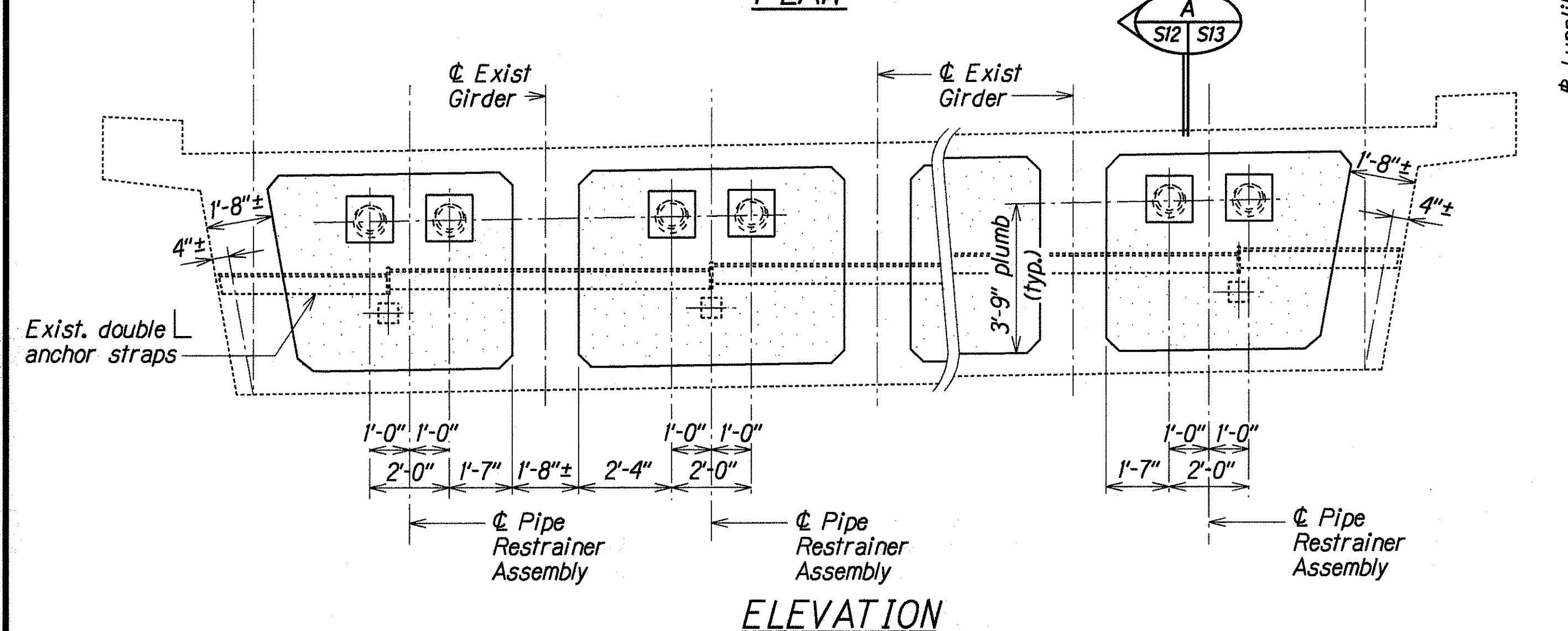
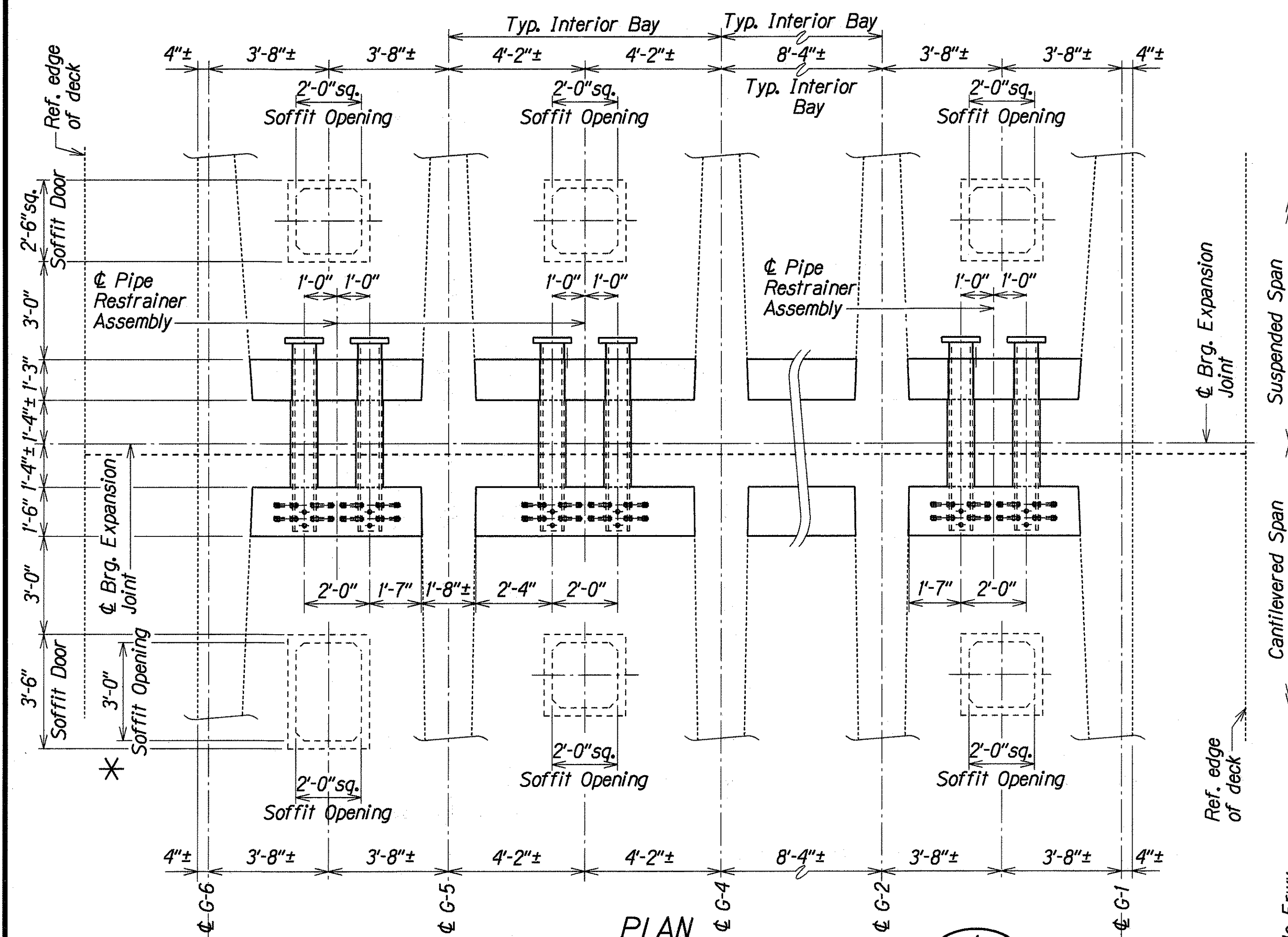


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-HI-1(225)	2000	18	37

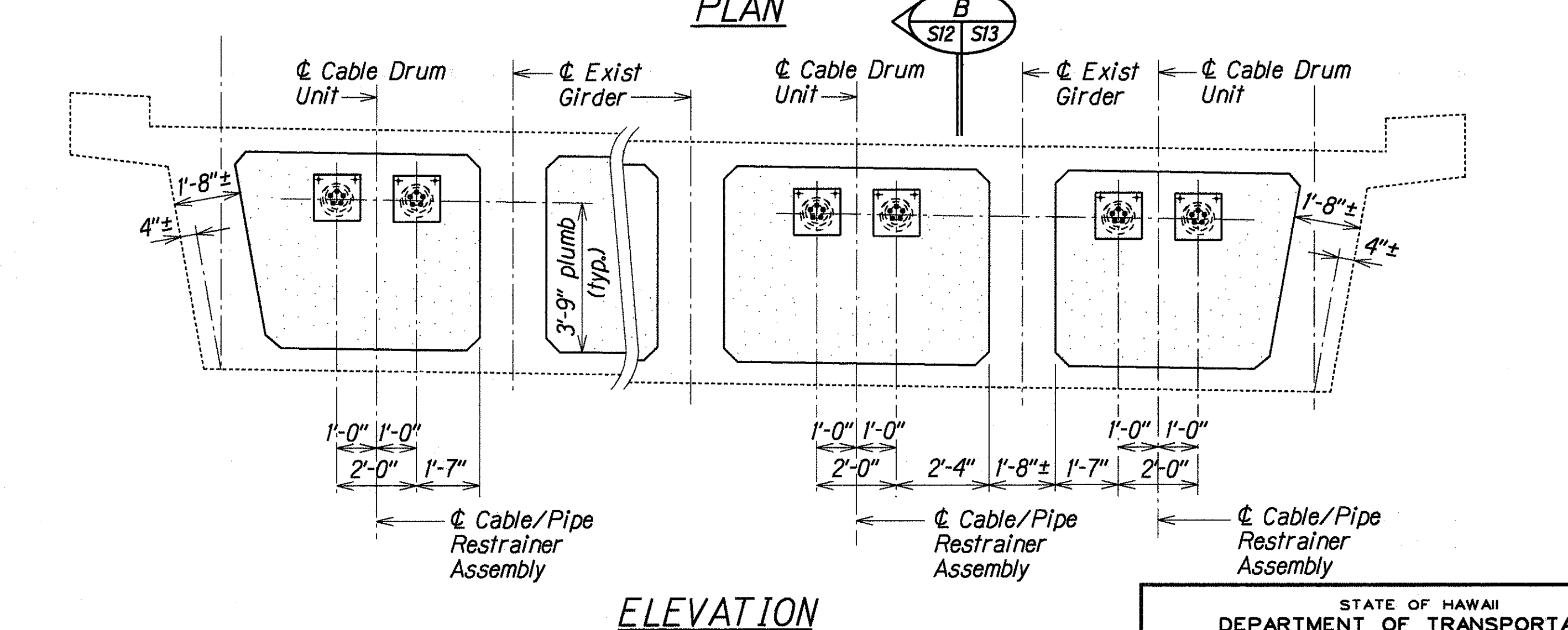
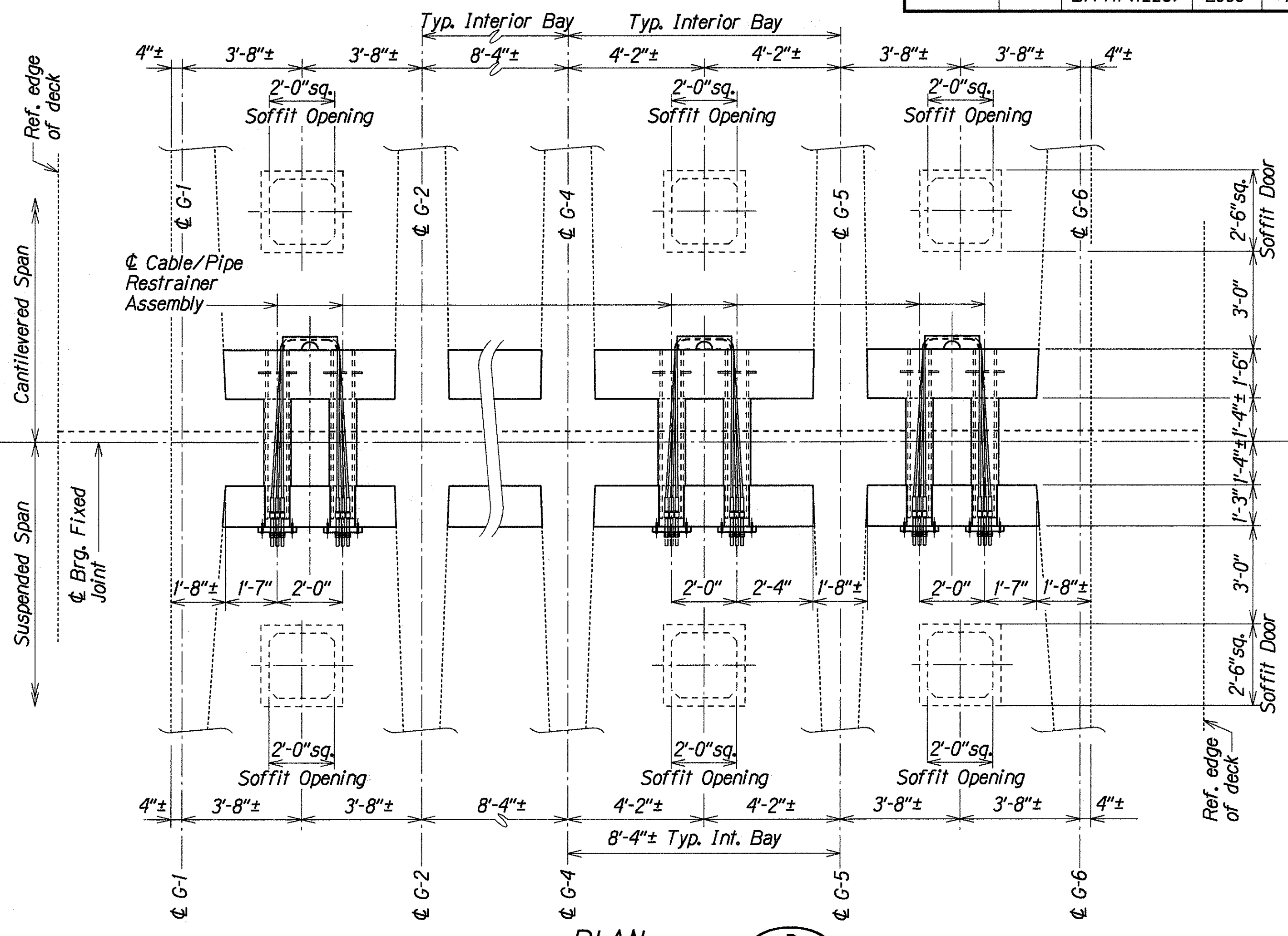


at EXISTING TYPICAL EXPANSION JOINT

W.B. STA. 205+99.76, W.B. STA. 208+38.76, E.B. STA. 210+99.76
E.B. STA. 212+38.76, E.B. STA. 216+58.76

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

* NOTE:
At Station 210+99.76 joint on cantilever span side only,
Soffit Opening is 2'-0"x3'-0" with 2'-6"x3'-6" door.



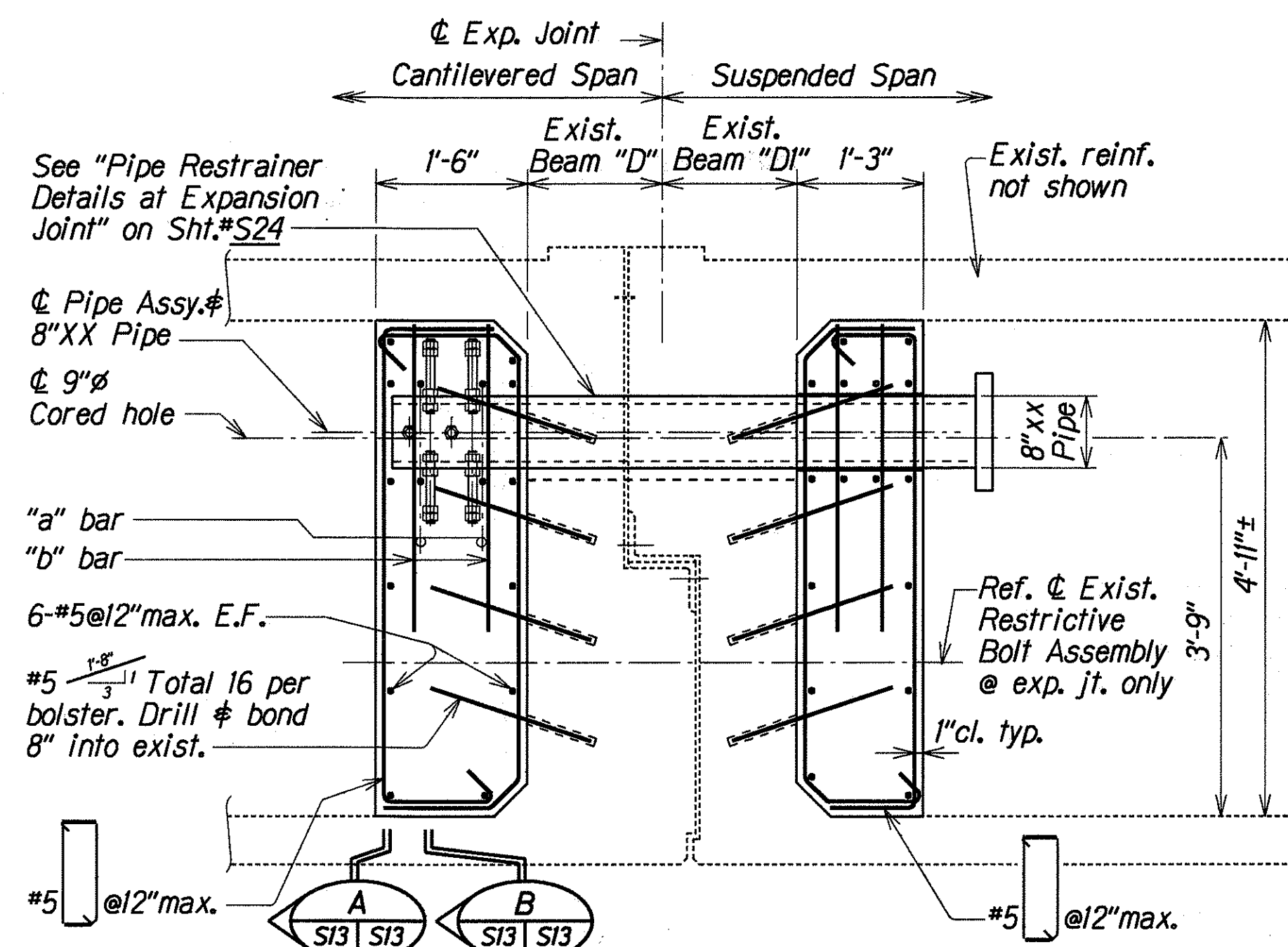
at EXISTING TYPICAL FIXED JOINT

W.B. STA. 209+00.76, E.B. STA. 213+00.76
E.B. STA. 217+20.76

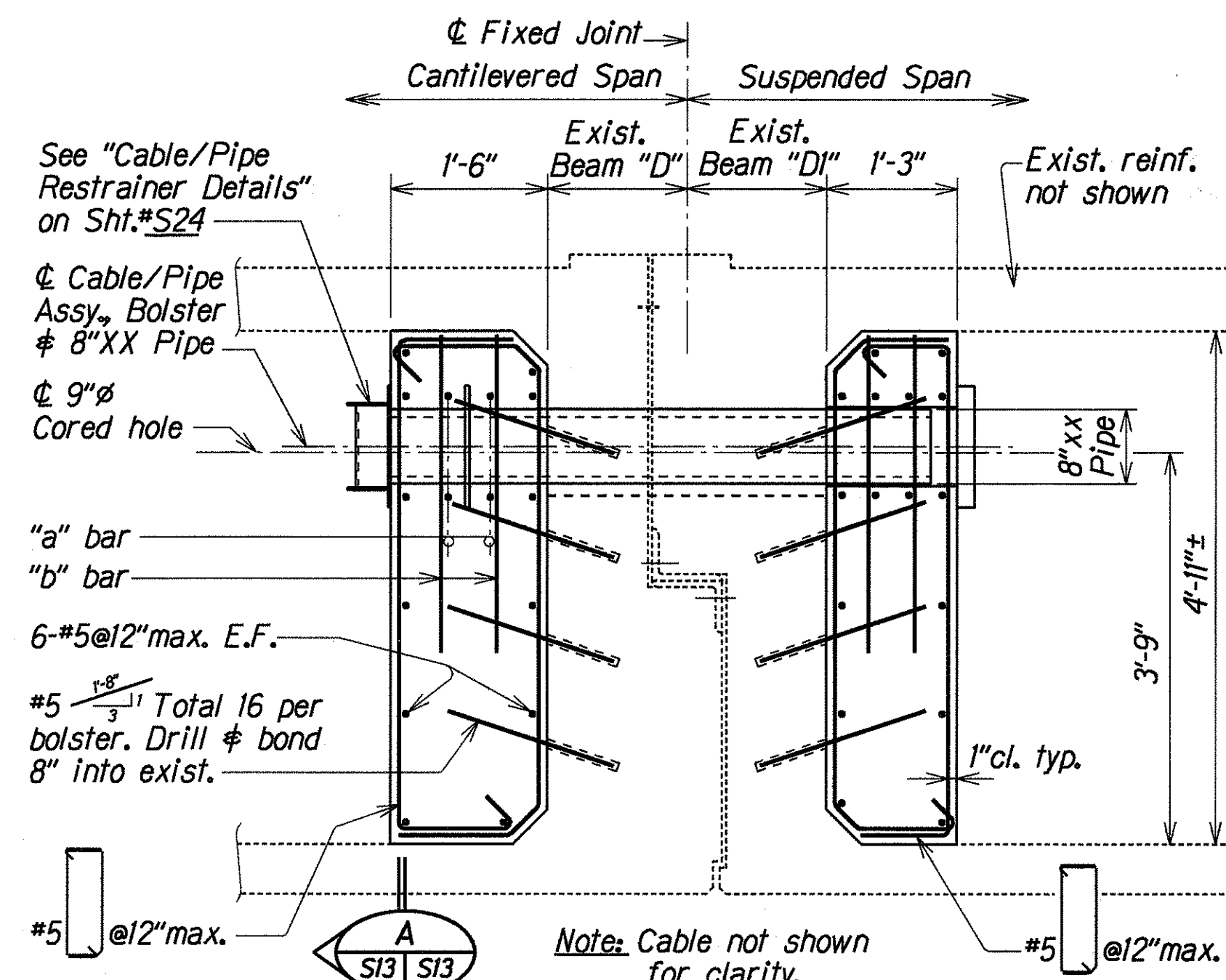
Scale: 1/4" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAKIKI VIADUCT
JOINT RETROFIT DETAILS at TYPICAL
EXPANSION and FIXED JOINTS
SEISMIC RETROFIT for LUNALILO-VINEYARD OFF-RAMP
MAKIKI VIADUCT and PALAMA SEPARATION
Fed. Aid Proj. No. BR-HI-1(225)
Scale: As Noted Date: Jul, 1999

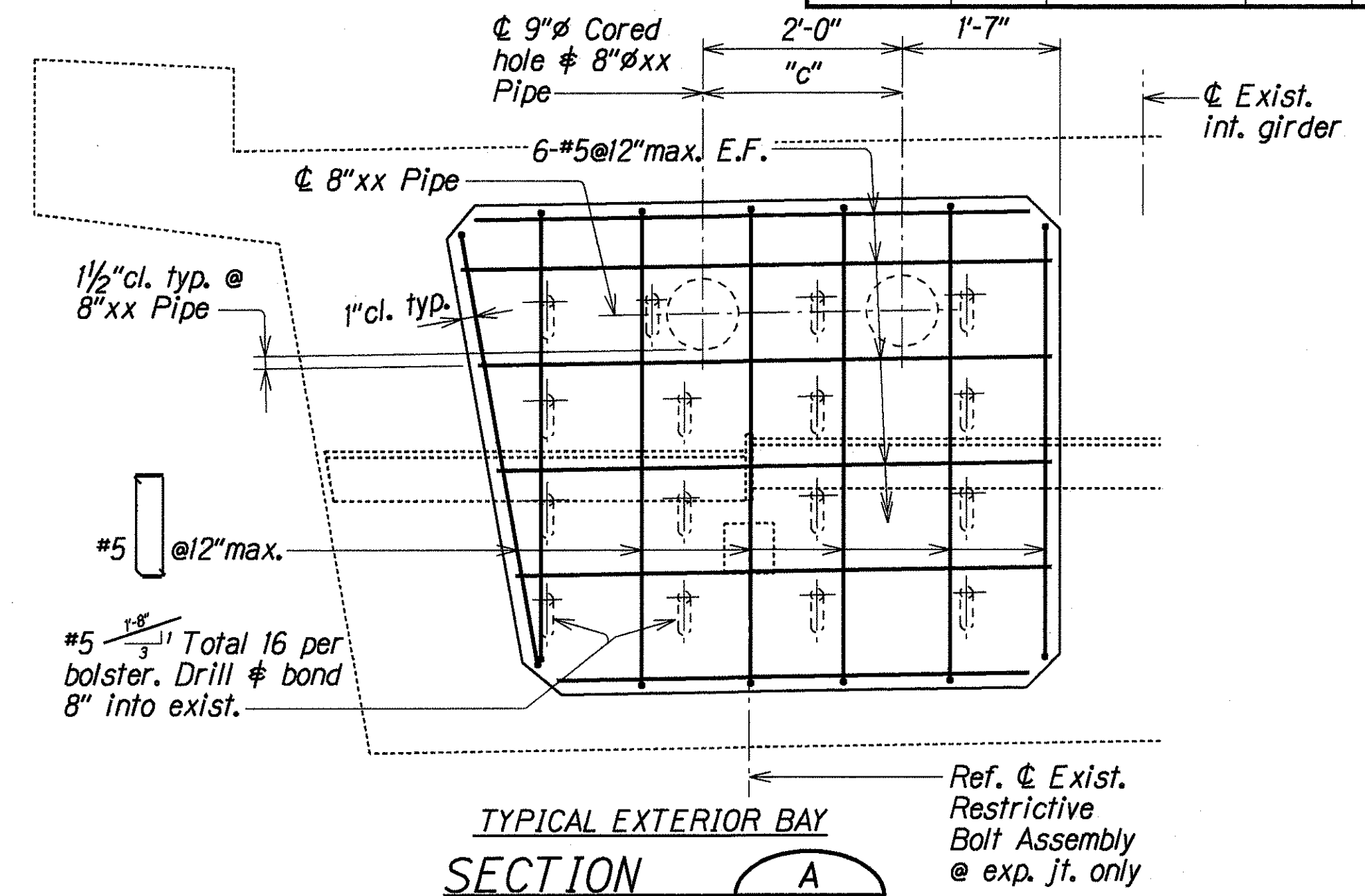
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-HI-1(225)	2000	19	37



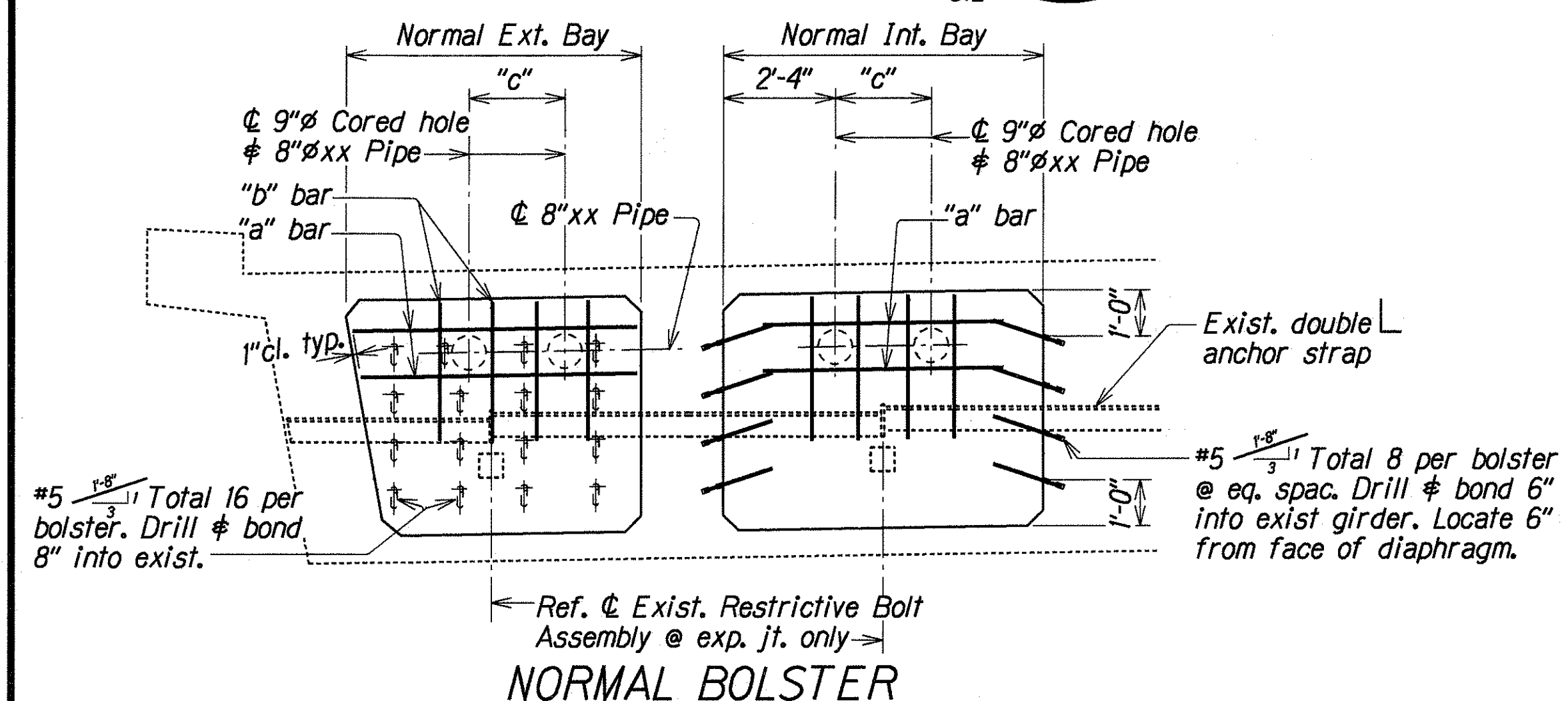
BOLSTER SECTION AT EXPANSION JOINT
Scale: $\frac{3}{4}$ " = 1'-0"



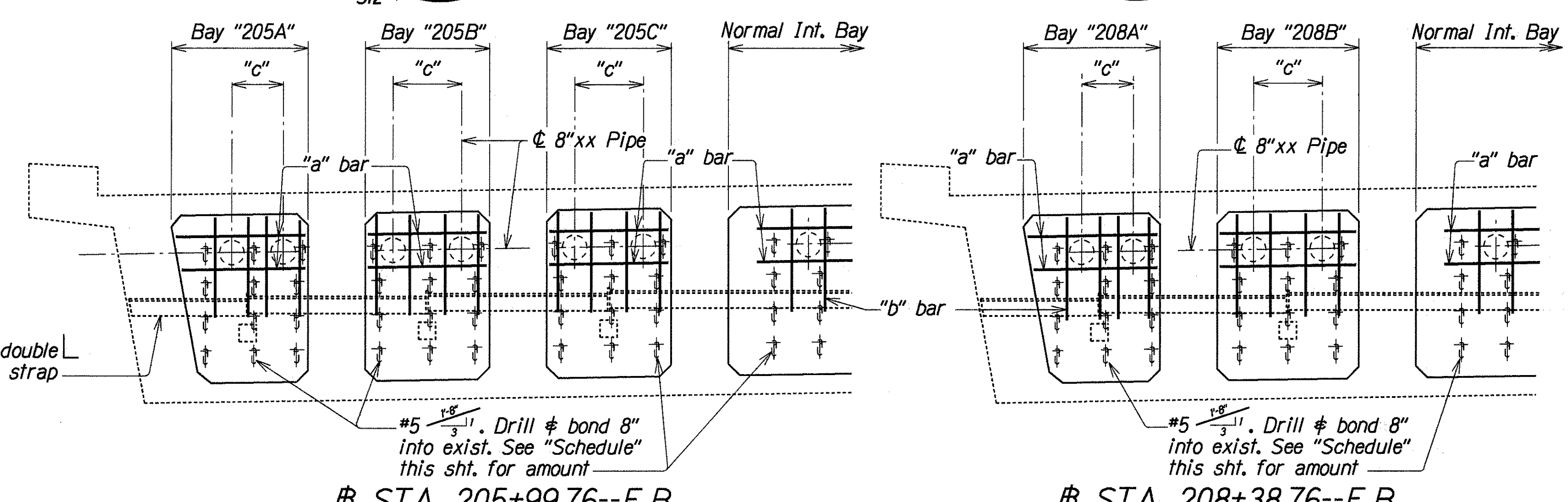
BOLSTER SECTION AT FIXED JOINT
Scale: $\frac{3}{4}$ " = 1'-0"



TYPICAL EXTERIOR BAY SECTION
Scale: $\frac{3}{4}$ " = 1'-0"



NORMAL BOLSTER



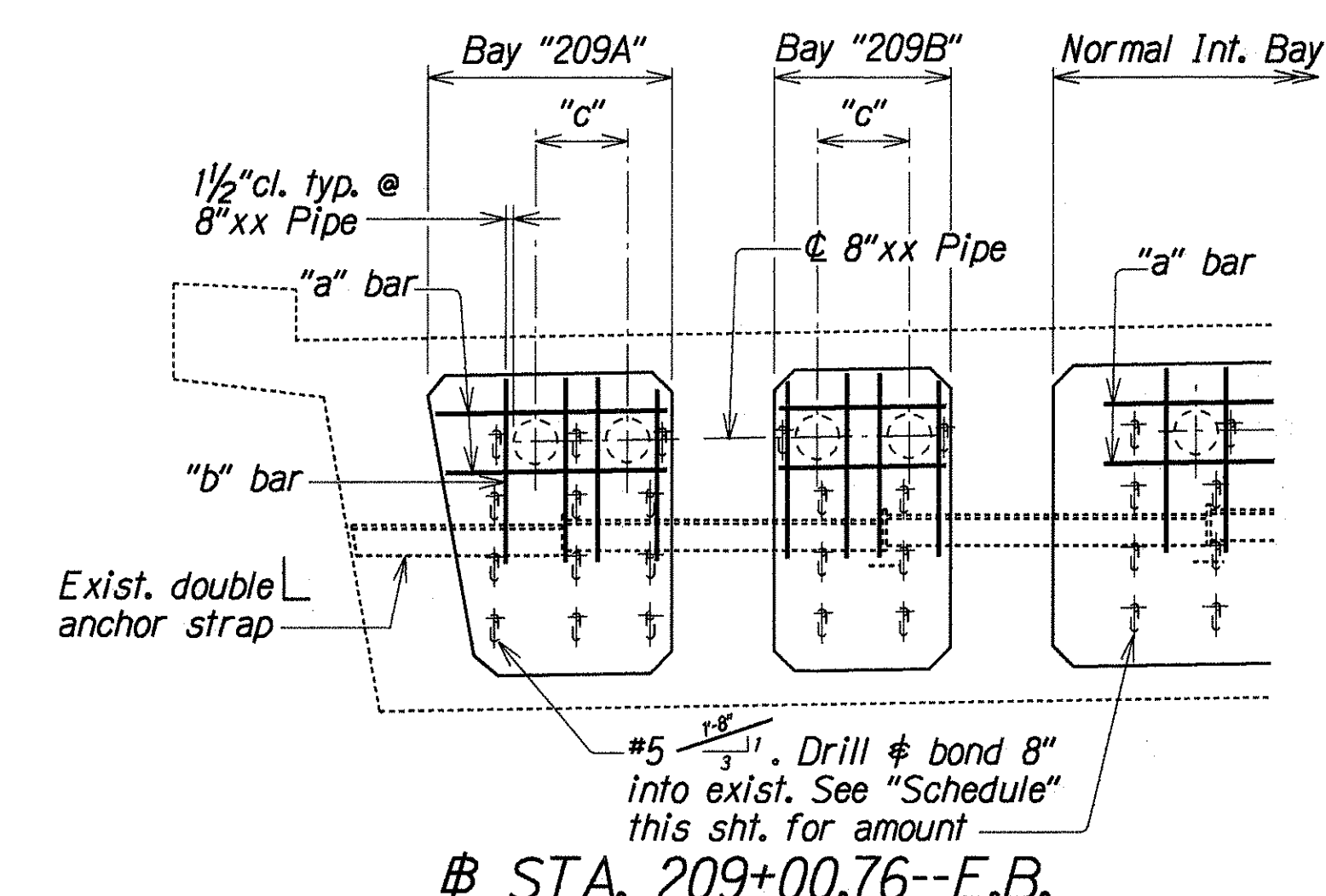
STA. 205+99.76--E.B.

STA. 208+38.76--E.B.

CONCRETE BOLSTER REINFORCING SCHEDULE

BAY DESIGNATION	AMOUNT #5 $\frac{1}{8}$ "		"a" bar	"b" bar	dimen. "c" *	BAY DESIGNATION	AMOUNT #5 $\frac{1}{8}$ "		"a" bar	"b" bar	dimen. "c" *
	Drill 8" into exist. beam	Drill 6" into exist. girder					Drill 8" into exist. beam	Drill 6" into exist. girder			
"Normal Ext."	16	8	2-#8x5'-0"lg. E.F.	4-#8x3'-0"lg. E.F.	2'-0"	"205C"	12	8	2-#8x3'-3"lg. E.F.	4-#8x3'-0"lg. E.F.	2'-0"
"Normal Int."	16	8	2-#8x5'-0"lg. E.F.		2'-0"	"208A"	12	8	2-#8x3'-3"lg. E.F.		1'-6"
"205A"	12	8	2-#8x3'-3"lg. E.F.		1'-6"	"208B"	12	8	2-#8x3'-9"lg. E.F.		2'-0"
"205B"	12	8	2-#8x3'-3"lg. E.F.		2'-0"	"209A"	12	8	2-#8x3'-3"lg. E.F.		1'-6"
"205C"	12	8	2-#8x3'-3"lg. E.F.		2'-0"	"209B"	8	8	2-#8x2'-6"lg. E.F.		1'-6"

*Restrainer Assembly & to &



STA. 209+00.76--E.B.

SECTION THRU CONCRETE BOLSTER
Scale: $\frac{3}{8}$ " = 1'-0"

Note: Where Concrete Bolster interferes with Existing Vent Holes, Vent Hole shall be maintained opened with the installation of a 6" PVC Pipe or similar device. See "Vent Extension Details" on Sht. #S25.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAKIKI VIADUCT
CONCRETE BOLSTER REINFORCING SCHEDULE
and DETAILS
SEISMIC RETROFIT for LUNALILO-VINEYARD OFF-RAMP
MAKIKI VIADUCT and PALAMA SEPARATION
Fed. Aid Proj. No. BR-HI-1(225)
Scale: As Noted Date: Jul, 1999
SHEET No. S13 OF 25 SHEETS