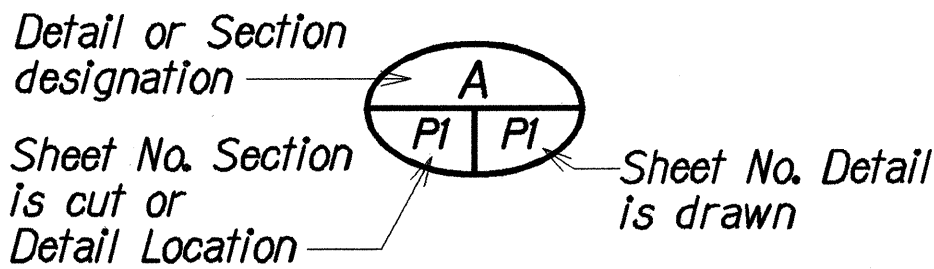


SYMBOLS AND ABBREVIATIONS



Abut.	Abutment	Jt.	Joint
Alt.	Alternate		
Approx.	Approximate	L	Length
		LBS./lb./bs.	Pound/Pounds
#	Baseline	L.F./Lin. Ft.	Linear Feet
Bal.	Balance	Lg.	Long
B.F.	Both Faces	Longit.	longitudinal
Bk.	Back		
Blf	Bolt	Max.	Maximum
Bm.	Beam	Min.	Minimum
B, Bot. Bott.	Bottom	Misc.	Miscellaneous
Br.	Bridge	No.#	Number
		N.T.S.	Not To Scale
¢	Center Line	o.c.	On Center
C.F.	Cubic Feet		
Cl., Clr.	Clear	PL	Plate
Col.	Column	Pvmt.	Pavement
Conc.	Concrete		
Conn.	Connection	Rdwy	Roadway
Const.	Construction	Ref.	Reference
Cont.	Continuous	Reinf.	Reinforcement
CRM	Cement Rubble Masonry	Ret.	Retaining
C.Y., Cu. Yd.	Cubic Yards	Req'd.	Required
		Rt.	Right
Def.	Detail	R/W	Right Of Way
Dia., ø	Diameter		
		Sect.	Section
EA, Ea., ea.	Each	SF	Square Feet
E.F.	Each Face	Sht.	Sheet
El., Elev.	Elevation	Spc.	Space
Eq.	Equal	Spcd.	Spaced
Est.	Estimated	Spcg.	Spacing
Exist.	Existing	Spec.	Specification
		Sta.	Station
F.F.	Front Face	Std.	Standard
Fin.	Finish	Strr.	Stirrup
Fin. Gr.	Finish Grade	Str.	Straight
		Struct.	Structural
Ga.	Gage, Gauge	Typ.	Typical
Galv.	Galvanized	Var.	Varies
Gr.	Grade	Vert.	Vertical
Grd.	Ground		
Horiz.	Horizontal	w/	With
Hwy.	Highway	W.W.	Wingwall
I.F.	Inside Face		
In.	Inch		
Int.	Interior		

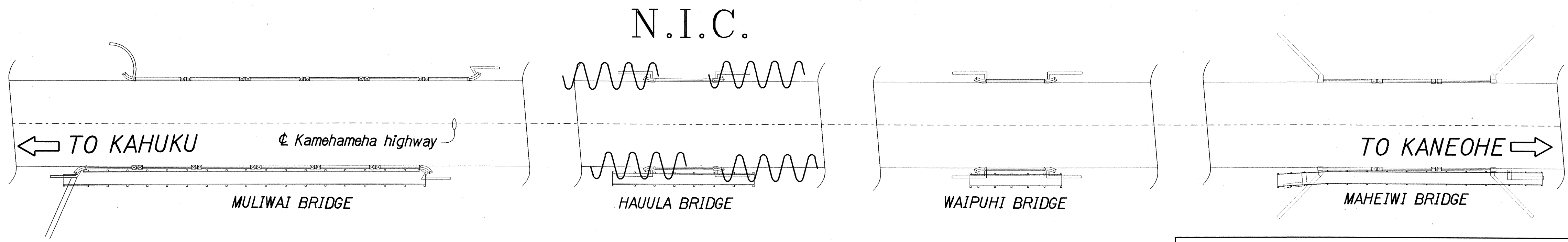
GENERAL NOTES:

DESIGN SPECIFICATIONS:
Hawaii Department of Transportation, Standard Specifications for Road And Bridge Construction, 1994, together with Special Provisions prepared for this contract.
AASHTO LRFD 1994 Bridge Design Specifications - U.S. Units First Edition 1994 and its subsequent 1996 Interim Revisions with interim supplements and modifications by the Highways Division, Department of Transportation, State of Hawaii.

- DESIGN LOADS:
- A. Dead Load: Concrete: 160 pcf
Timber: 50 pcf
Steel: 490 pcf
- MATERIALS:
- A. All concrete shall be Class A.
 - B. All reinforcing shall be ASTM A 615, Grade 60.
 - C. All structural Steel shall be ASTM A 36 hot-dip galvanized after fabrication, unless noted otherwise.
 - D. All anchor bolts, carriage bolts, washers and nuts shall be ASTM A 307 hot-dip galvanized after fabrication unless noted otherwise.
 - E. All timber to be Douglas Fir select structural grade S4S wolmanized.
 - F. All nails used shall be hot-dip galvanized unless noted otherwise.

- CONSTRUCTION NOTES:
- A. See Standard Specifications and Special Provisions.
 - B. Paint - See Special Provisions.
 - C. Except as noted otherwise, all welds to be 1/16" continuous all around fillet weld. It shall conform to the latest Specifications For Welded Highway And Railway Bridge Design Construction and Repair of The American Welding Society.
 - D. The Contractor shall be solely responsible in verifying the location of all utility lines and notify the respective owners before commencing with any work.
 - E. The Contractor shall coordinate his work with that performed concurrently on adjacent sites.
 - F. The Contractor shall verify all site conditions and not rely upon these Plans for access road, stream location, etc. conditions may differ from those shown due to work performed by other Contracts.
 - G. Unless noted otherwise, all exposed concrete edges shall be chamfered 3/4".
 - H. Except as noted otherwise, all vertical dimensions are measured plumb.
 - I. Demolition of existing footbridge structures shall include demolishing, removing and disposing of existing footbridge railings, planks, posts, nailers, brackets and connectors. The contractor is allowed to abandon in place existing anchor plates and bolts which do not interfere with new construction. Existing CRM walls and caps are not to be demolished except as necessary for new construction. Demolition is to be considered incidental and included in the bid items 520.0001, ~~520.0002~~, 520.0003 & 520.0004.
- GENERAL:
- A. All items noted incidental will not be paid for separately.
 - B. For Estimated Quantities see Specifications.

DATE	JUN 1997
SURVEY PLOTTED BY	CHO
DRAWN BY	CHO
TRACED BY	CHO
NOTE BOOK	CHO
QUANTITIES BY	CHO
CHECKED BY	CHO
Scale	As Noted

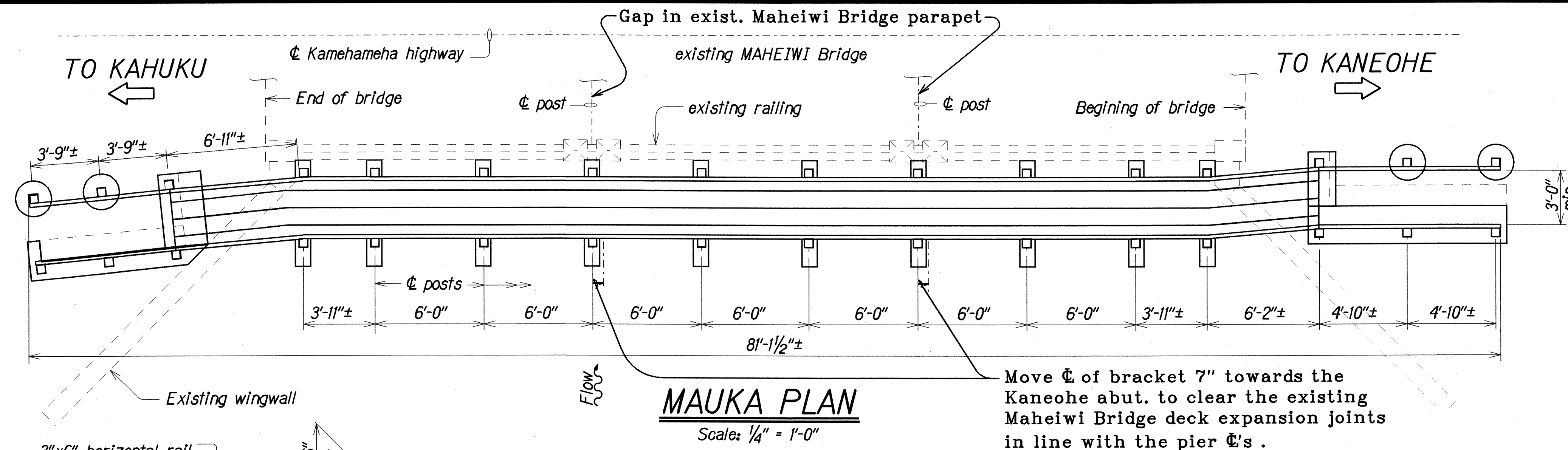


LAYOUT PLAN
Scale: Not to scale

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
FOOT BRIDGE REPLACEMENT
GENERAL NOTES, SYMBOLS, ABBREVIATIONS & LAYOUT PLAN
KAMEHAMEHA HIGHWAY
REPLACE WOODEN FOOT BRIDGE
MAHEIWI, WAIPUHI, HAUULA & MULIWAI BRIDGES
Project No. 83C-01-97M
Scale: As Noted Date: JUNE, 1997
SHEET No. PI OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 5	13

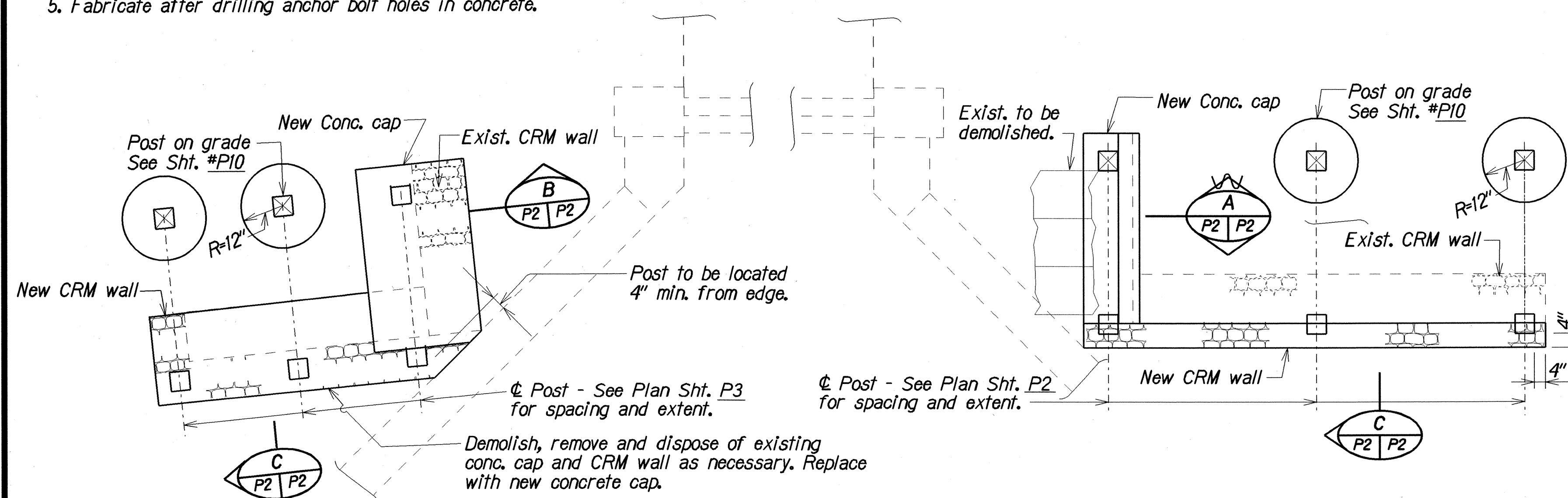


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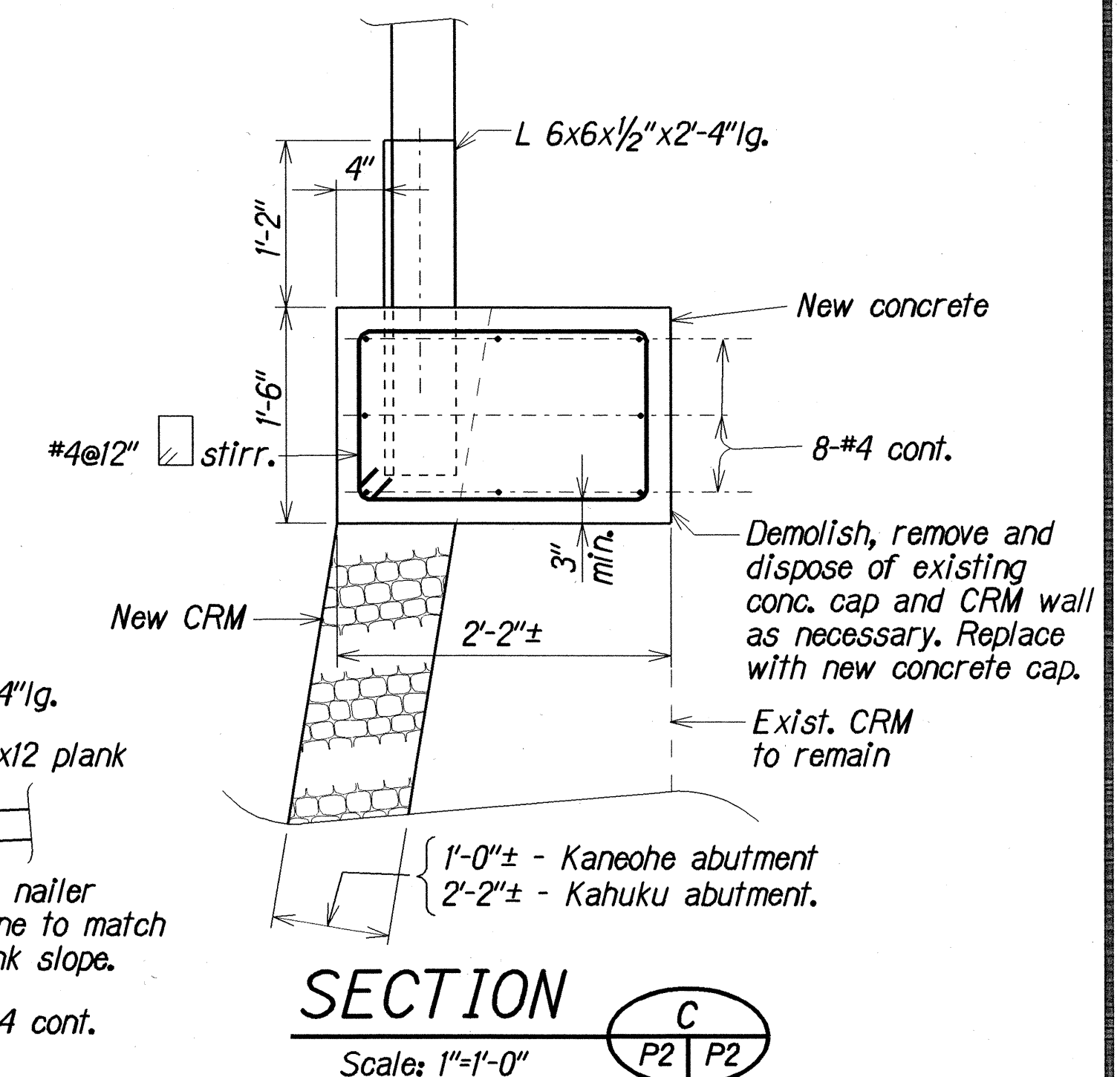
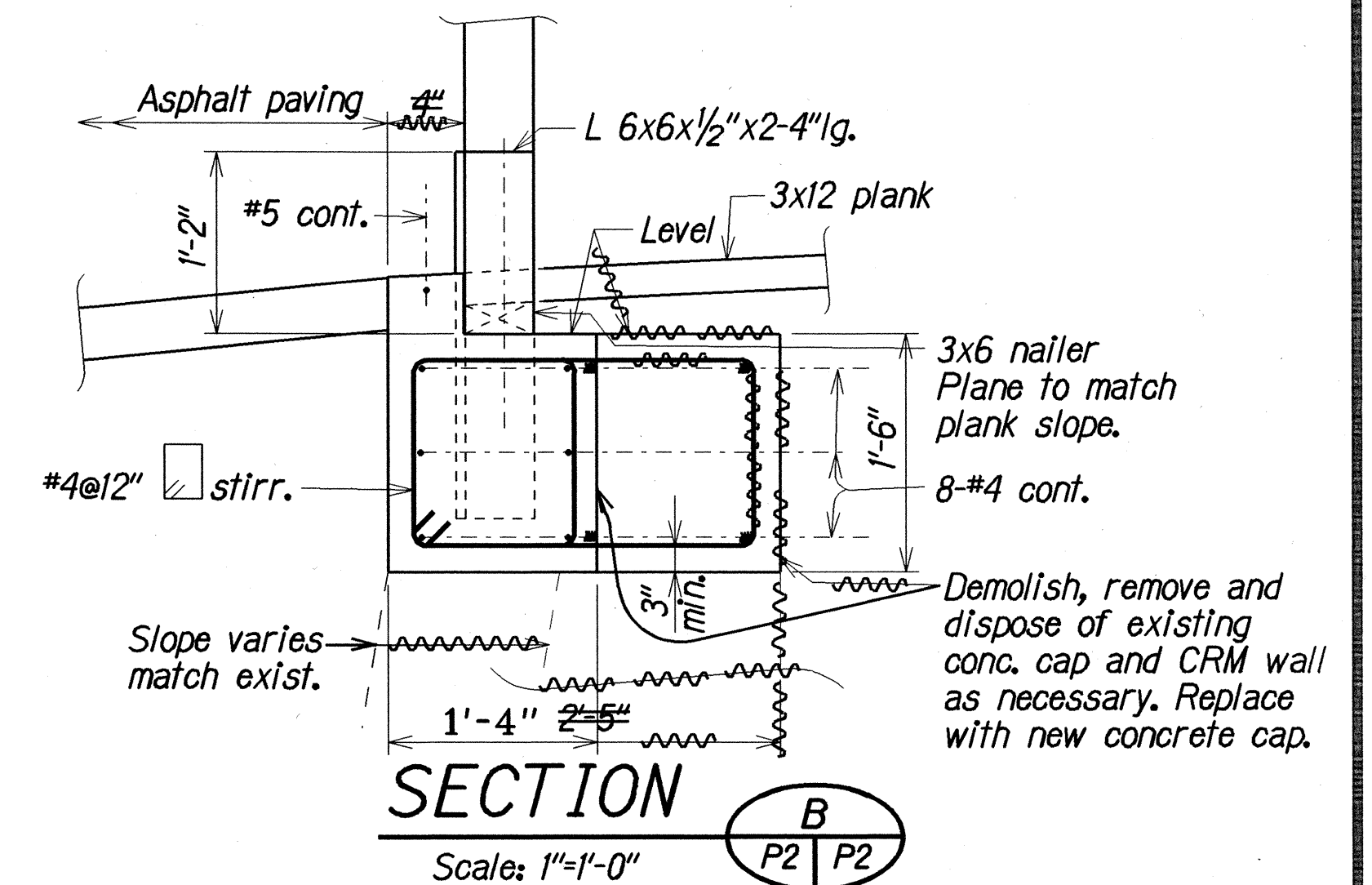
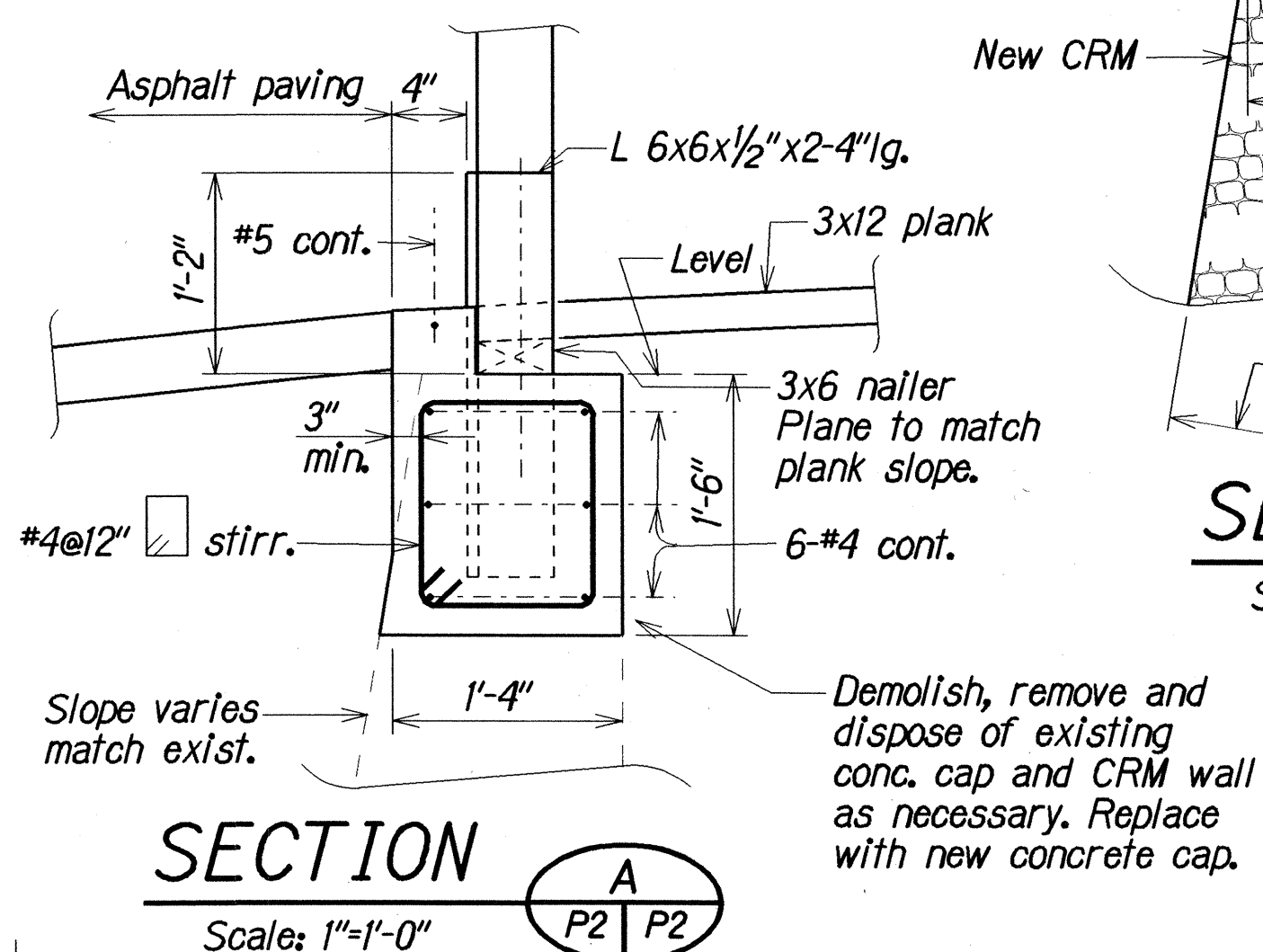
1. Dimensions of existing conditions to be verified by Contractor prior to bidding, construction and ordering of materials.
2. Dimensions of piers approximate. Contractor shall be aware that water level in stream varies.
3. Asphalt paving to tie into existing ground at slope not to exceed 5%.
4. Locate bolt holes to avoid reinforcing in concrete structure.
5. Fabricate after drilling anchor bolt holes in concrete.

MAUKA ELEVATION
Scale: 1/4" = 1'-0"

Centerlines of both piers are actually in line with the gap in the parapet



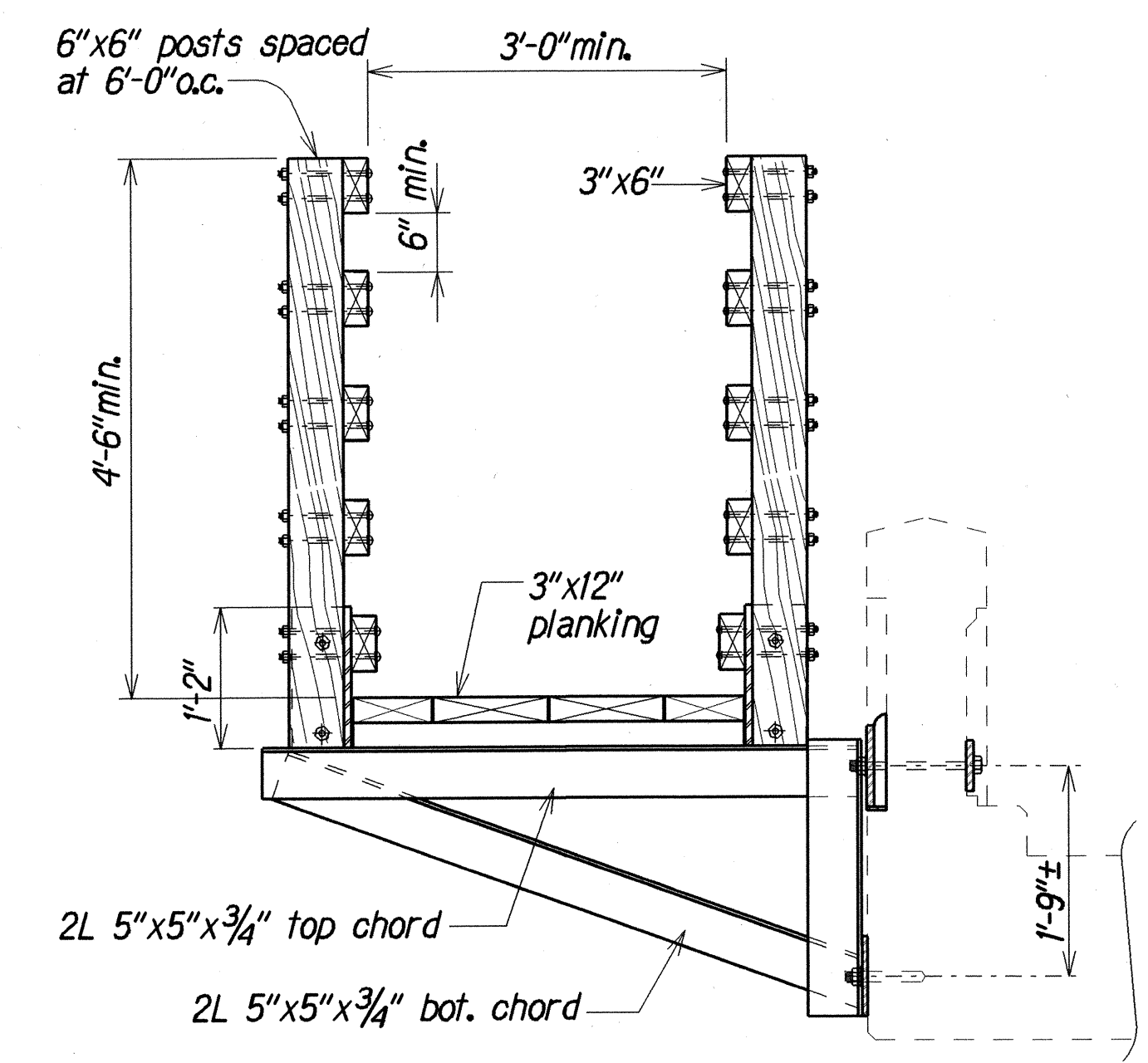
ABUTMENT PLAN KANEOHE END
Scale: 1/2" = 1'-0"



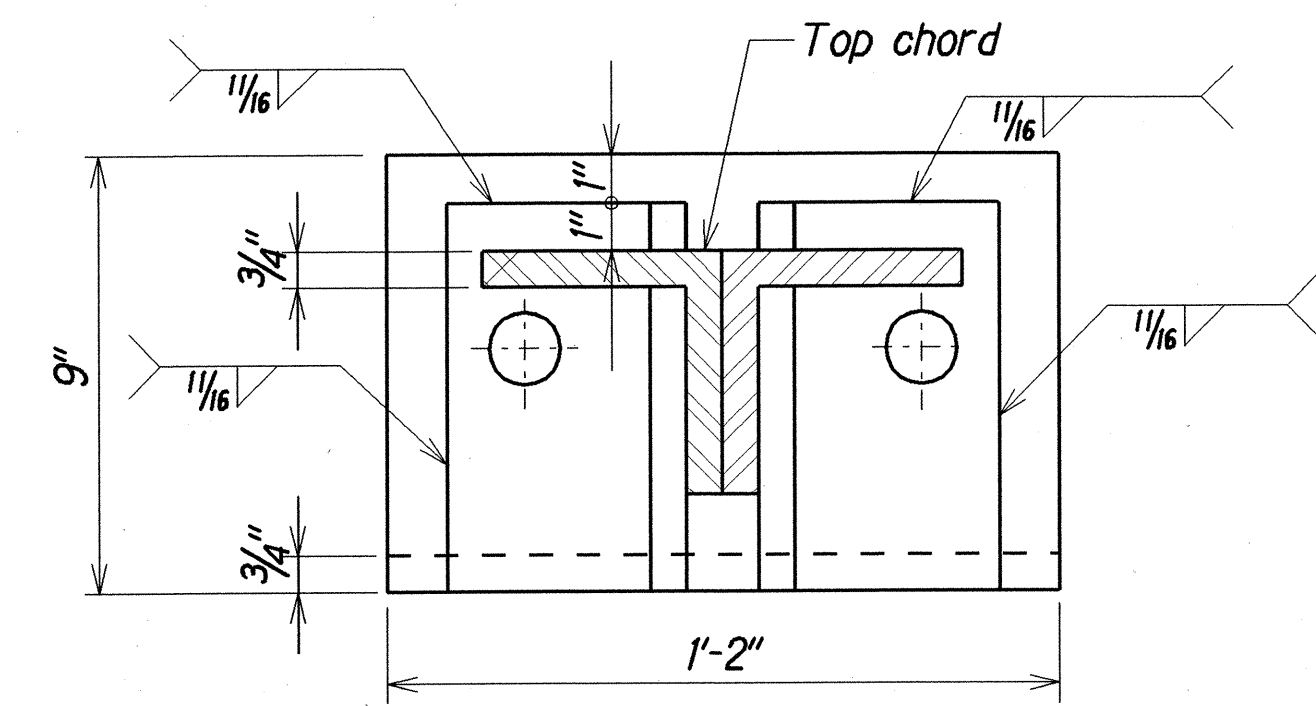
LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 6	13

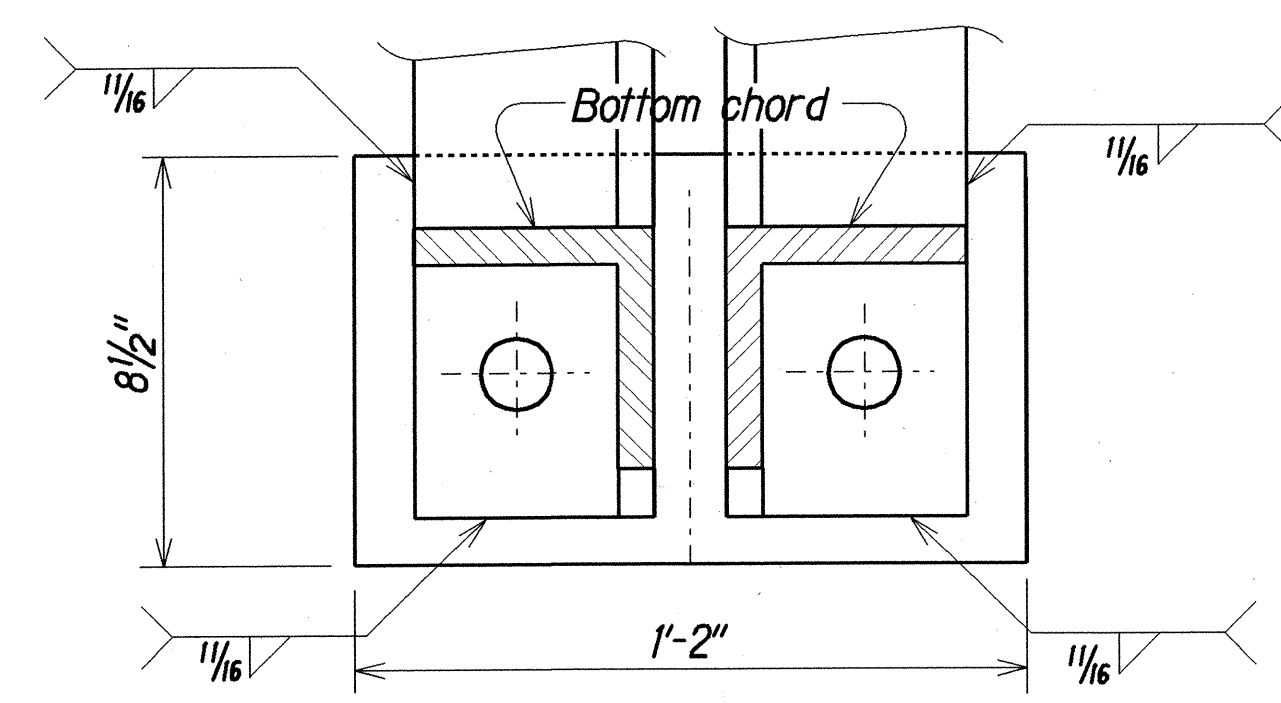
NOTE:
For additional details see shft. #P10.



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



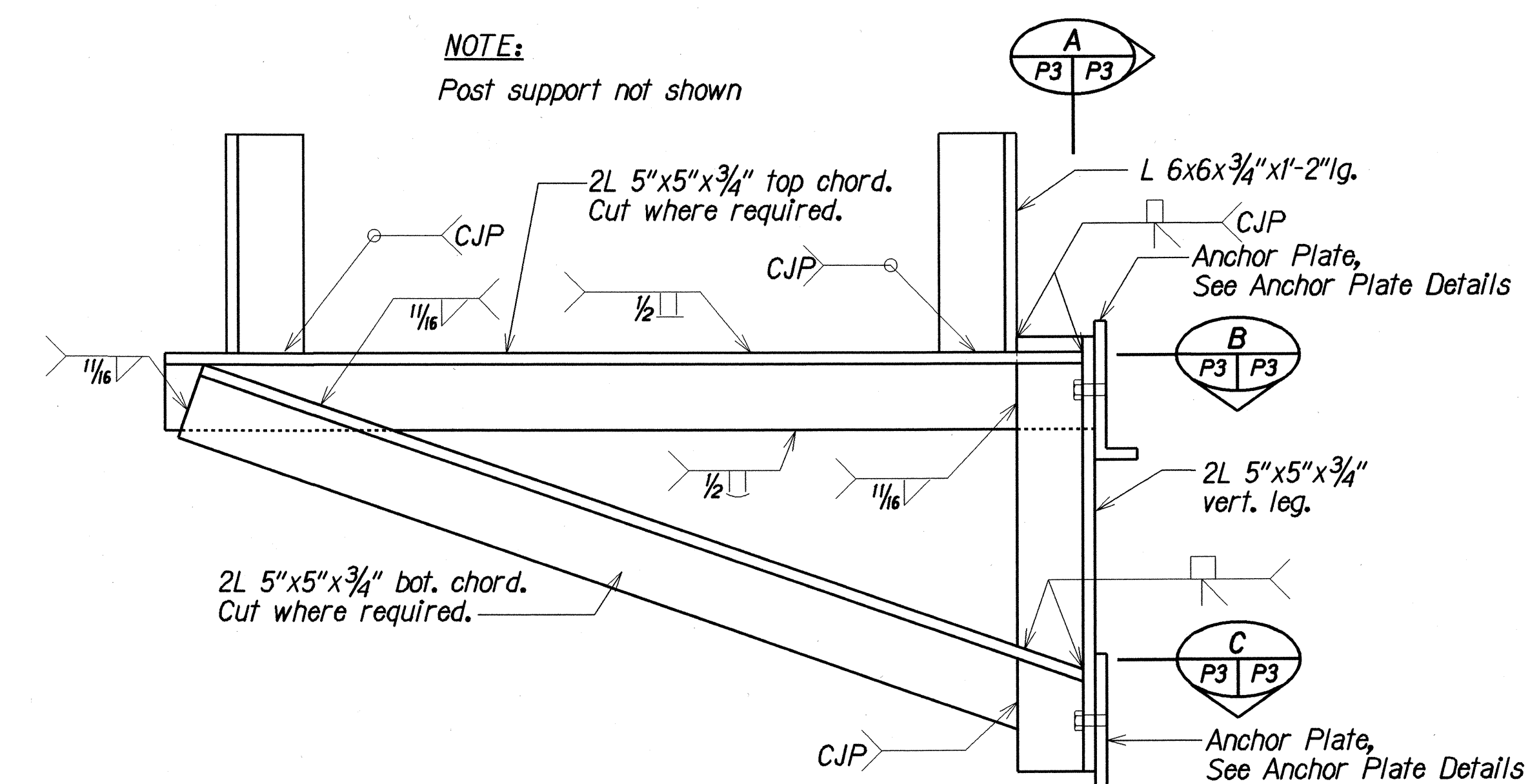
FRONT VIEW



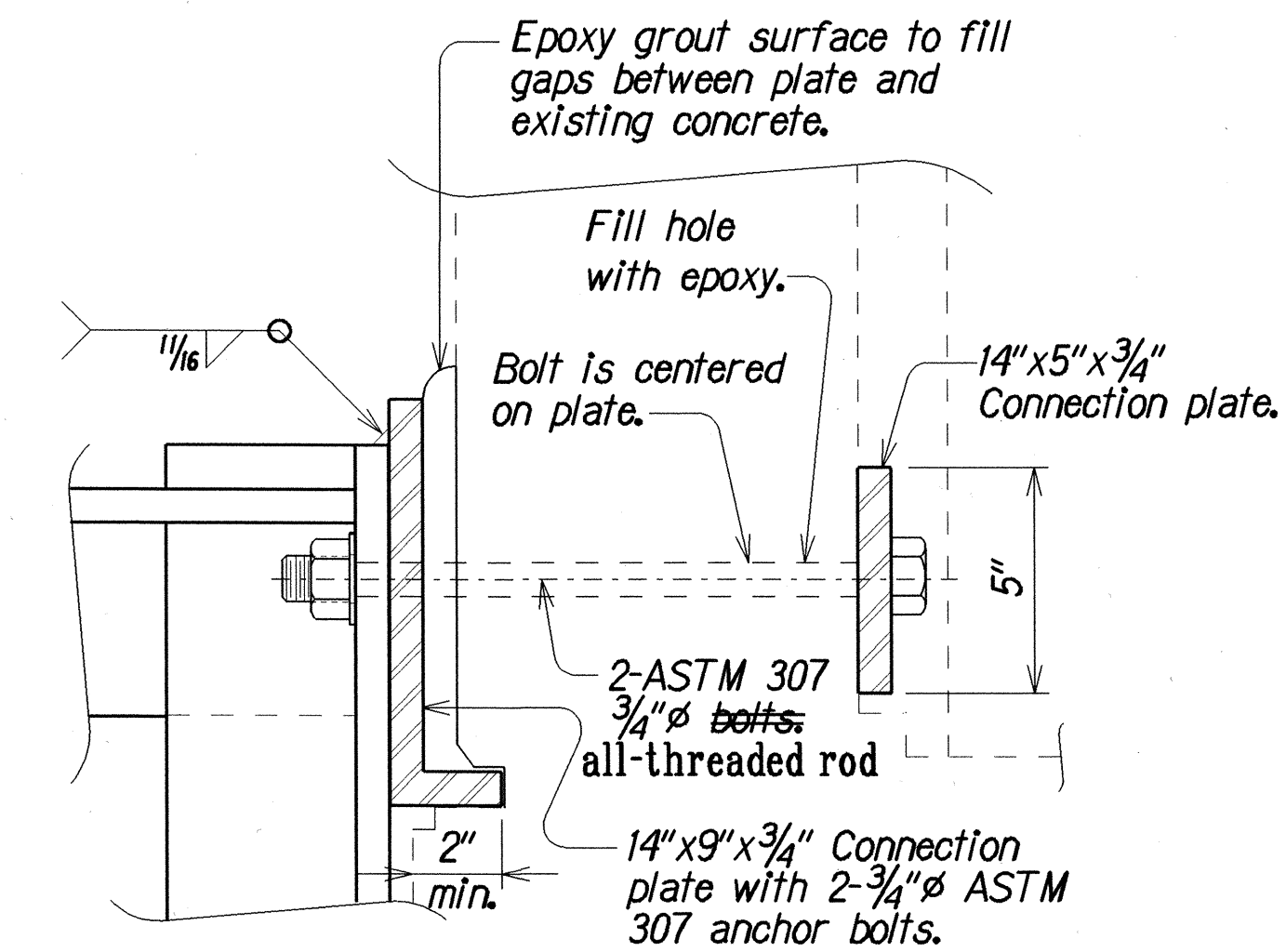
FRONT VIEW

ANCHOR BOLT & PLATE DETAILS
Scale: 3" = 1'-0"

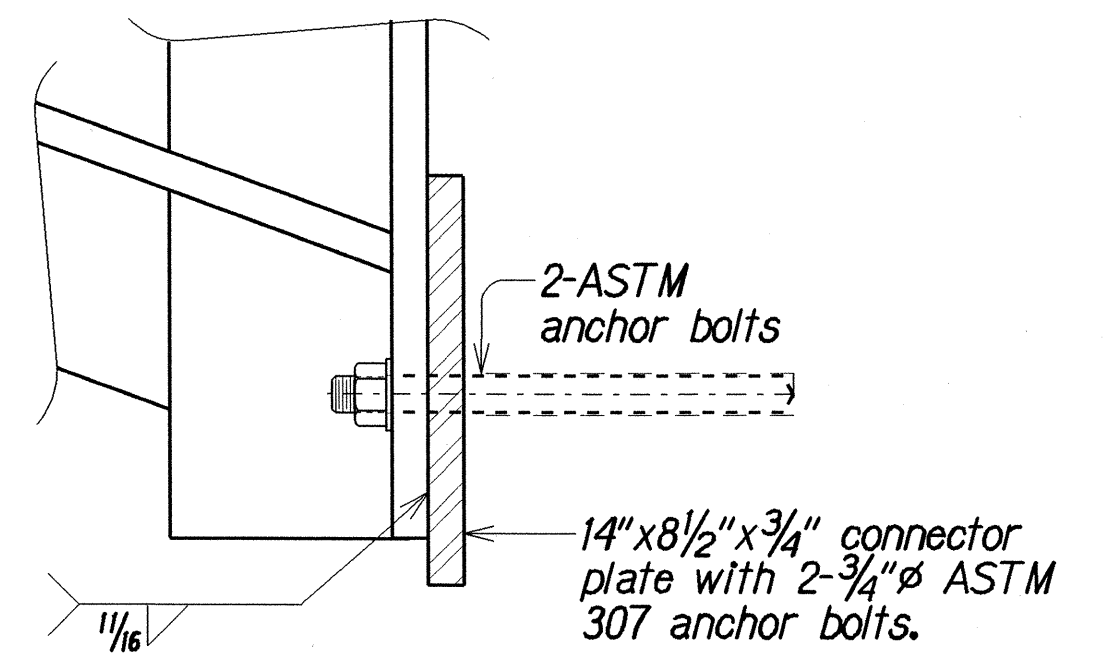
NOTE:
Post support not shown



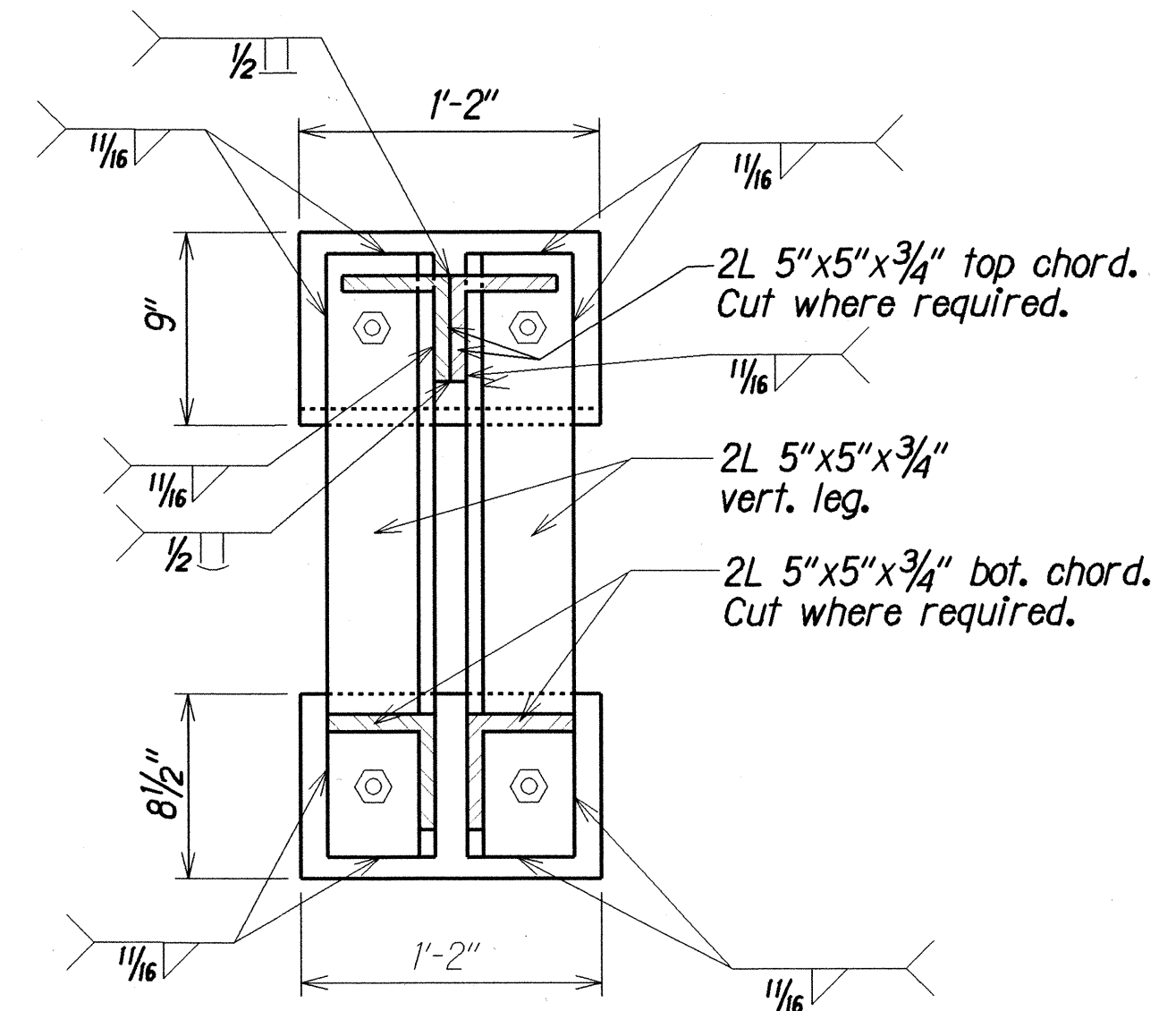
BRACKET DETAIL
Scale: 1 1/2" = 1'-0"



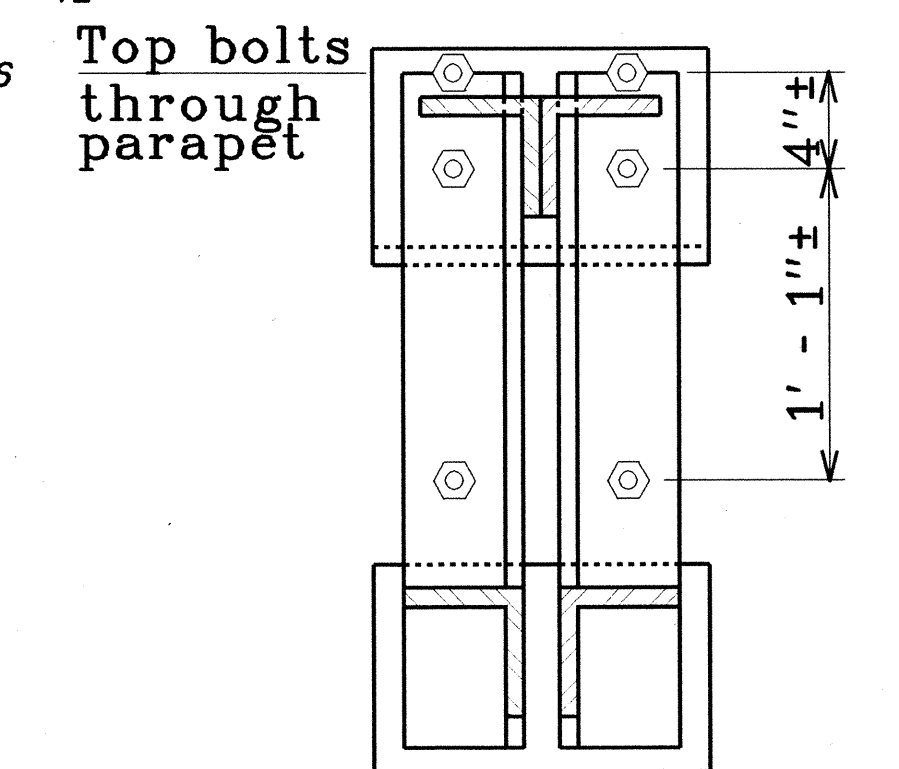
SECTION



SECTION

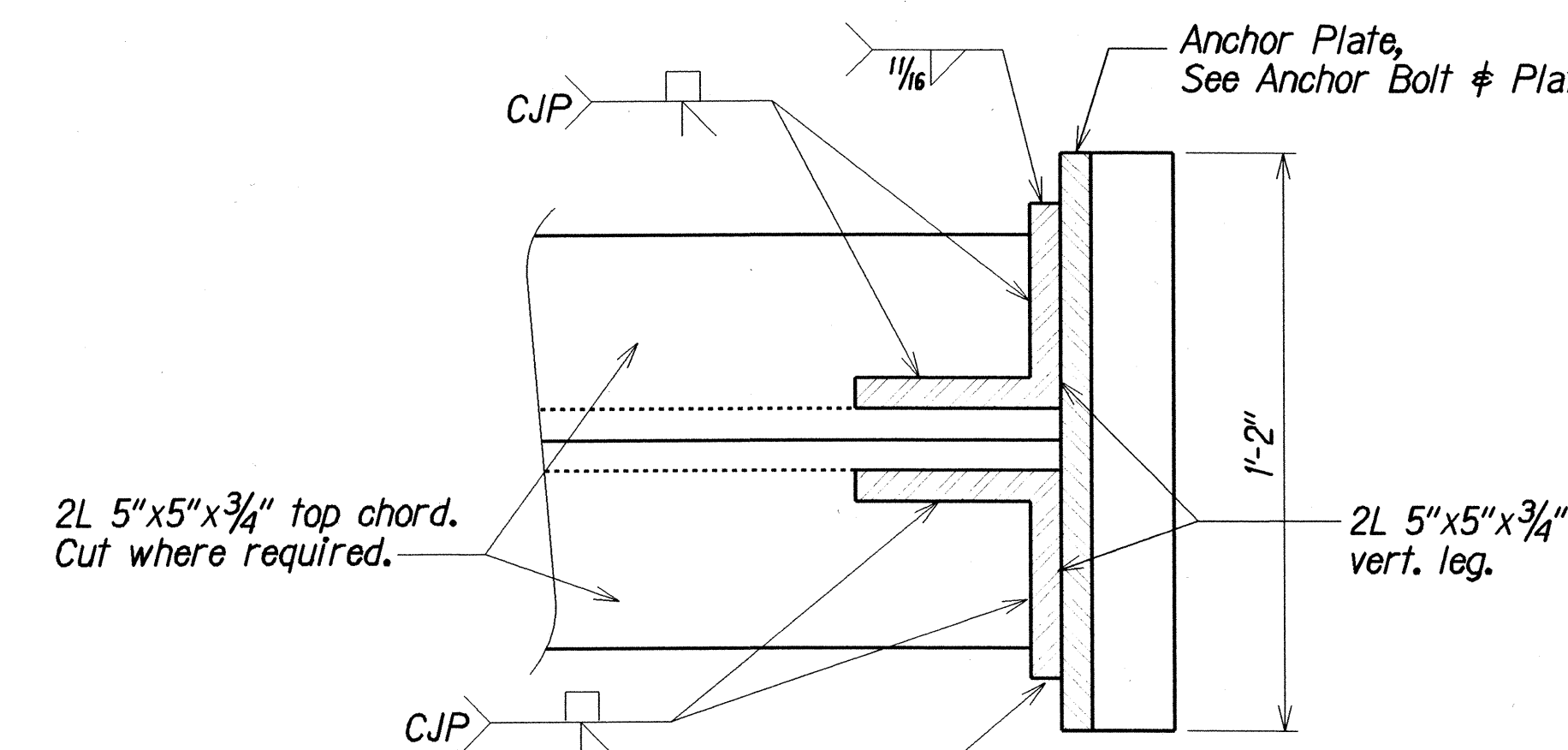


SECTION A
Scale: 1 1/2" = 1'-0"

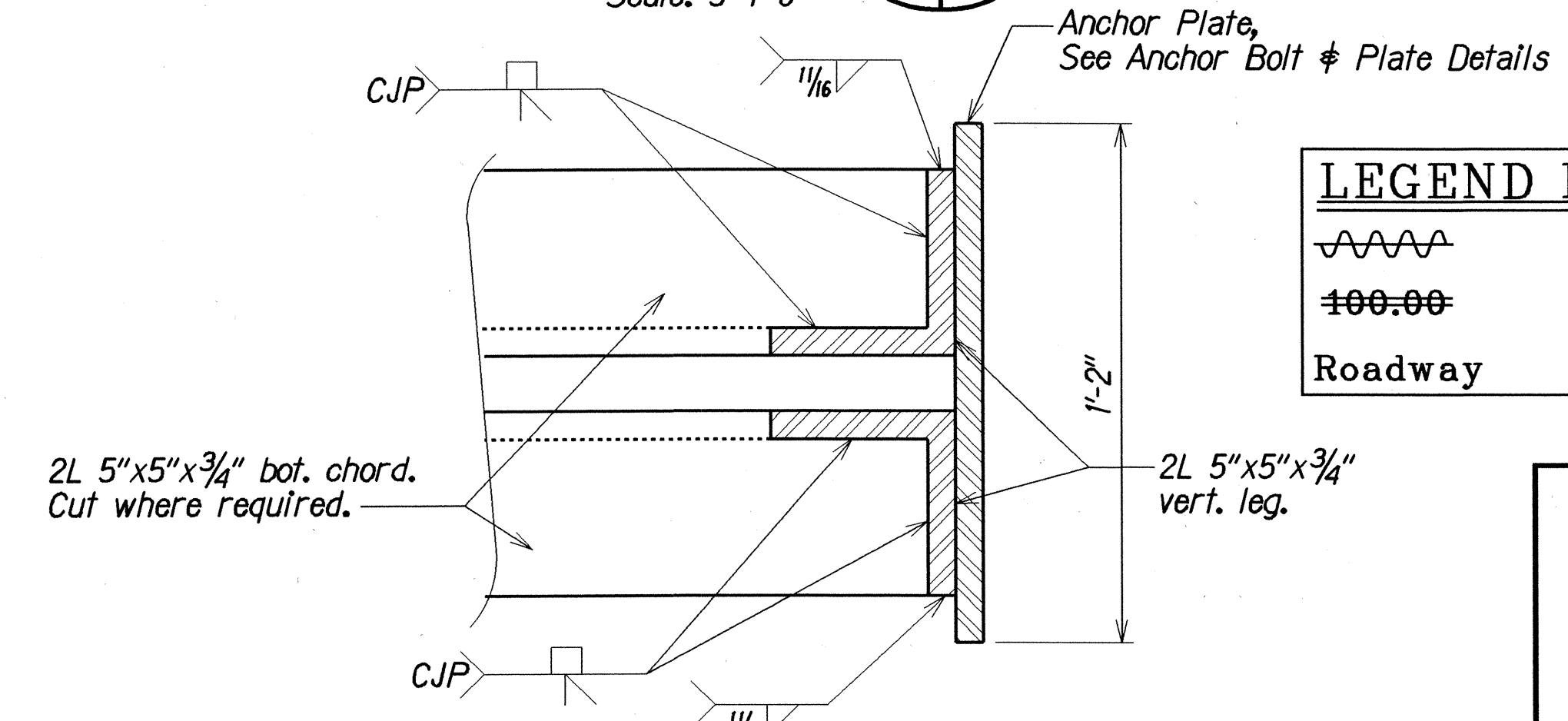


SECTION A

At the two brackets closest to the abutments (six anchor bolts total)



SECTION B
Scale: 3" = 1'-0"



SECTION B

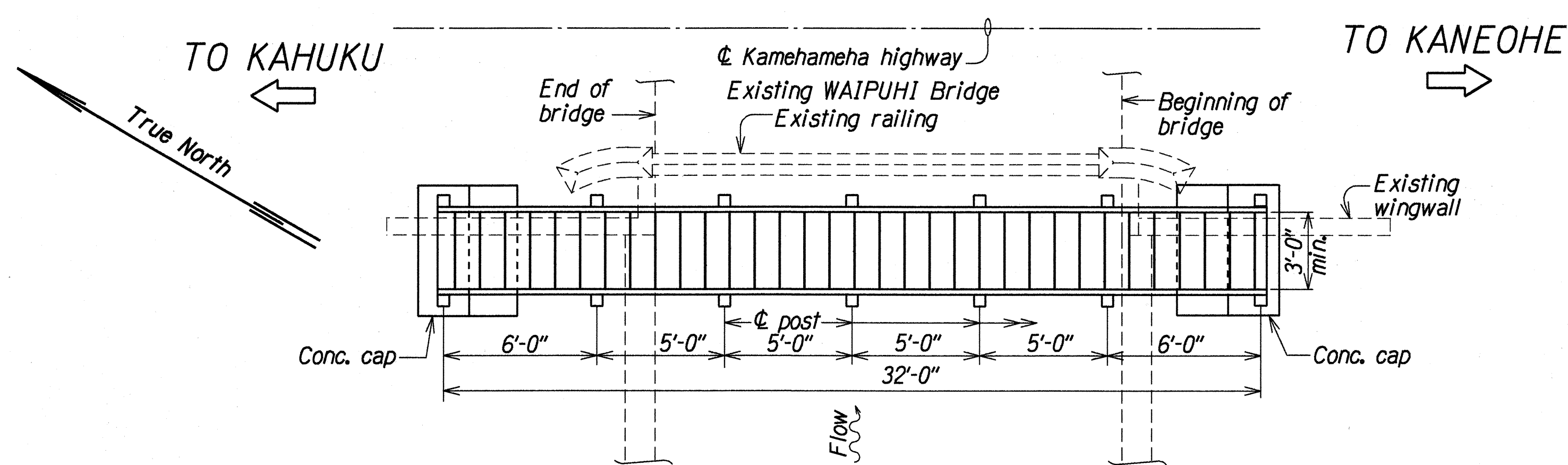
LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
FOOT BRIDGE REPLACEMENT
MAHEIWI BRIDGE DETAILS
KAMEHAMEHA HIGHWAY
REPLACE WOODEN BRIDGES
MAHEIWI, WAIPIHI, HAUULA & MUALAI BRIDGES
Project No. 83C-01-97M
Scale: As Noted Date: JUNE, 1997

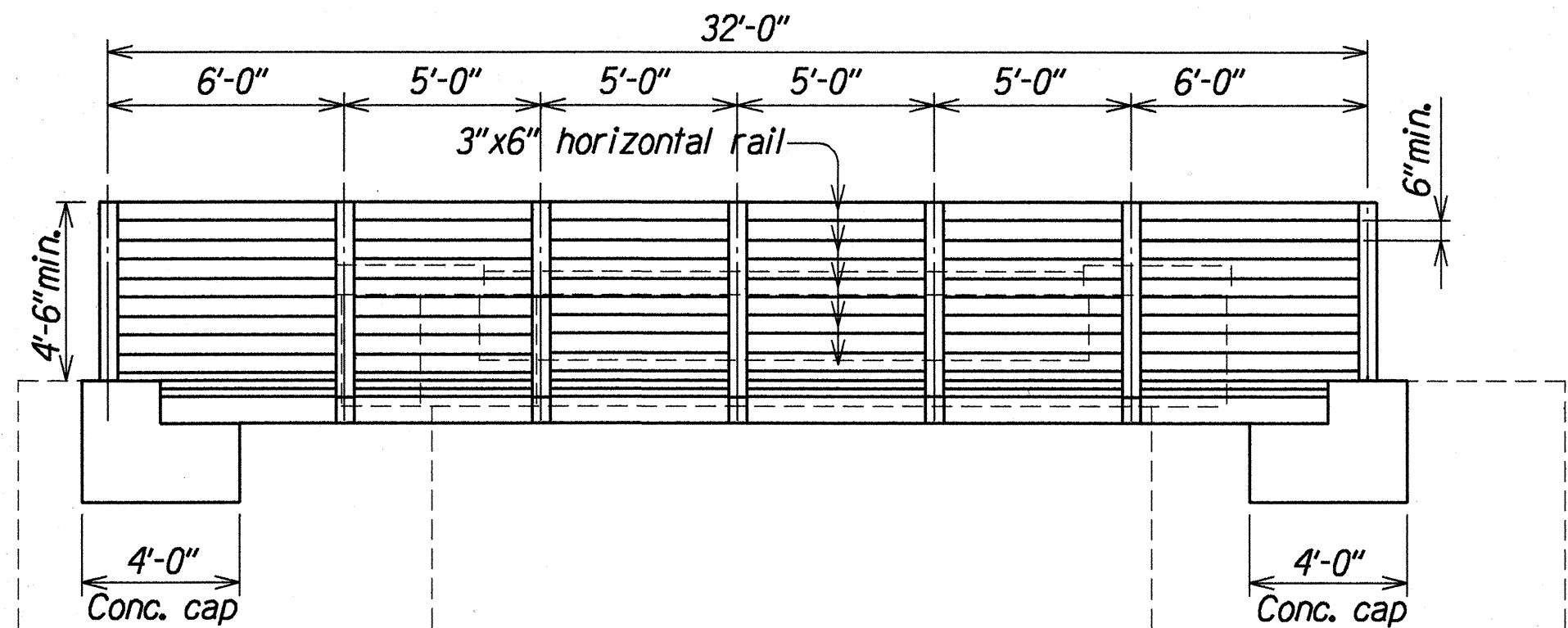
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	DATE
DRAWN BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 7	13

- NOTE:
1. Dimensions of existing conditions to be verified by Contractor prior to bidding, construction and ordering of material.
 2. Dimensions of piers approximate. Contractor shall be aware that water level in stream varies.
 3. Existing ground at slope not to exceed 5%.

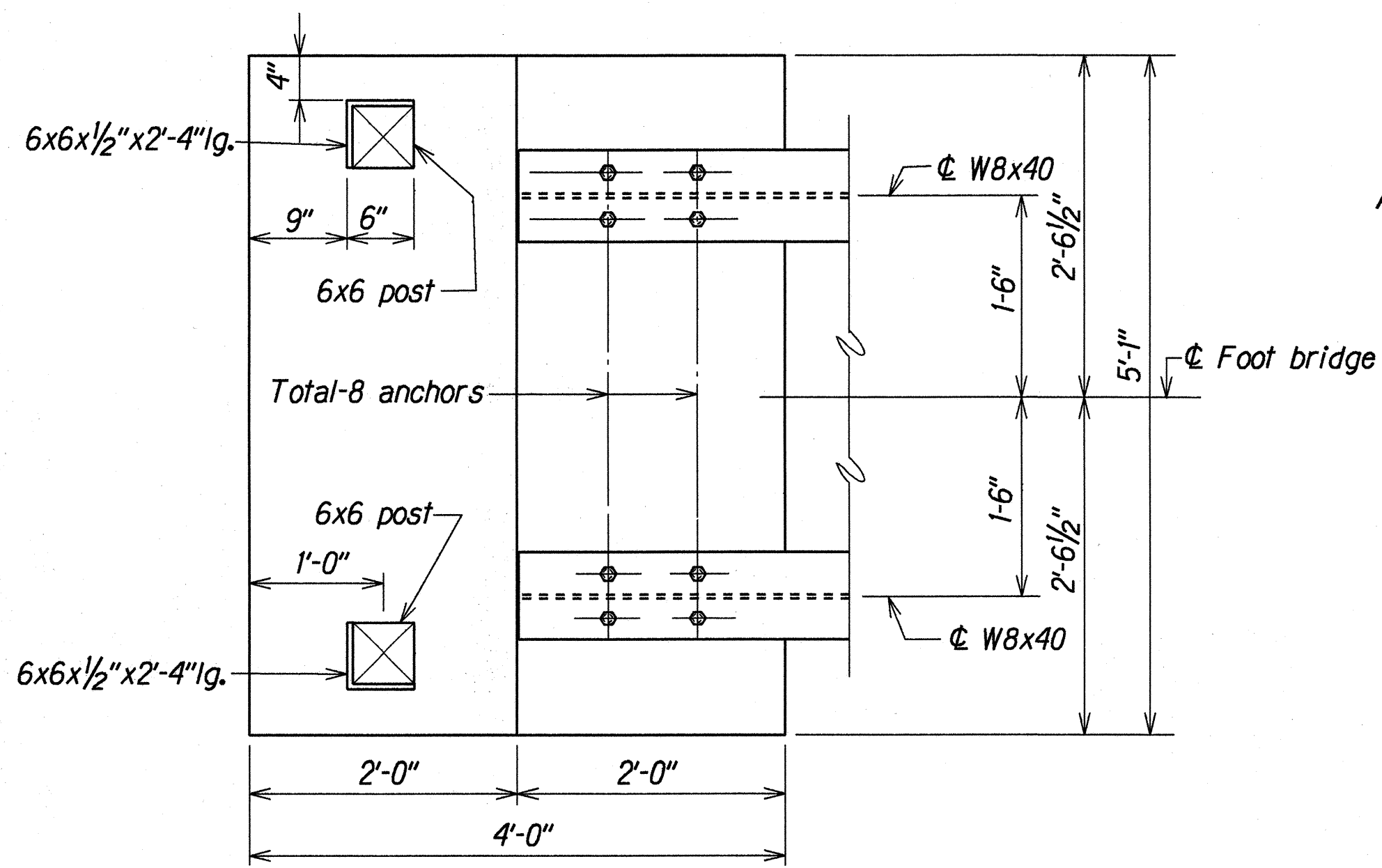


MAUKA PLAN
Scale: 1/4" = 1'-0"

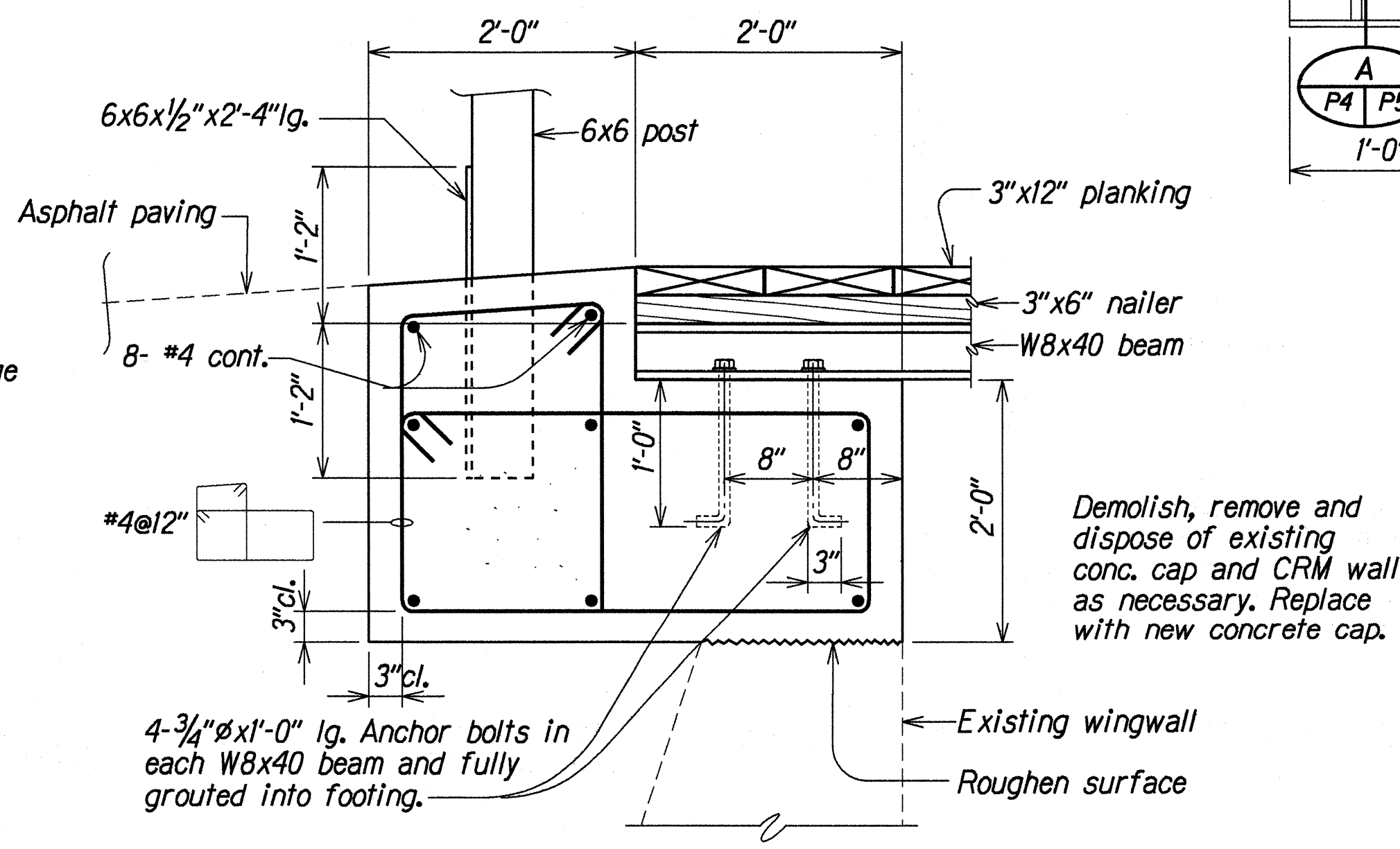


MAUKA ELEVATION
Scale: 1/4" = 1'-0"

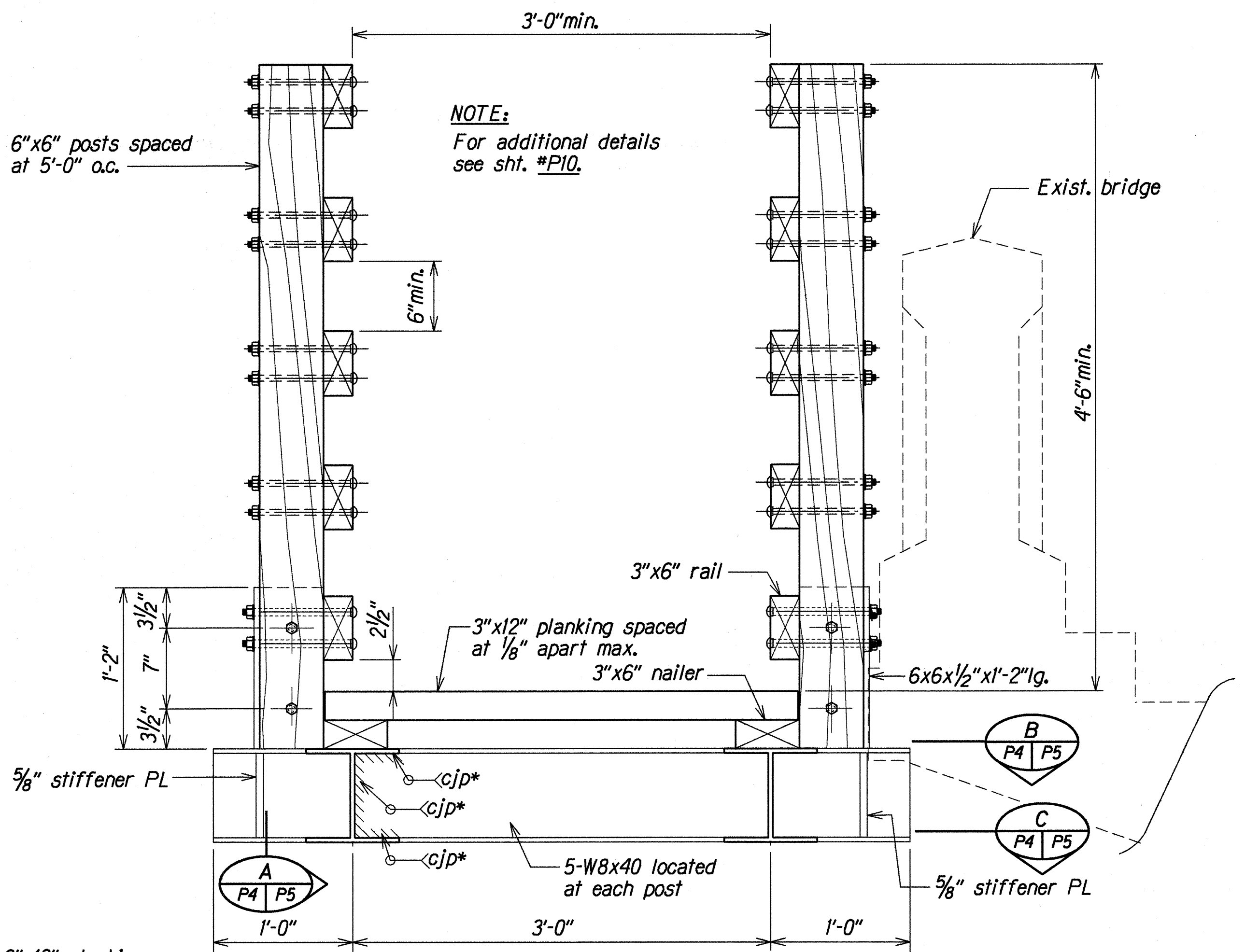
NOTE:
Planks and nailer not shown.



PLAN - CONCRETE CAP
Scale: 1" = 1'-0"



CONCRETE CAP DETAIL
Scale: 1" = 1'-0"



NOTE:
For additional details see sht. #P10.

NORMAL SECTION
Scale: 1 1/2" = 1'-0"

* Typical each side of both main W8x40 beams.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

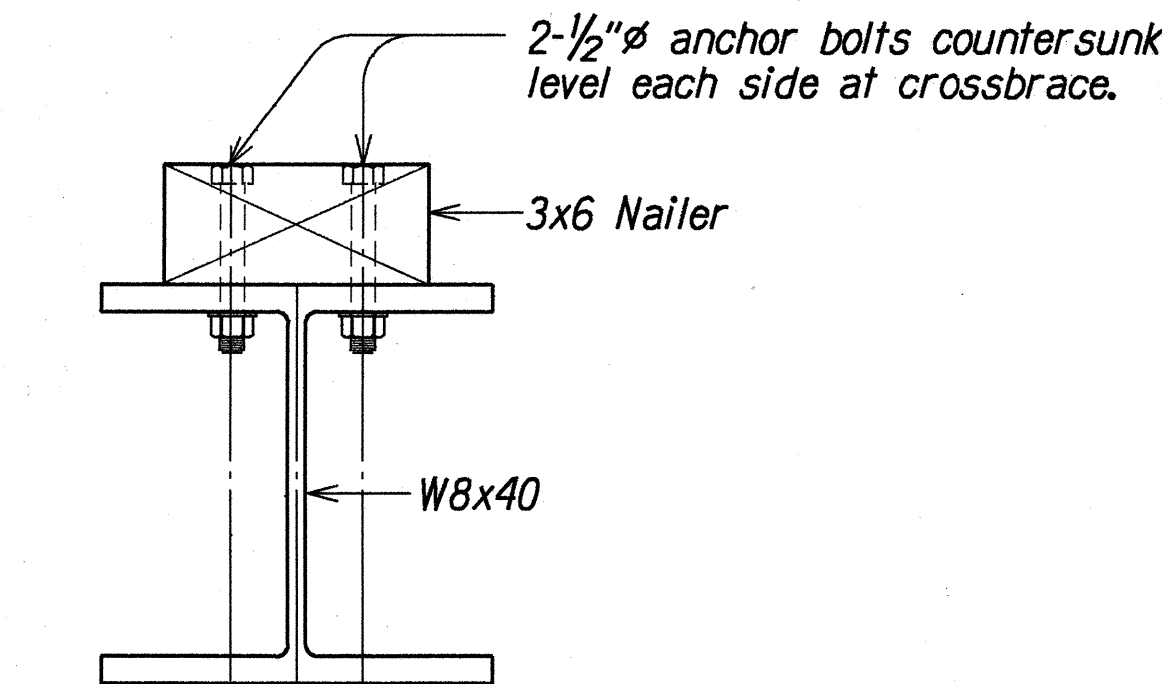
FOOT BRIDGE REPLACEMENT
WAIPUHI BRIDGE DETAILS
KAMEHAMEHA HIGHWAY
REPLACE WOODEN FOOT BRIDGES
MAHEIWI, WAIPUHI, HAUULA & MULIWI BRIDGES
Project No. 83C-01-97M

Scale: As Noted
SHEET No. P4 OF 10 SHEETS

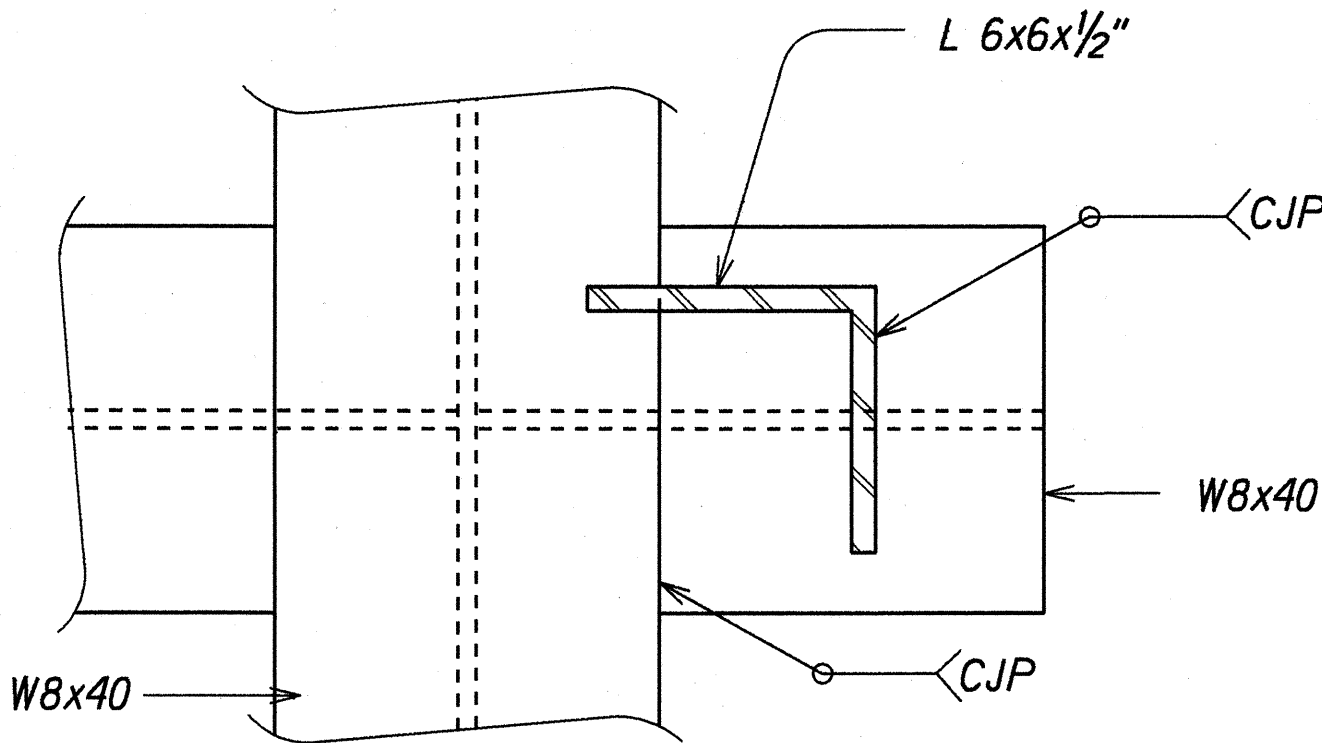
Date: JUNE, 1997

ORIGINAL PLAN	DATE	JUN 1997
DRAWN BY	CHK. TKM	
DESIGNED BY	CHK. TKM	
CHECKED BY	CHK. TKM	
APPROVED BY	CHK. TKM	

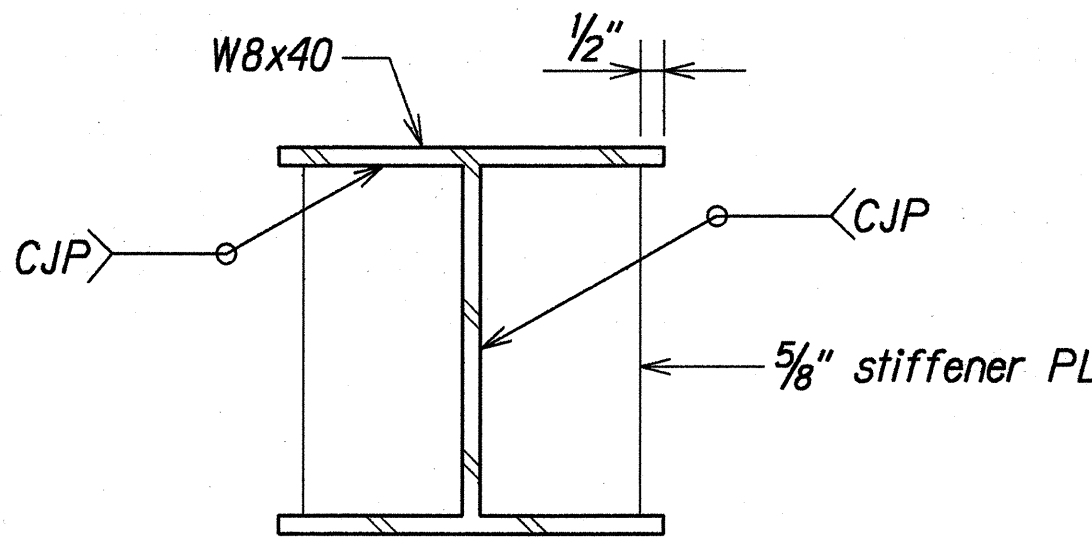
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 8	13



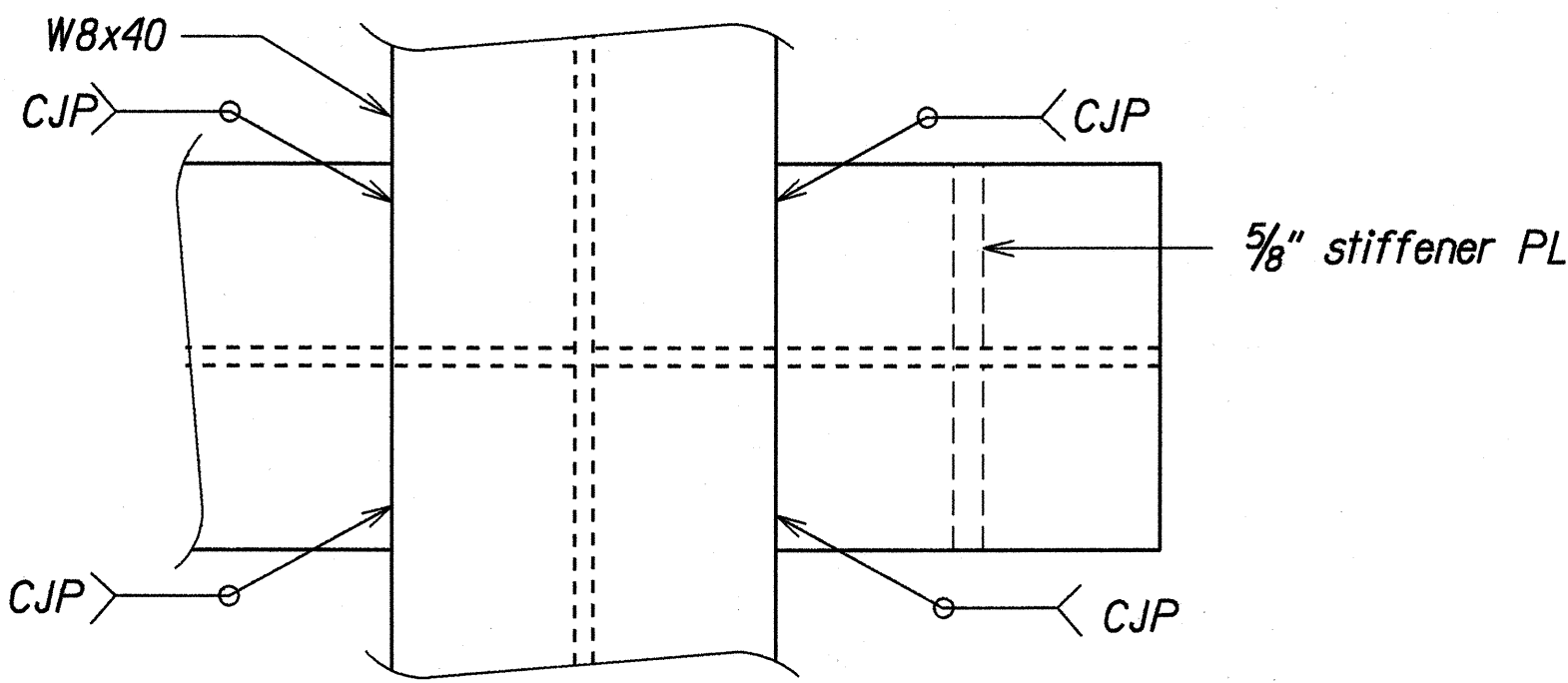
NAILER DETAIL
Scale: 3" = 1'-0"



SECTION B
Scale: 3" = 1'-0" P4 P5



SECTION A
Scale: 3" = 1'-0" P4 P5



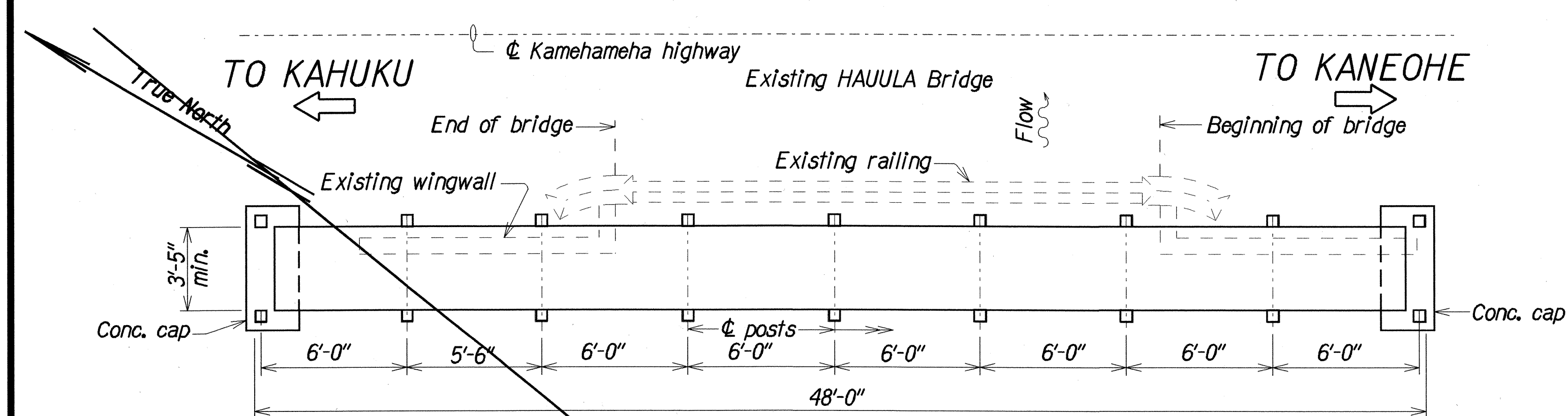
SECTION C
Scale: 3" = 1'-0" P4 P5

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	JUL 1997
BY: waipuhi.dog	DESIGNED BY	JUL 1997
	CHECKED BY	JUL 1997
		JUL 1997

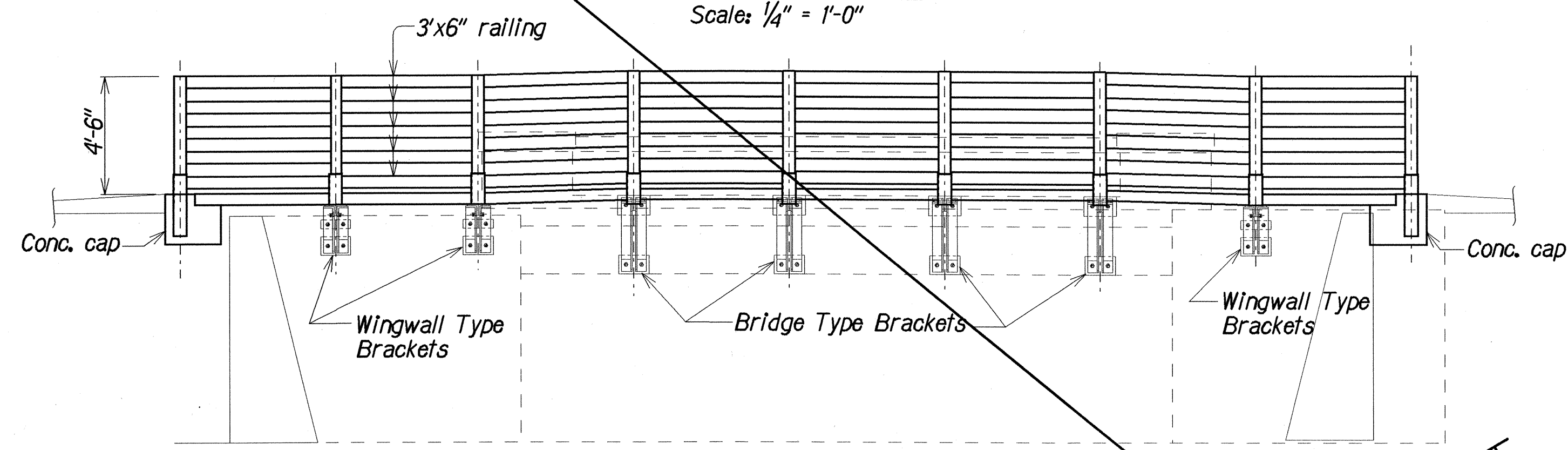
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
FOOT BRIDGE REPLACEMENT
WAIPUHI BRIDGE DETAILS
KAMEHAMEHA HIGHWAY
REPLACE WOODEN FOOT BRIDGES
MAHEIWI, WAIPUHI, HAUULA & MULIWI BRIDGES
Project No. 83C-01-97M
Scale: As Noted Date: JUNE, 1997

SHEET No. P5 OF 10 SHEETS
ADD. 8

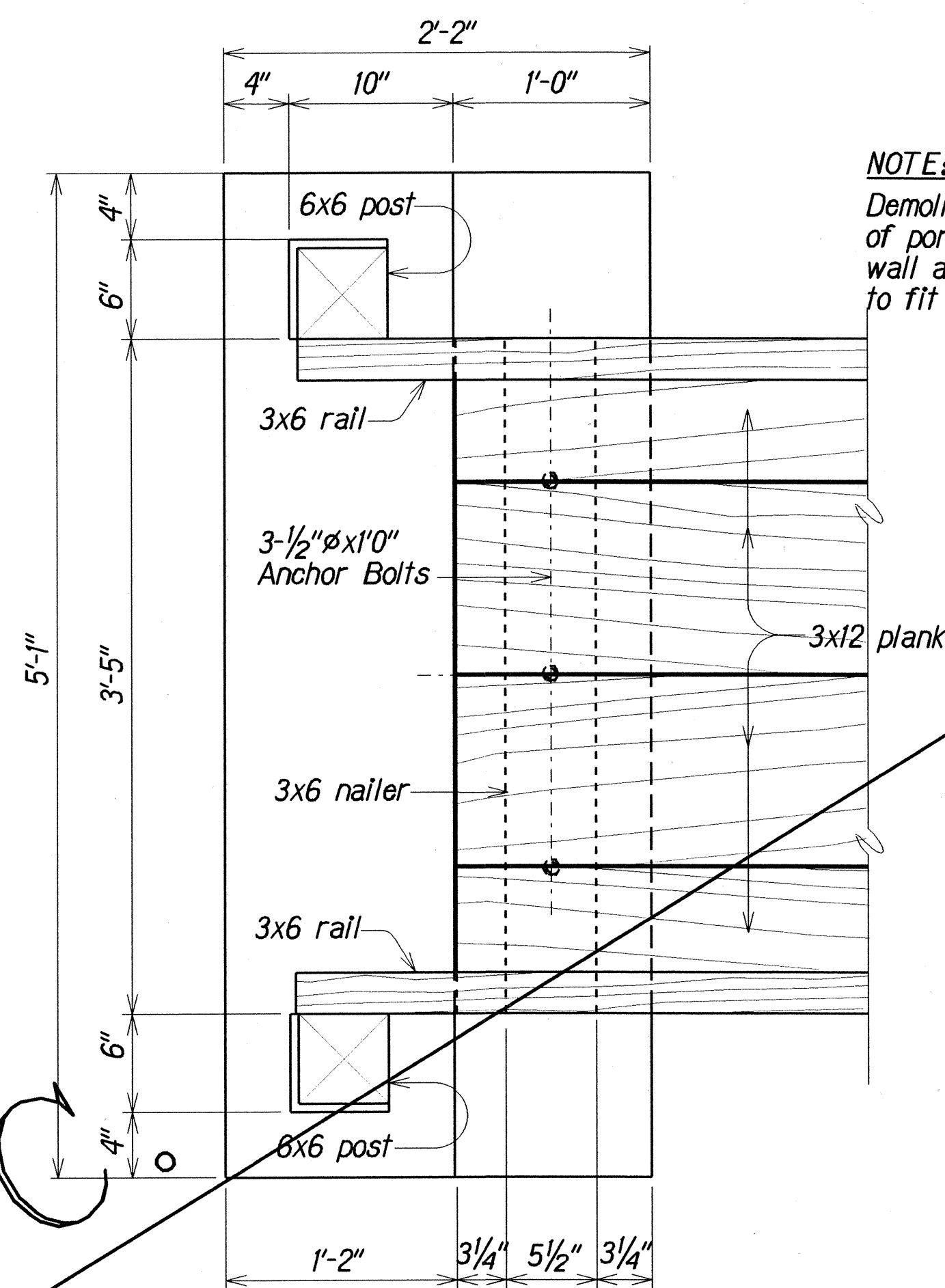
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 9	13



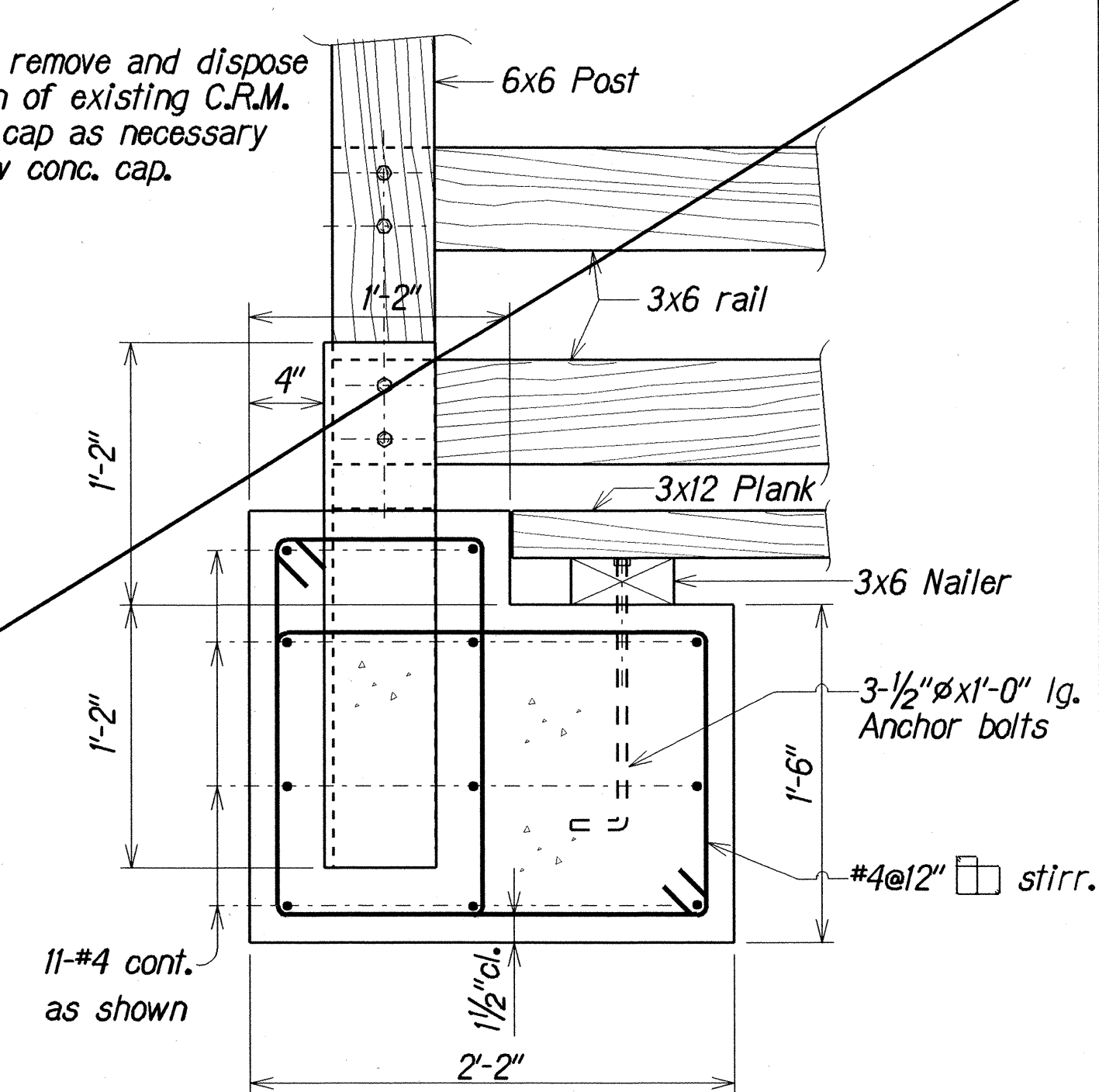
MAUKA PLAN
Scale: $\frac{1}{4}" = 1'-0"$



MAUKA ELEVATION

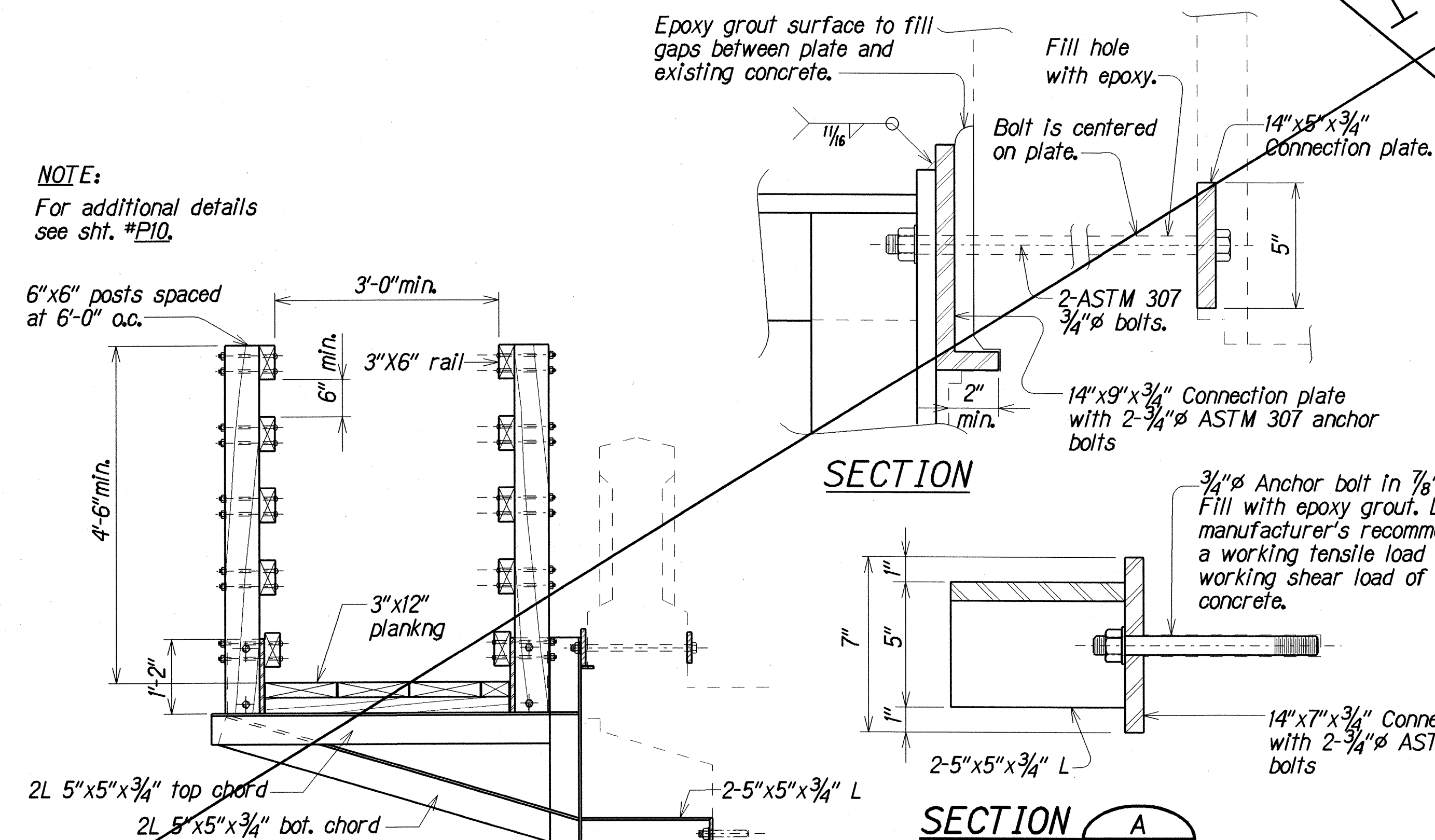


PLAN AT CONCRETE CAP
Scale: $1\frac{1}{2}" = 1'-0"$

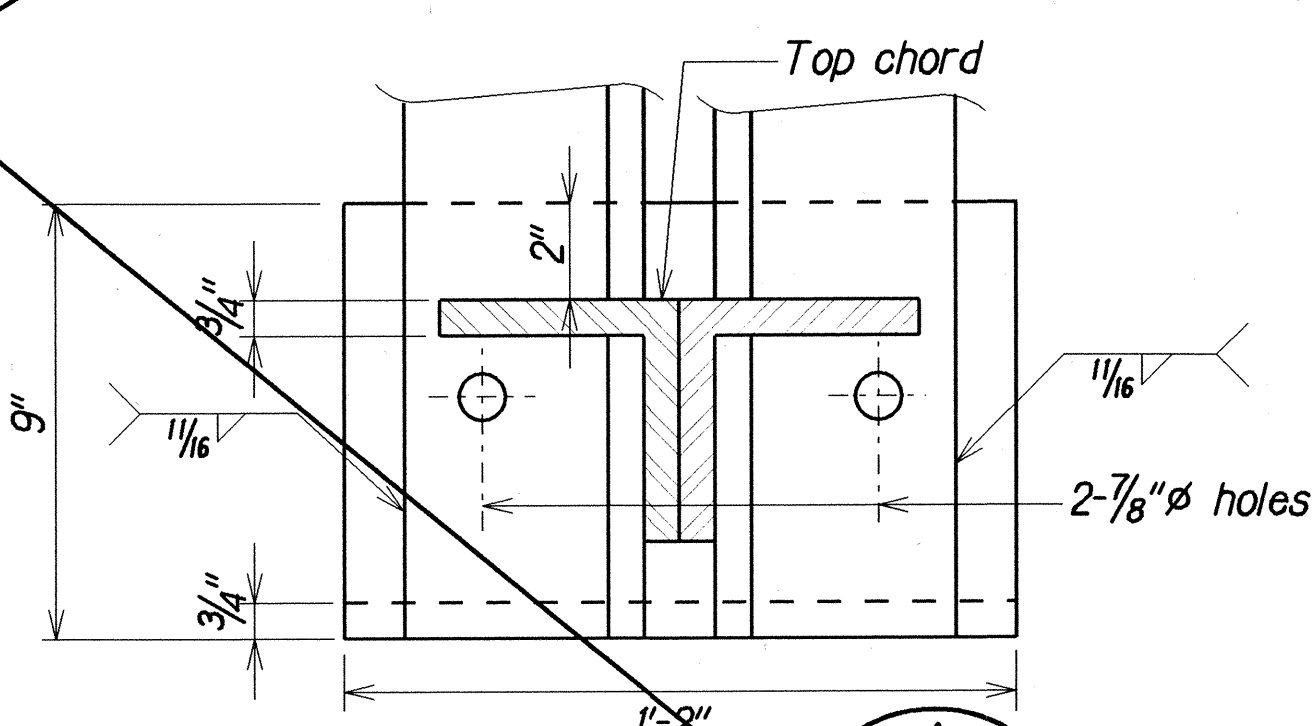


CONCRETE CAP DETAIL
Scale: $1\frac{1}{2}" = 1'-0"$

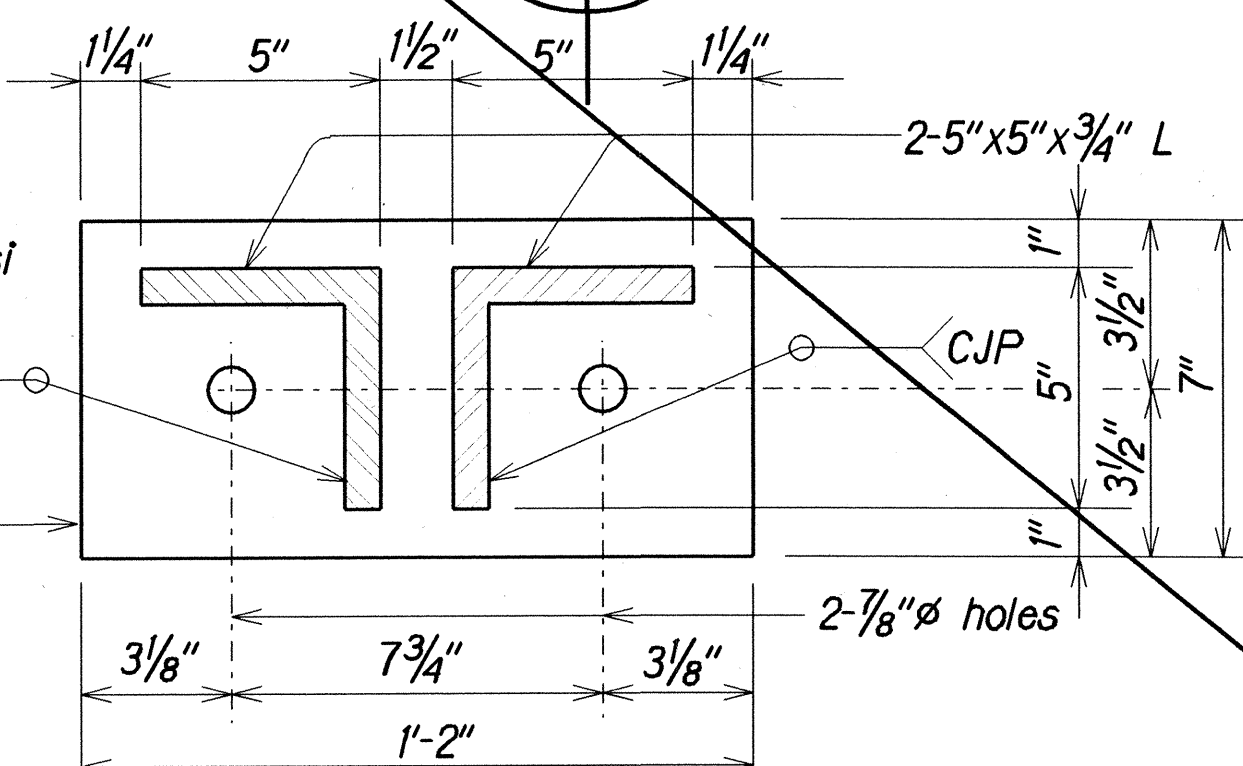
NOTE:
For additional details
see sht. #P10.



NORMAL SECTION



PLAN AT CONCRETE CAP
Scale: $1\frac{1}{2}" = 1'-0"$



ANCHOR BOLT & PLATE DETAILS
Scale: 3" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	<u>CHO. LMA</u>
	TRACED BY	*
NOTE BOOK	DESIGNED BY	<u>DKT</u> <u>JUN 1997</u>
	QUANTITIES BY	<u>DKT</u> <u>JUN 1997</u>
	CHECKED BY	<u>DCO</u> <u>JUN 1997</u>
N:\skamtpc.dwg		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

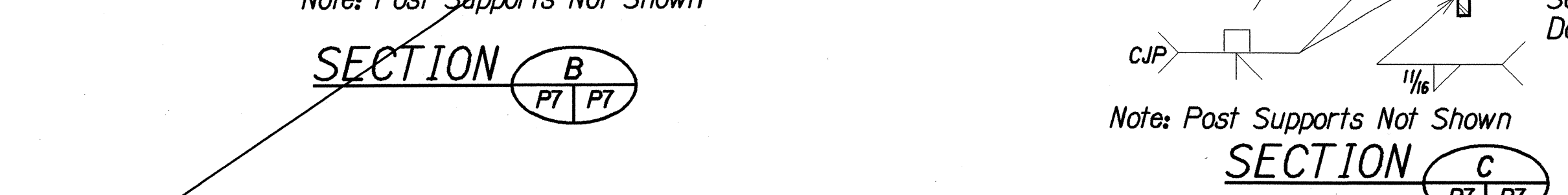
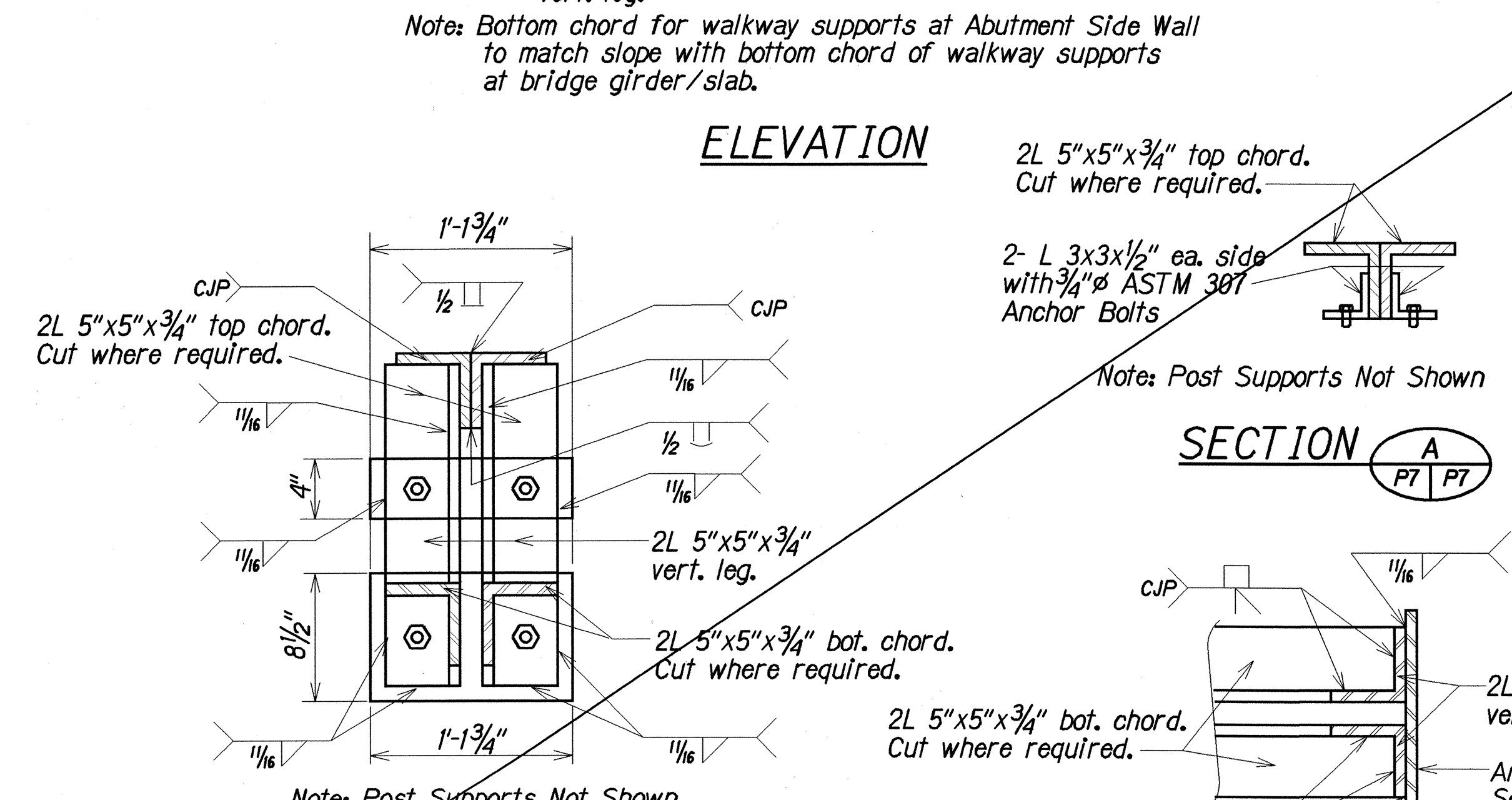
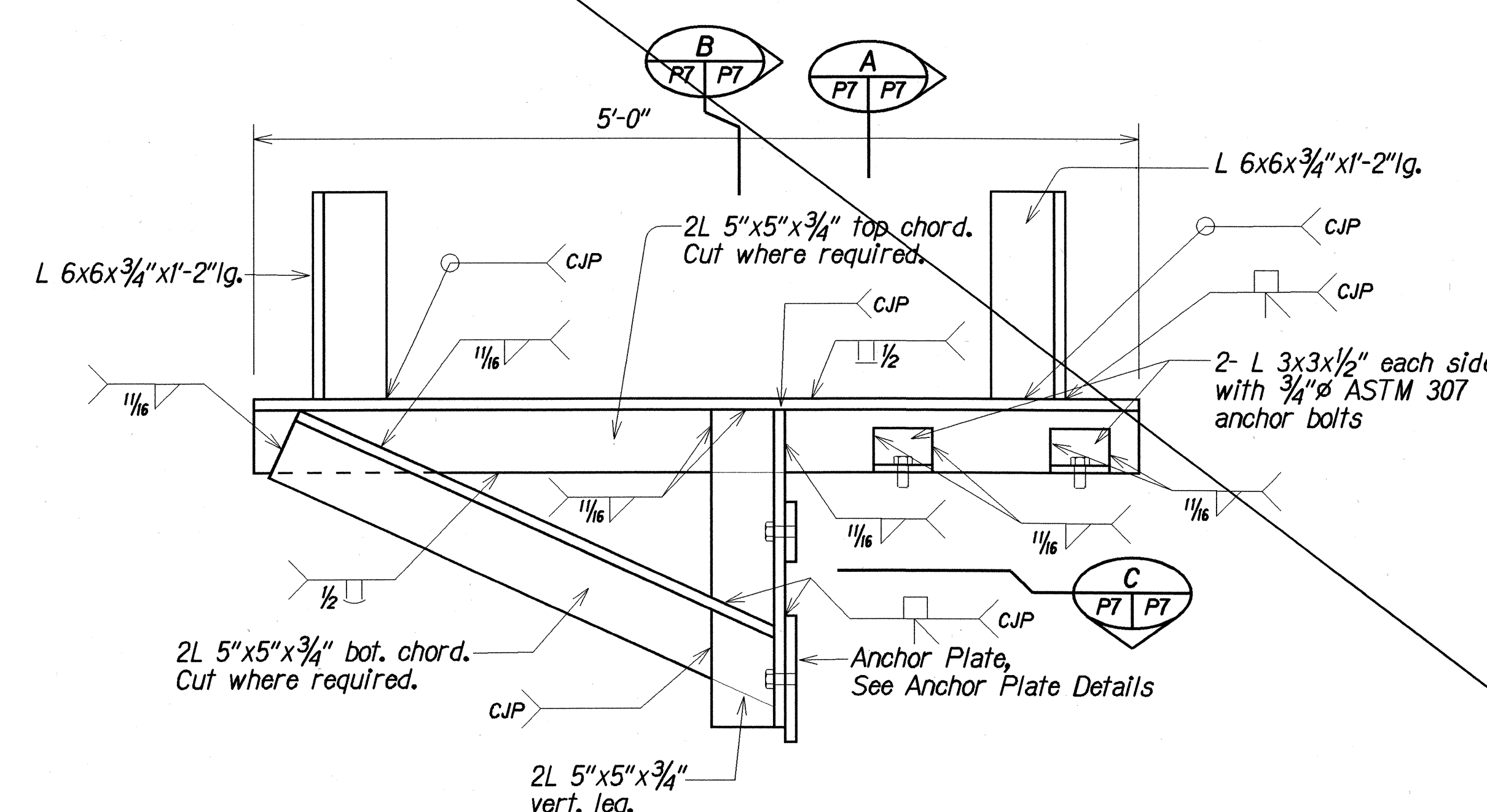
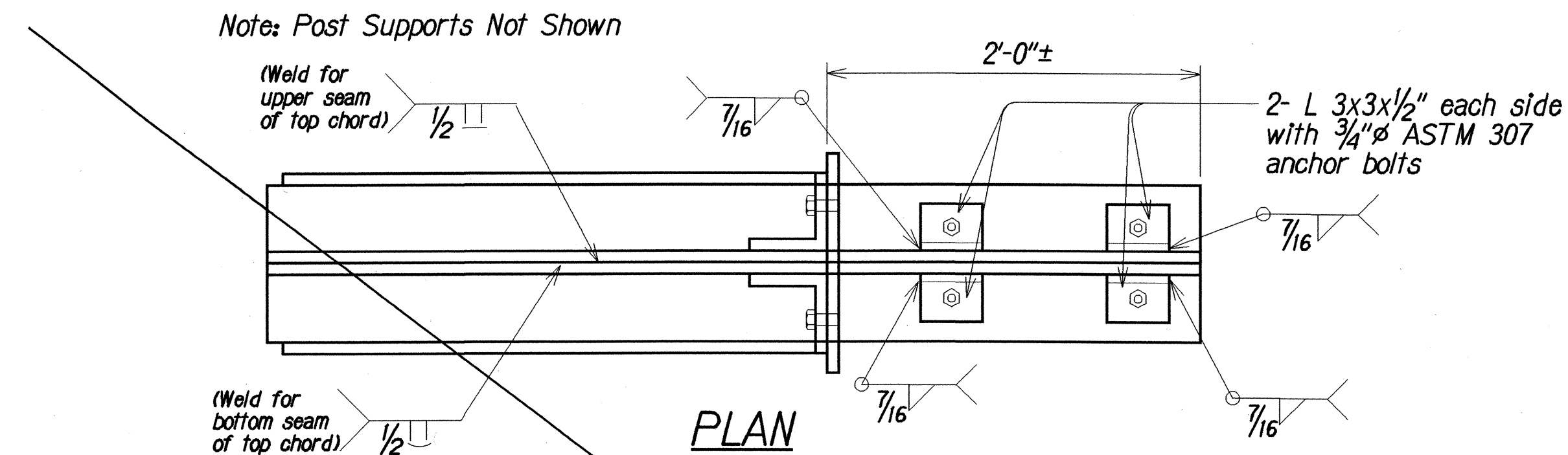
FOOT BRIDGE REPLACEMENT
HAUULA BRIDGE DETAILS

KAMEHAMEHA HIGHWAY
REPLACE WOODEN FOOT BRIDGES
MAHEIWA, WAIPUHI, HAUULA & MULIWAH BRIDGES
Project No. 83C-01-97M

Scale: As Noted Date: JUNE, 1997

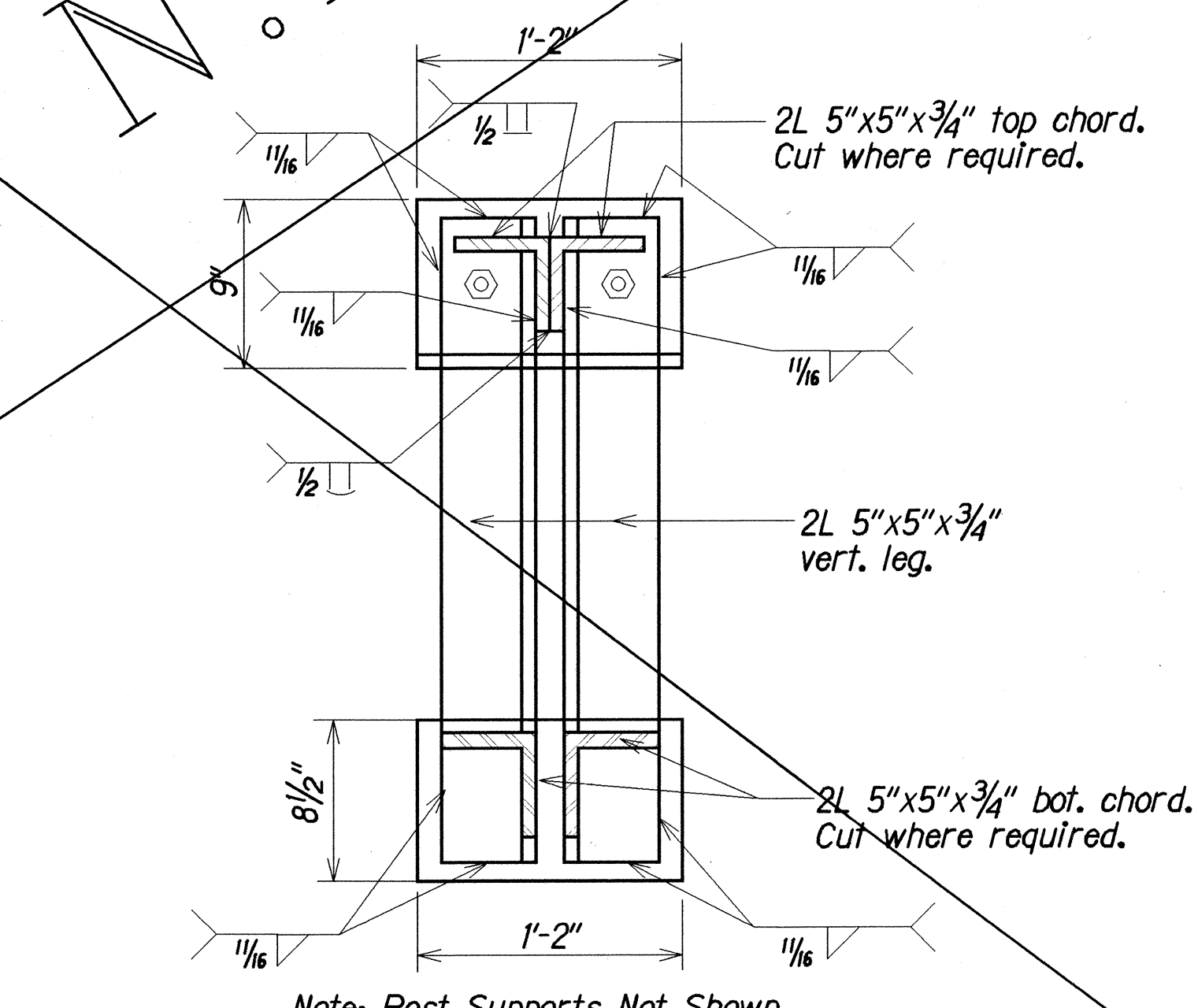
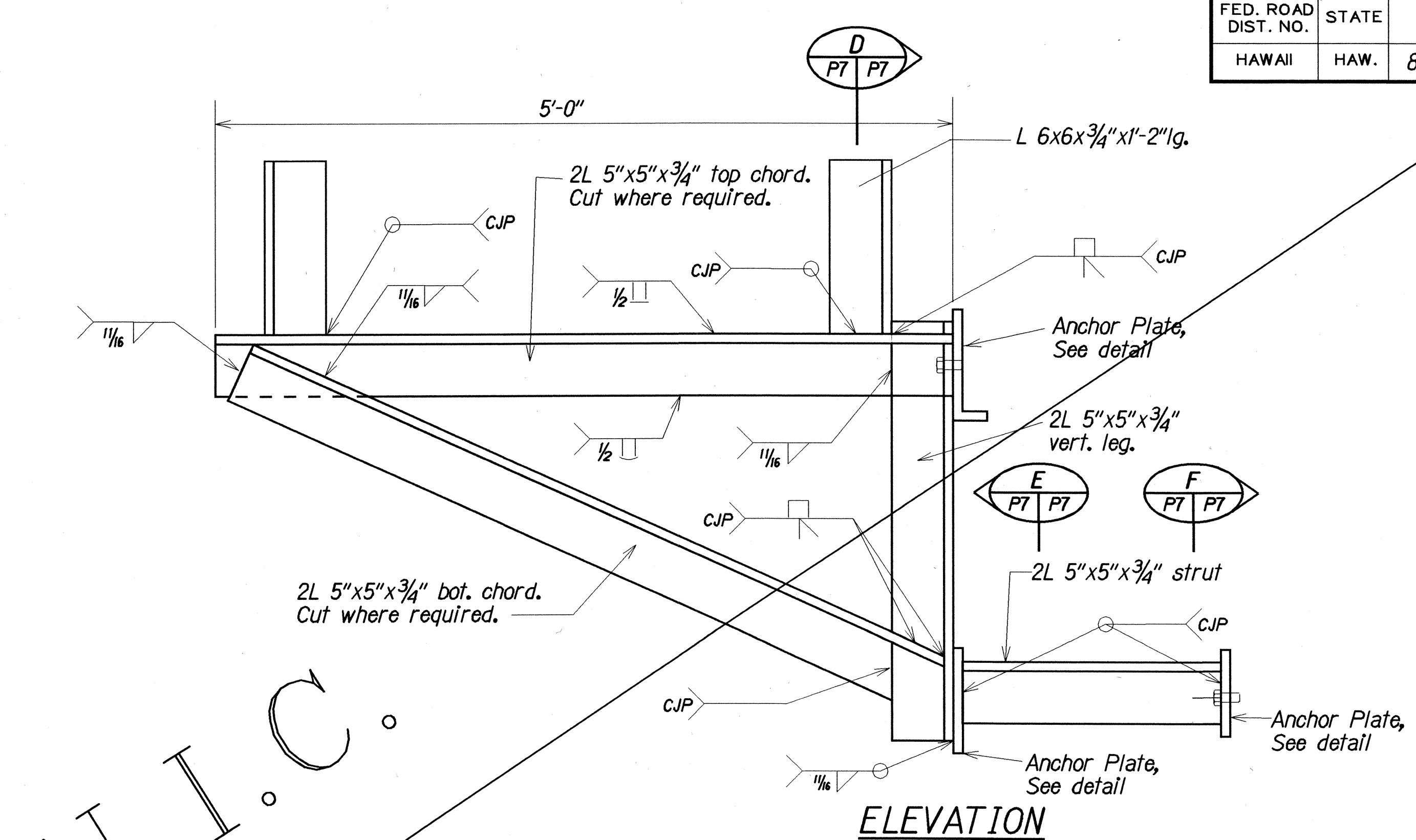
SHEET No. P6 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 10	13



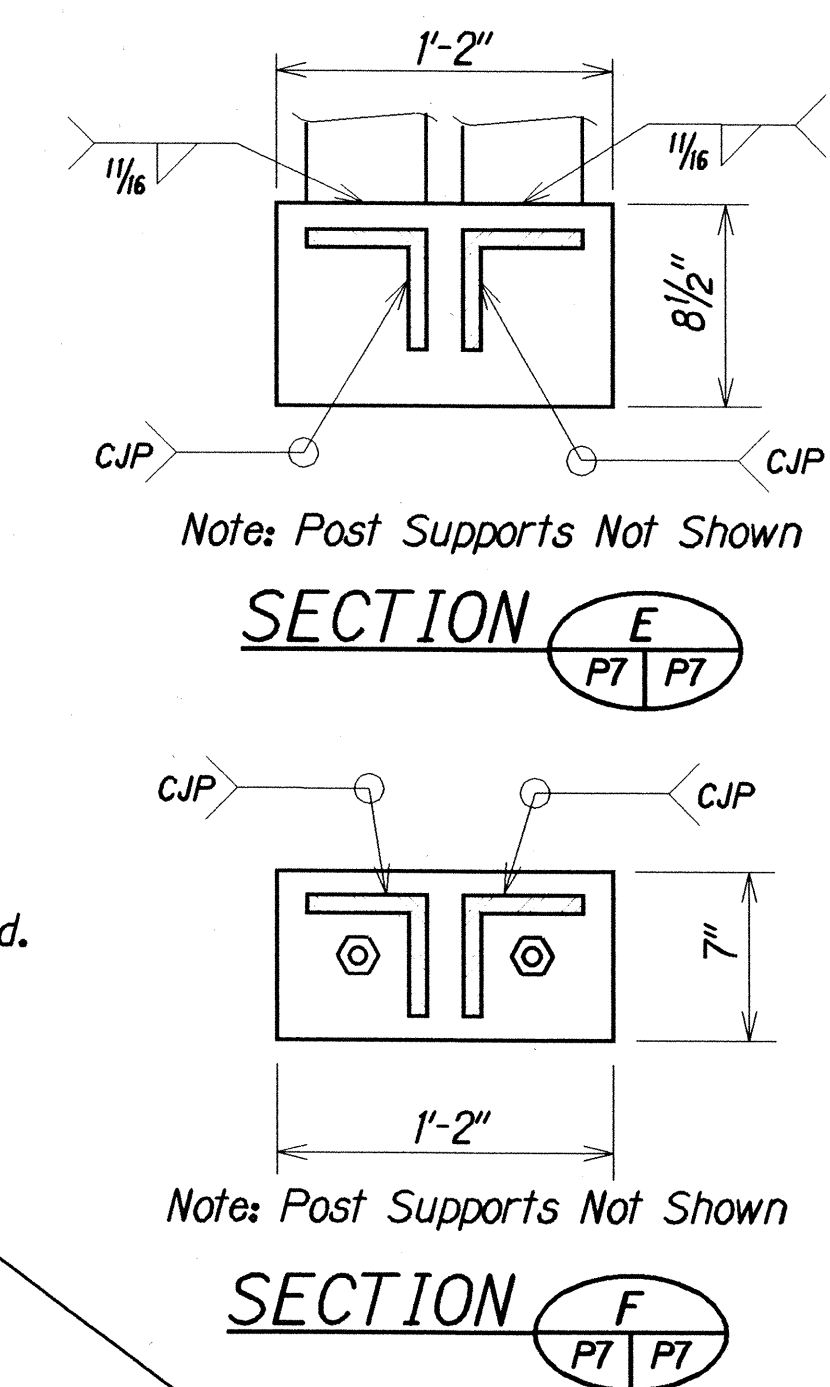
BRACKET DETAILS AT WINGWALLS

Scale: 1 1/2" = 1'-0"



BRACKET DETAILS AT BRIDGE

Scale: 1 1/2" = 1'-0"



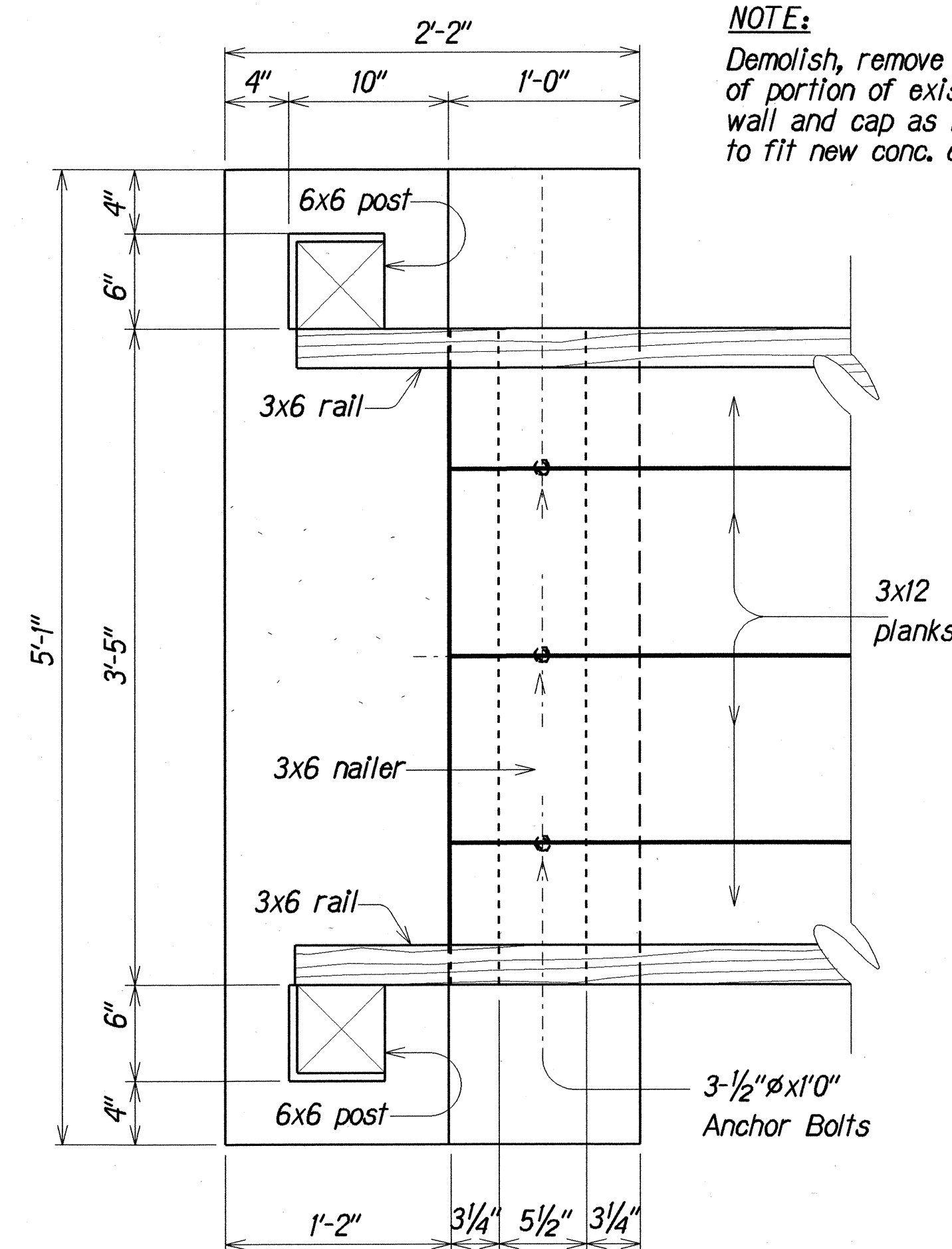
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
FOOT BRIDGE REPLACEMENT
HAUULA BRIDGE DETAILS
KAMEHAMEHA HIGHWAY
REPLACE WOODEN FOOT BRIDGES
MAHEIWA, WAIPIHI, HAUULA & MULIWAU BRIDGES
Project No. 83C-01-97M
Scale: As Noted Date: JUNE, 1997

SURVEY PLOTTED BY	DATE
DRAWN BY	JUN 1997
TRACED BY	DKT
DESIGNED BY	DKT
CHECKED BY	DKT
NOTED BY	DKT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 12	13

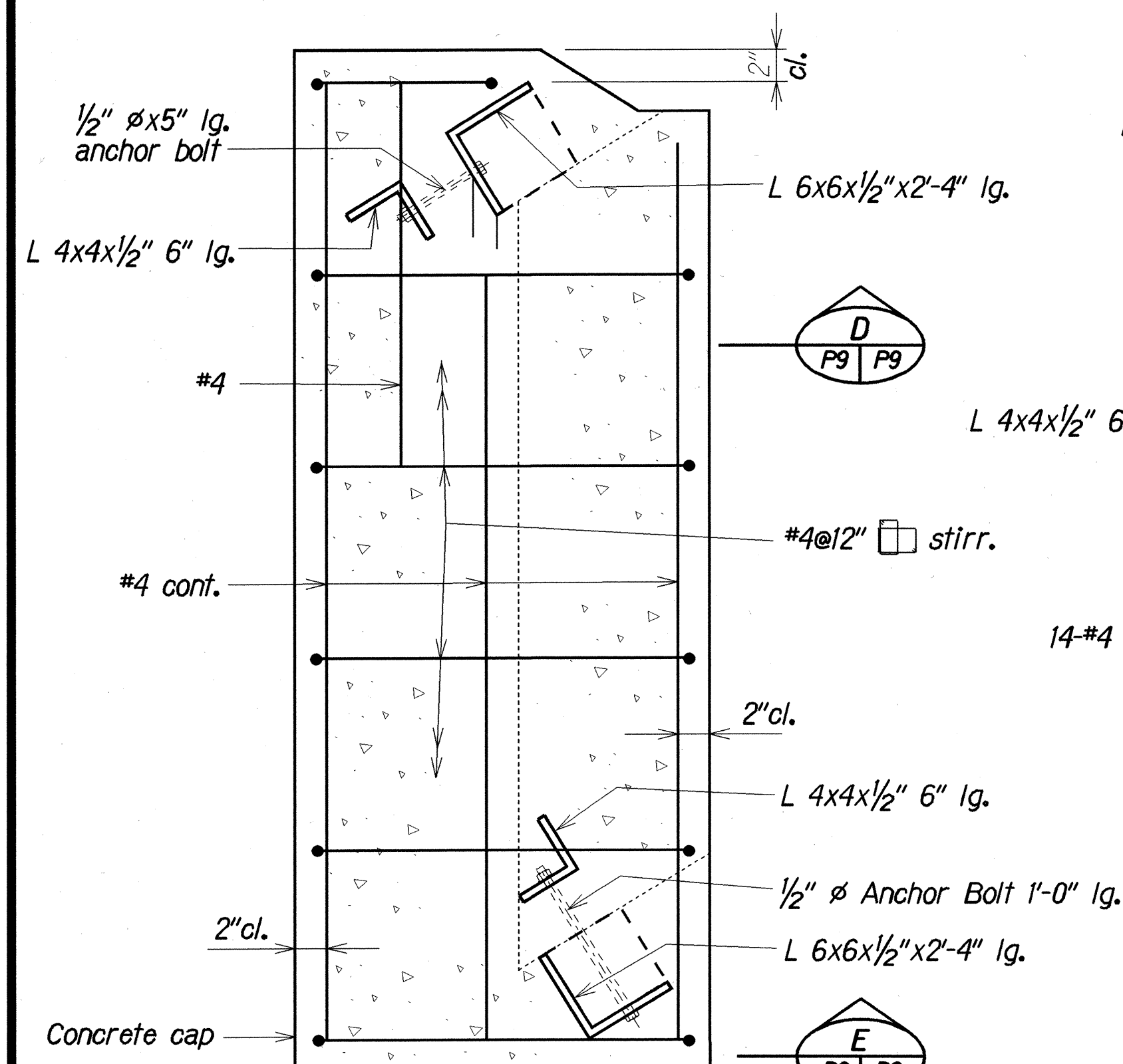
NOTE:

Dimensions of existing conditions to be verified by contractor prior to bidding, construction and ordering of materials.



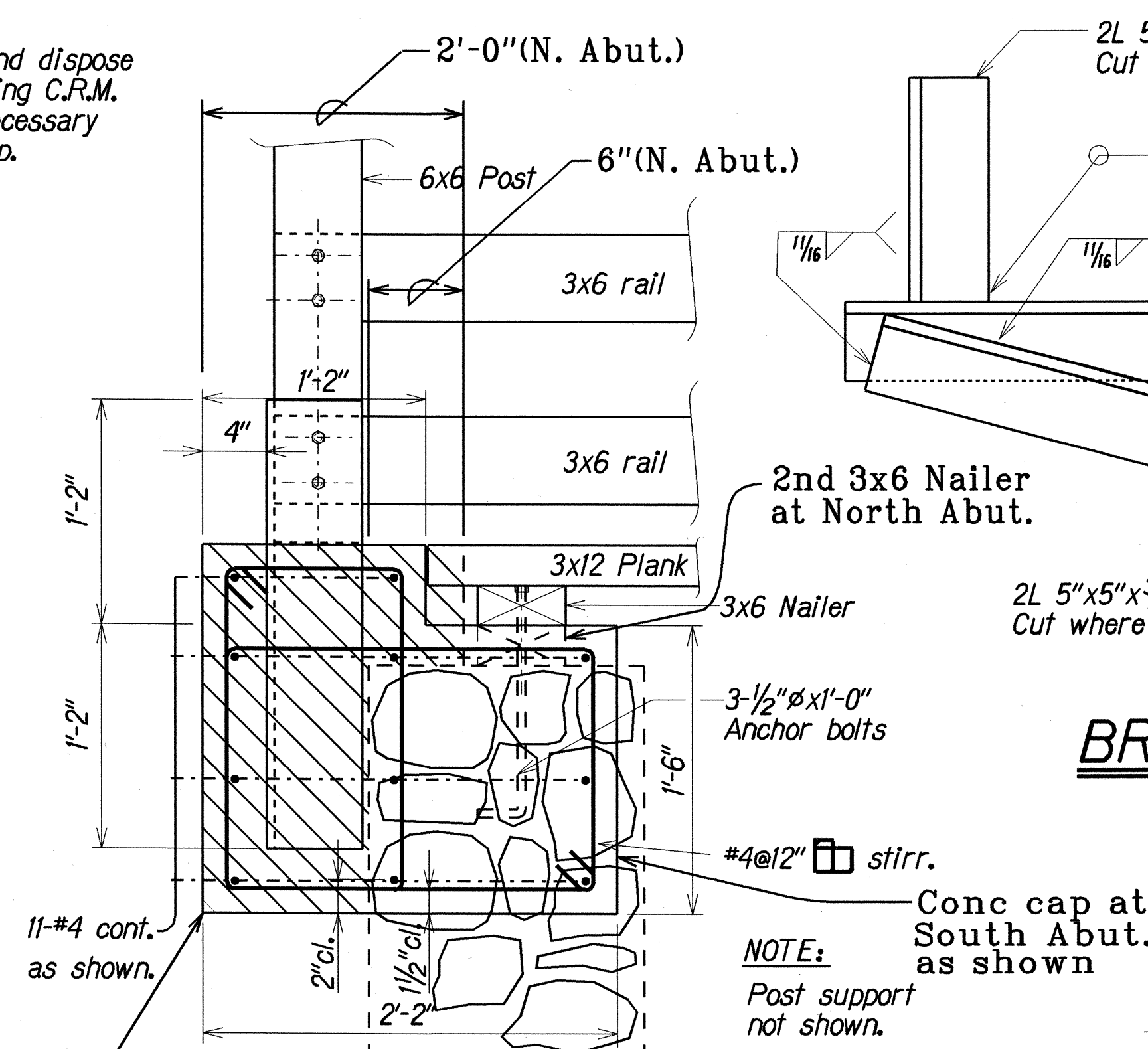
PLAN AT CONCRETE CAP

Scale: $1\frac{1}{2}'' = 1'-0''$



PLAN

Scale: $1\frac{1}{2}'' = 1'-0''$



CONCRETE CAP DETAIL

Scale: $1\frac{1}{2}" = 1'-0"$

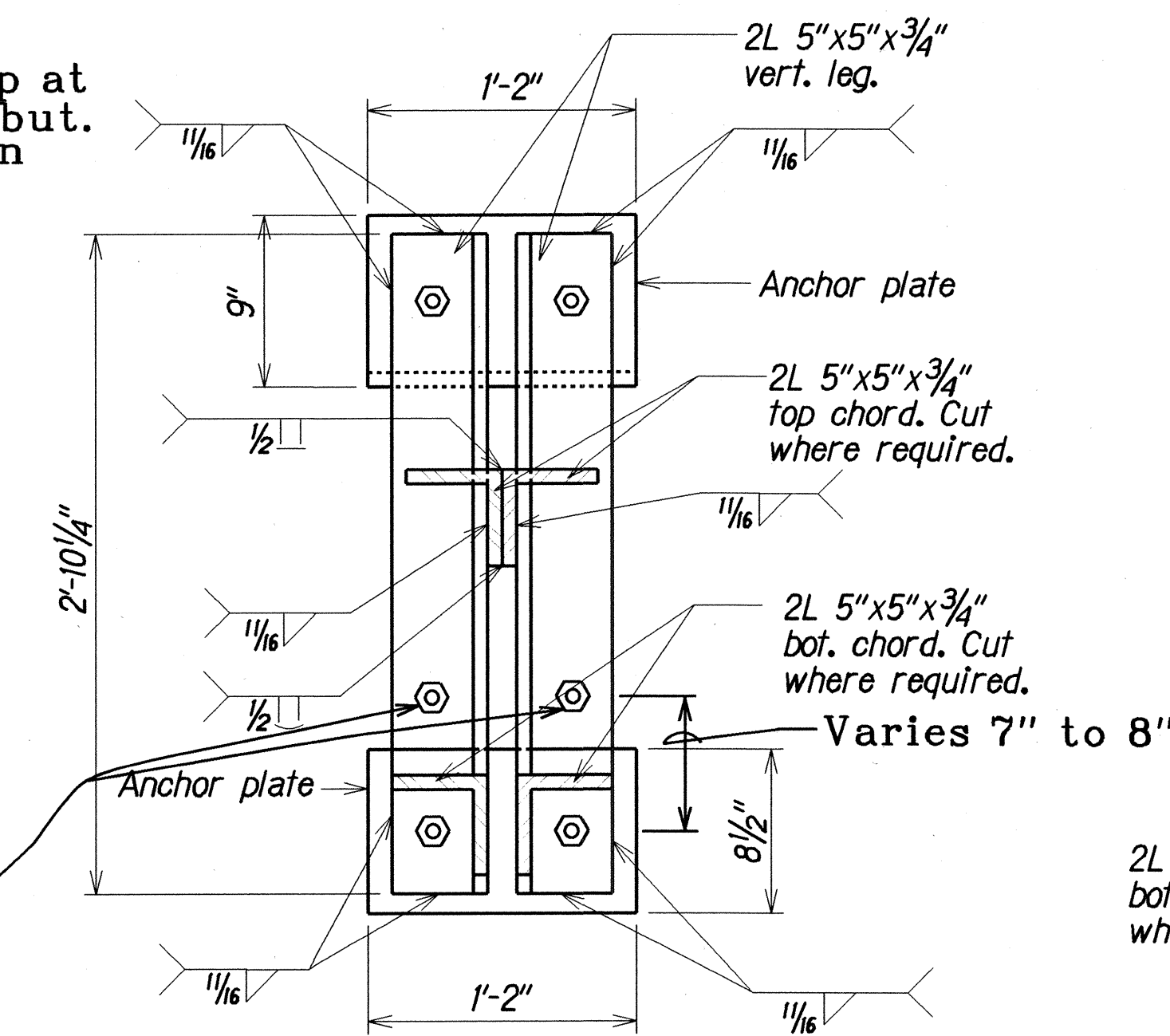
N.T.S.

Existing CRM wall
at North Abut.

Conc. cap at
North Abut. (Hatched)

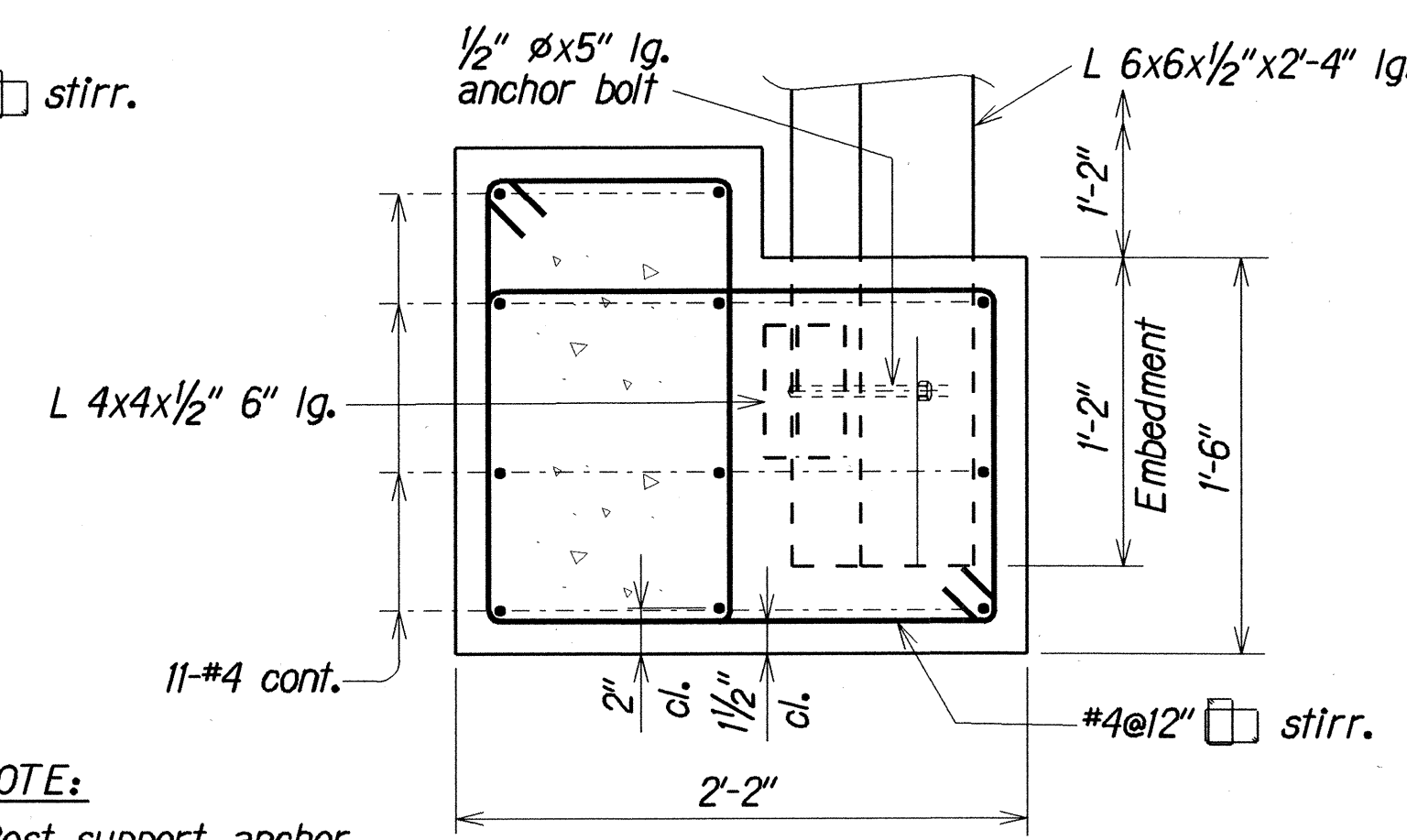


Scale: $1\frac{1}{2}''=1'-0''$

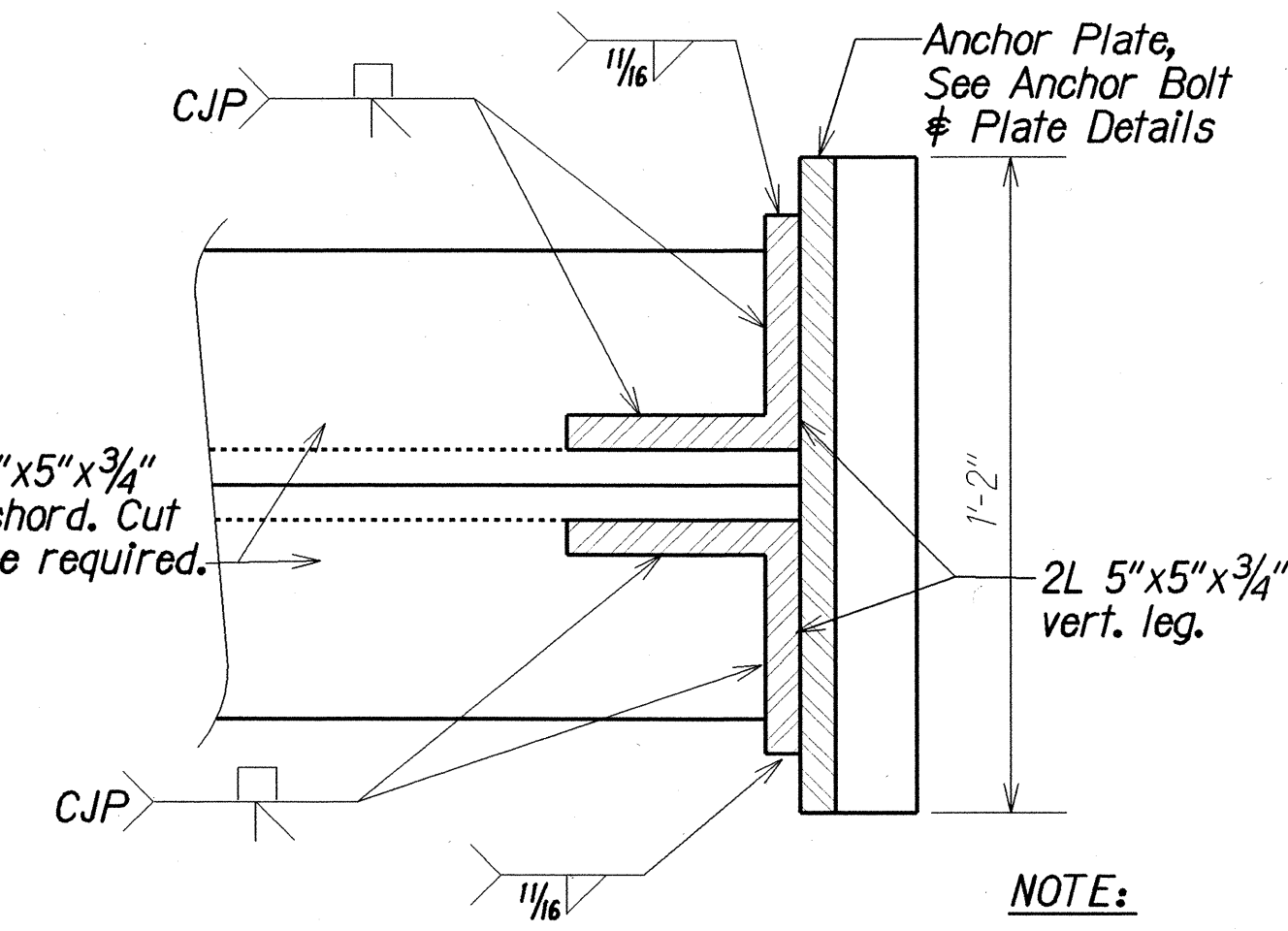


SECTION C

Scale: $1\frac{1}{2}''=1'-0''$

SECTION E

Scale: $1\frac{1}{2}'' = 1'-0''$

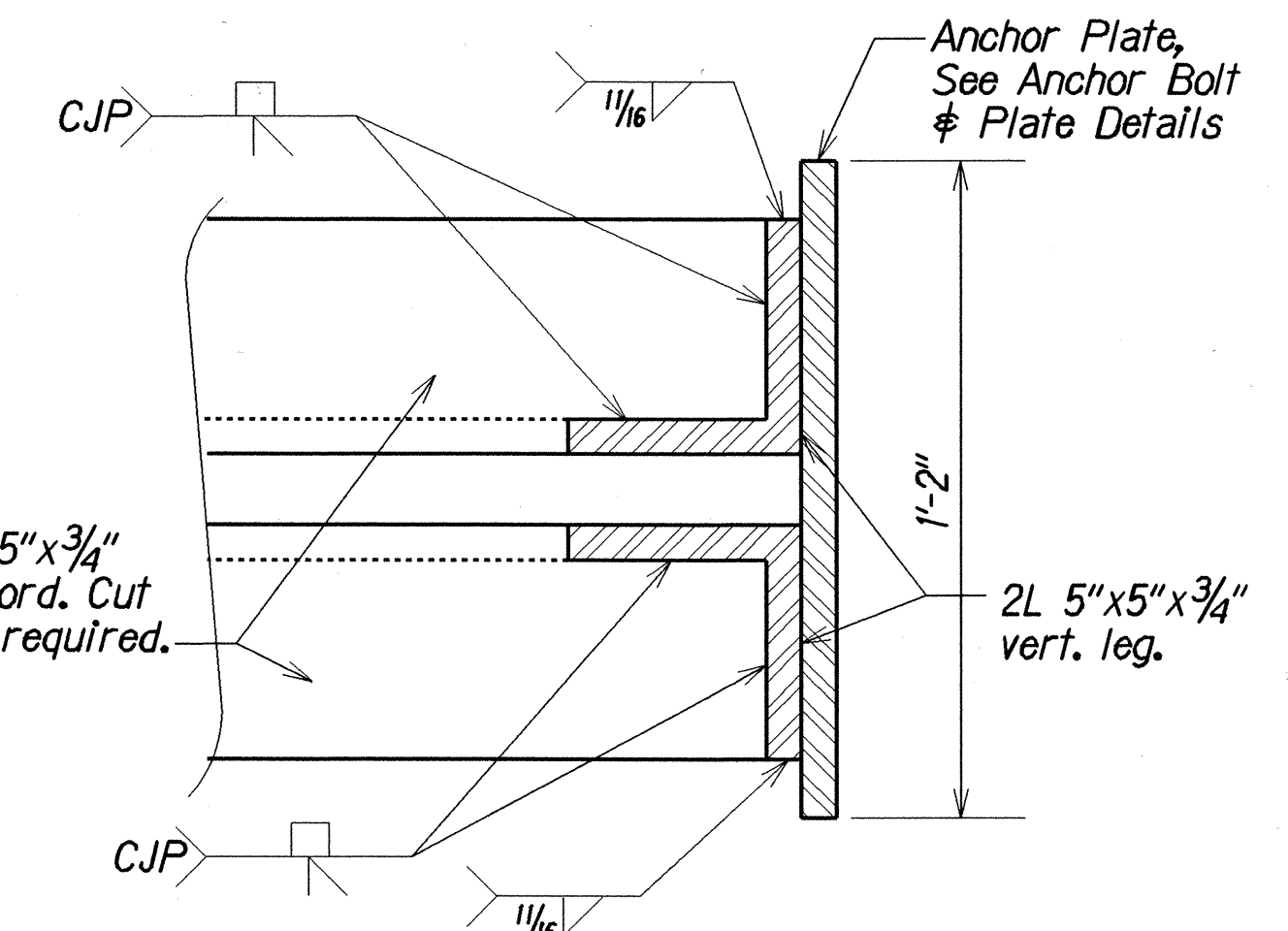


SECTION 

Scale: 3"=1'-0"

NOTE:

Post support
not shown



SECTION C

Scale: 3"=1'-0"

2L 5"x5"x $\frac{3}{4}$ "
vert. leg.

PL 5"x5"x3/4"
ert. leg.

LEGEND FOR AS-BUILT POSTINGS

 Squiggly line for as-built deletion

100.00	Double line for as-built deletion
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Roadway	Text for as-built posting
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
FOOT BRIDGE REPLACEMENT
MULIWAHAI BRIDGE CONCRETE CAP PLAN AND DETAIL

KAMFHAMEHA HIGHWAY
REPLACE WOODEN FOOT BRIDGE
MAHEIWI, WAIPIHI, HAUULA & MULIWIAI BRIDGES
Project No. 83C-01-97M

Scale: As Noted

Date: JUNE, 1997

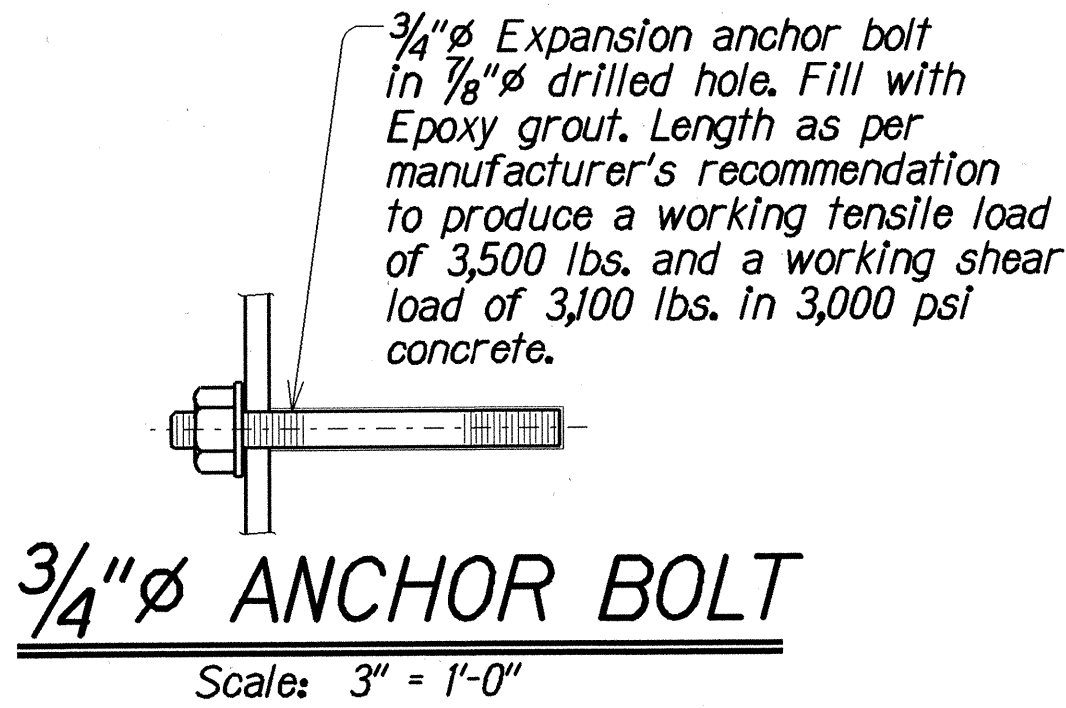
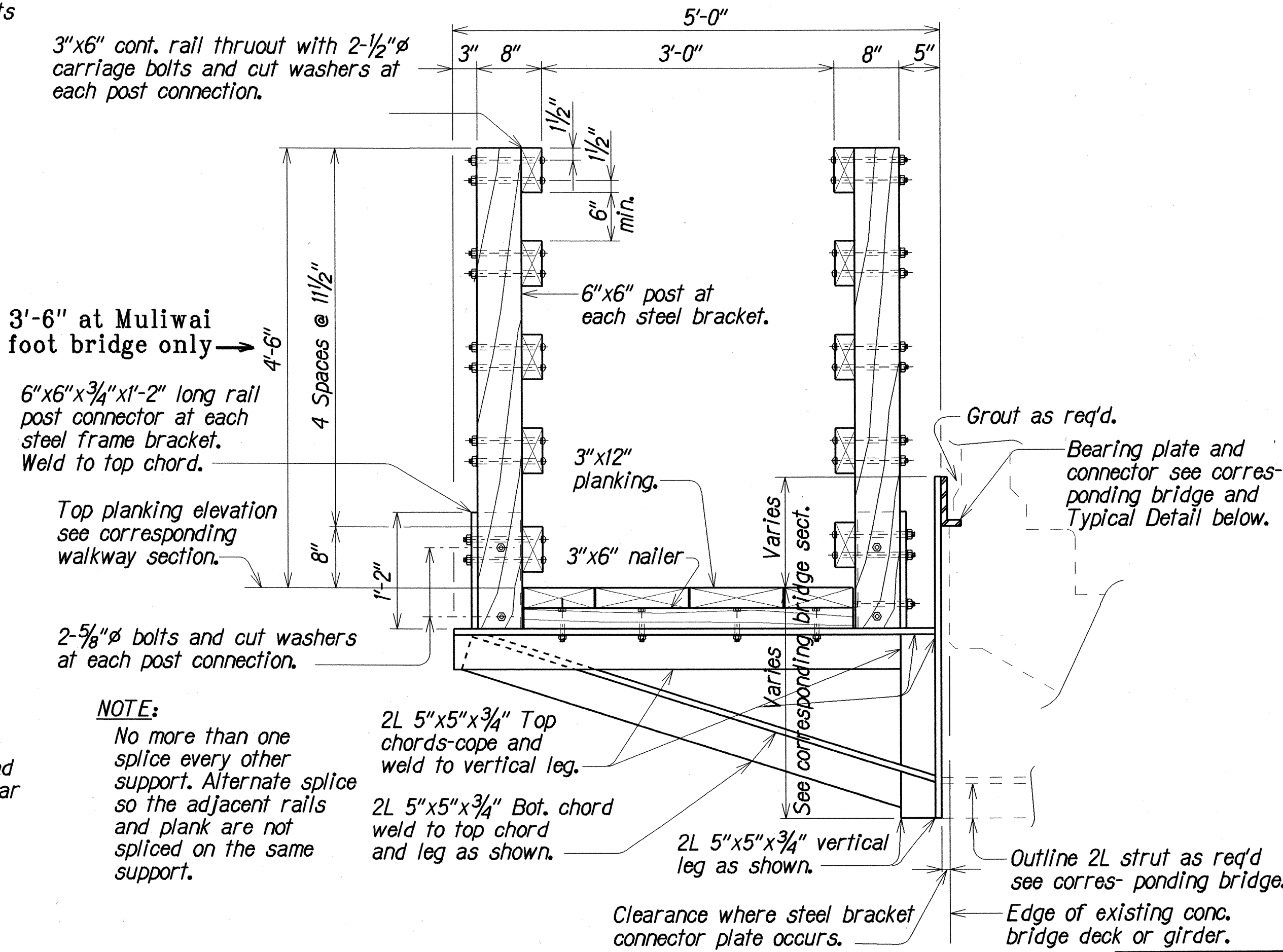
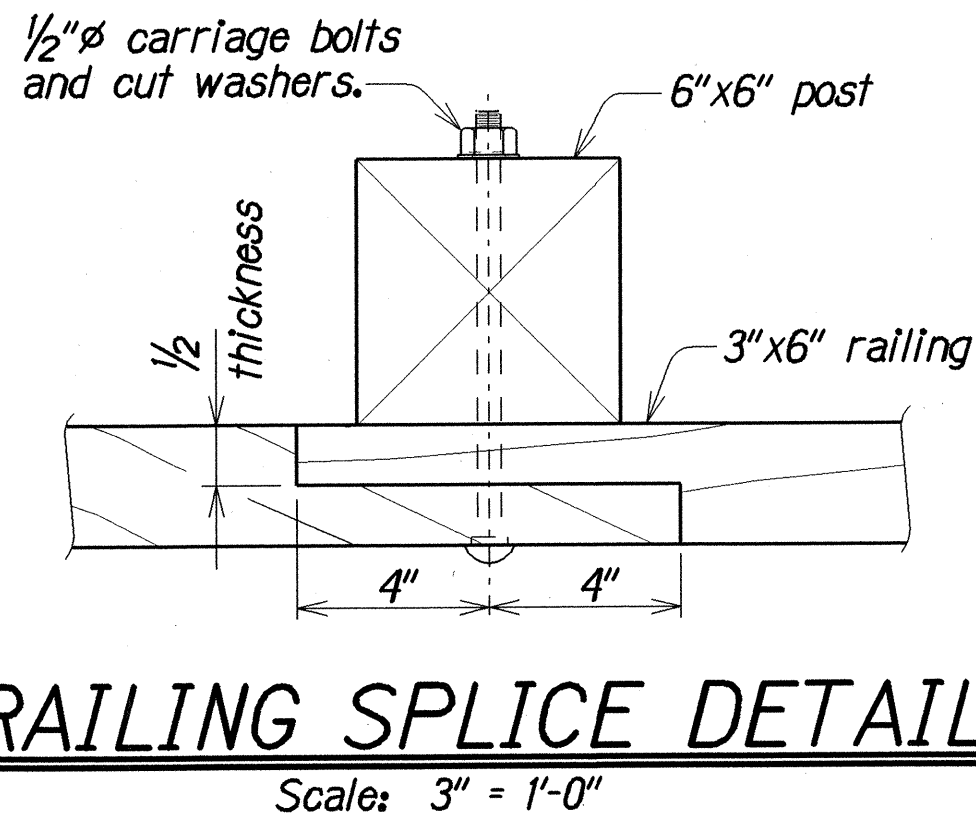
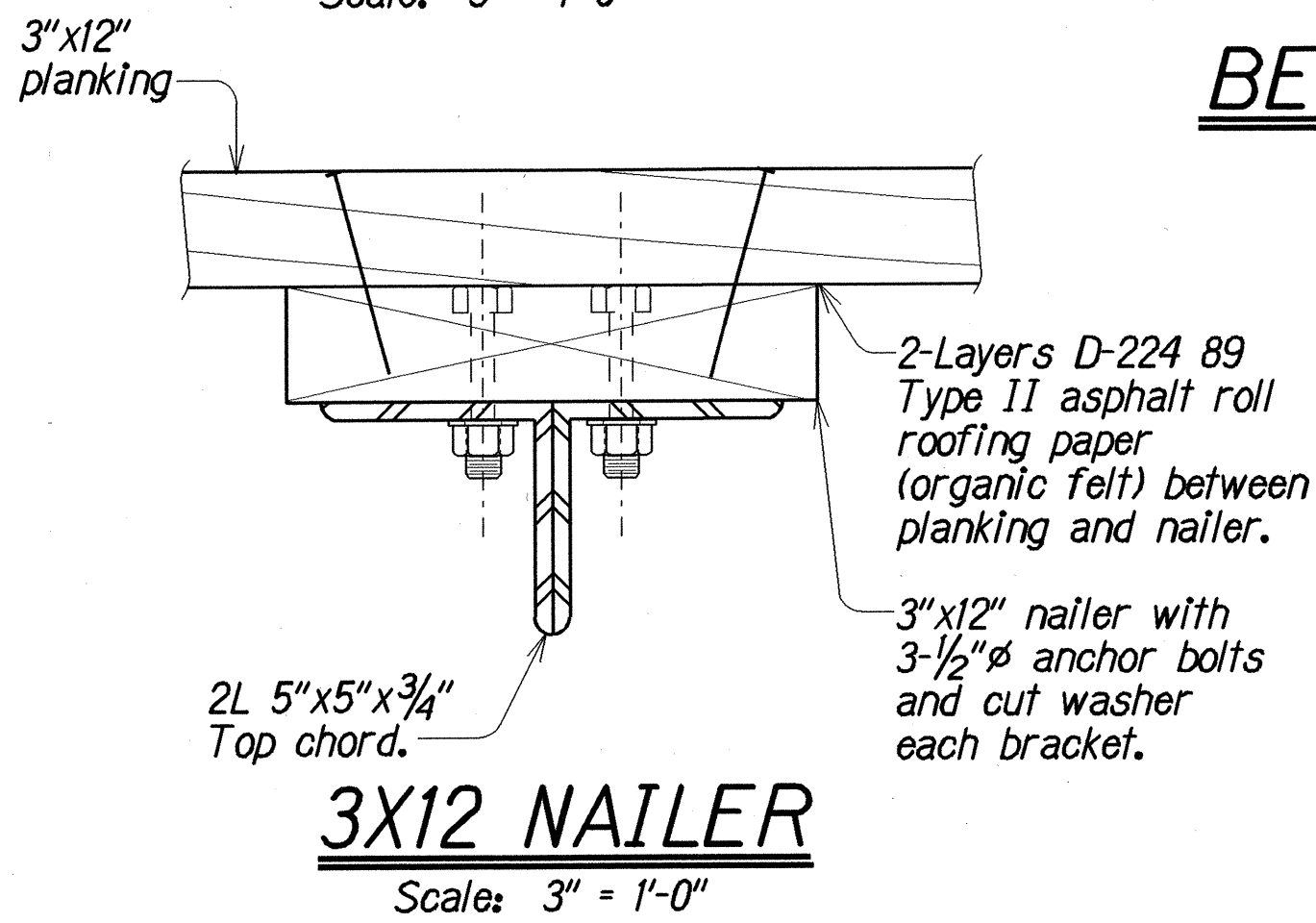
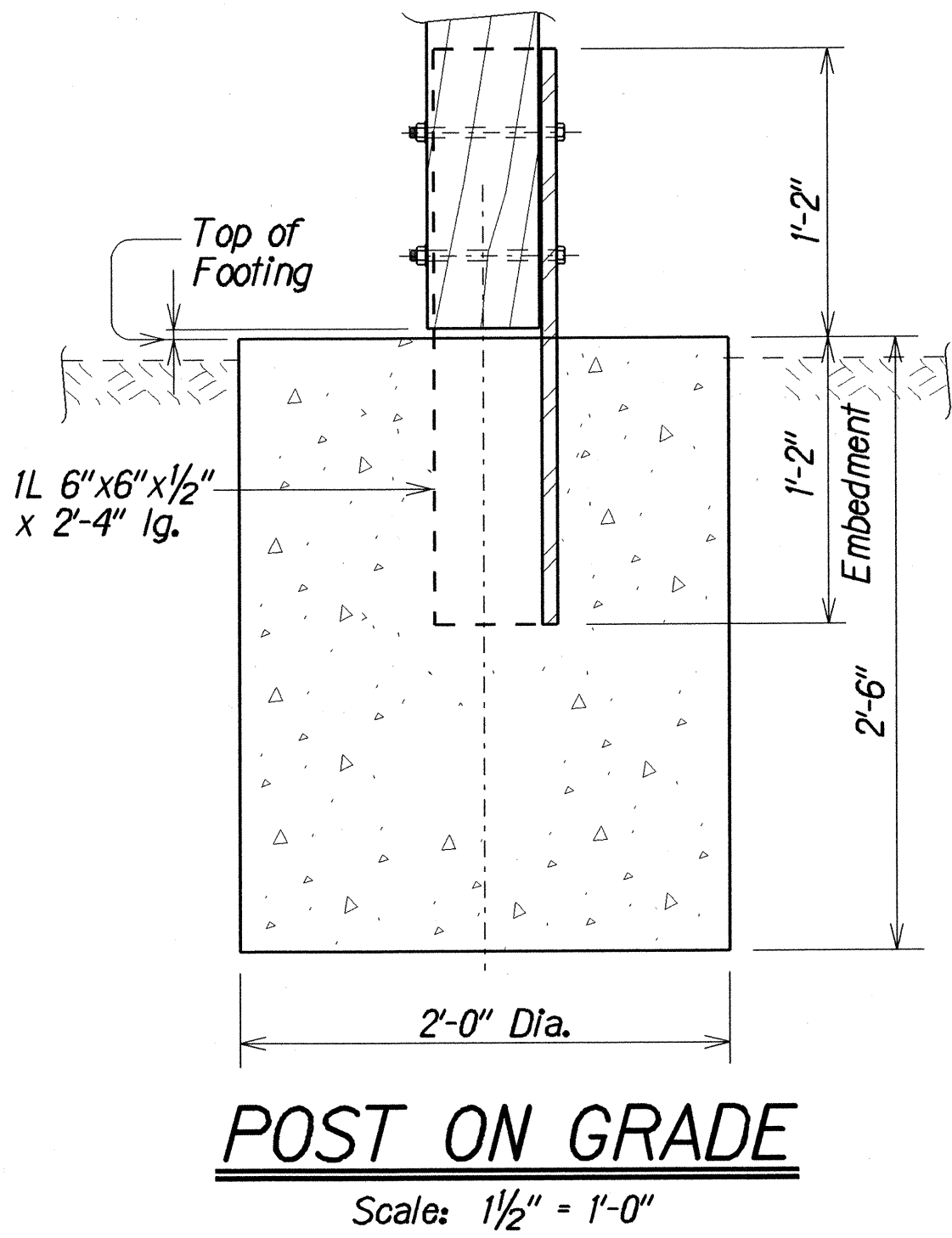
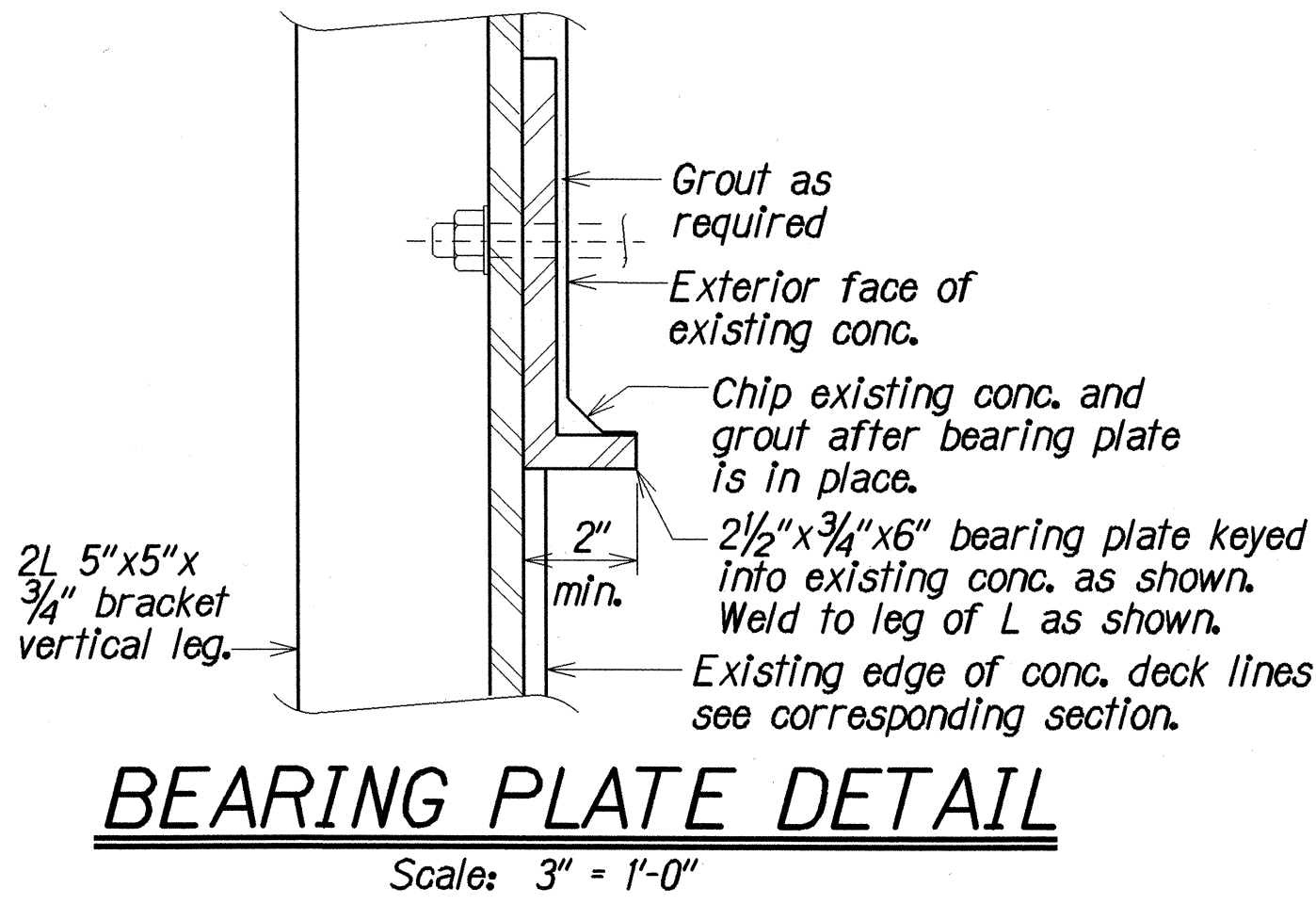
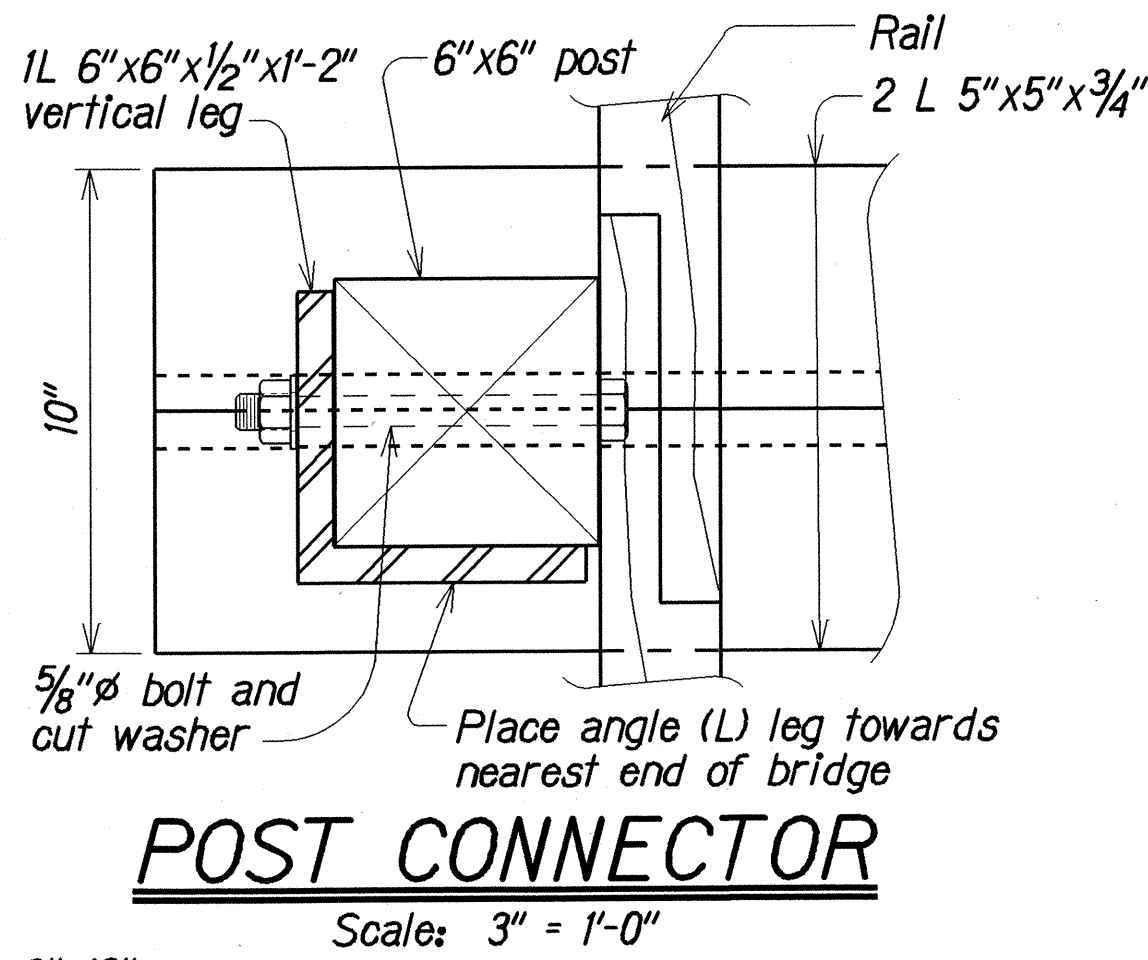
SHEET No. *P9* OF *10* SHEETS

"AS-BUILT"

ADD. 12

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83C-01-97M	1997	ADD. 13	13



NOTE:
No more than one splice every other support. Alternate splice so the adjacent rails and plank are not spliced on the same support.

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
FOOT BRIDGE REPLACEMENT
FOOT BRIDGE DETAILS
KAMEHAMEHA HIGHWAY
REPLACE WOODEN FOOT BRIDGES
MAHEIWI, WAIPIUHI, HAUULA & MULIWAH BRIDGES
Project No. 83C-01-97M
Scale: As Noted
Date: JUNE, 1997

SHEET No. P10 OF 10 SHEETS
ADD. 13

SURVEY PLOTTED BY	DATE
DRAWN BY	JUN 1997
DESIGNED BY	JUN 1997
CHECKED BY	JUN 1997
NOTED BY	JUN 1997
SCALE	AS NOTED

"AS-BUILT"