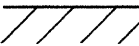
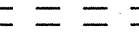
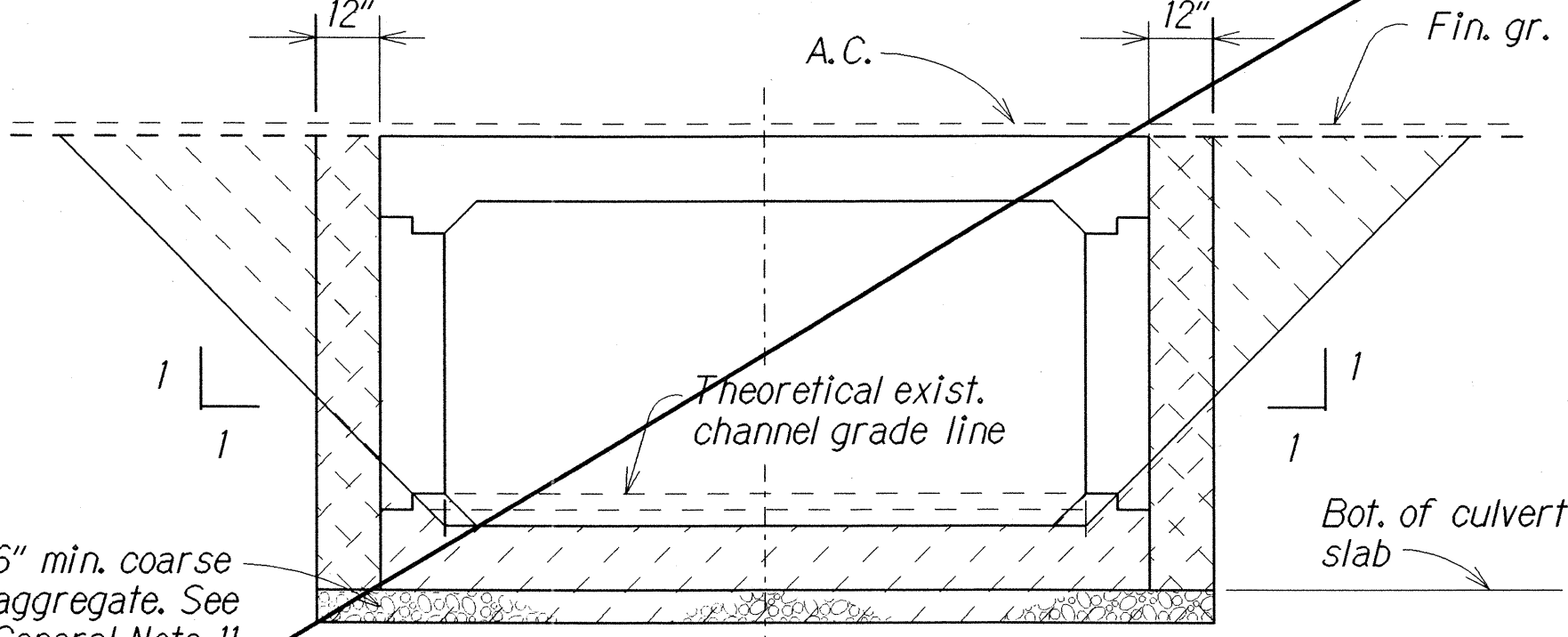
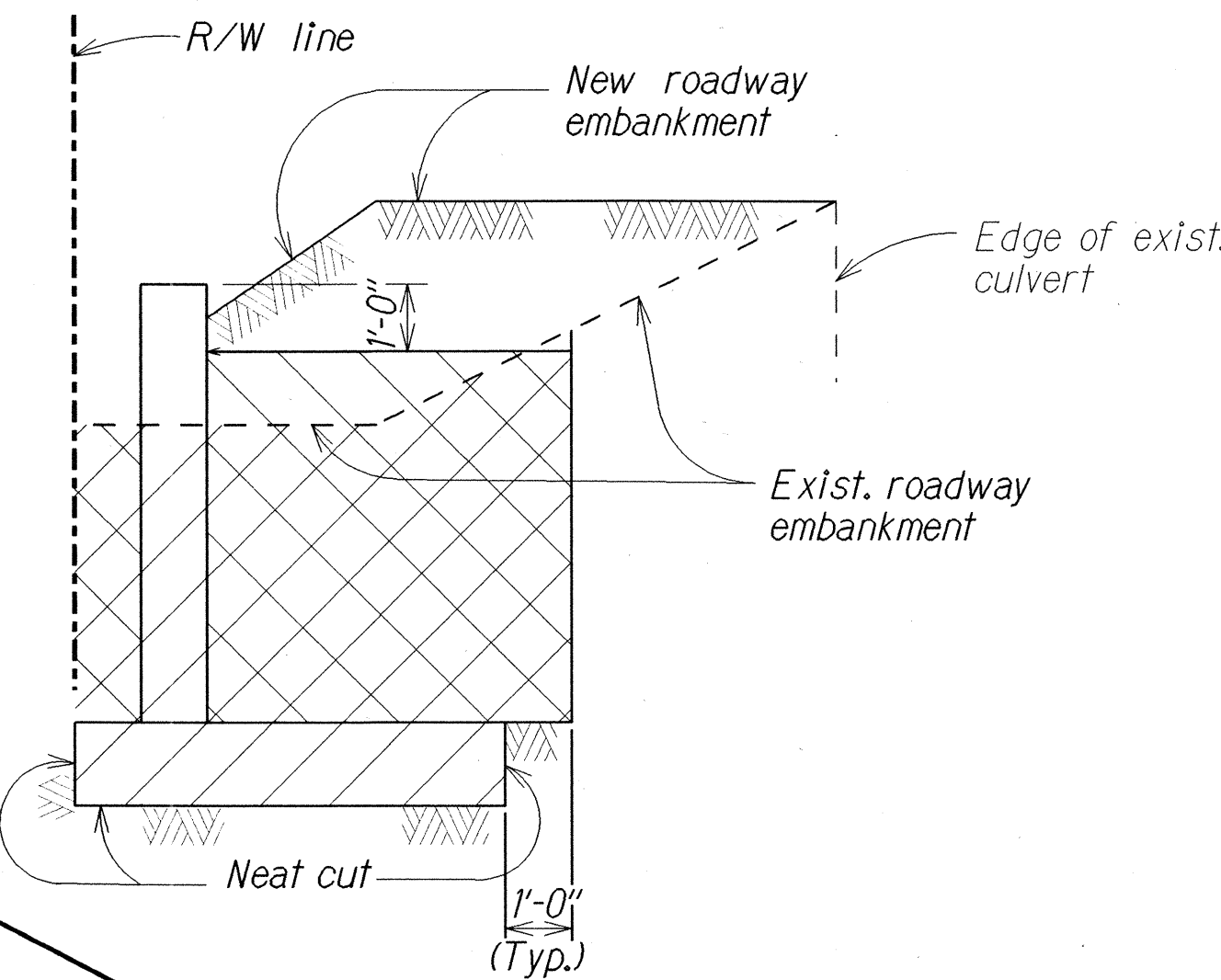


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-89	1990	21R	23

- NOTE:
- Hatched area shown thus  denotes limits of structure excavation.
 - Hatched area shown thus  denotes limits of structure backfill.
 - Hatched area shown thus  denotes limits of channel excavation.



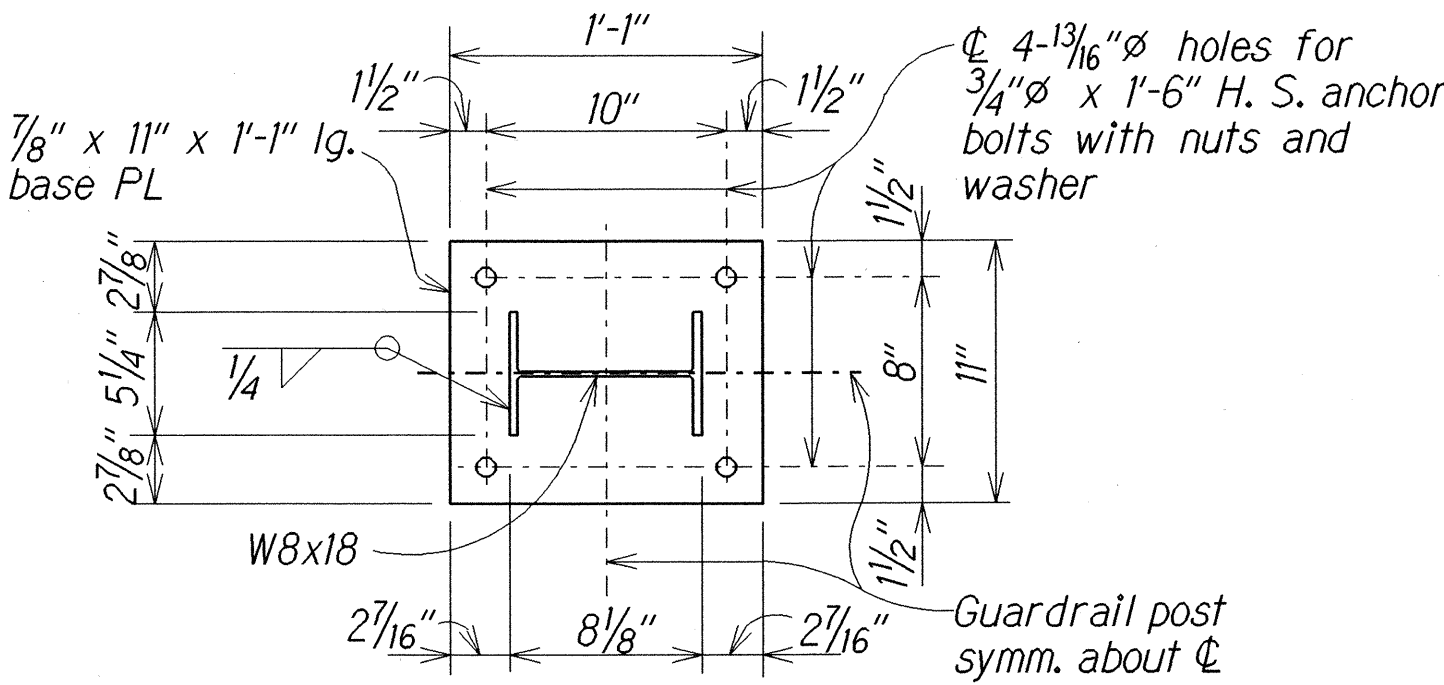
AT CULVERT



AT WINGWALL

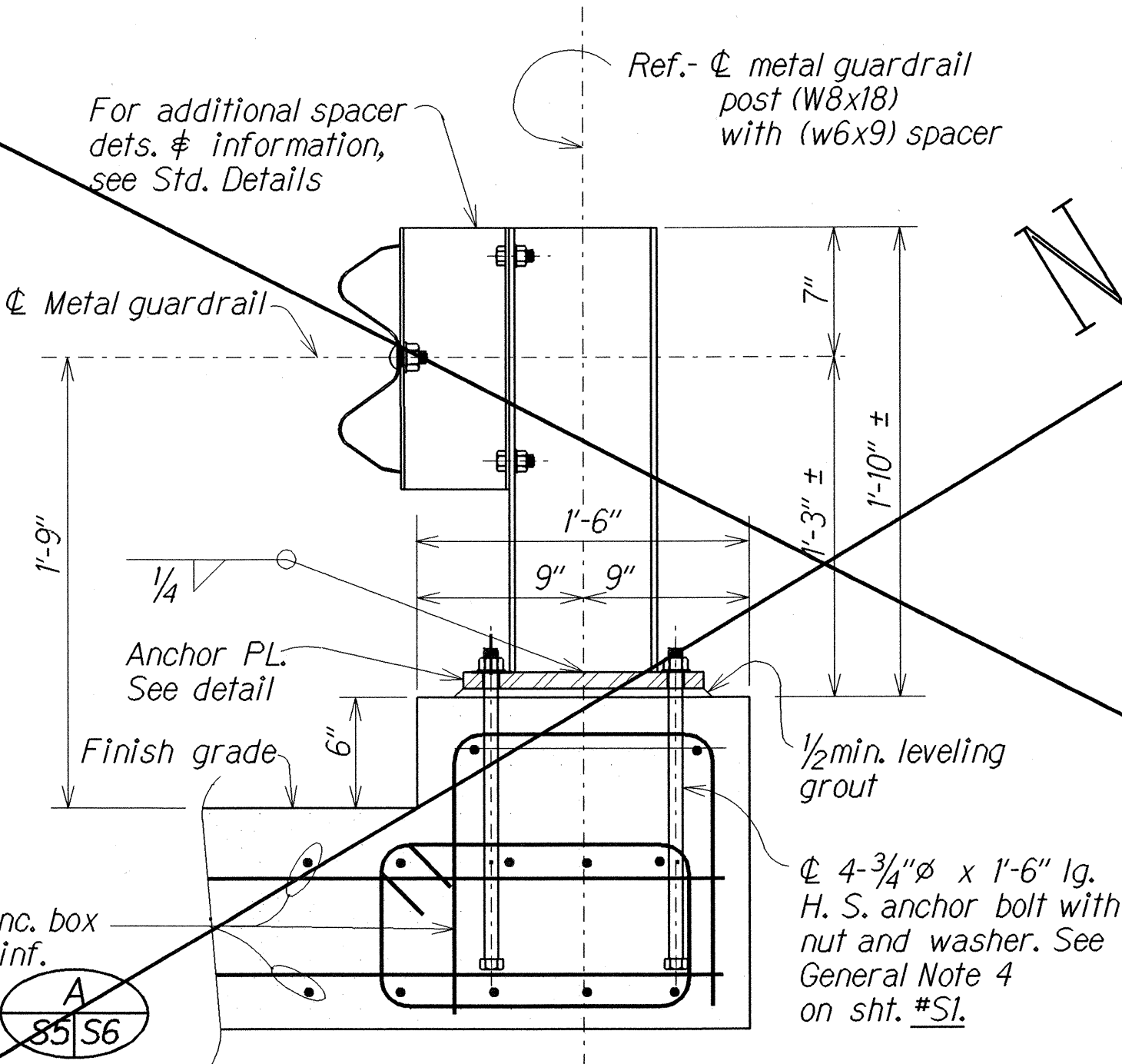
TYPICAL CHANNEL & STRUCTURE EXCAVATION & BACKFILL PAY LIMITS

Scale: 3/8"=1'-0"



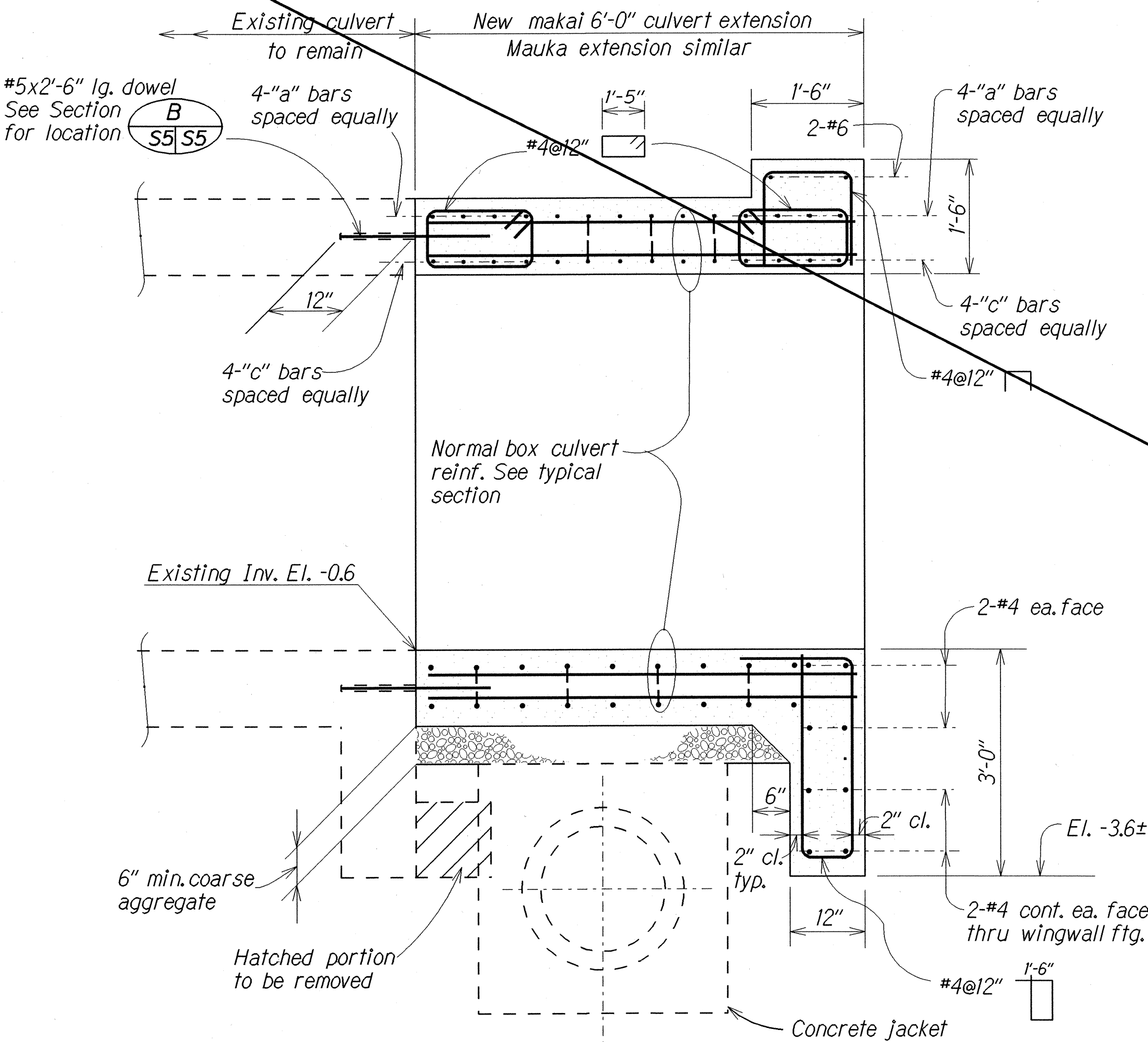
POST ANCHOR PL DETAIL

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



TYPICAL GUARD RAIL SECTION

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



SECTION A A

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

ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITIES
202.0100	Removal of Portion of Concrete Box Culvert	Lump Sum	18 c.y.
206.4200	Structure Excavation for Box Culvert	C.Y.	65 c.y.
206.7000	Structure Backfill	C.Y.	60 c.y.
207.0100	Channel Excavation	C.Y.	4 c.y.
501.0100	Structure Steel (Post, PL, & Bolts)	Lbs.	298 lbs.
503.1030	Concrete in Box Culvert	Lump Sum	42 c.y.
503.1036	2" ϕ Drilled Holes for Dowels	Each	68 ea.
602.0030	Reinforcing Steel in Box Culvert	Lump Sum	5,500 lbs.
603.0010	Coarse Aggregate	C.Y.	4 c.y.

10/22/90 This entire sheet shall be N.I.C. per negotiation with low bidder.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

10'X5' BOX CULVERT AT STA. 1134+55
CULVERT DETAILS & EST. QUANTITIES
GUARDRAIL AND SHOULDER IMPROVEMENTS
AT VARIOUS LOCATIONS ON OAHU
Proj. No. HWY-0-02-89

Scale: As Noted

Date: Nov. 1989

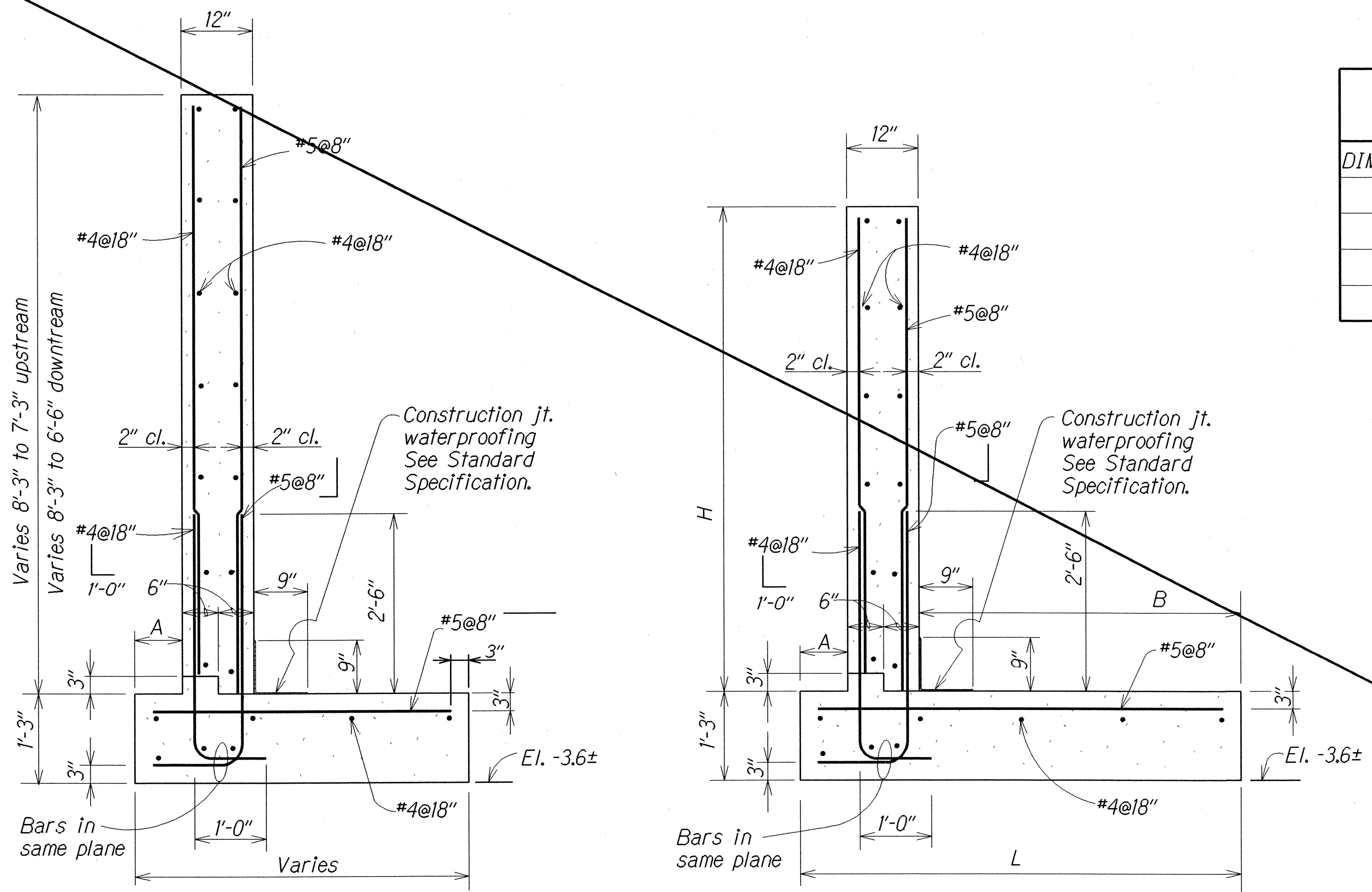
SHEET No. S6 OF 8 SHEETS

"AS-BUILT"

21R

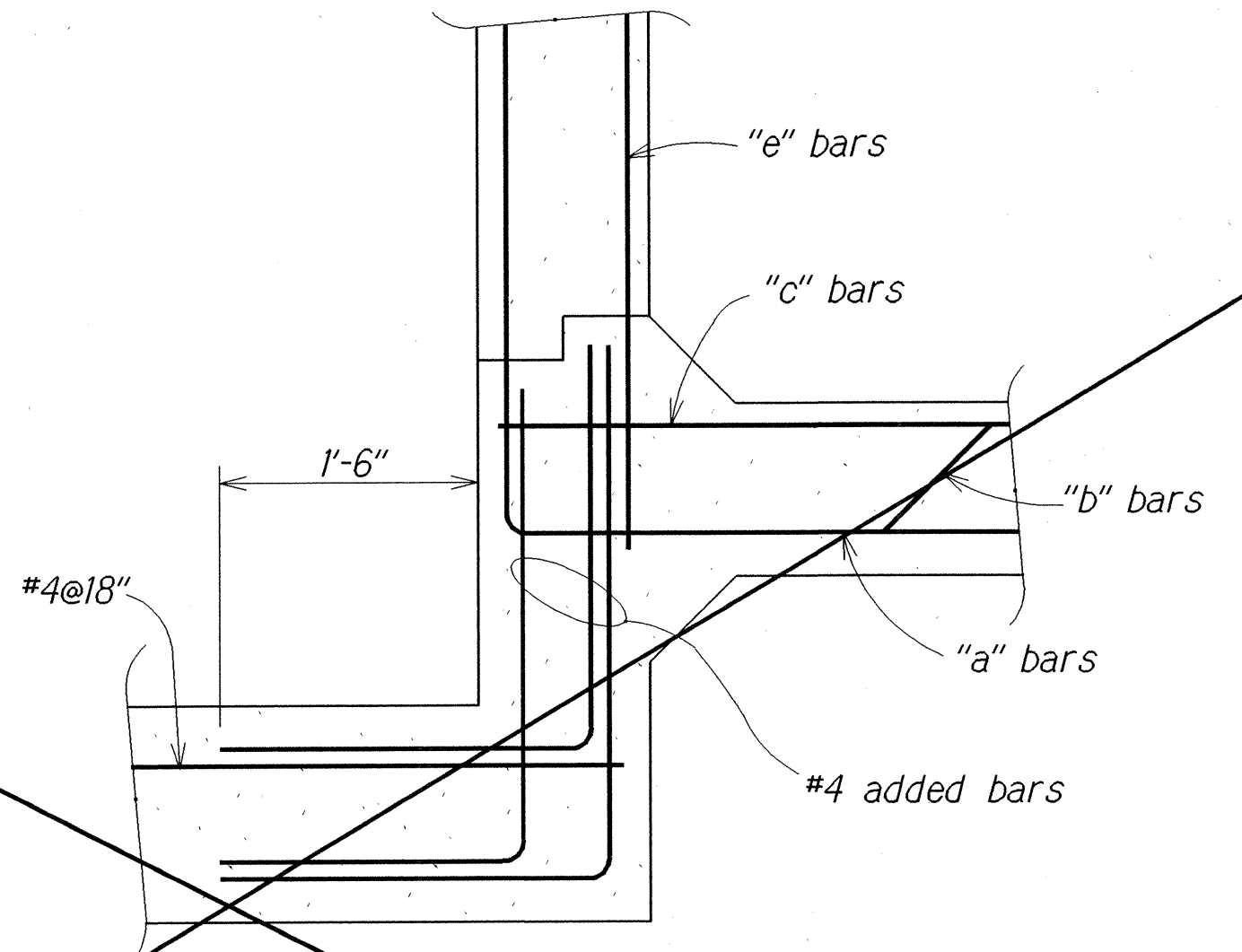
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-02-89	1990	22R	23

WINGWALL SCHEDULE		
DIMENSION	UPSTREAM	DOWNSTREAM
L	6'-2"	6'-6"
H	7'-3"	6'-6"
A	8"	1'-0"
B	4'-6"	4'-6"



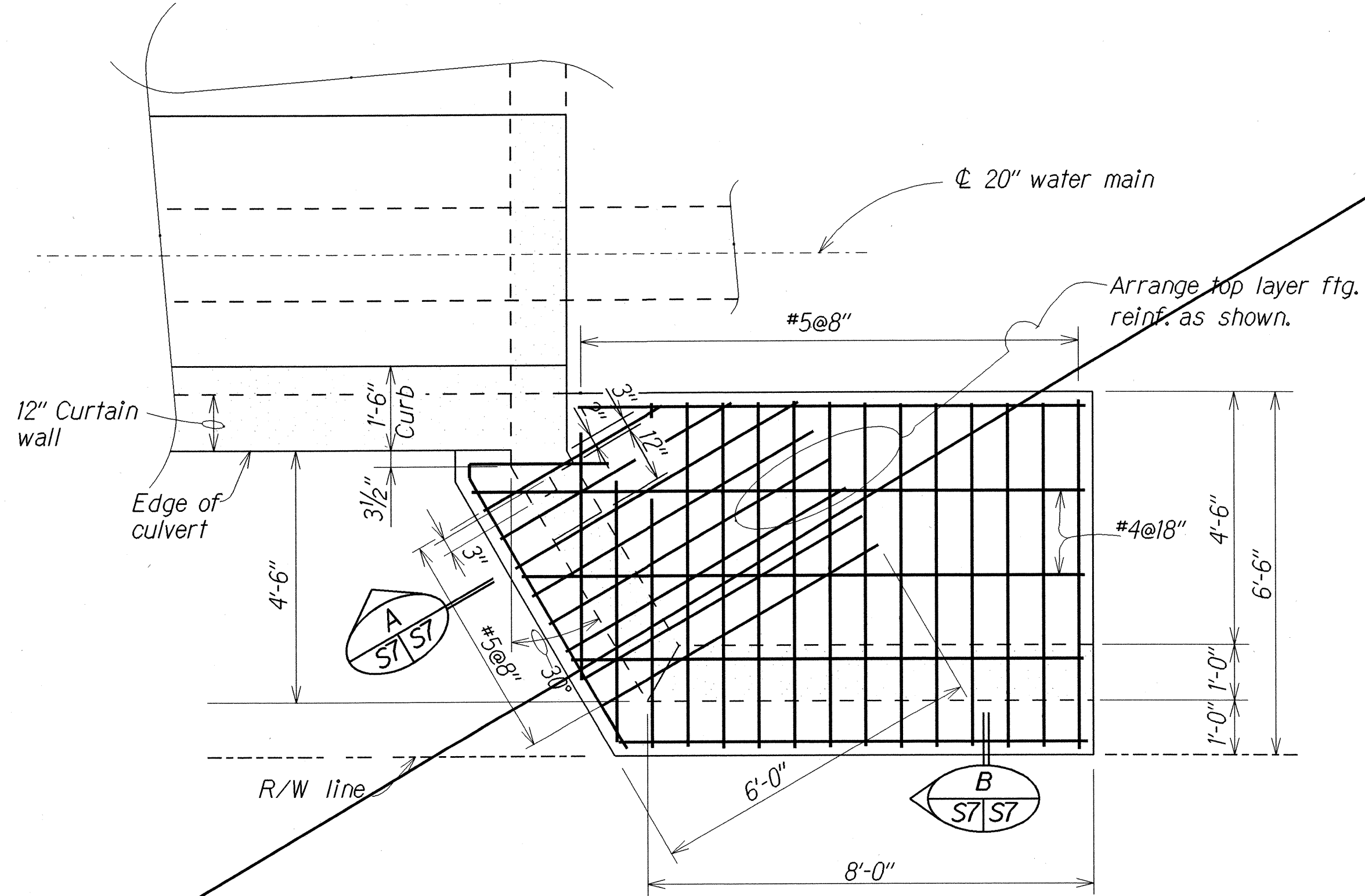
SECTION A
S7 S7
Scale: 3/4"=1'-0"

SECTION B
S7 S7
Scale: 3/4"=1'-0"

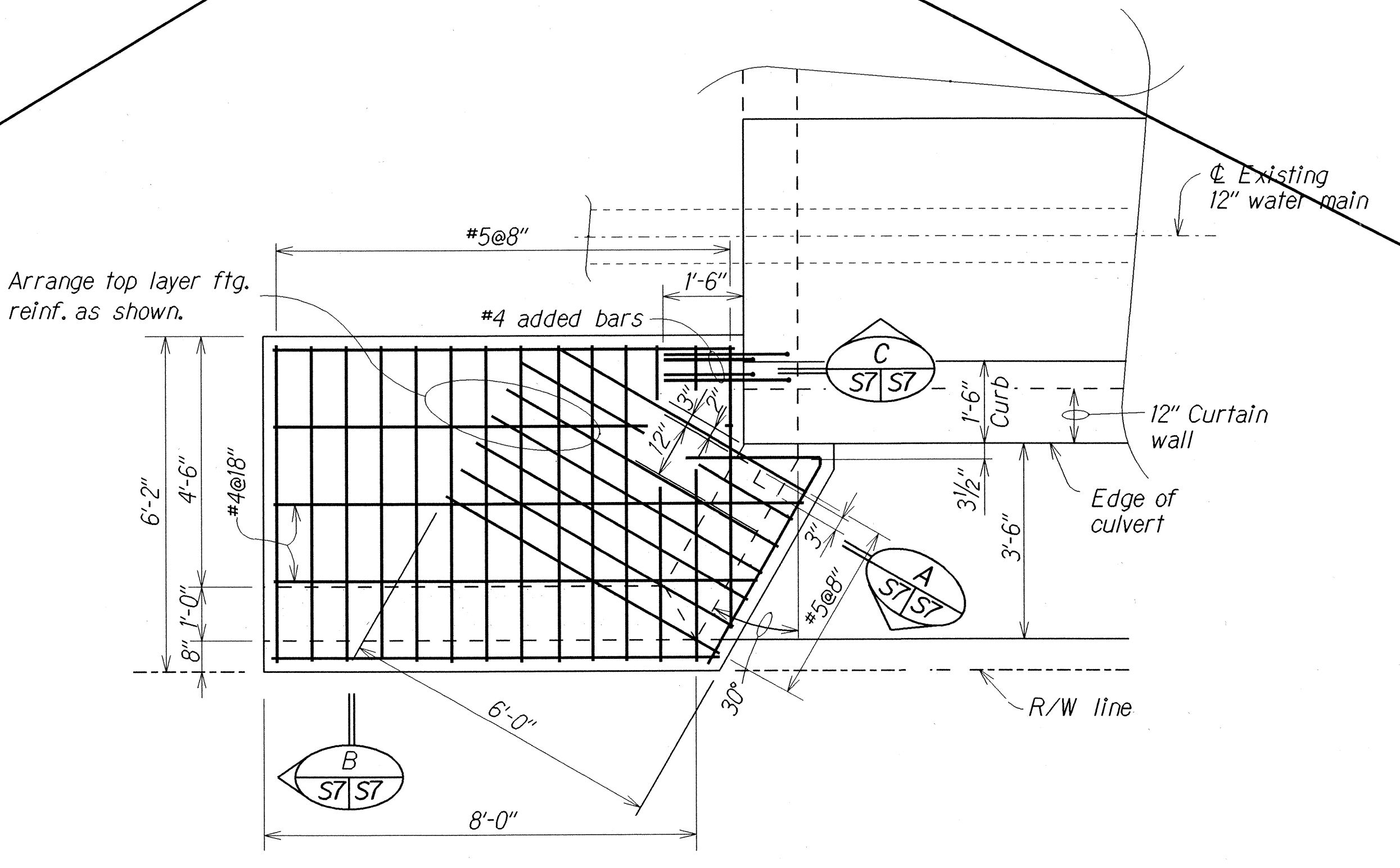


SECTION C
S7 S7
Scale: 1"=1'-0"

N.I.C.



DOWNSTREAM WINGWALL PLAN
Scale: 1/2"=1'-0"



UPSTREAM WINGWALL PLAN
Scale: 1/2"=1'-0"

10/22/90

DATE

This entire sheet shall be N.I.C. per negotiation with low bidder.

REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

10'X5' BOX CULVERT AT STA. 1134+55

RETAINING WALL DETAILS

GUARDRAIL AND SHOULDER IMPROVEMENTS

AT VARIOUS LOCATIONS ON OAHU

Proj. No. HWY-0-02-89

Scale: As Noted

Date: Nov. 1989

SHEET No. 57 OF 8 SHEETS

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

"AS-BUILT"

22R