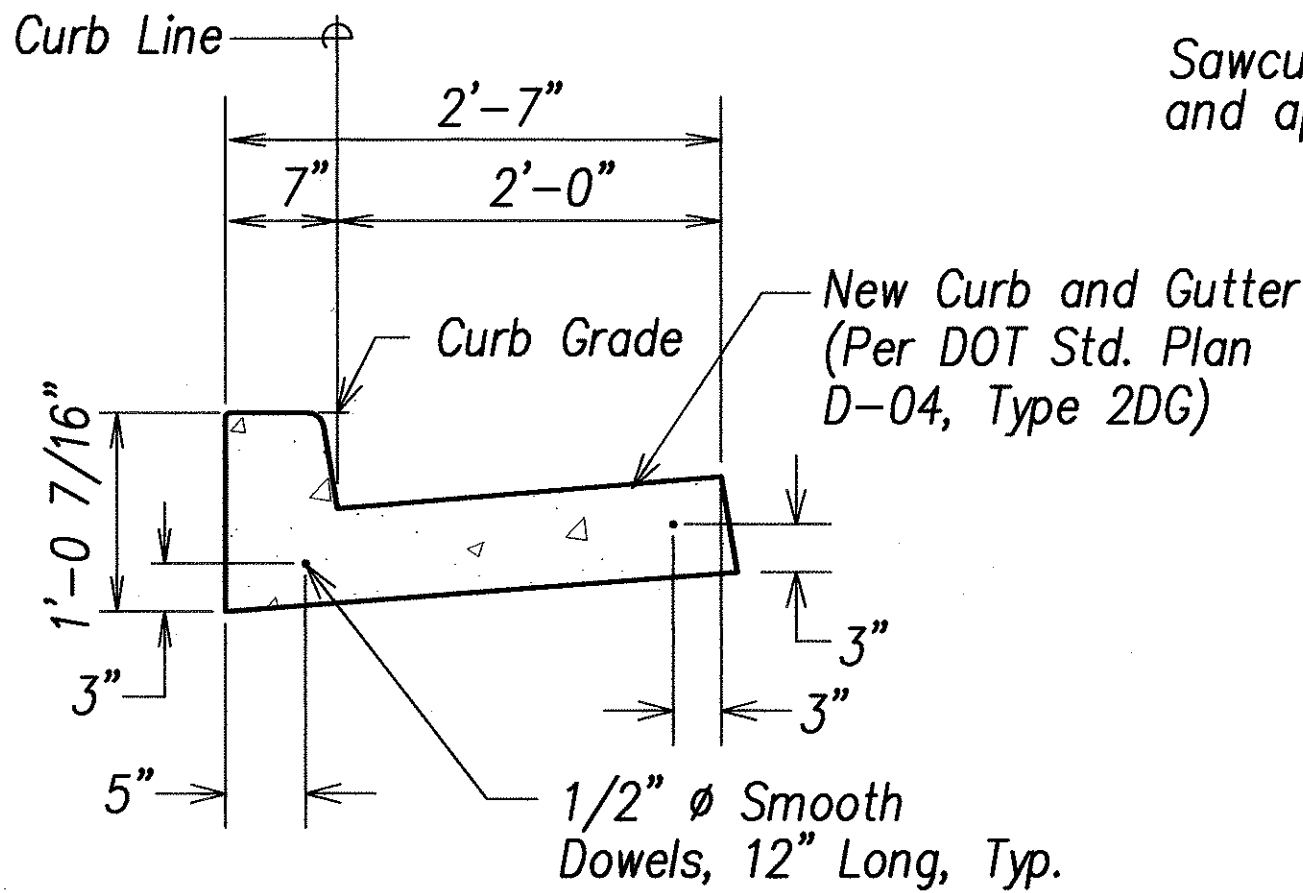
**CONCRETE THRU GUTTER CONNECTION DETAIL**  
Not to scale



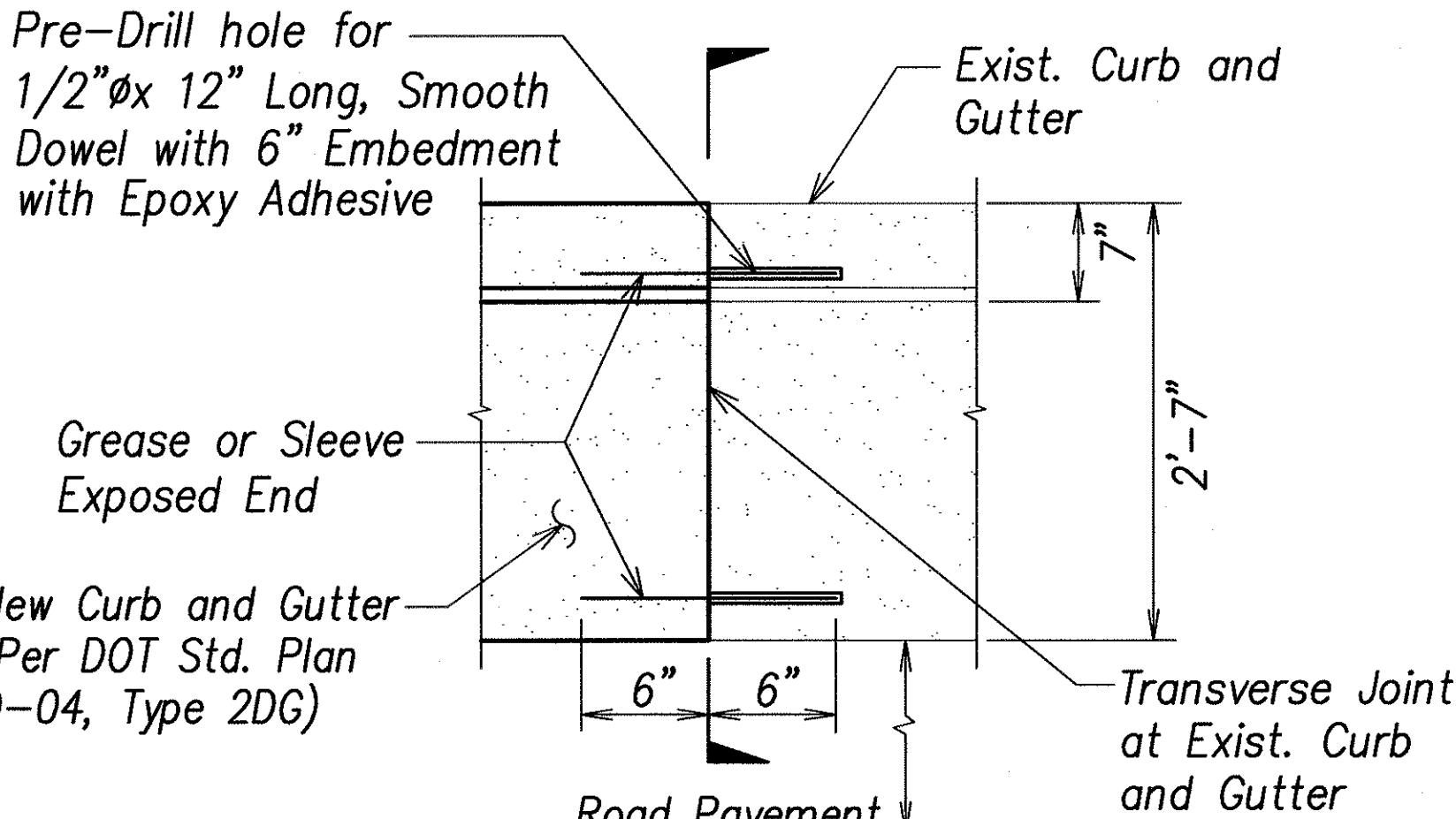
**NOTE:**  
This detail can be used in situations where the edge of sidewalk cannot be flush with the face of (back) curb due to right of way restrictions.

**NOTE:**  
All curb ramps shall be reinforced.

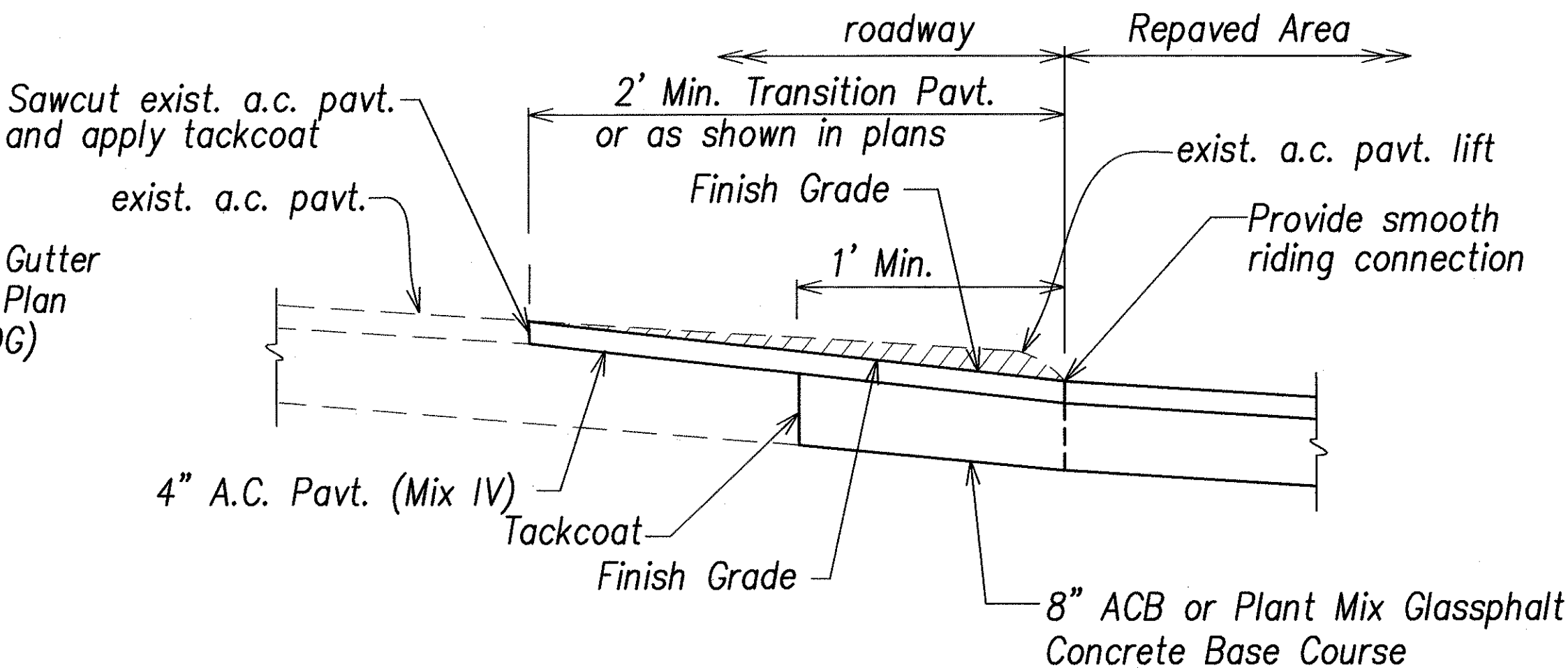
**ELEVATION  
DETAIL – BACK CURB**  
Not to scale



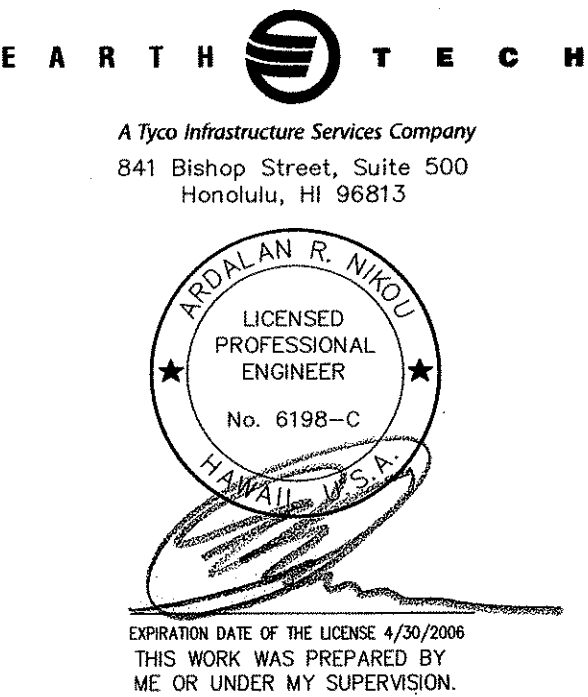
**SECTION**



**PLAN  
CURB AND GUTTER CONNECTION**  
Not to scale



**PAVEMENT RESTORATION DETAIL**  
Not to scale



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

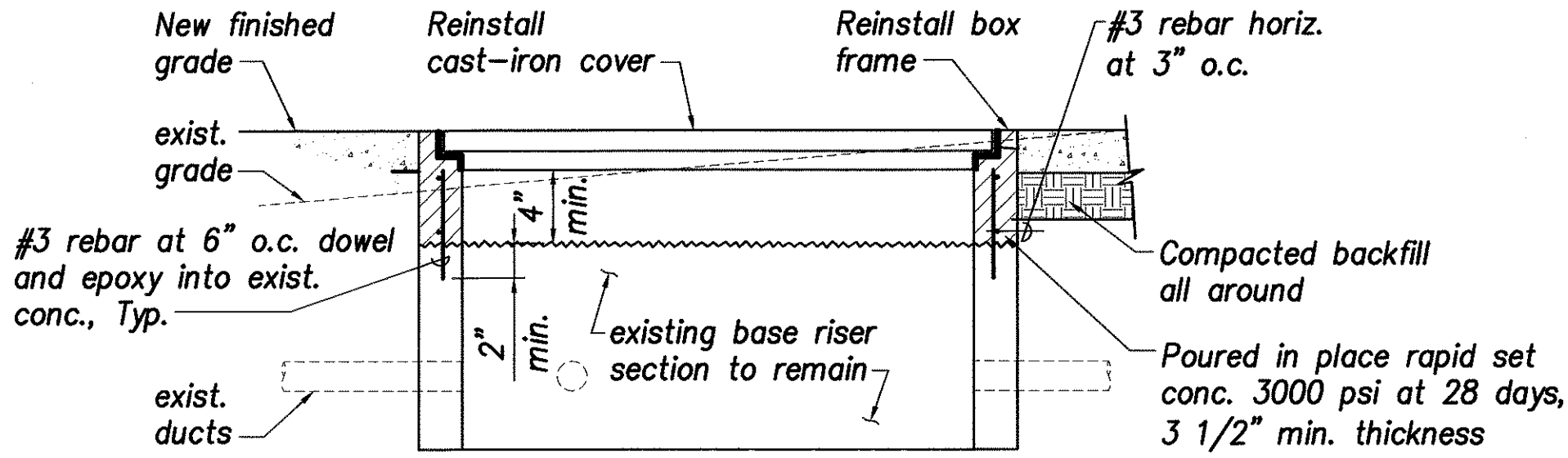
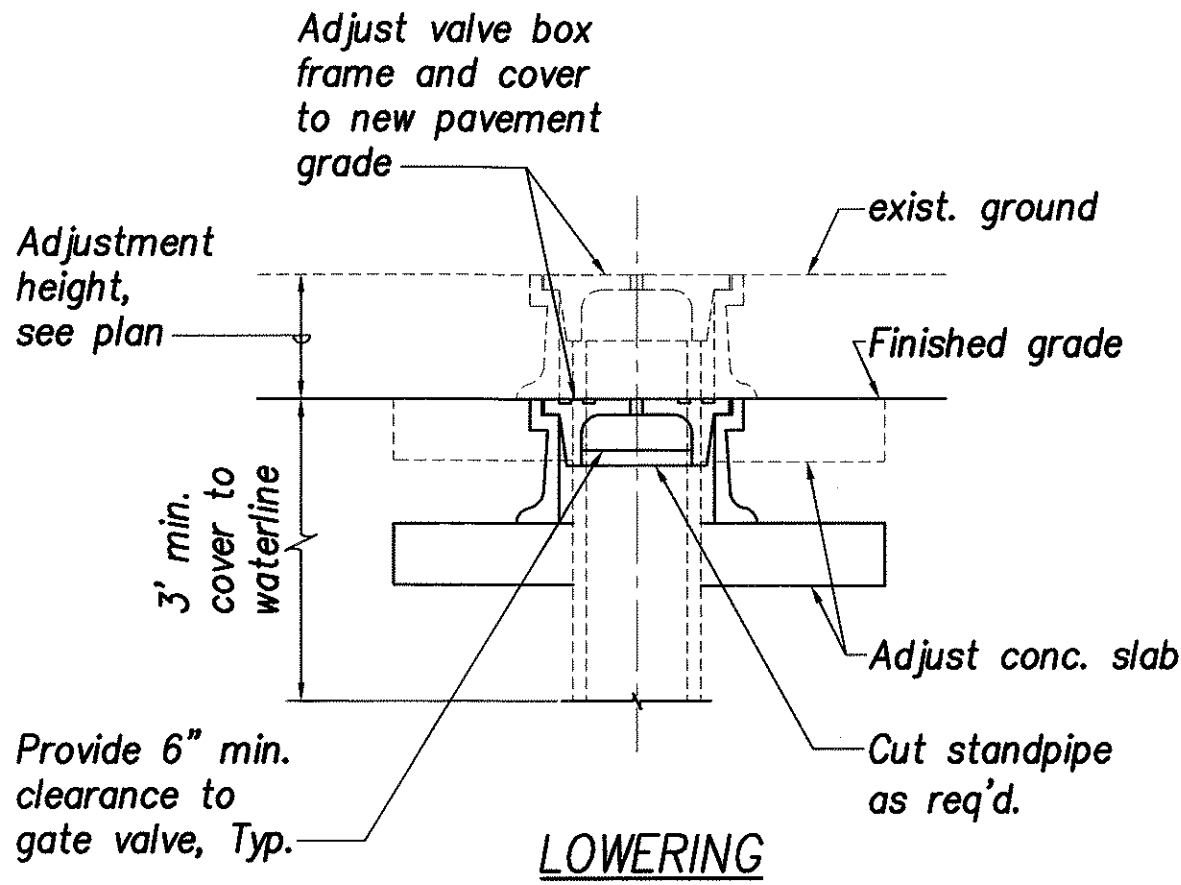
**MISCELLANEOUS DETAILS – 1**  
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted  
Date: August 2004

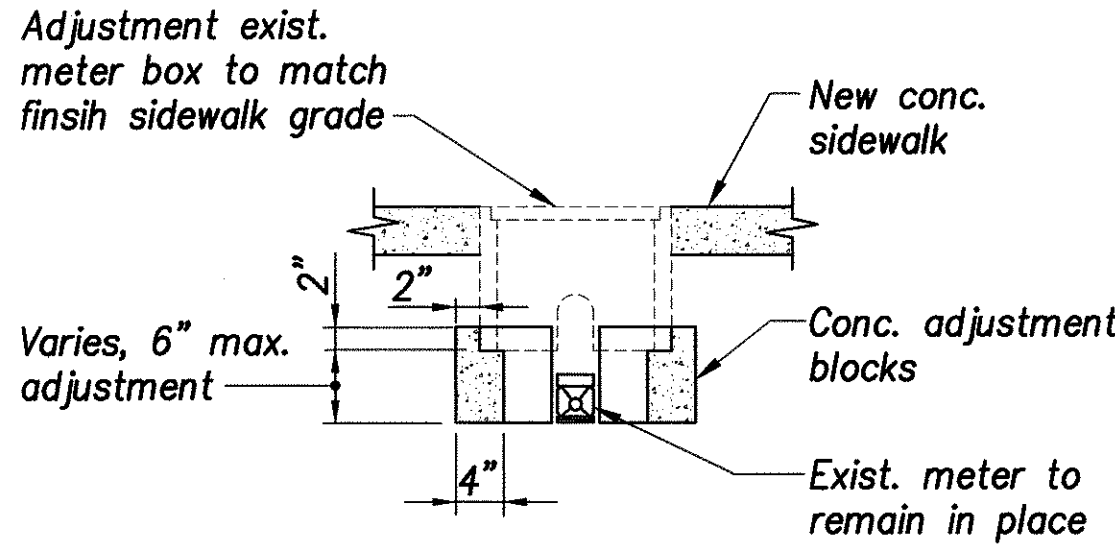
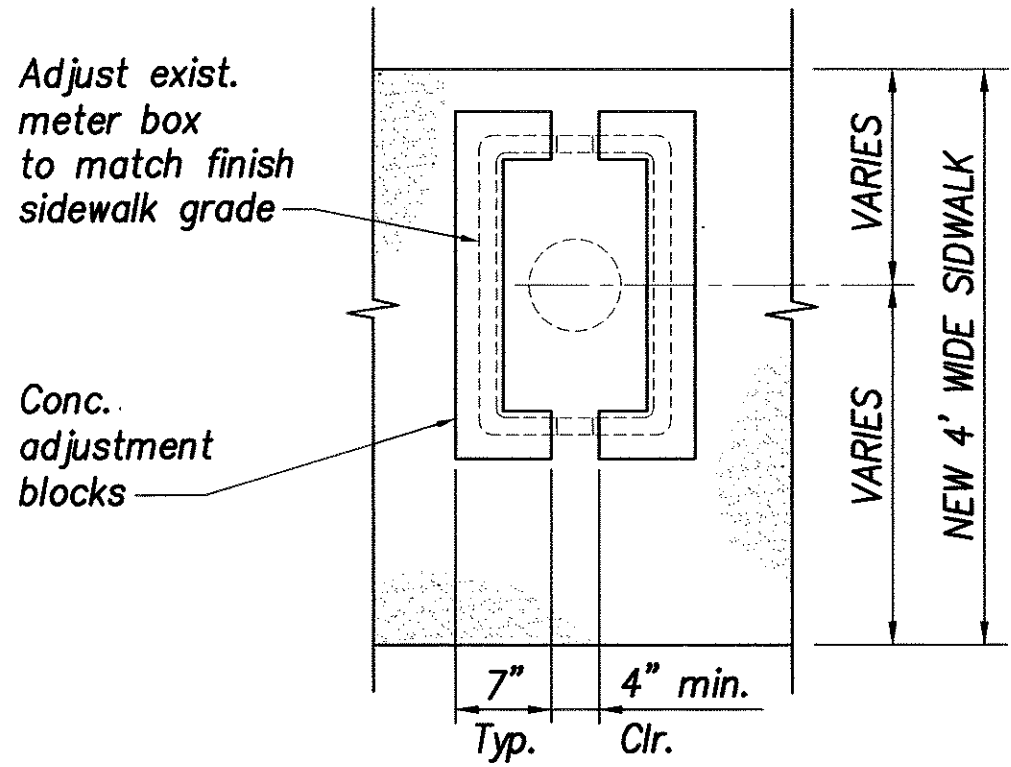
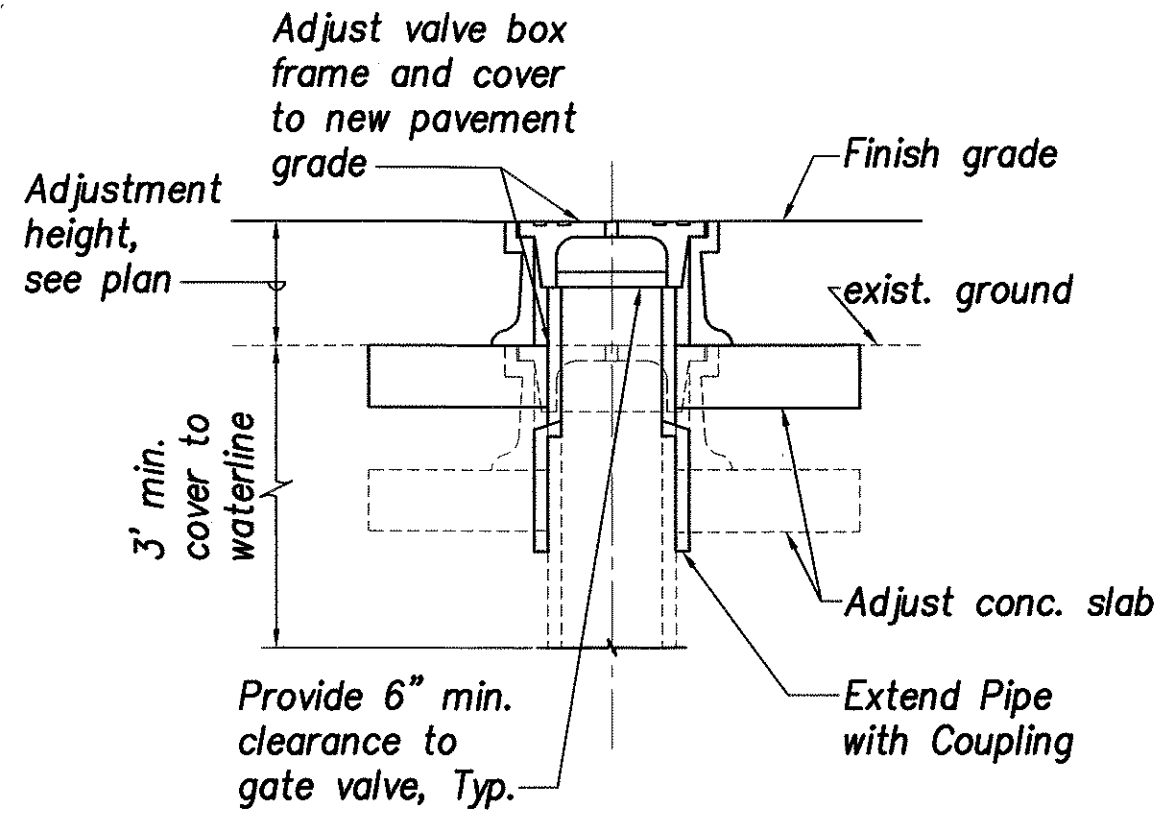
SHEET No. C-26 OF 139 SHEETS

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

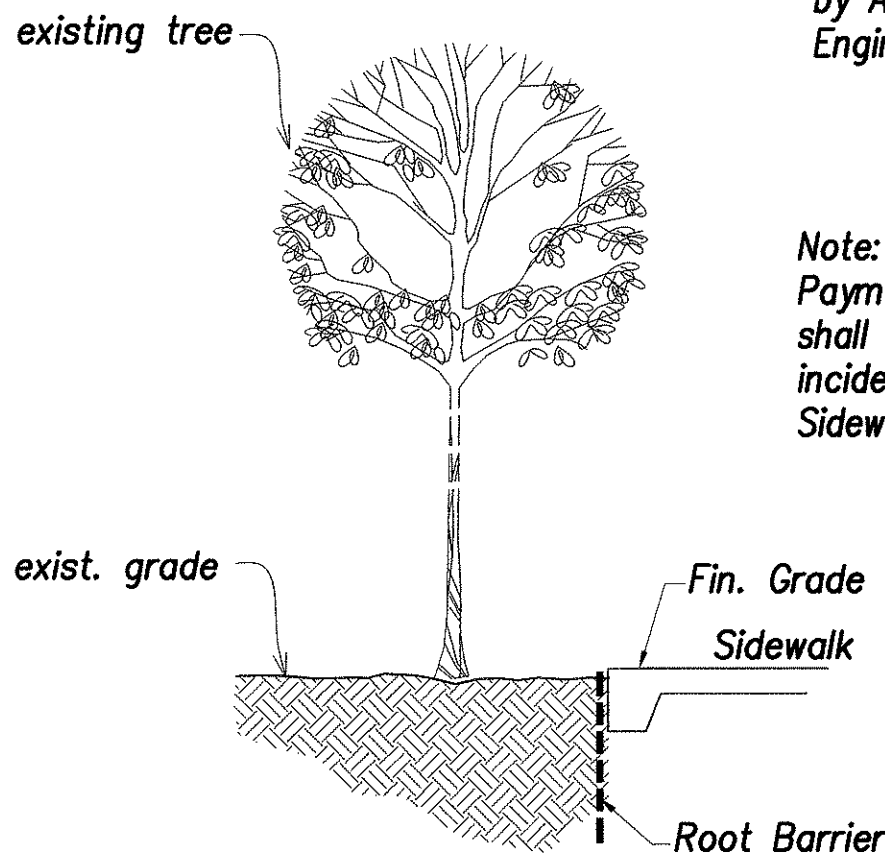
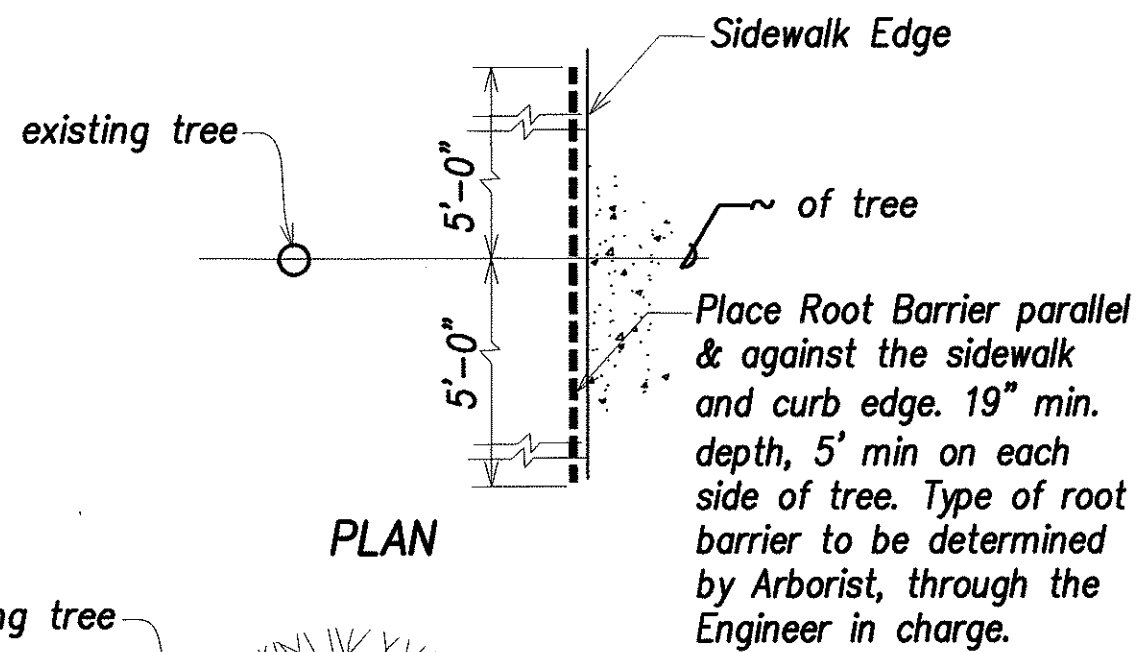
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	28	180



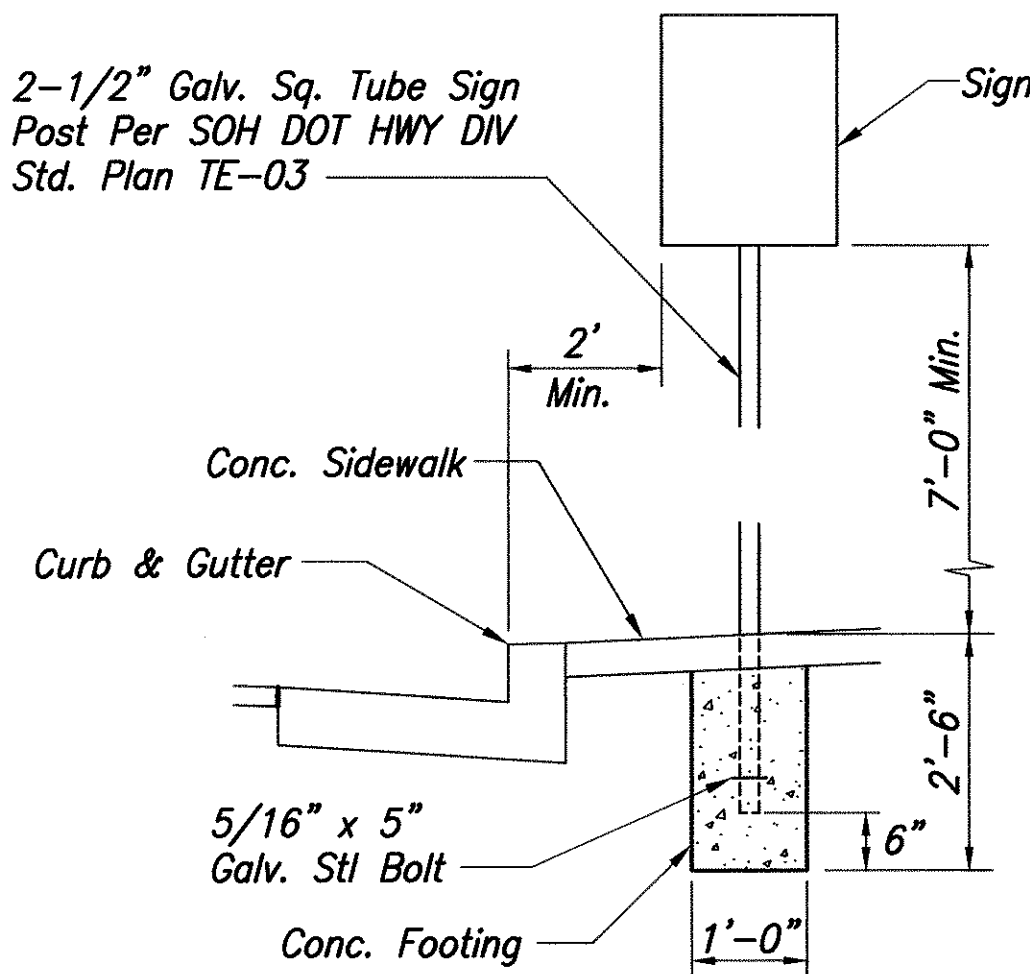
UTILITY BOX ADJUSTMENT  
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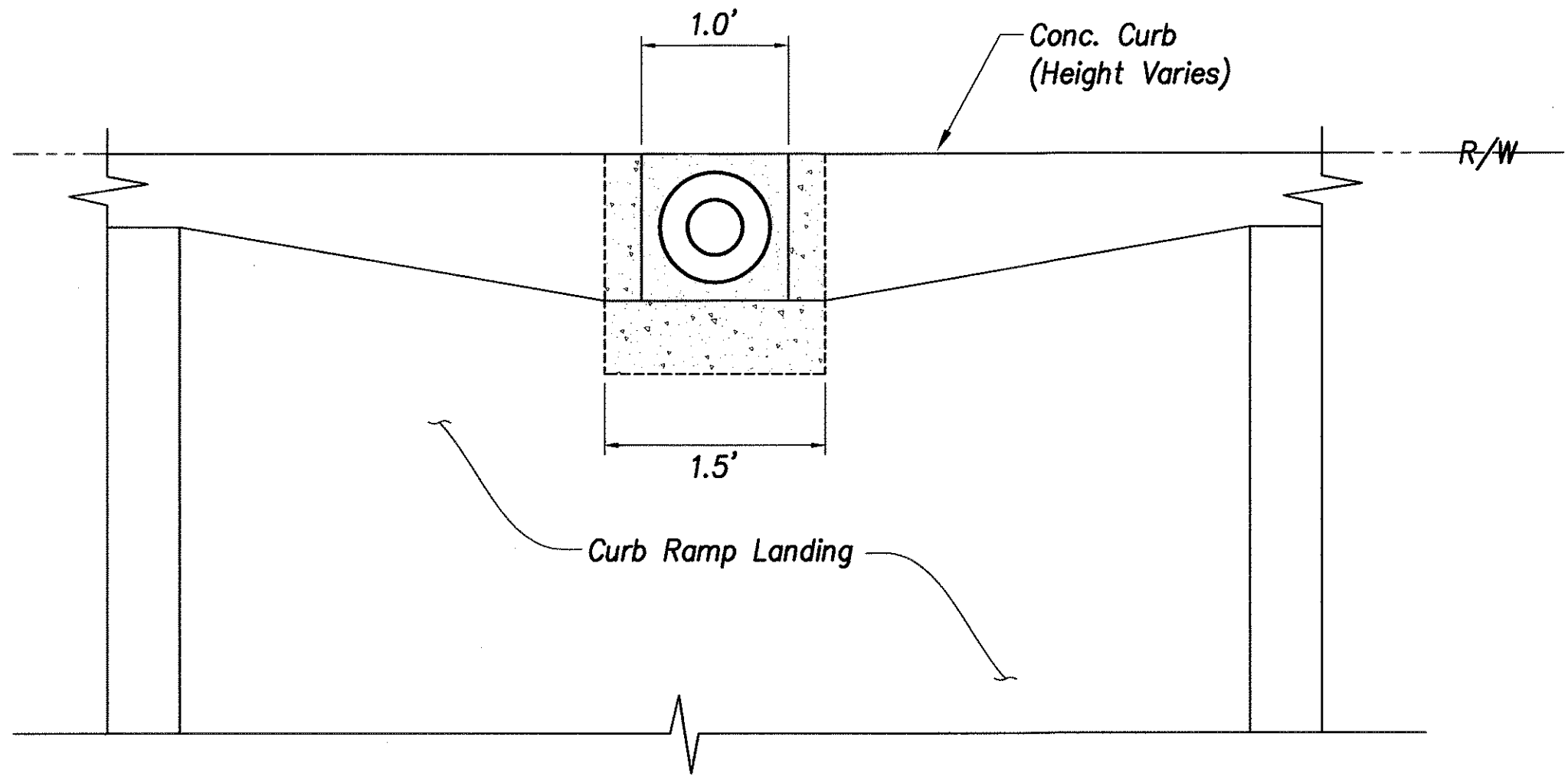
METER BOX ADJUSTMENT DETAIL  
Not to Scale



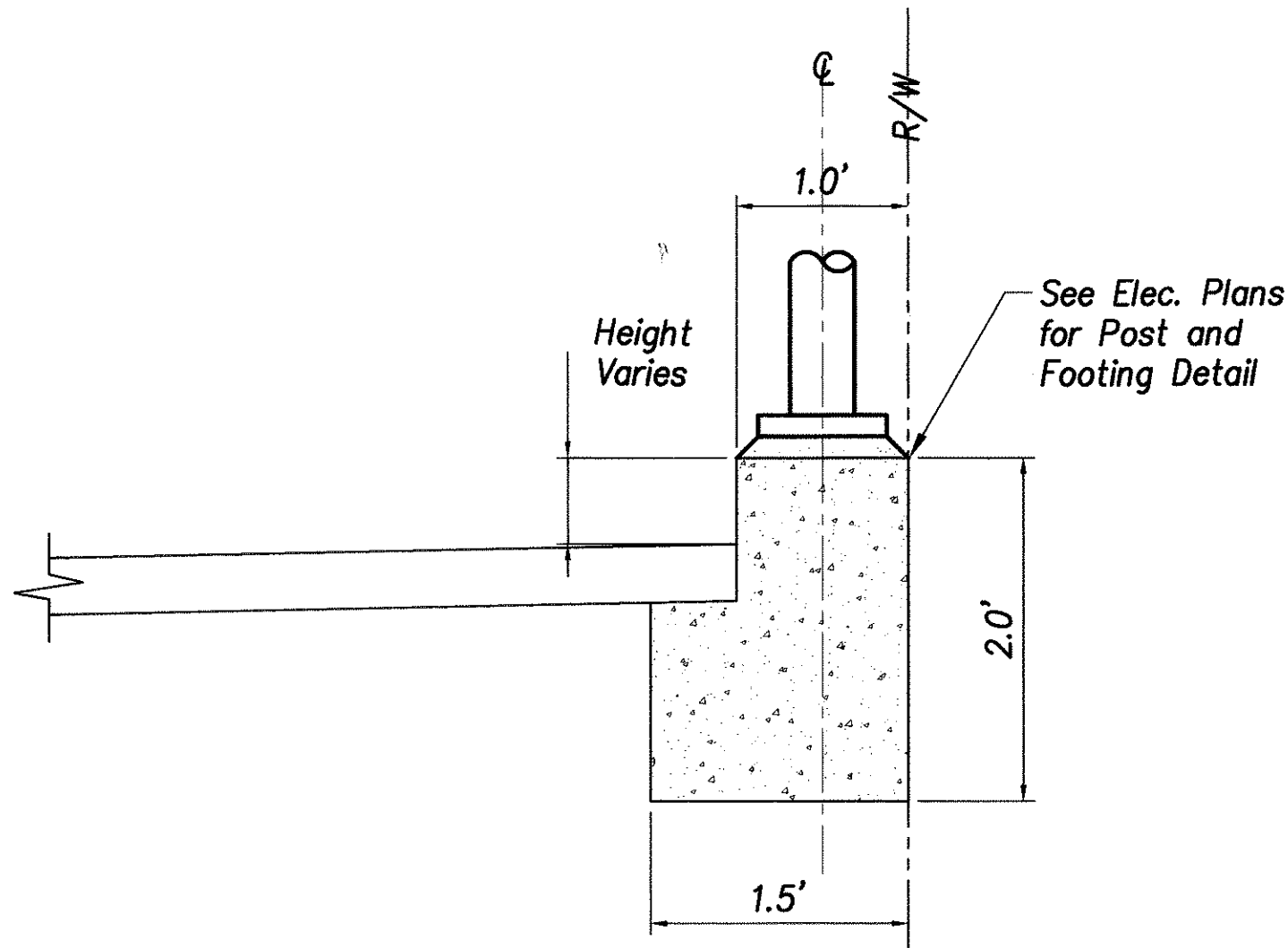
ROOT BARRIER DETAIL  
Not to scale



TYPICAL SIGN POST DETAIL  
Not to Scale



PLAN



SECTION

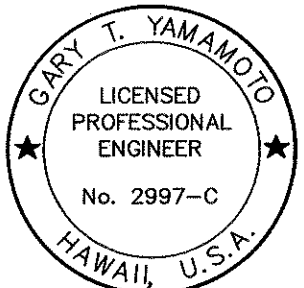
PPB FOOTING DETAIL AT R/W  
Not to Scale

APPROVED:

*Joseph W. Keenan* 5/19/04  
Principal Executive Date  
Maintenance Unit, BWS

EARTH TECH

A Tyco Infrastructure Services Company  
841 Bishop Street, Suite 500  
Honolulu, HI 96813



EXPIRATION DATE OF THE LICENSE 4/30/2008  
THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS-2

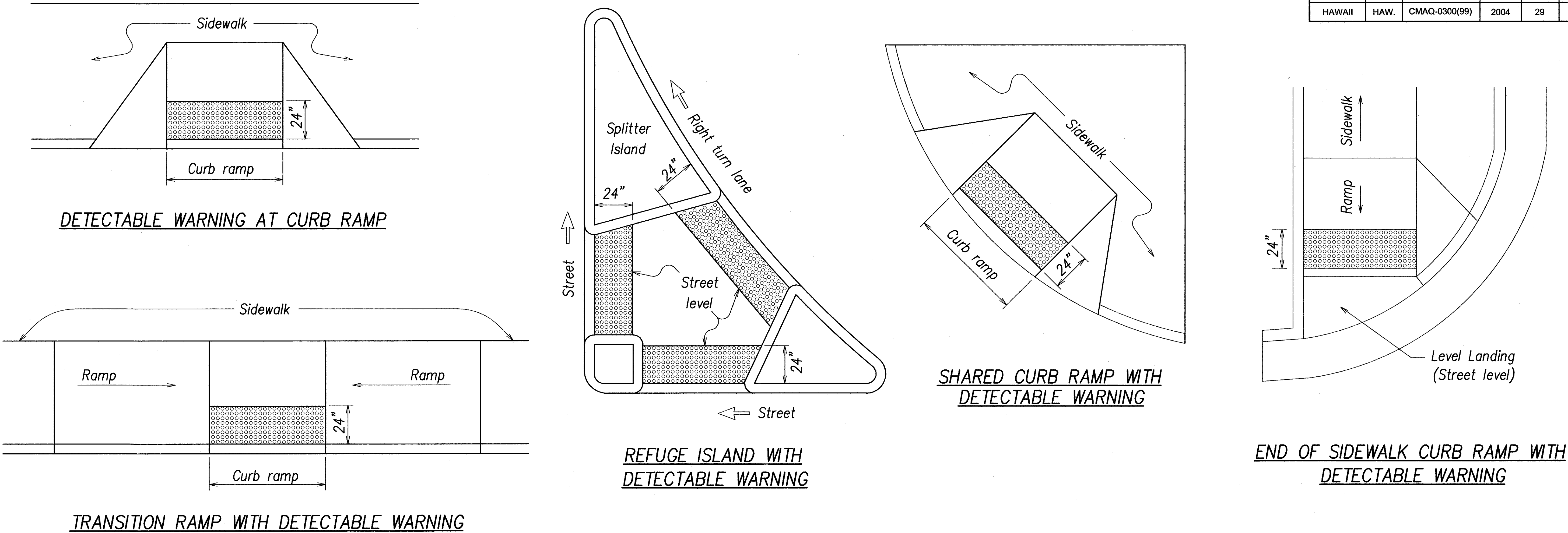
Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: August 2004

SHEET No. C-27 OF 139 SHEETS



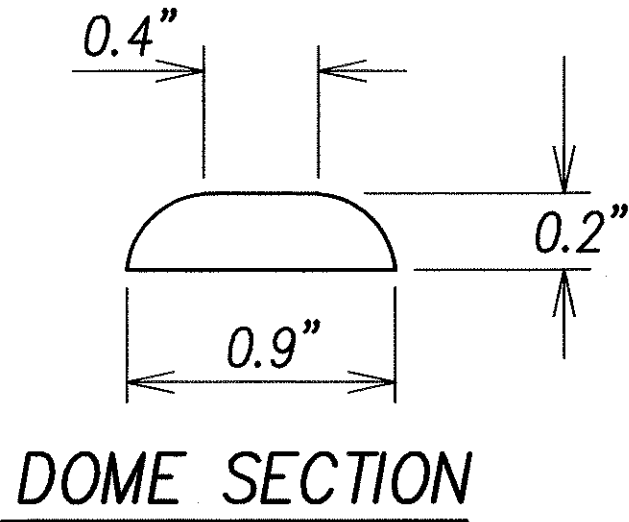
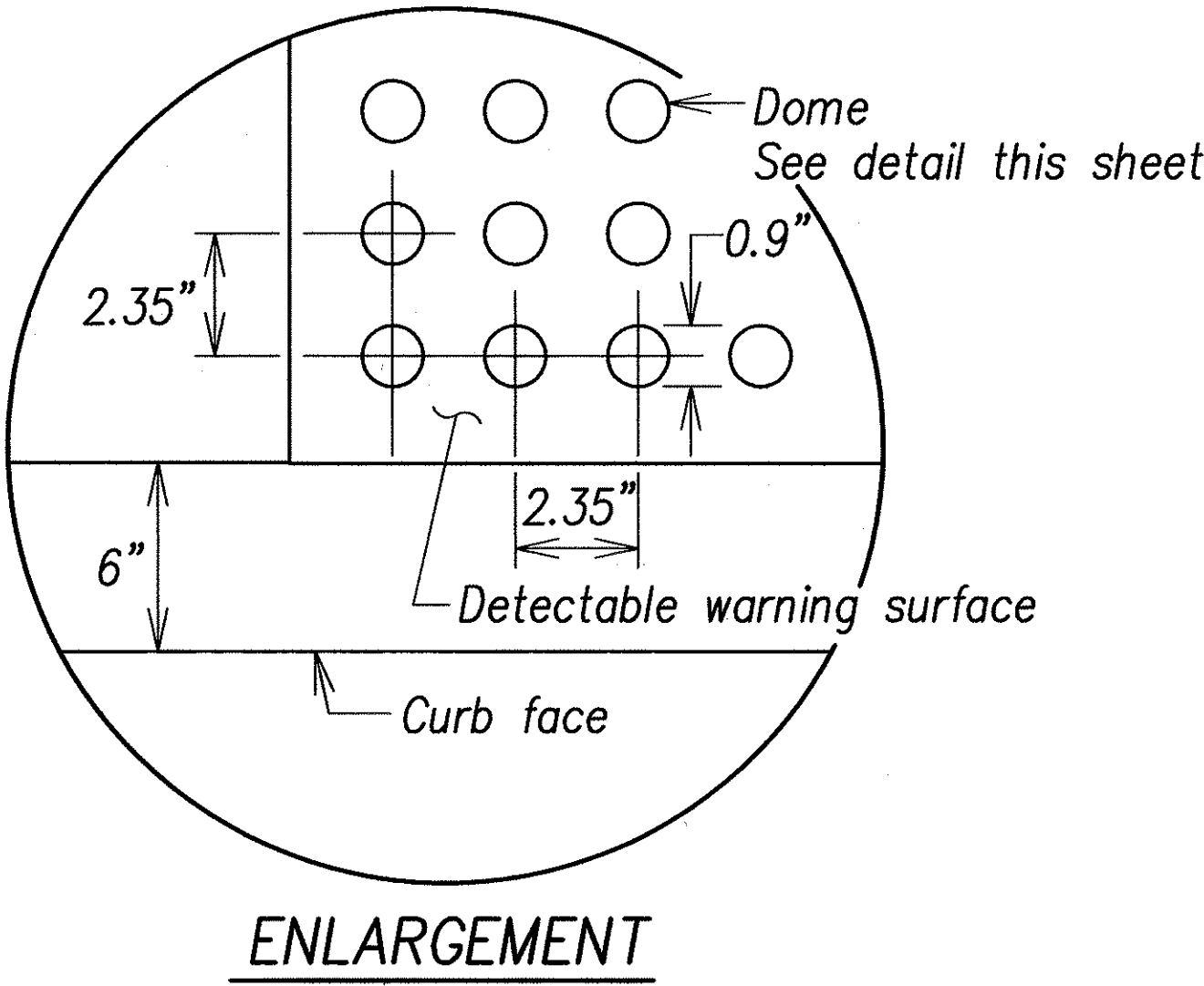
FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	CMAQ-0300(99)	2004	29	180



TYPICAL INSTALLATION OF DETECTABLE WARNINGS  
Not to Scale

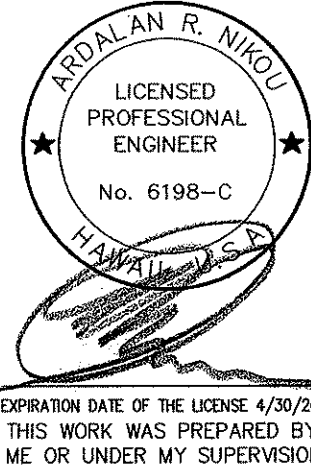
NOTES:

1. Detectable warnings shall be 24 inches in the direction of travel and extend the full width of the curb ramp or flush surface (does not include flares).
2. Truncated domes shall have a diameter of 0.9 inch at the bottom, a diameter of 0.4 inch at the top, a height of 0.2 inch and a center-to-center spacing of 2.35 inches measured along one side of a square arrangement.
3. Domes shall be aligned on a square grid in the predominant direction of travel to permit wheels to roll between the domes.
4. The detectable warning shall be "safety yellow".
5. The material used to provide visual contrast shall be an integral part of the detectable warning surface.
6. The detectable warning shall be located so that the edge nearest the curb line or other potential hazard is 6 to 8 inches from the curb line.



EARTH TECH

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

DETECTABLE WARNING DETAILS

Pedestrian Facilities & ADA Compliance  
at Various Locations on Oahu, Unit 8  
Fed. Aid Proj. No. CMAQ-0300(99)

Scale: As Noted Date: August 2004

SHEET No. C-28 OF 139 SHEETS

