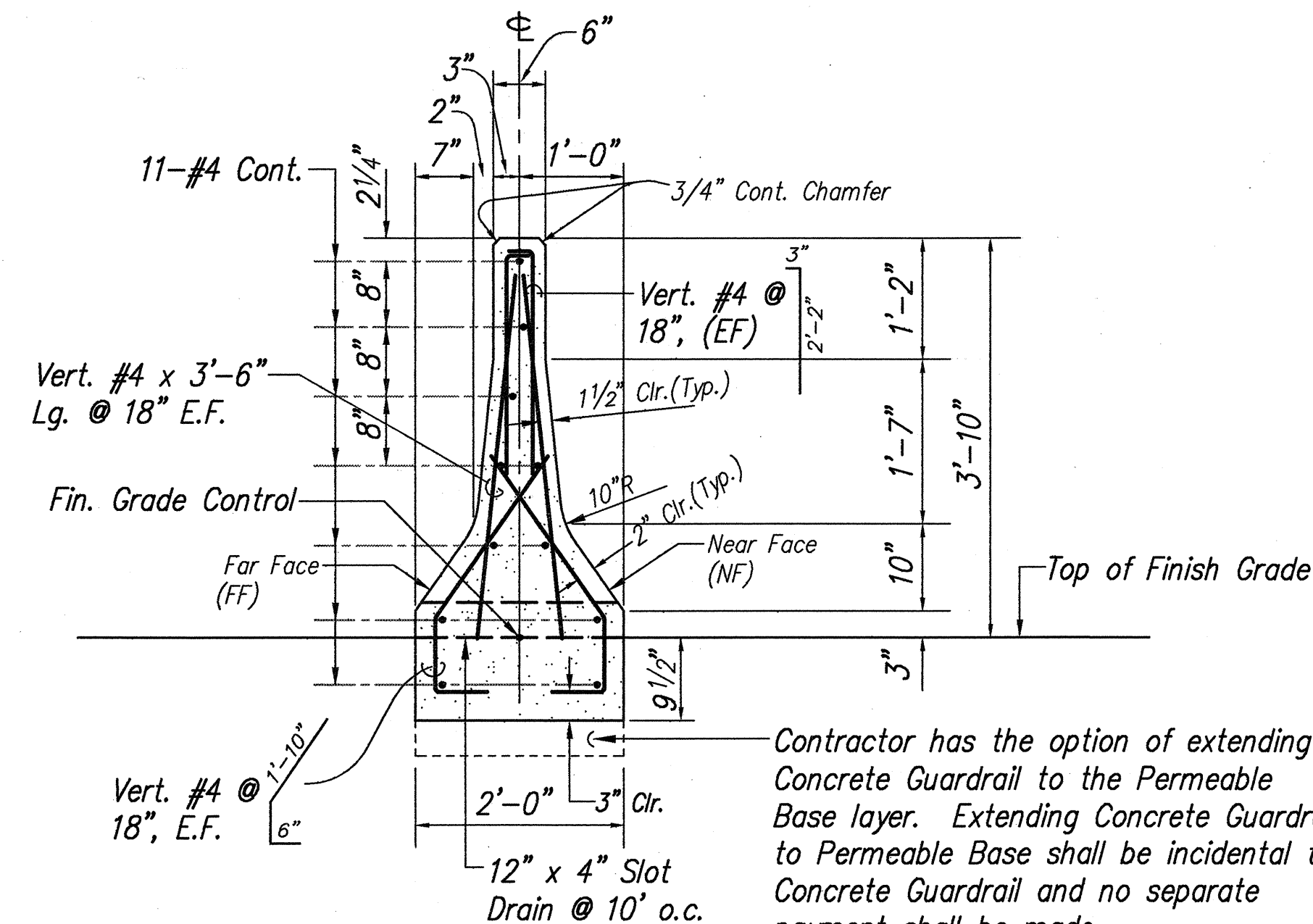
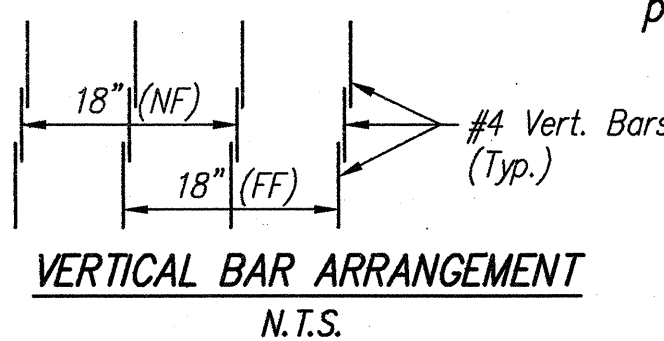


FED. ROAD DIS. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(26)	1994	3	238



Note:

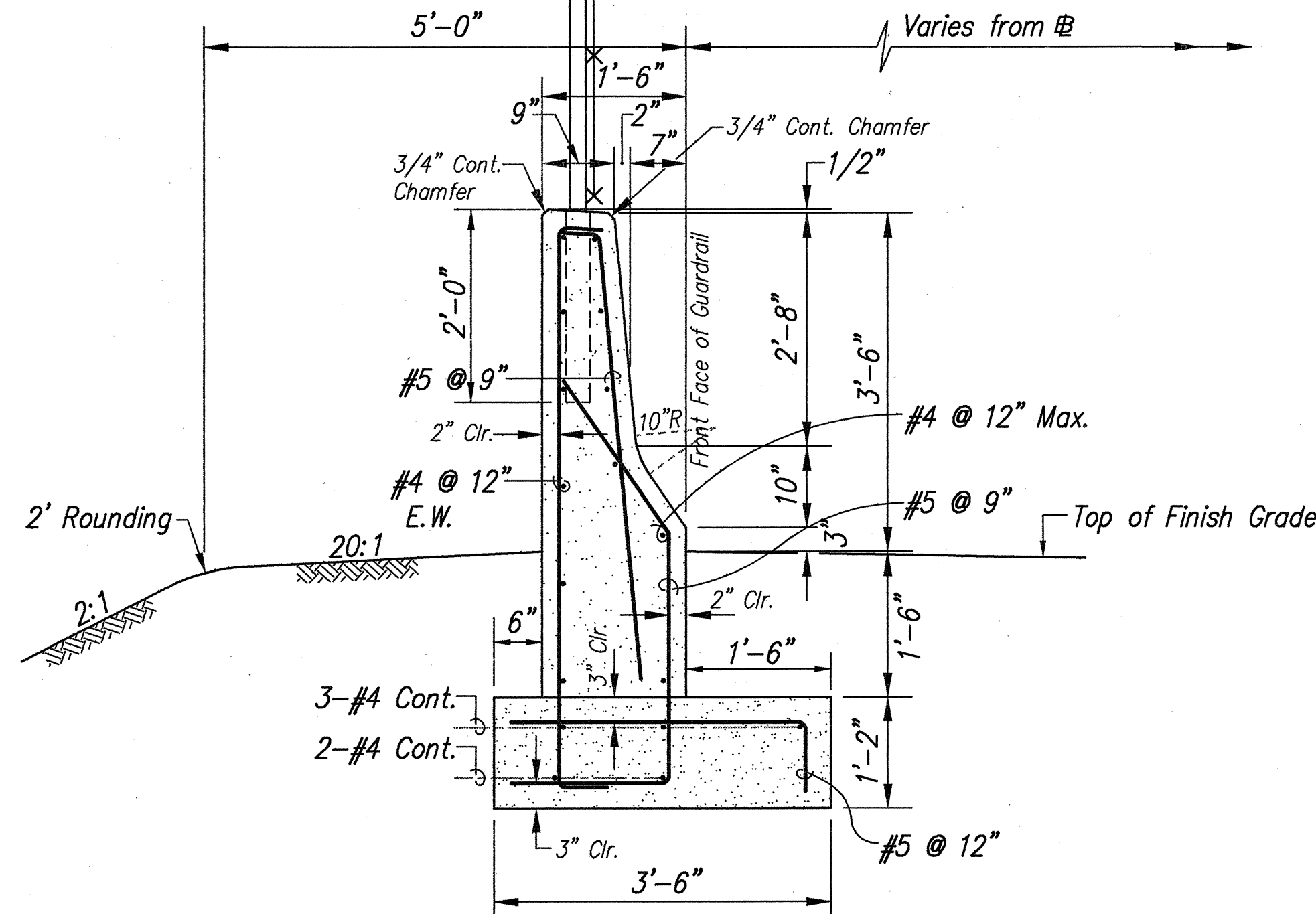
For Type 4 Concrete Guardrail, See Standard Plan TE-63 for General Notes, Expansion Joint Detail, Construction and Control Joint Detail, and Optional Construction Joint Details.



CONCRETE GUARDRAIL, TYPE 4G DETAIL

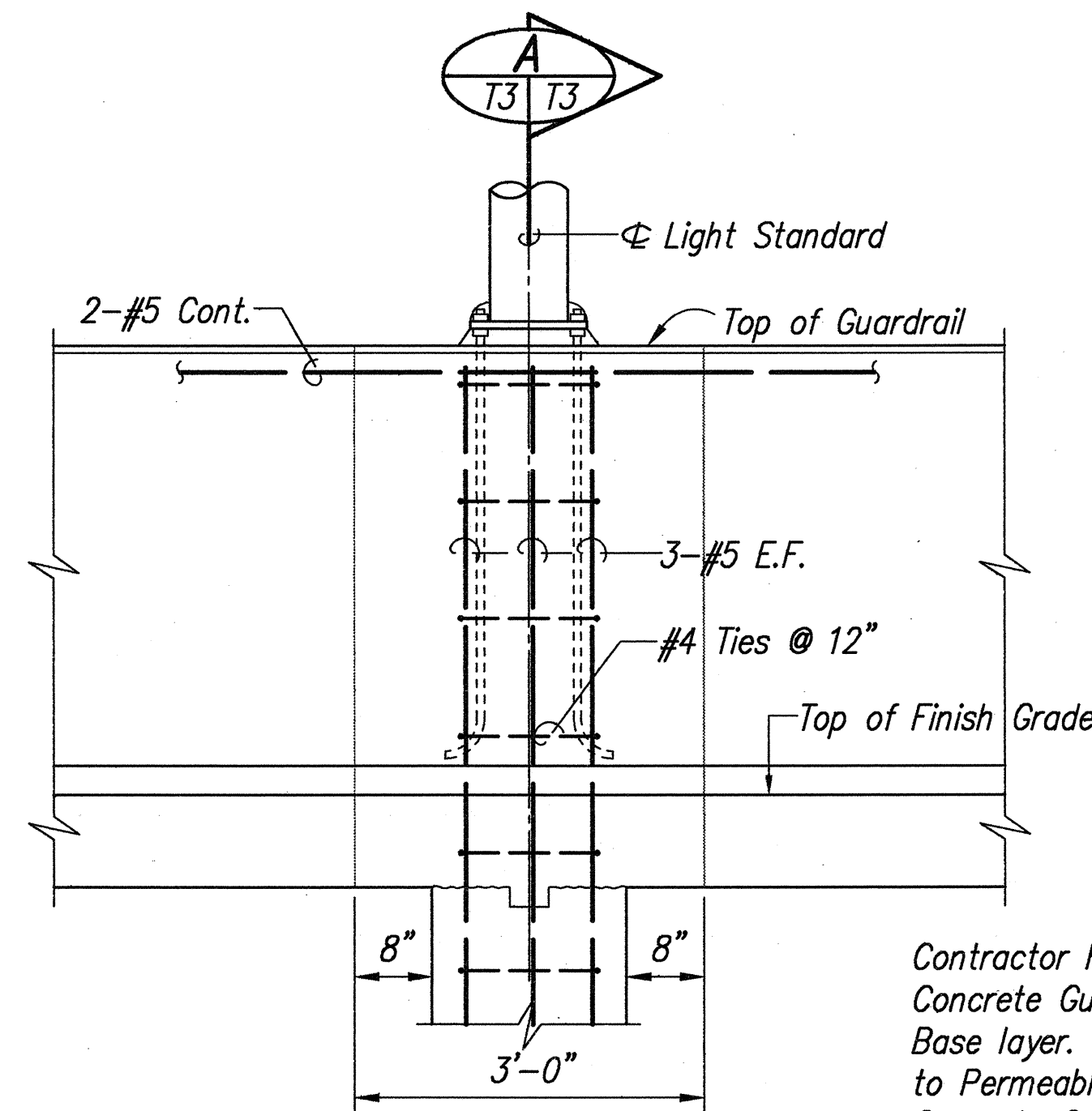
Scale: 3/4" = 1'-0"

Fence Post 10'-0" max. o.c.
See Standard Plan D-02
Typical Section (Conc. Ret. Wall)
for other Details not shown.

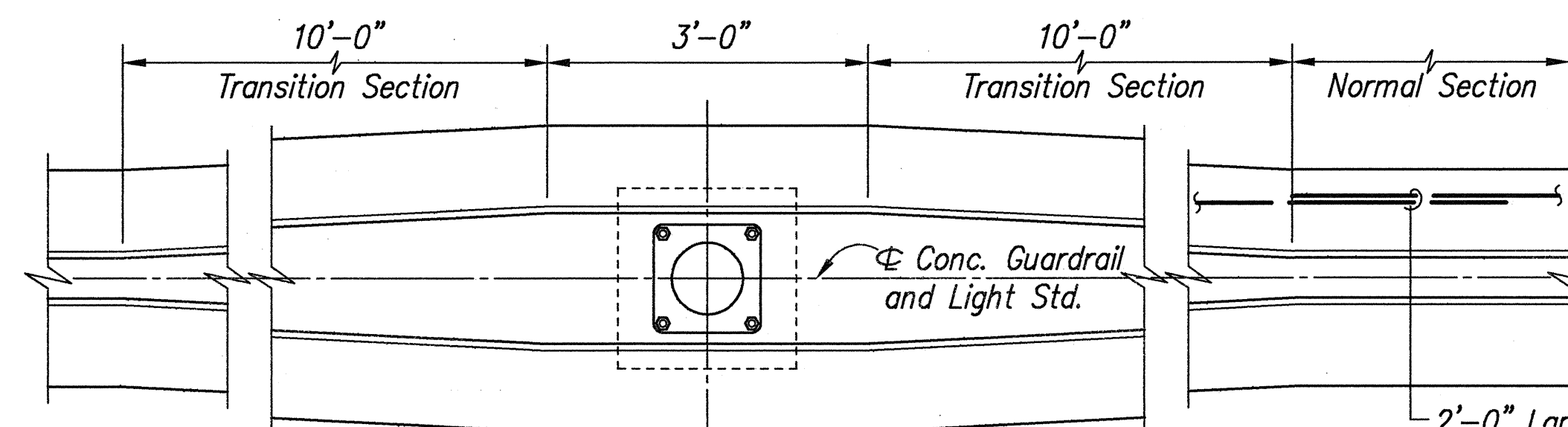


CONCRETE GUARDRAIL, TYPE 4H DETAIL

Scale: 3/4" = 1'-0"



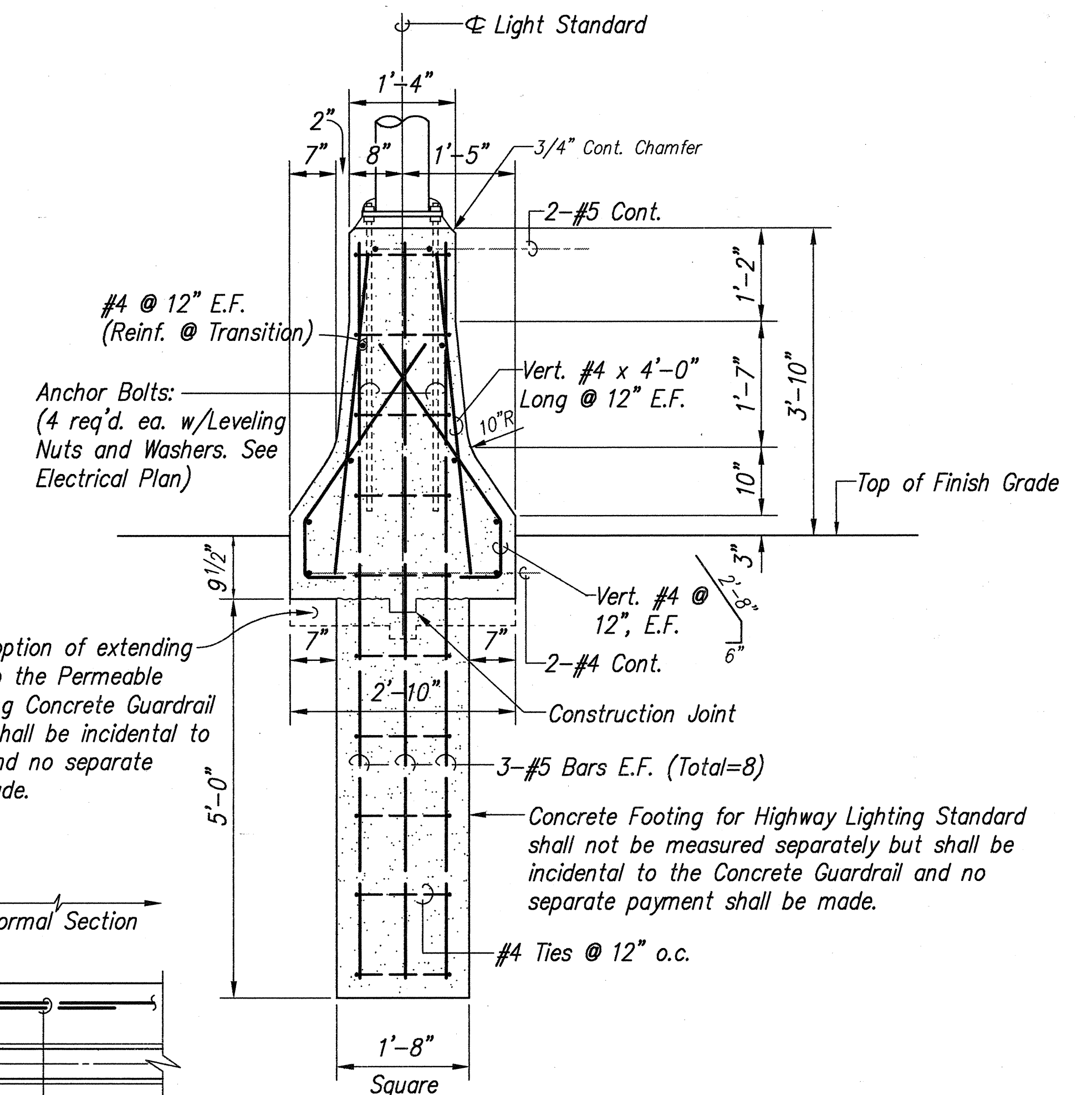
Contractor has the option of extending Concrete Guardrail to the Permeable Base layer. Extending Concrete Guardrail to Permeable Base shall be incidental to Concrete Guardrail and no separate payment shall be made.



PLAN

HIGHWAY LIGHTING STANDARD ON CONCRETE GUARDRAIL DETAIL

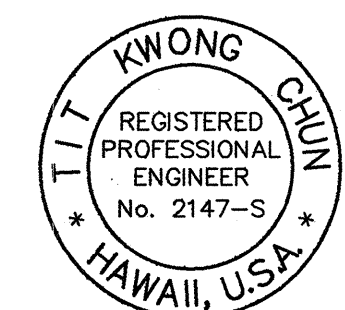
Scale: 3/4" = 1'-0"



Anchor Bolts:
(4 req'd. ea. w/Leveling Nuts and Washers. See Electrical Plan)

Concrete Footing for Highway Lighting Standard shall not be measured separately but shall be incidental to the Concrete Guardrail and no separate payment shall be made.

SECTION A



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ForEn, Inc.
dba PARK ENGINEERING

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ForEn, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY DETAILS

KAHEKILI HIGHWAY WIDENING
Likelike Hwy. to Vicinity of Haiku Road
F.A. PROJECT NO. NH-083-1(26)

SCALE: AS NOTED DATE: APRIL 1994

SHEET No. T3 OF T13 SHEETS

AS-BUILT 3

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
NOTED BY	
REVISIONS	
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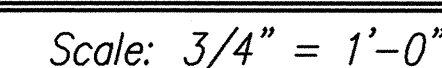
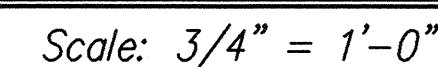
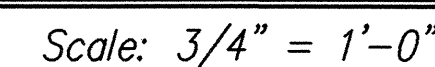
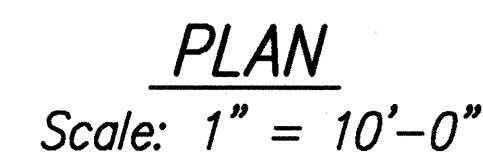


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OR UNDER MY SUPERVISION

Raymond J. Parker
ParEn, Inc.
dba PARK ENGINEERING

** SIGNATURE HAS BEEN DIGITIZED

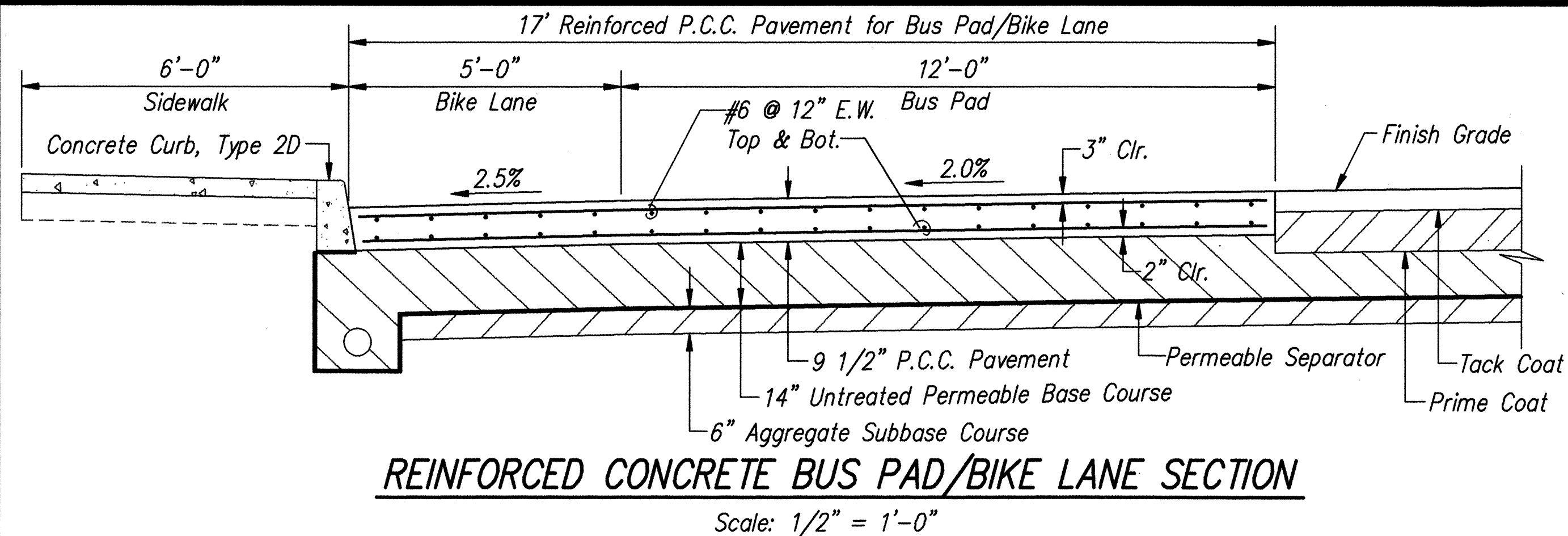
AS-BUILT C.O. 4 R S-1



1. Concrete shall be Class A.
2. All bolts to have cut washers unless otherwise noted.
3. Welded wire fabric of equivalent strength may be substituted for the barrier reinforcement in conformance with the applicable ASTM specifications and with the approval of the Engineer.
4. Portable Concrete Barrier shall be placed plumb.
5. Install pin connection to ends of Concrete Guardrail, Type 4G for Portable Concrete Barrier Connection.

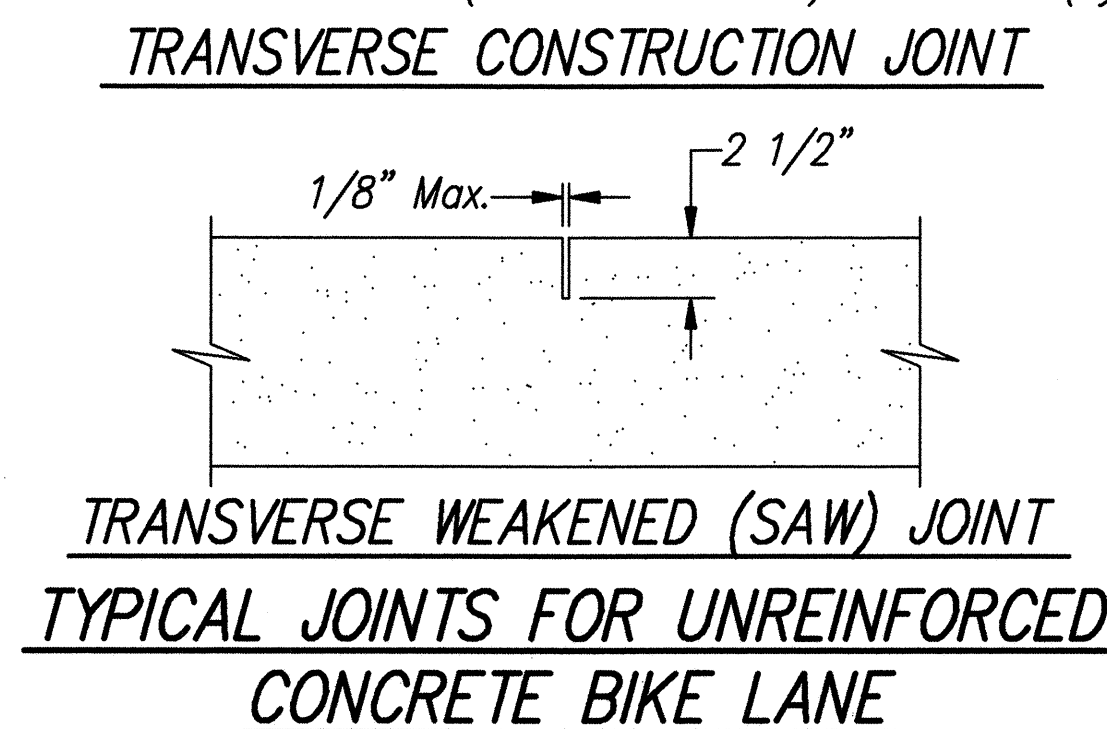
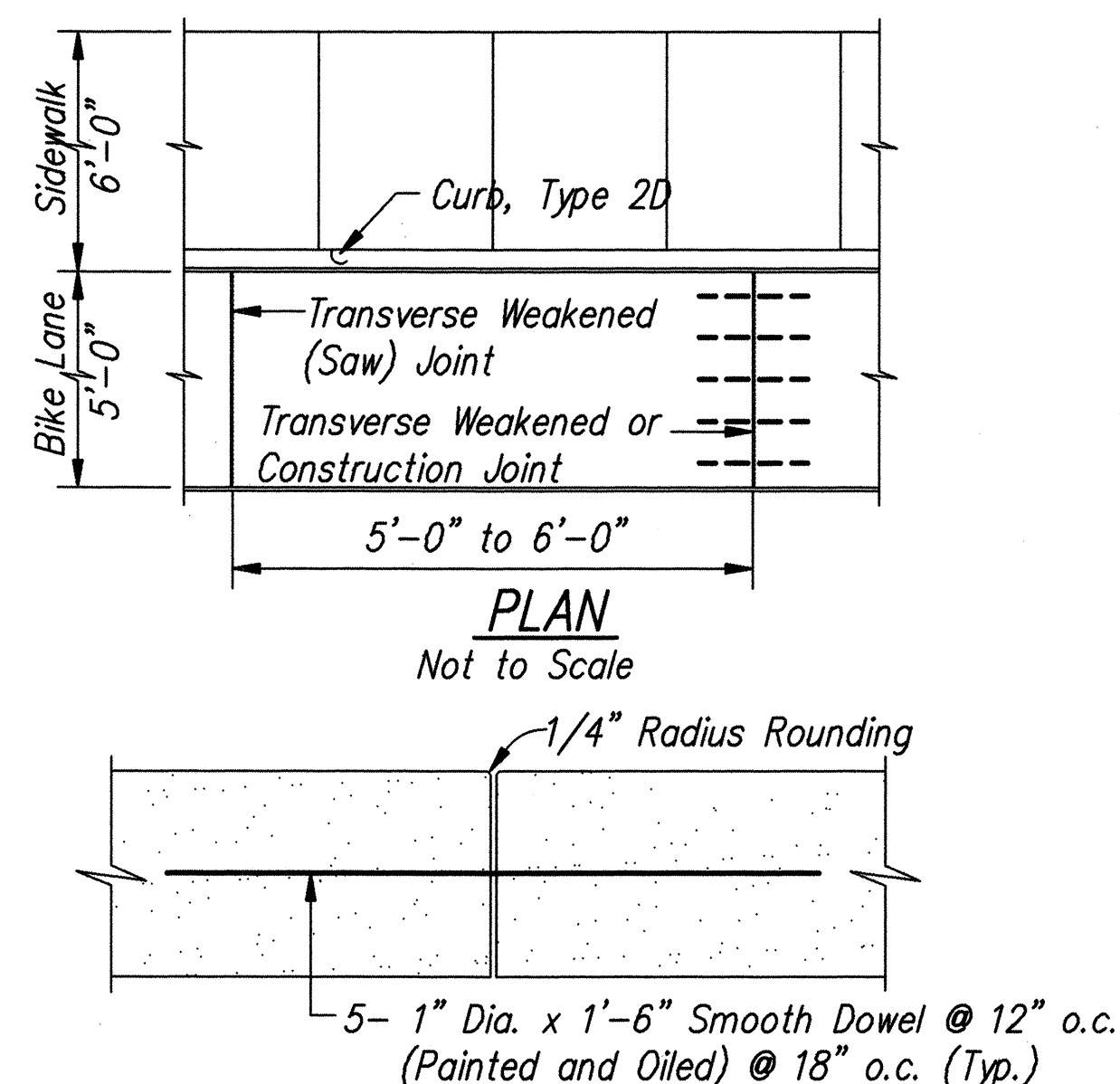
3/17/97	THIS SHEET SUPERCEDES SHEET T4
DATE	REVISION

FED. ROAD DIS. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(26)	1994	A025	238

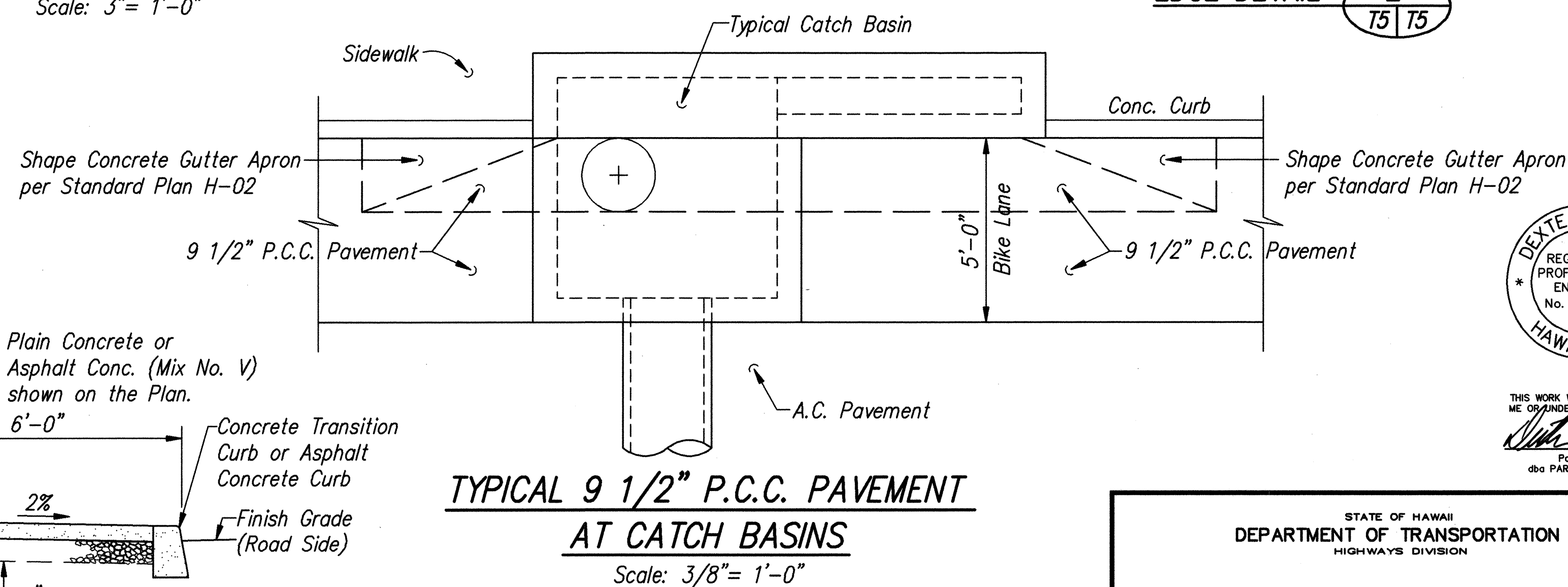
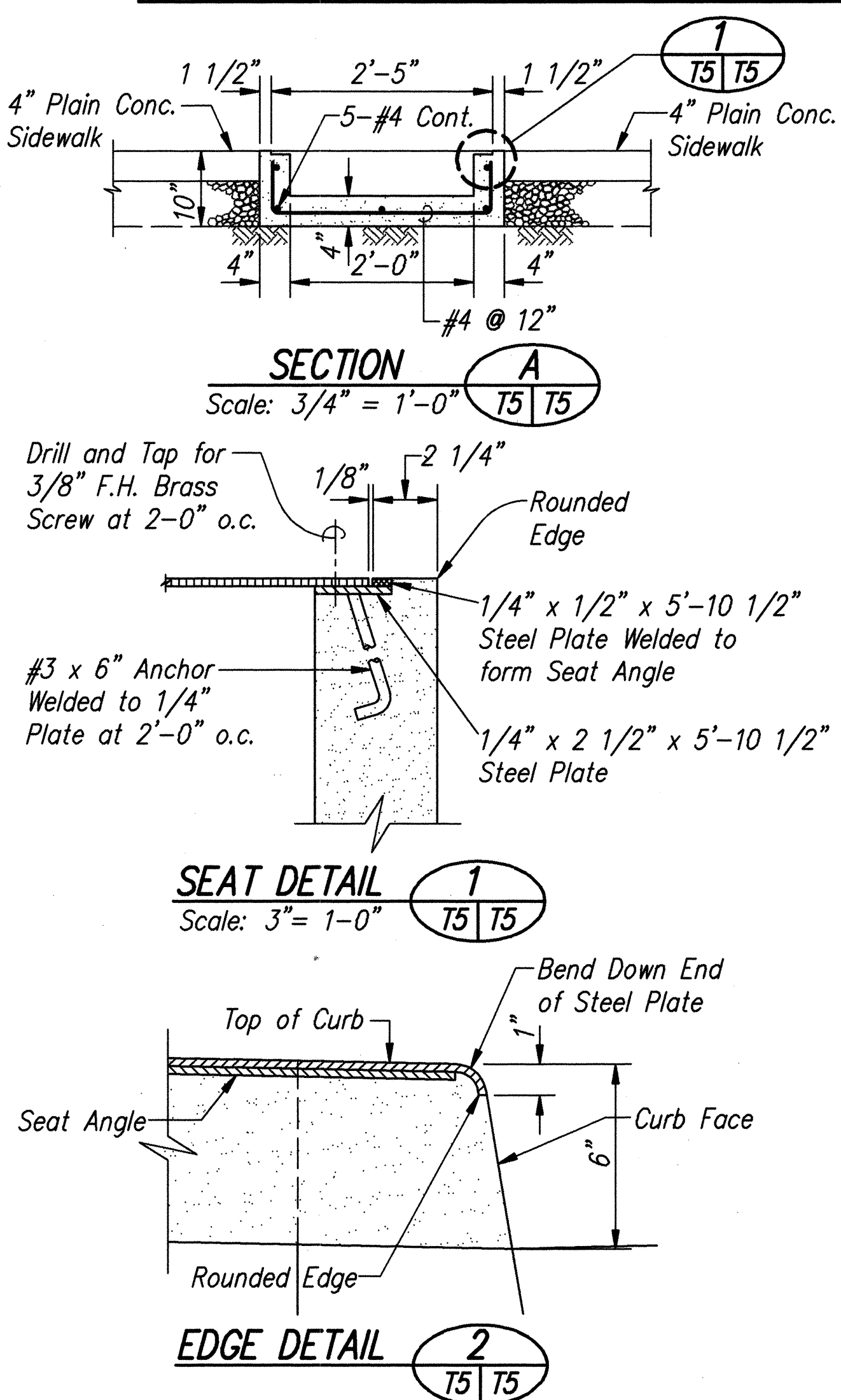
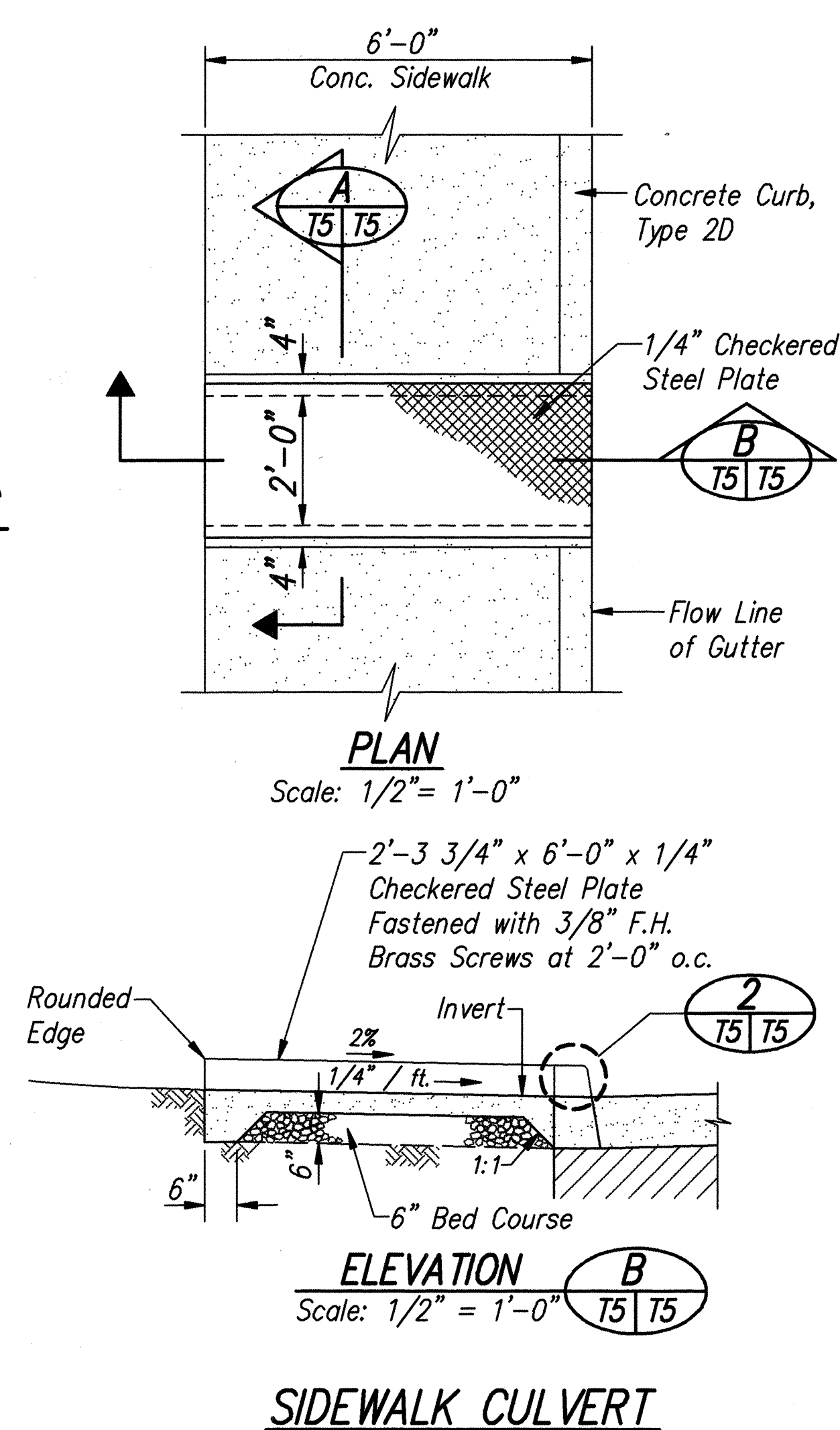
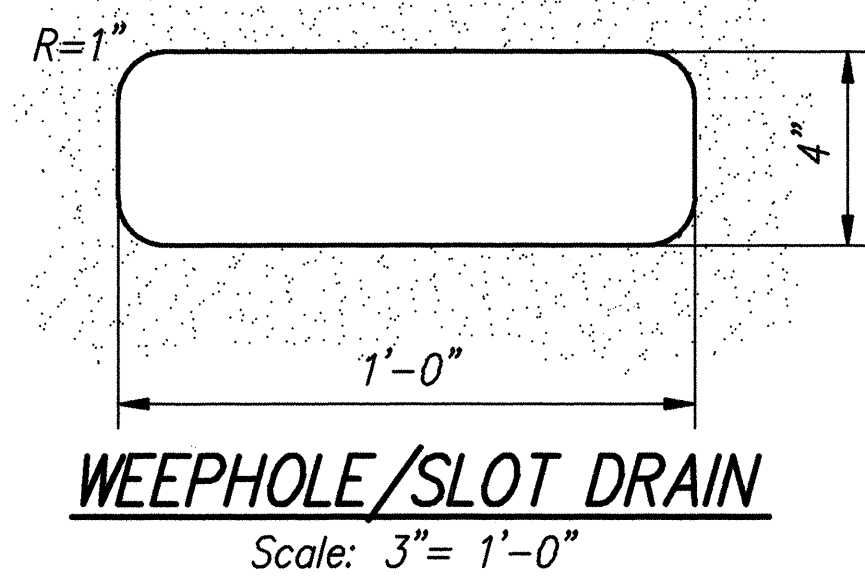
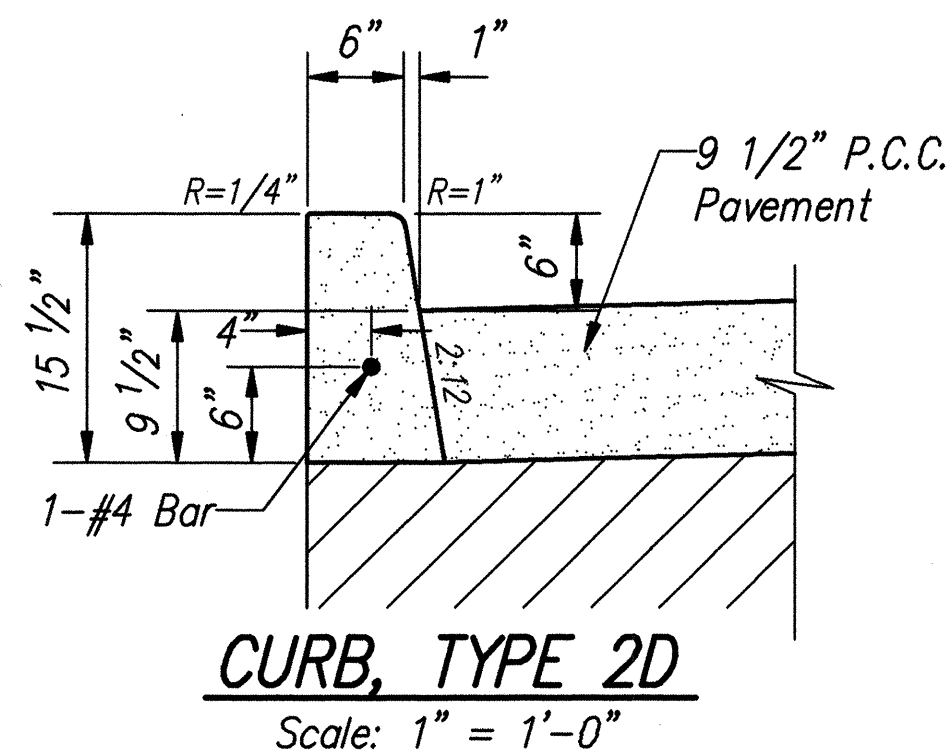
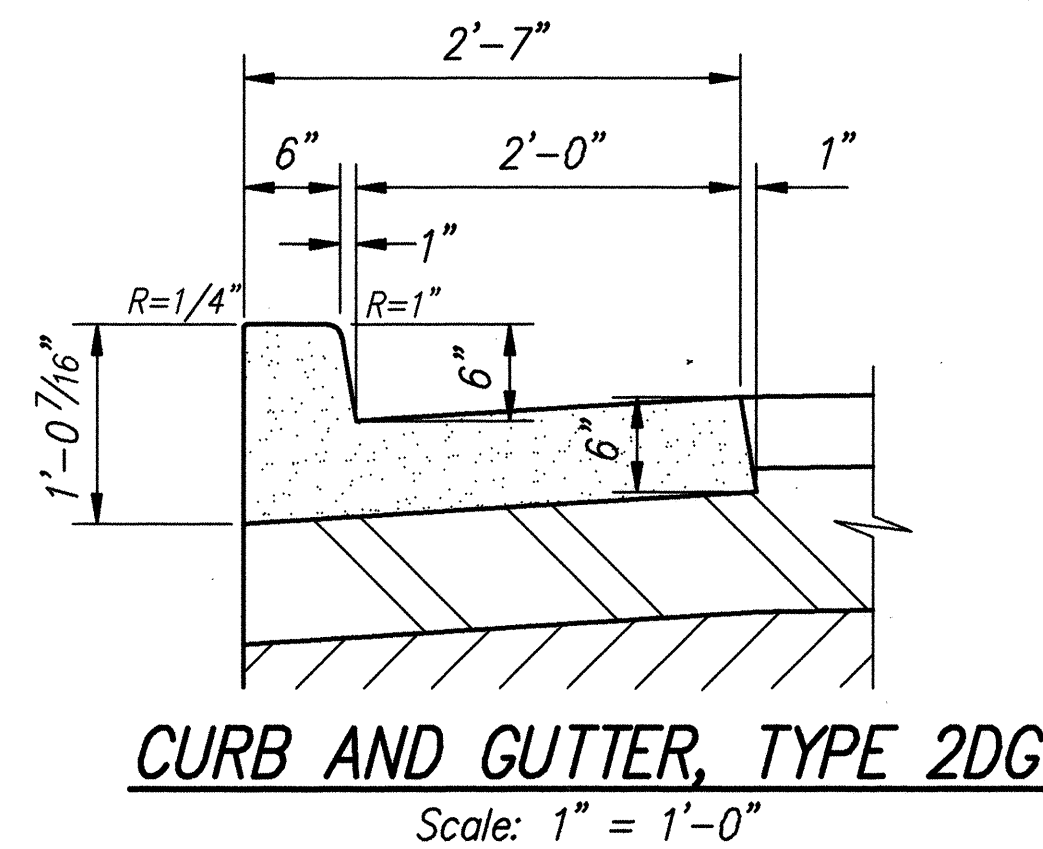
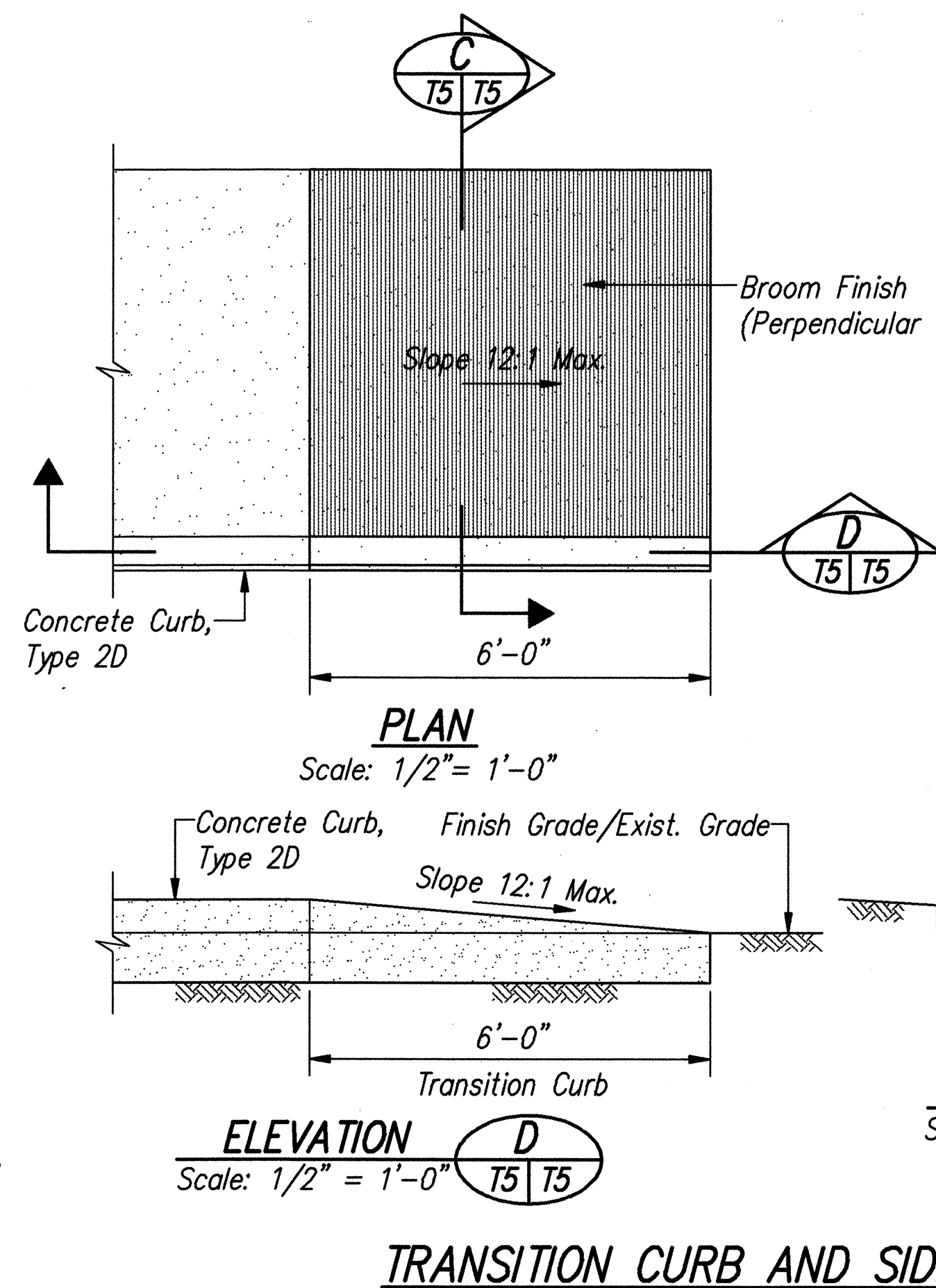
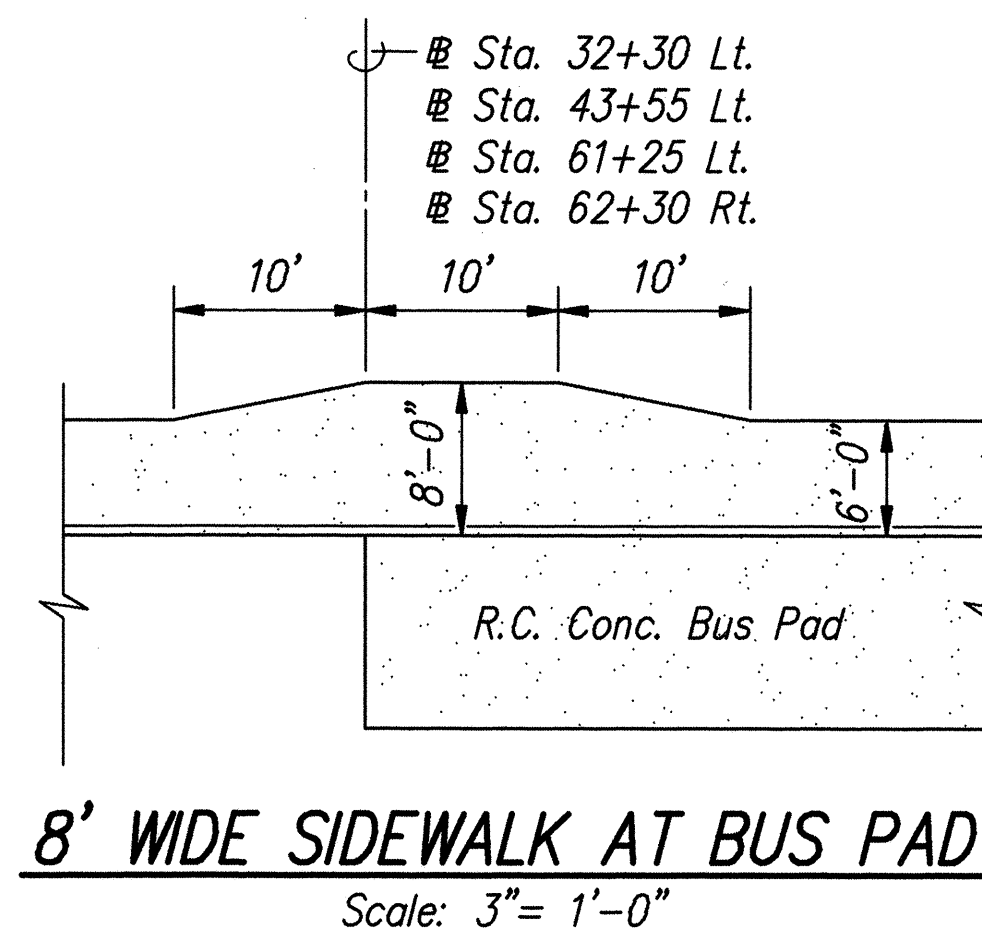


Reinforced P.C.C. Pavement Notes:

- 1- Rebars shall be continuous with no intermediate transverse joint.
- 2- Provide 15" wide Longitudinal Broom Finish along Curb where Pavement slope down toward Curb. In lieu of a Concrete Gutter Apron at Drainage Catch Basins, the P.C.C. Pavement shall be extended to the Catch Basin and shaped as the Concrete Gutter Apron.
- 3- Reinforcement for Bus Pad carried thru Bike Lane at Bus Pad sections only.



- Notes:**
- 1- Broom Finish similar to Reinforced P.C.C. Pavement.
 - 2- Transverse Construction Joints, as required, shall be located at the nearest Planned Transverse Weakened Joint. A Transverse Construction Joint shall be located at Junctions of the Reinforced Concrete Bus Pad Pavement and Unreinforced Concrete Bike Lane.
 - 3- Bike Lane shall be Unreinforced except at Bus Pad Pavement Areas.



ROADWAY DETAILS	
KAHEKILI HIGHWAY WIDENING Likelike Hwy. to Vicinity of Haiku Road F.A. PROJECT NO. NH-083-1(26) SCALE: AS NOTED DATE: APRIL 1994 SHEET No. T5 OF T13 SHEETS AS-BUILT ADD. 5	

DATE	REVISION
6/07/94	REVISED REINFORCED CONCRETE BUSPAD/BIKE LANE DETAILS AND NOTES.

[illegible]

ROADWAY DETAILS

KAHEKILI HIGHWAY WIDENING

Likeline Hwy. to Vicinity of Haiku Road

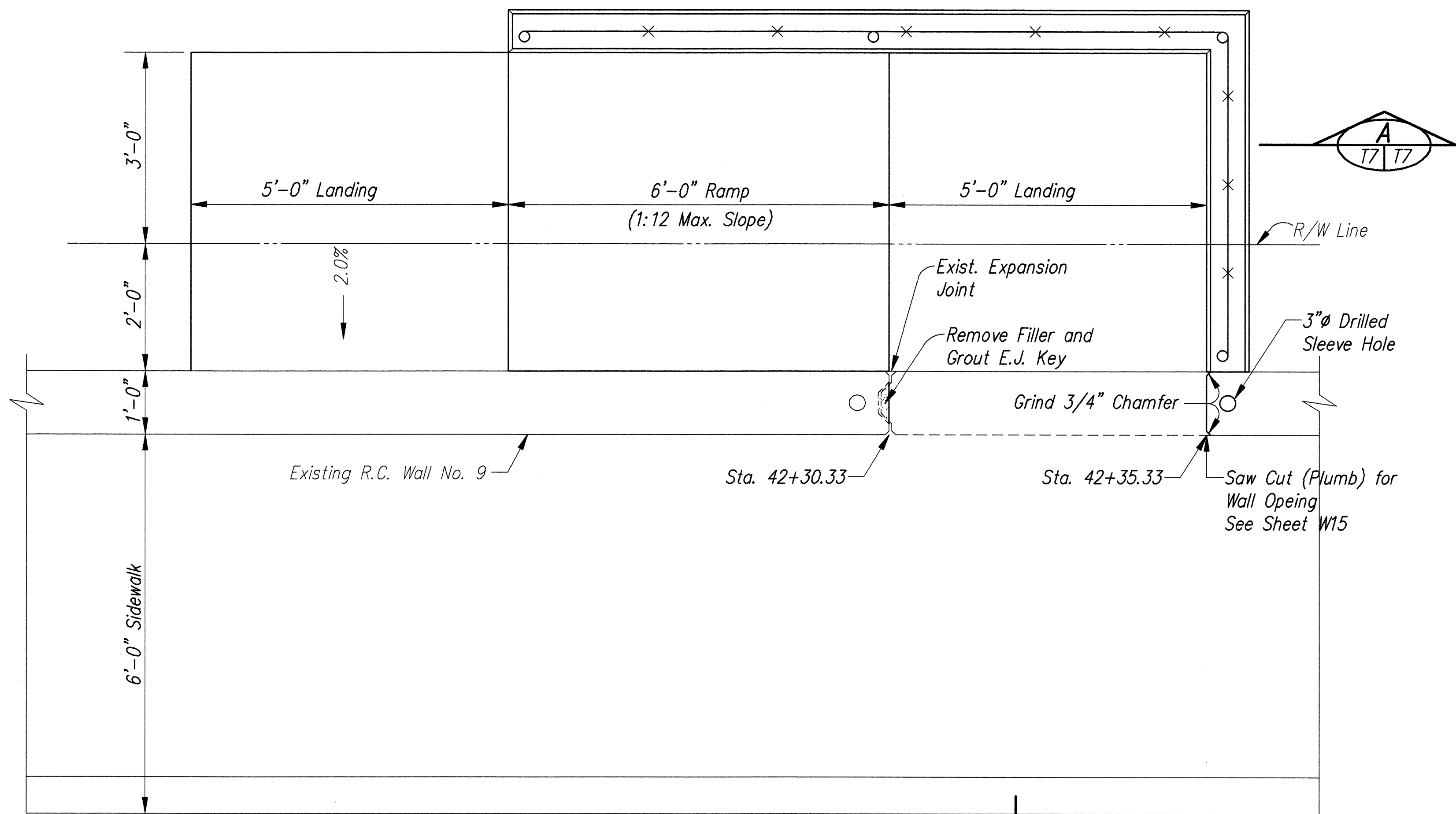
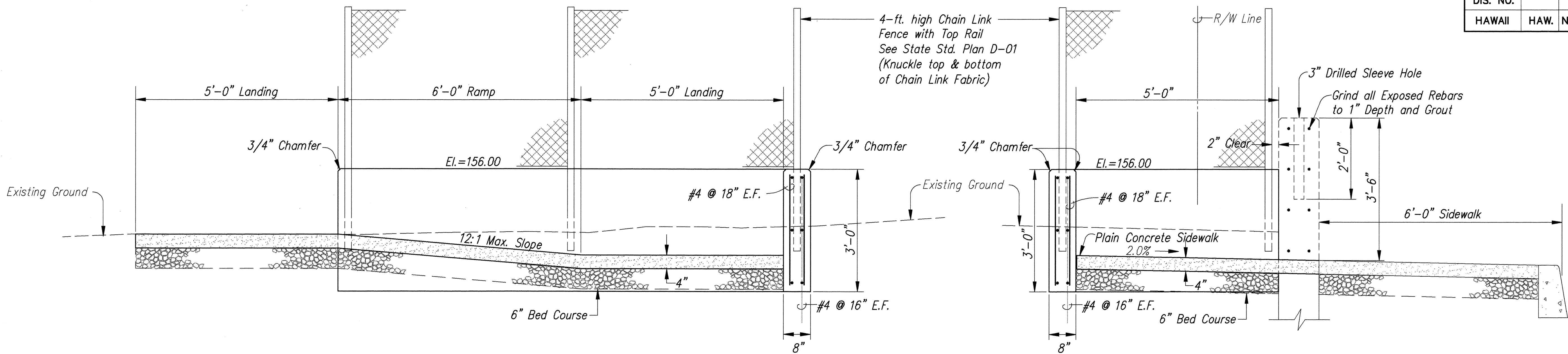
F.A. PROJECT NO. NH-083-1(26)

SCALE: AS NOTED DATE: APRIL 1994

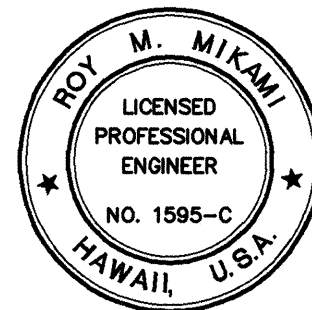
SHEET No. T6 OF T13 SHEETS

AS-BUILT ADD. 6

FED. ROAD DIS. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(26)	1994	7	238



PARK ACCESS
 STA. 42+30.33 TO STA. 42+35.33
 Scale: 3/4" = 1'-0"



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 OR UNDER MY SUPERVISION
Roy M. Mikami
 Roy M. Mikami, Inc.
 dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY DETAILS

KAHEKILI HIGHWAY WIDENING
Likelike Hwy. to Vicinity of Haiku Road
F.A. PROJECT NO. NH-083-1(26)
SCALE: AS NOTED DATE: APRIL 1994
SHEET No. T7A OF T13 SHEETS
AS-BUILT C.O. 7 S-1

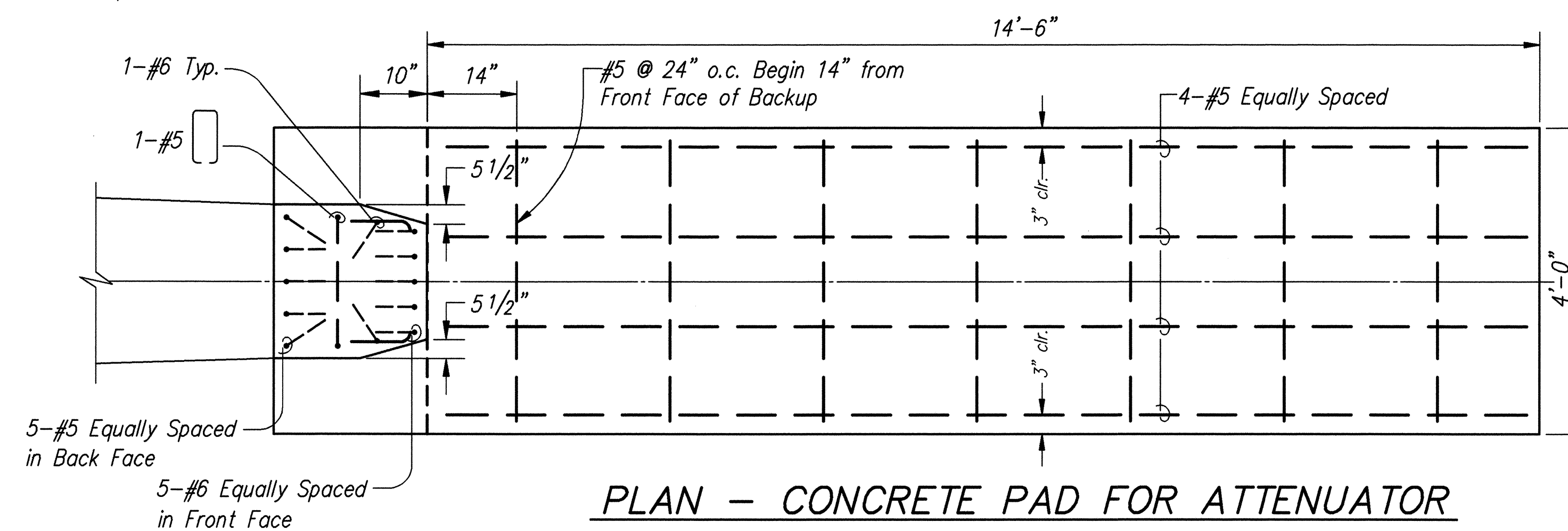
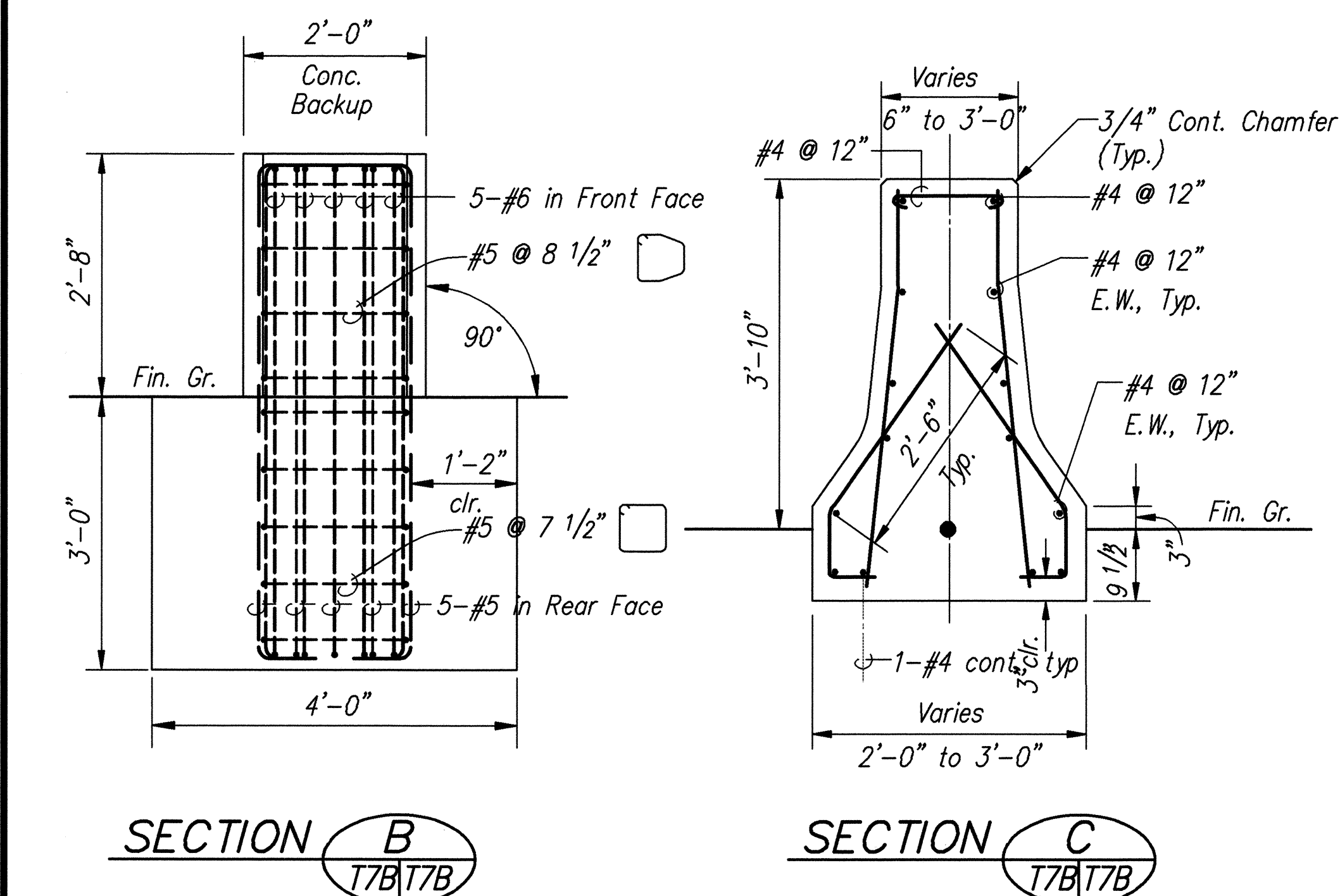
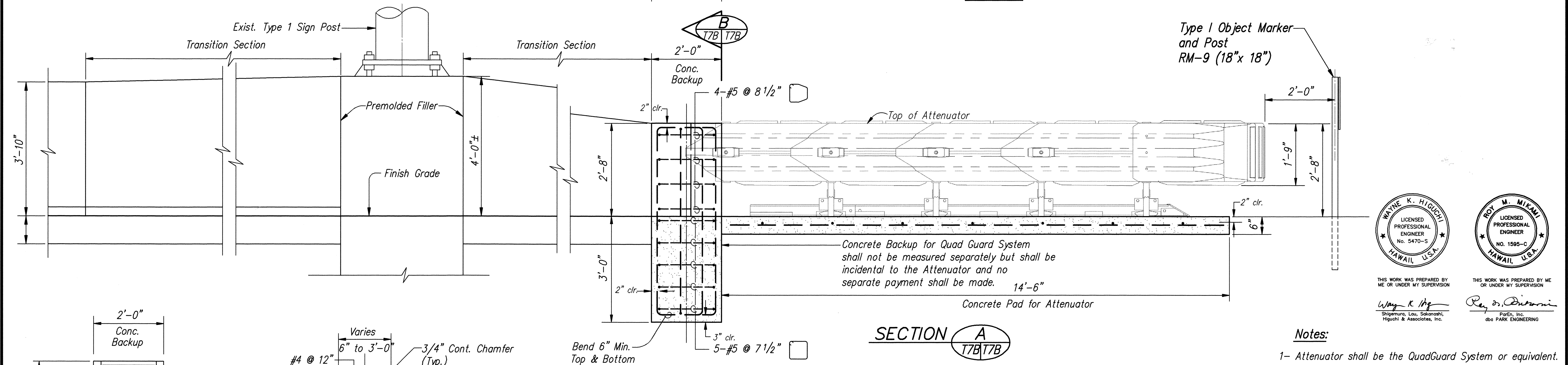
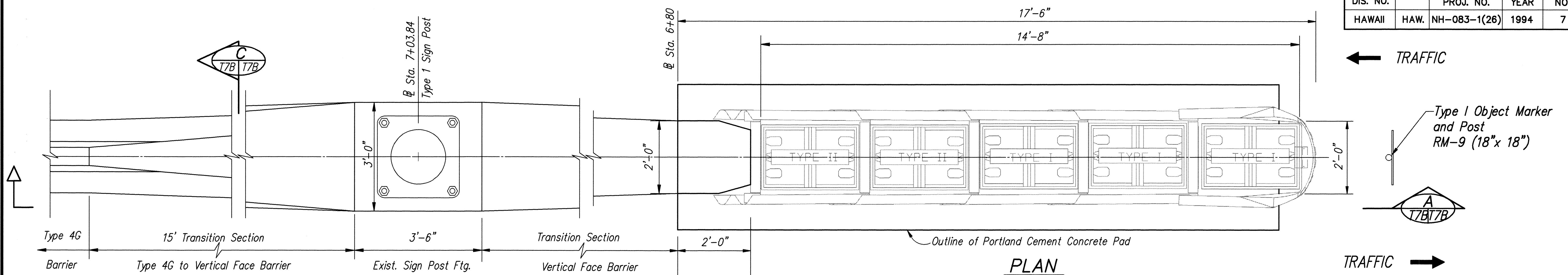
1/17/97	ADDED DETAIL FOR PARK ACCESS STA. 42+30.33 TO STA. 42+35.33
DATE	REVISION

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED BY	DRAWN BY	
NO.	DESIGNED BY	
	CHECKED BY	

ROTATED
BASE PT.

LIB: STATE\DOT\KAHEKILI\ADDENDUM
R001501 1/17/97 KSH

FED. ROAD DIS. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(26)	1994	7	238



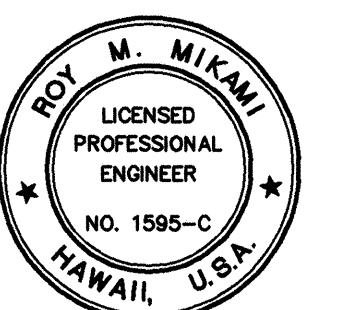
Notes:

- 1- Attenuator shall be the QuadGuard System or equivalent.
- 2- Additional designs and details required for the installation of the QuadGuard System shall be provided by the manufacturer.
- 3- The installation of the QuadGuard System and all appurtenances shall be in accordance with the manufacturer's recommendations and requirements.
- 4- Slope and grade of the concrete pad shall be determined in the field.



THIS WORK WAS PREPARED BY

Shigemura, Lau, Sakonashi,
Higuchi & Associates, Inc.



THIS WORK WAS PREPARED BY ME

Ray D. D'Amore
ParEn, Inc.
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY DETAILS

KAHEKILI HIGHWAY WIDENING
Likeline Hwy. to Vicinity of Haiku Road
F.A. PROJECT NO. NH-083-1(26)

SCALE: AS NOTED DATE: APRIL 1994

SHEET No. T7B OF T13 SHEETS

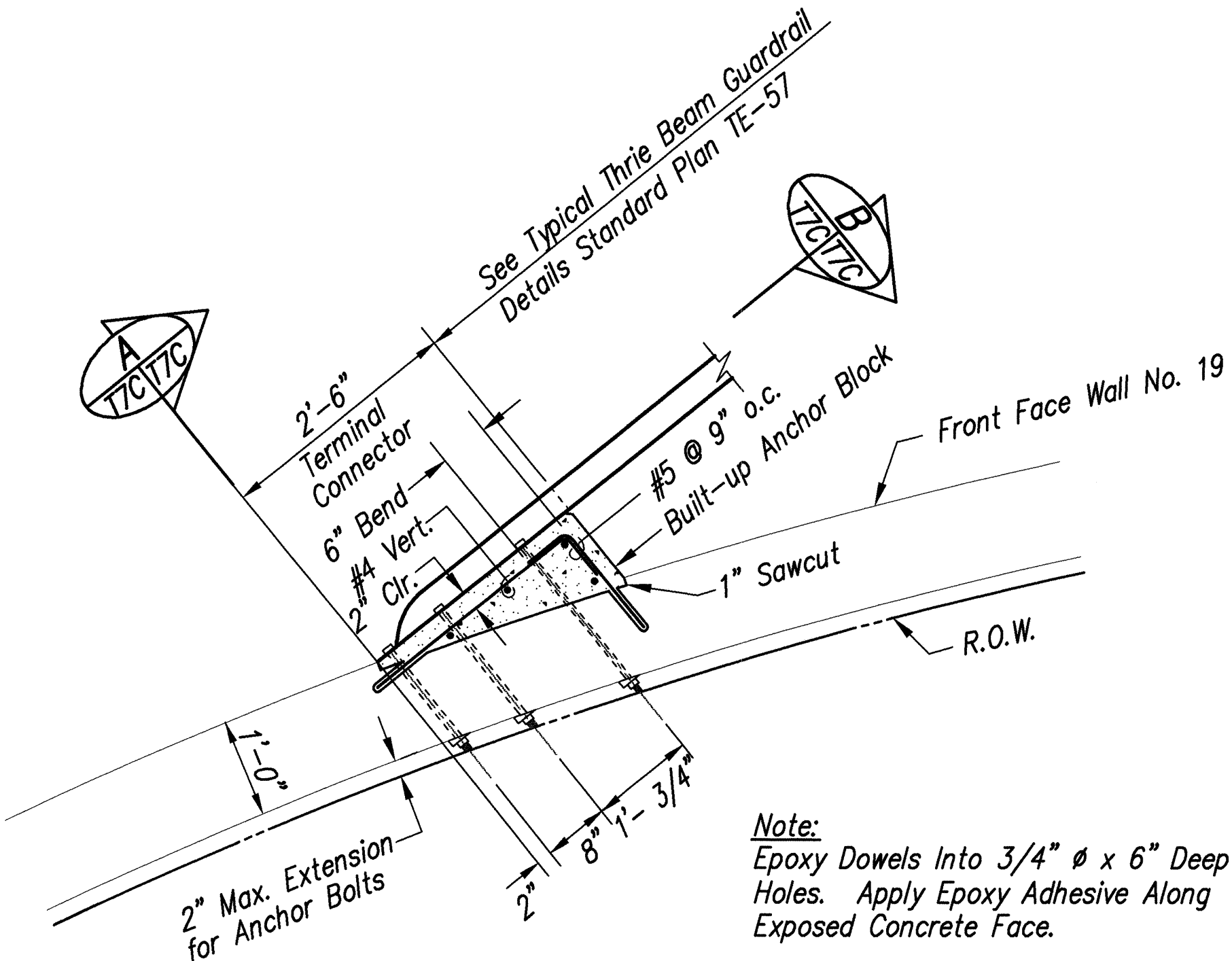
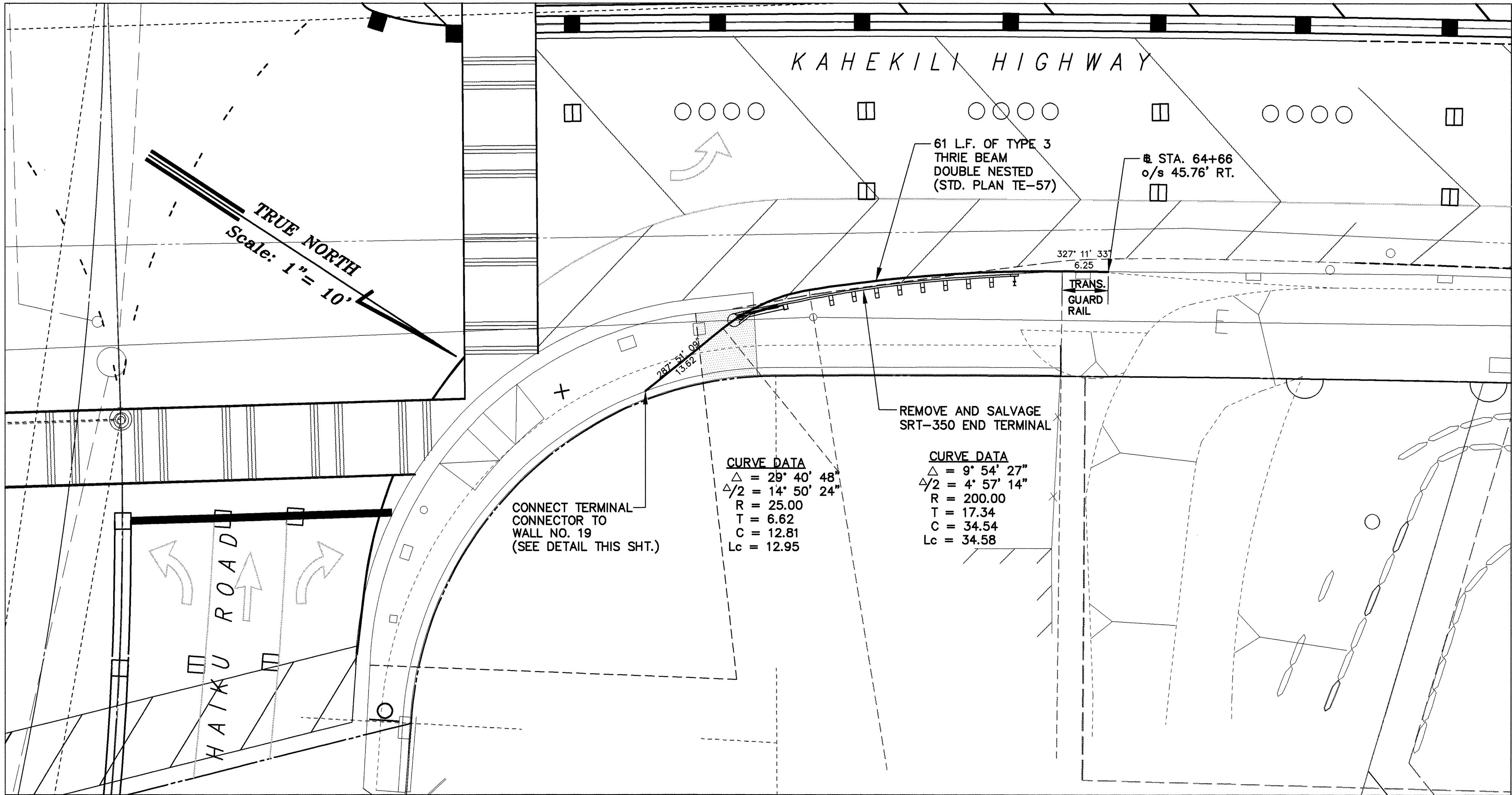
AS-BUILT C.O. 7 S-2

QUADGUARD SYSTEM ATTENUATOR AT STA. 6+80

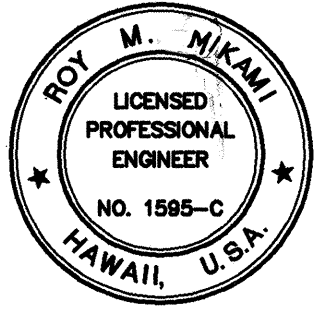
Scale: $3/4" = 1'-0"$

3/17/97	ADDED QUADGUARD ATTENUATOR AT STA 6+80
DATE	REVISION

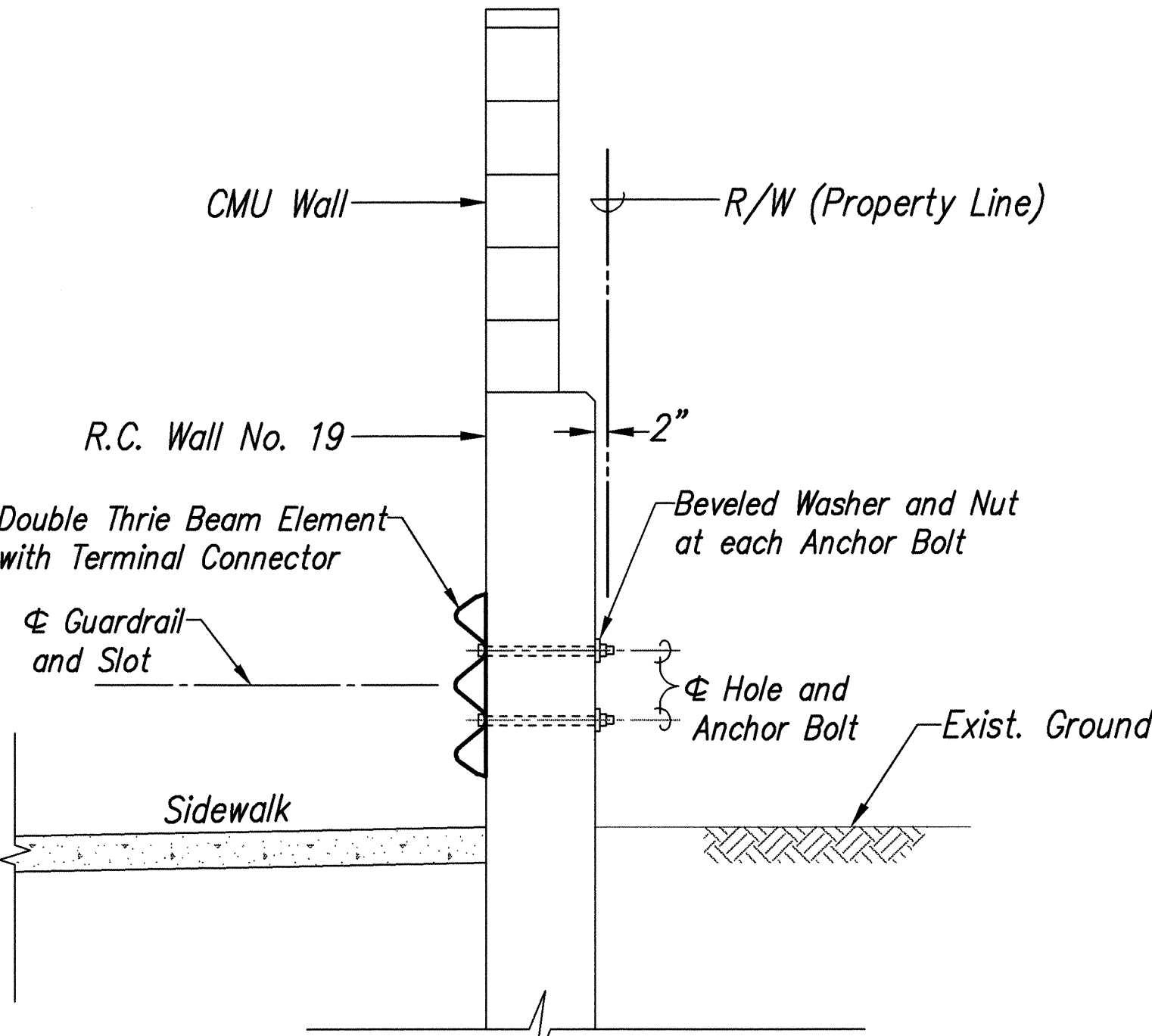
FED. ROAD DIS. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(26)	1994	7	238



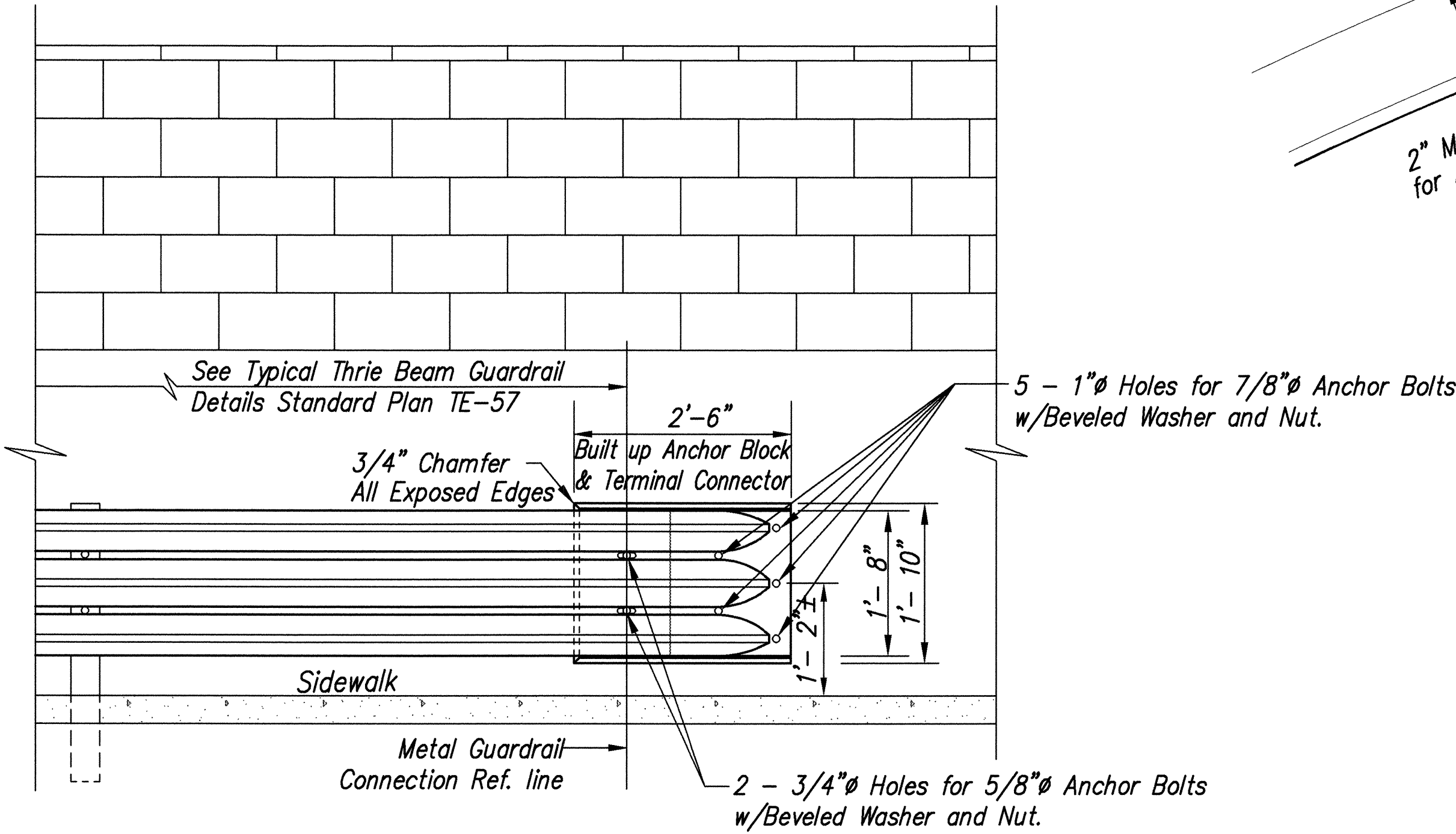
TERMINAL CONNECTOR DETAIL
SCALE: 3/4" = 1'-0"



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Ray M. Mikan
P.E., Inc.
dba PARK ENGINEERING



SECTION A
Scale: 3/4" = 1'-0" T7Q77C



SECTION B
Scale: 3/4" = 1'-0" T7Q77C

12/16/97	REPLACE SRT-350 WITH THRIE BEAM WITH WALL TERMINAL CONNECTOR.
DATE	REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

ROADWAY DETAILS

KAHEKILI HIGHWAY WIDENING

Likeline Hwy. to Vicinity of Haiku Road

F.A. PROJECT NO. NH-083-1(26)

SCALE: AS NOTED

DATE: APRIL 1994

SHEET No. T7C OF T7 SHEETS

AS-BUILT C.O. 7 S-3

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
APPROVED BY	
ORIGINAL PLAN	
NOTES	
QUANTITIES BY	
CHECKED BY	
NO.	

ROTATED BASE PT.

LIB: STATE DOT/KAHEKILI/ADDENDUM 12/17/97 KSJ