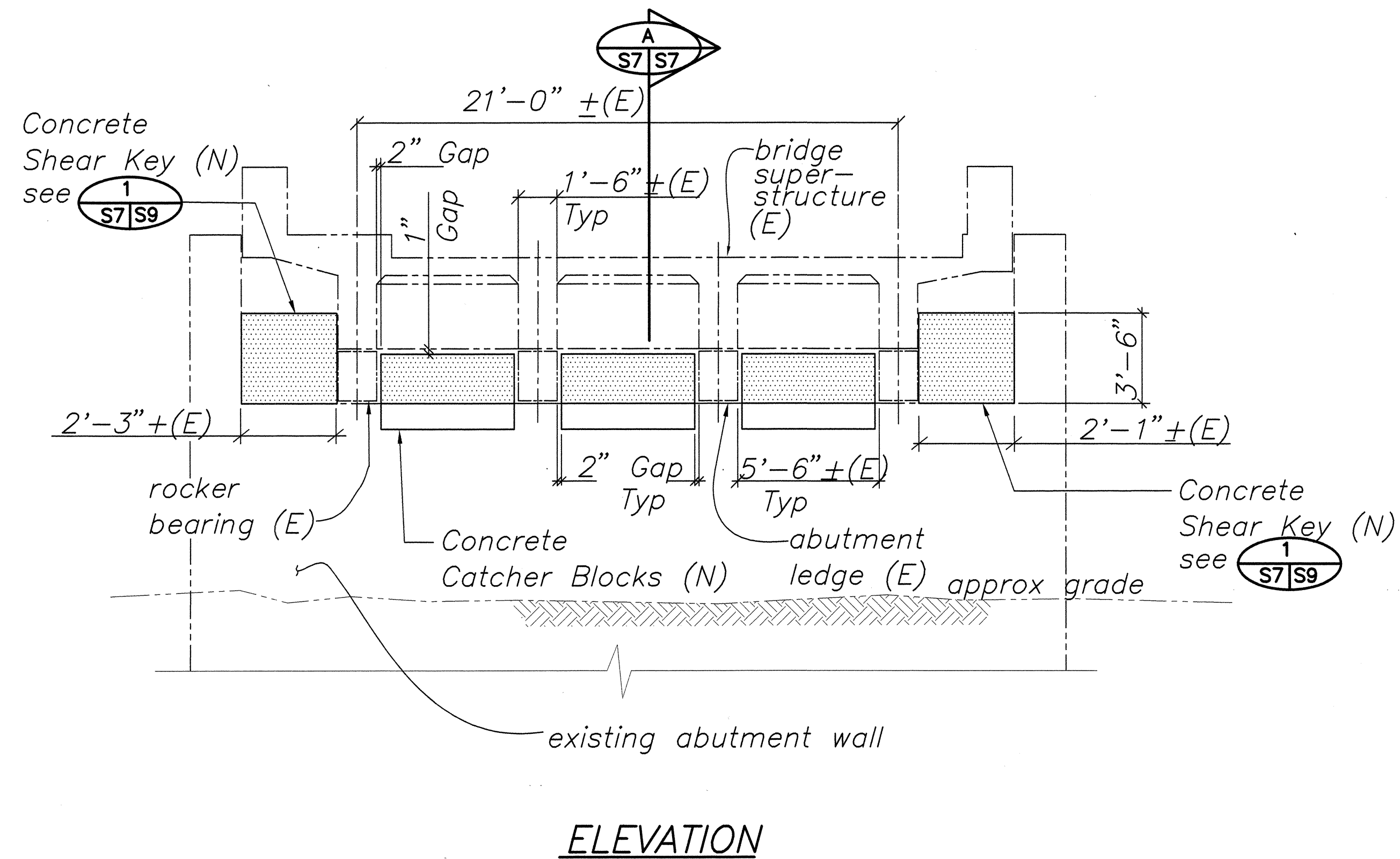
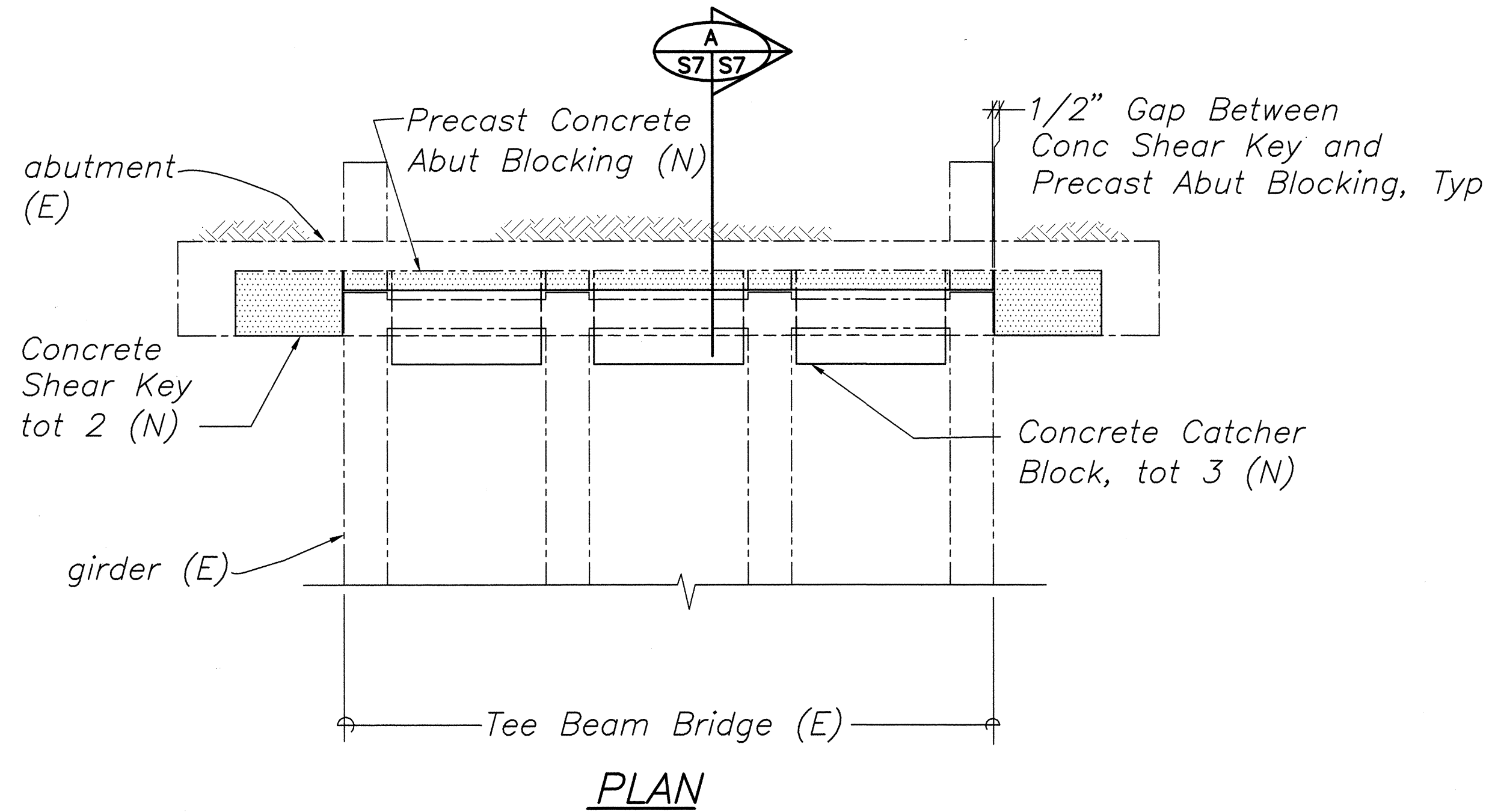


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(45)	1999	11	20



ABUTMENT 1 RETROFIT
SCALE: 1/4" = 1'-0"

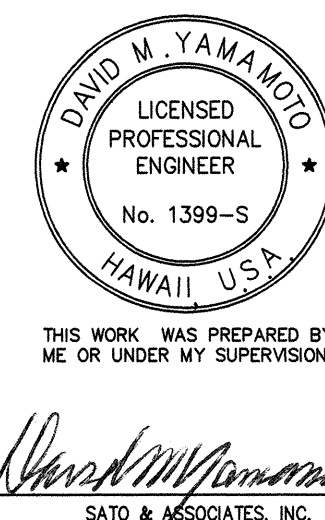
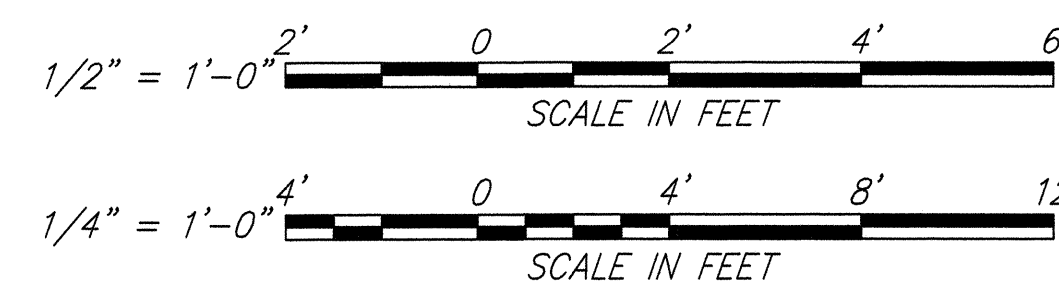
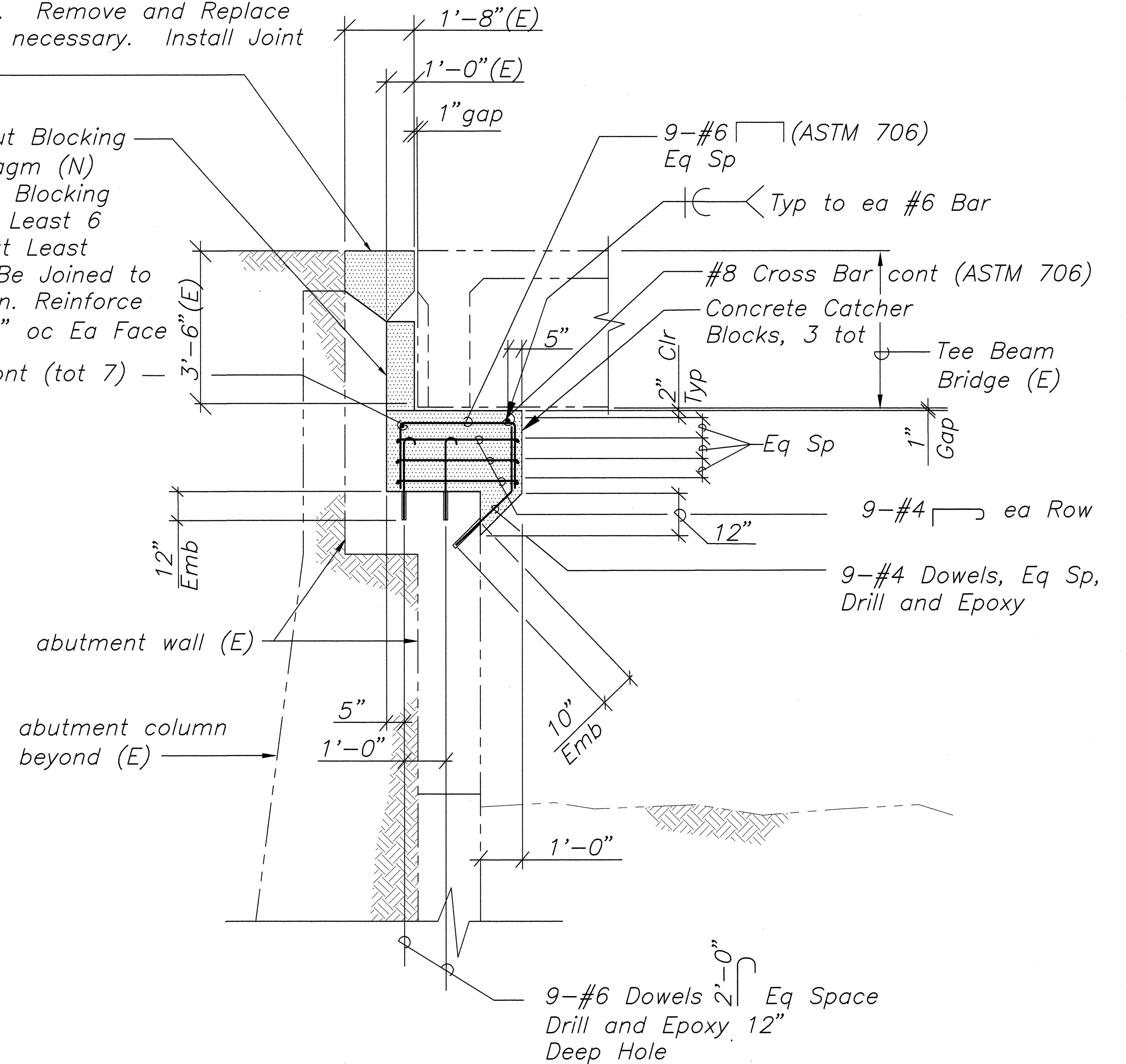
Note:

The Contractor shall verify all controlling field dimensions before ordering or fabricating any material

If Required, Remove and Reconstruct Corbel of Existing Abutment Wall (Existing Reinf to be Field Bent or Adjusted to Allow Installation of Abutment Blocking). Remove and Replace Asphalt Topping as necessary. Install Joint Seal, see 2 S7/S9

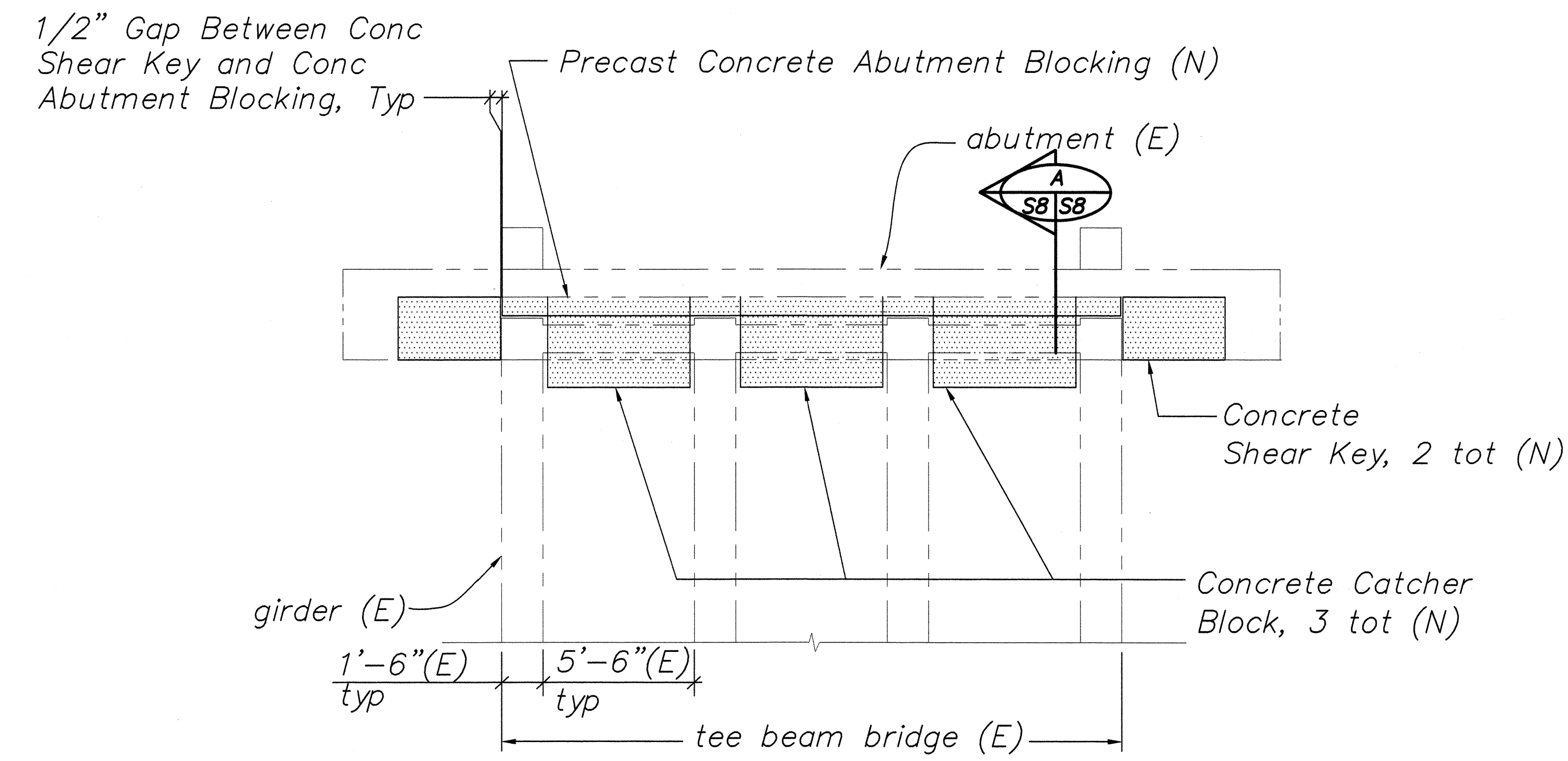
Pre-Cast Conc Abut Blocking Behind End Diaphragm (N) The Individual Conc Blocking Pieces Shall be at Least 6 inches Thick and at Least 8 Ft Lg and May Be Joined to Facilitate Installation. Reinforce Minimum #4 at 12" oc Ea Face

#4 [cont (tot 7) -

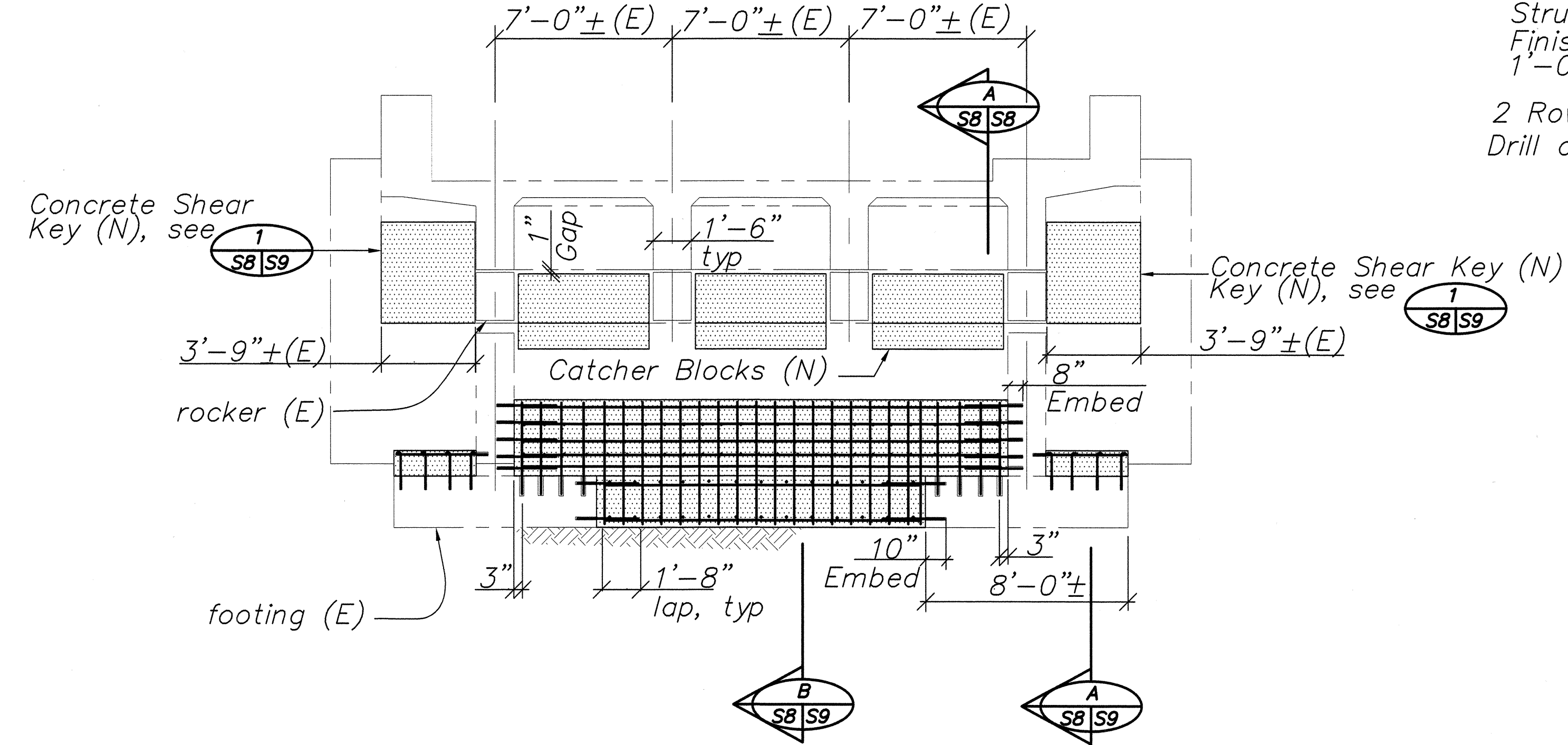


STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
KAALA BRIDGE ABUTMENT NO. 1 RETROFIT	
HAWAII BELT ROAD, SEISMIC RETROFIT OF VARIOUS BRIDGES, VICINITY OF OOKALA	
FEDERAL AID PROJECT NO. BR-019-2(45)	DATE: AUGUST 1998
SCALE: AS NOTED	SHEET No. 87 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(45)	1999	12	20



PLAN

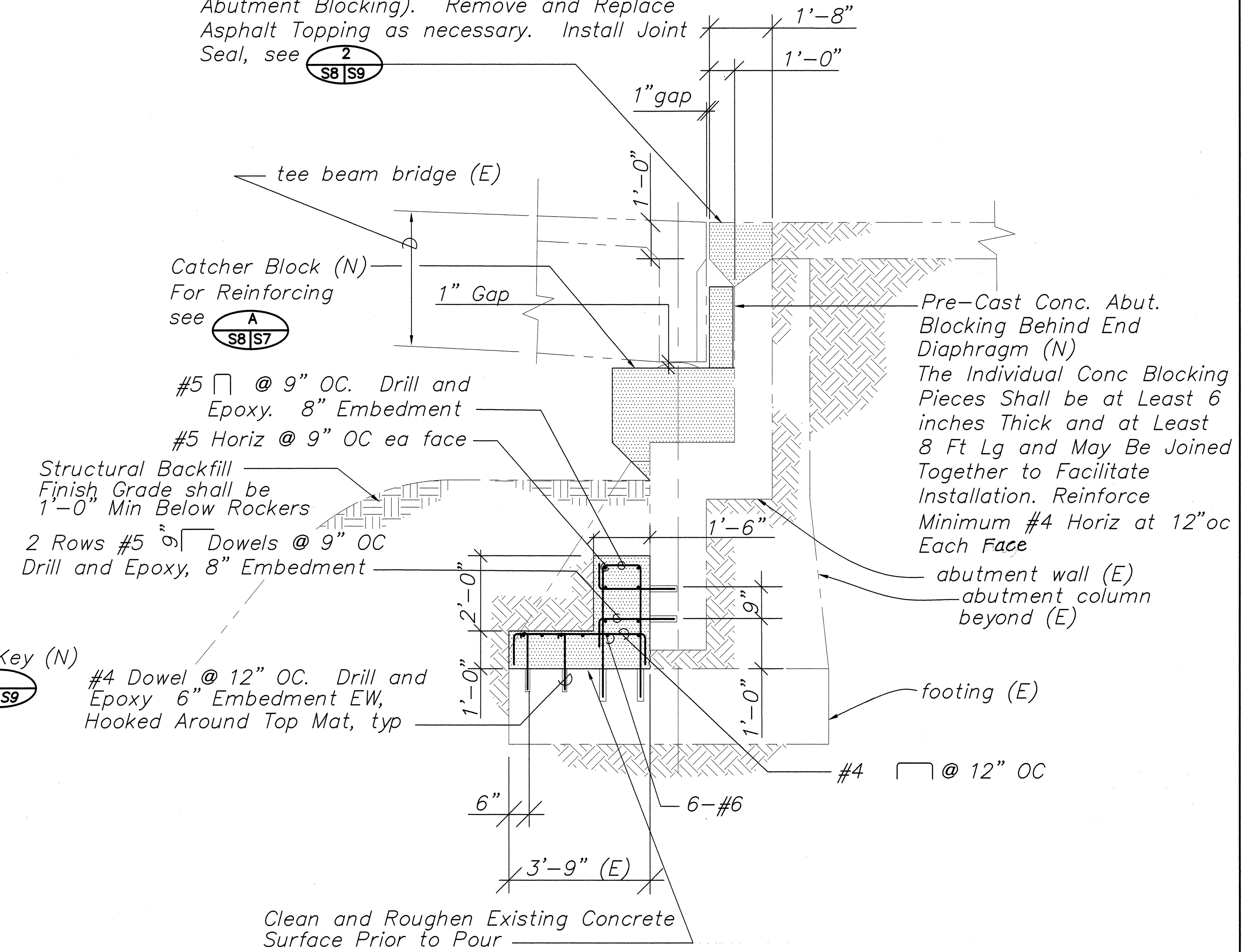


ELEVATION

ABUTMENT 2 RETROFIT 1 S6/S8
SCALE: 1/4" = 1'-0"

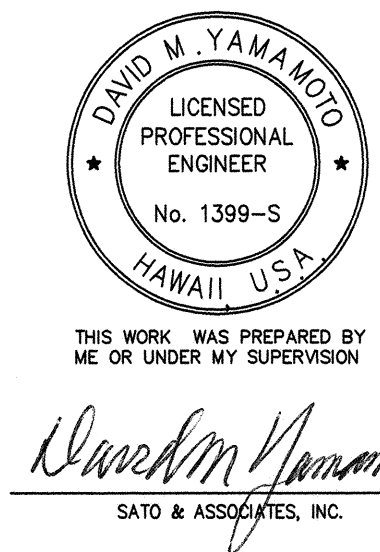
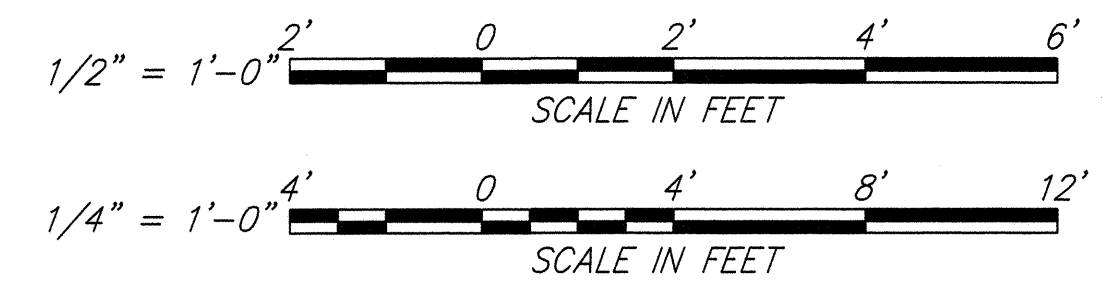
Note:
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material

If Required, Remove and Reconstruct Corbel of Existing Abutment Wall (Existing Reinf to be Field Bent or Adjusted to Allow Installation of Abutment Blocking). Remove and Replace Asphalt Topping as necessary. Install Joint Seal, see 2 S8/S9



SECTION A S8/S8
SCALE: 1/2" = 1'-0"

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



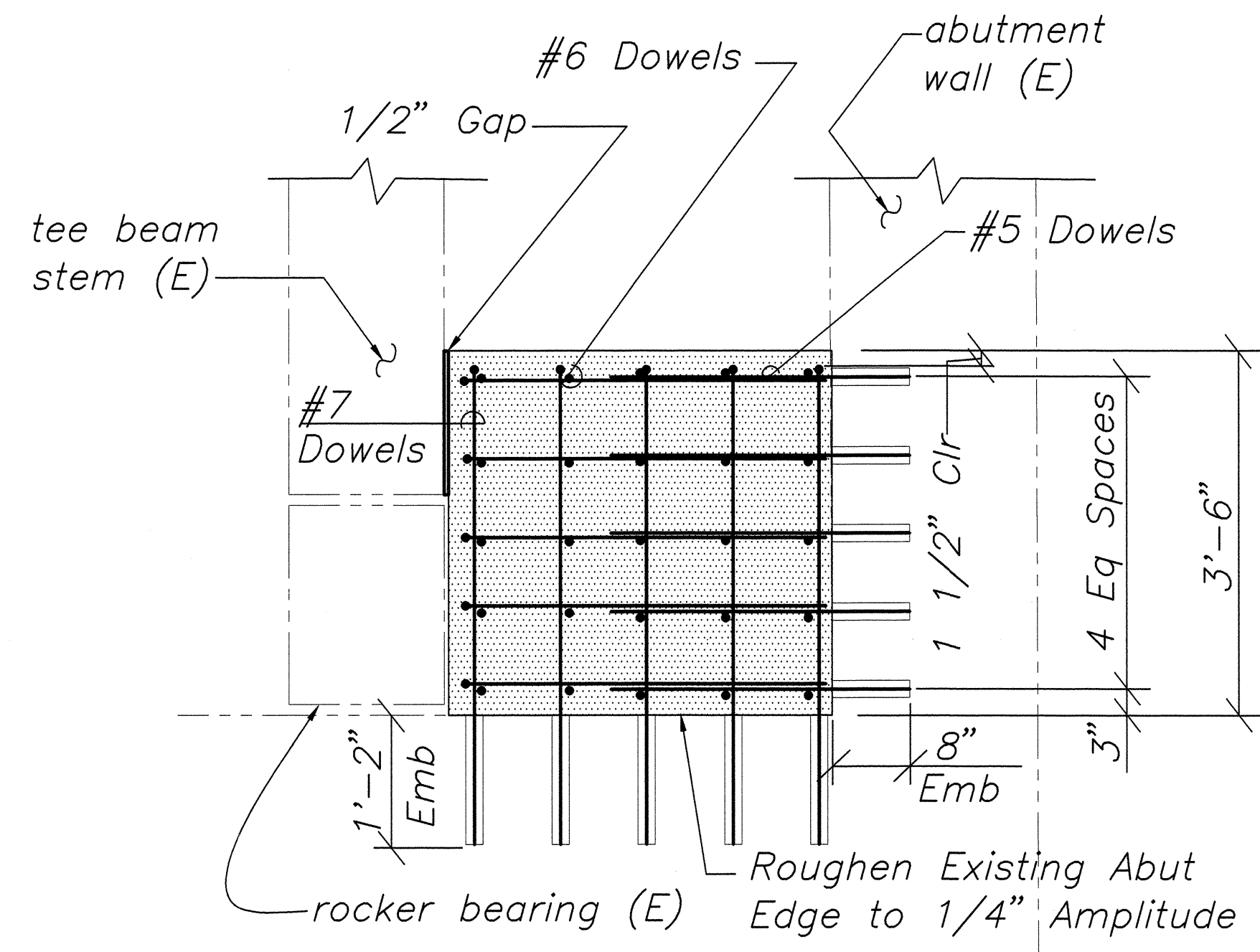
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KAALA BRIDGE
ABUTMENT NO. 2 RETROFIT

HAWAII BELT ROAD, SEISMIC RETROFIT OF VARIOUS BRIDGES,
VICINITY OF OOKALA
FEDERAL AID PROJECT NO. BR-019-2(45)
SCALE: AS NOTED DATE: AUGUST 1998

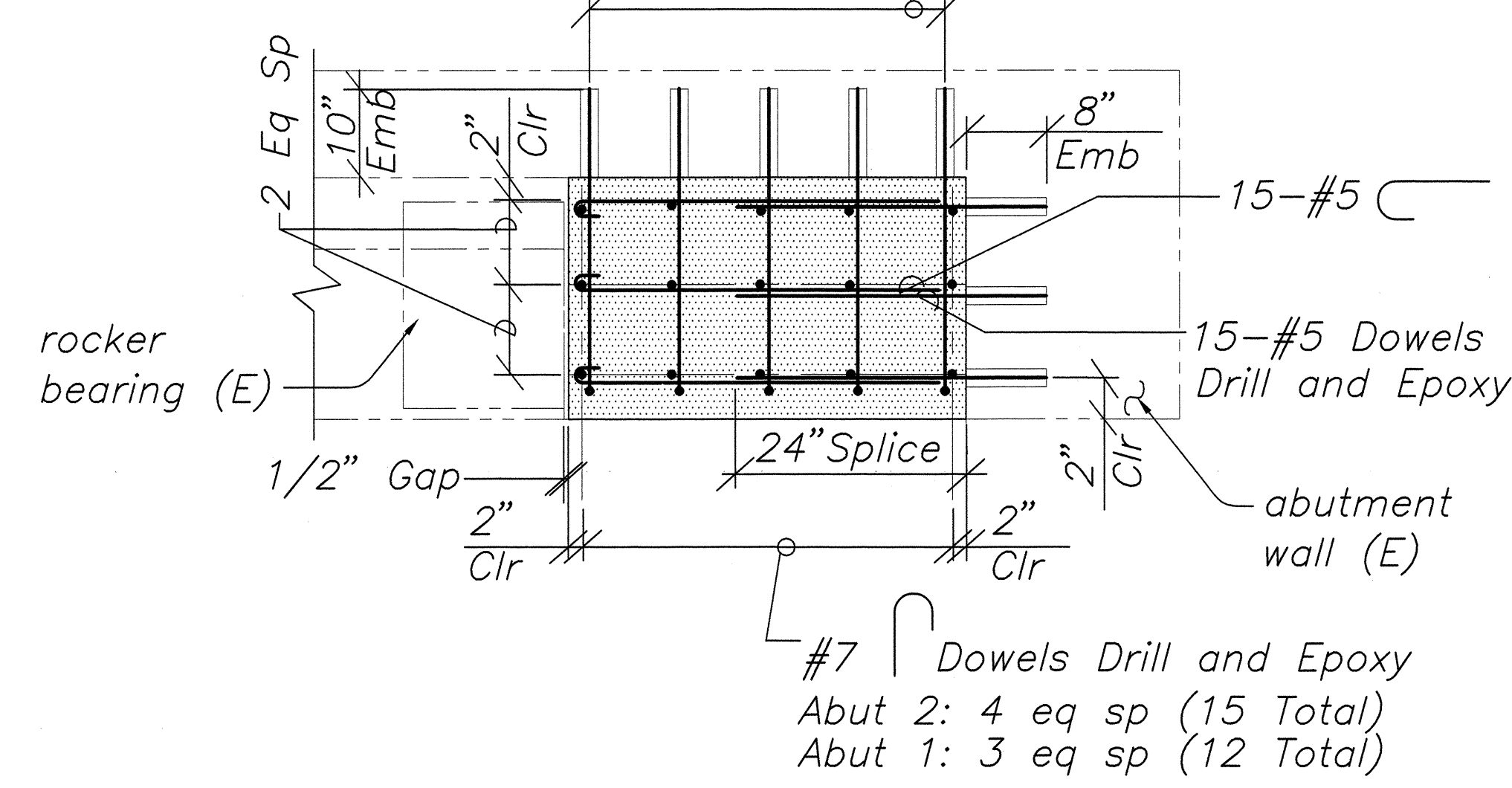
SHEET No. 12 OF 20 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(45)	1999	13	20



ELEVATION

#6 long Dowels, Drill and Epoxy
 Abut 2: 4 equal spaces, (25 Total)
 Abut 1: 3 equal spaces, (20 Total)

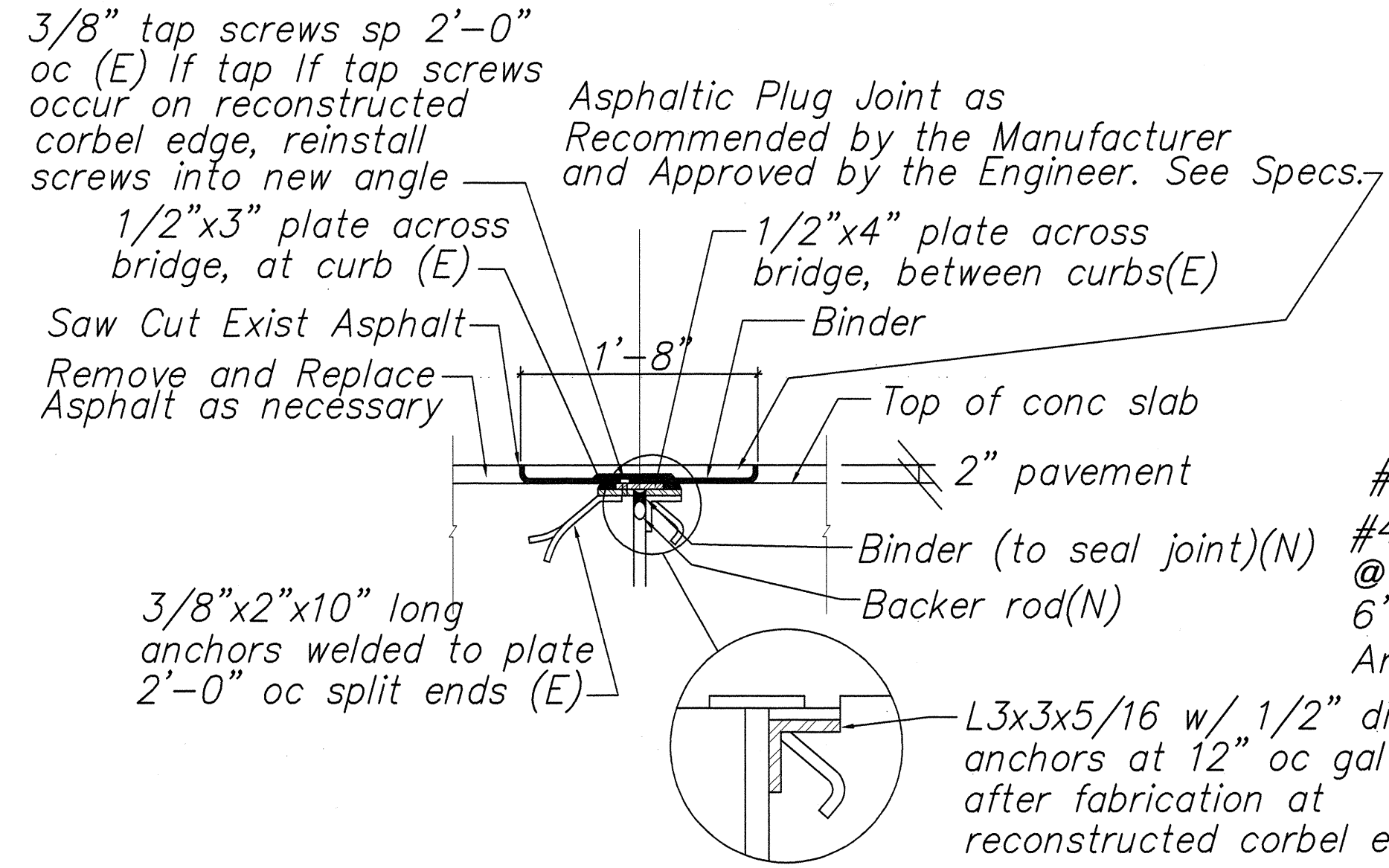


PLAN

SHEAR KEY DETAIL

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

1
S7, S8 | S9



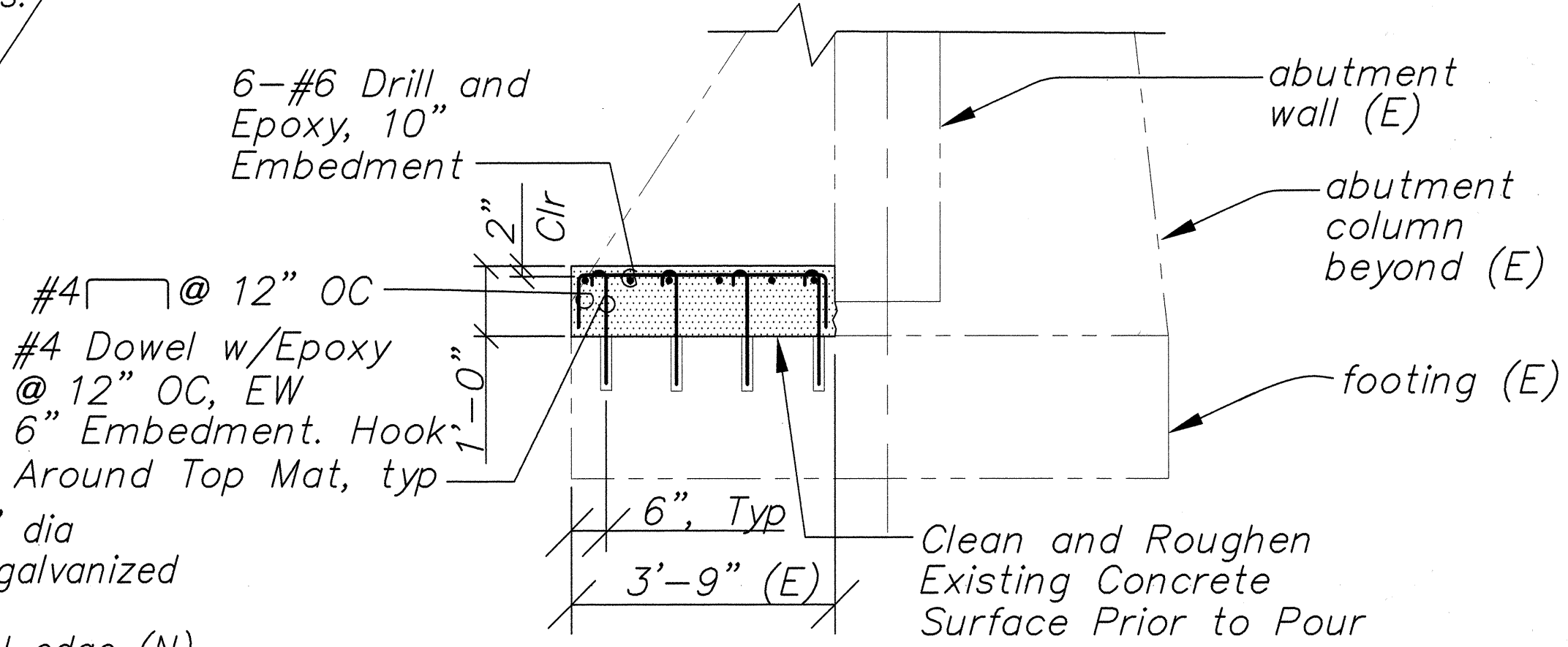
Note: Effective precautions must be taken by Contractor to prevent any leakage of pavement binder thru-expansion joint at curbs

Note: All Metal to be Galvanized

TYP TRANSVERSE JOINT DETAIL

SCALE: 1"=1'-0"

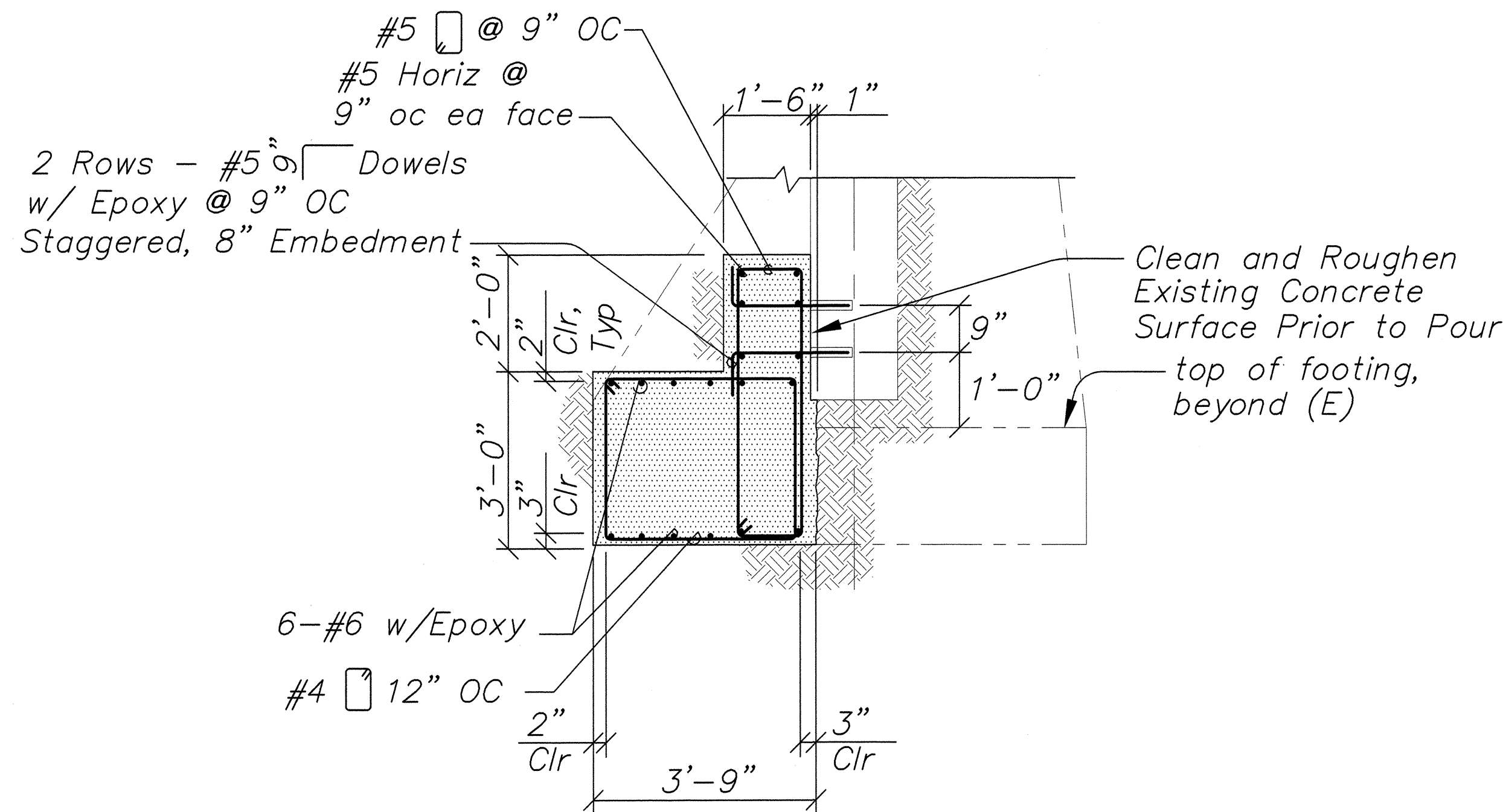
2
S7, S8 | S9



SECTION

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

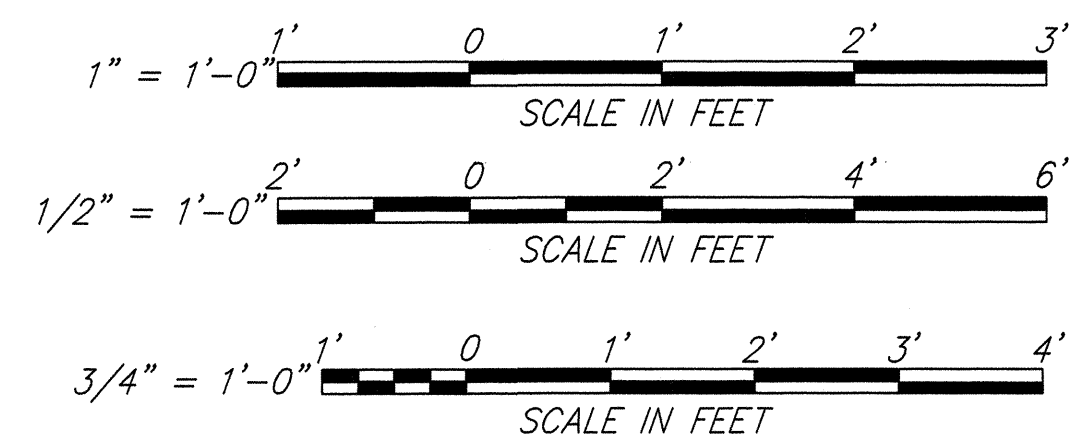
A
S8 | S9



SECTION

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

B
S8 | S9



DAVID M. YAMAMOTO
 LICENSED PROFESSIONAL ENGINEER
 No. 1399-S
 HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SATO & ASSOCIATES, INC.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KAALA BRIDGE
RETROFIT DETAILS

HAWAII BELT ROAD, SEISMIC RETROFIT OF VARIOUS BRIDGES,
VICINITY OF OOKALA
FEDERAL AID PROJECT NO. BR-019-2(45)
SCALE: AS NOTED
DATE: AUGUST 1998

SHEET No. 89 OF 16 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	