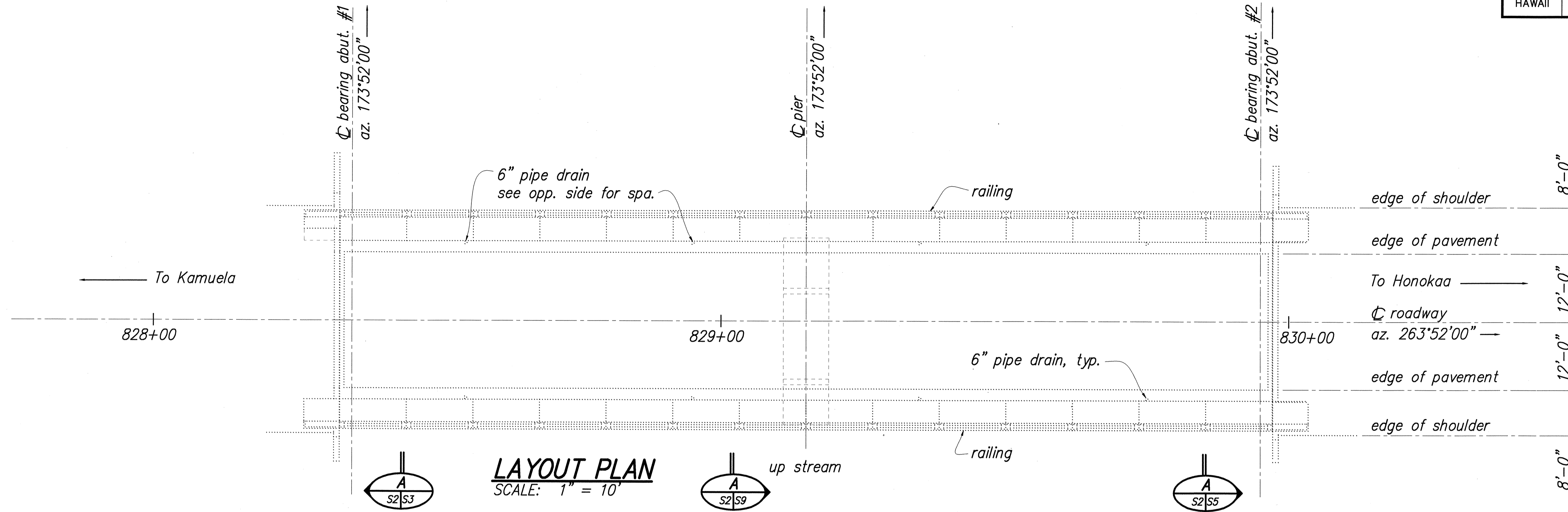
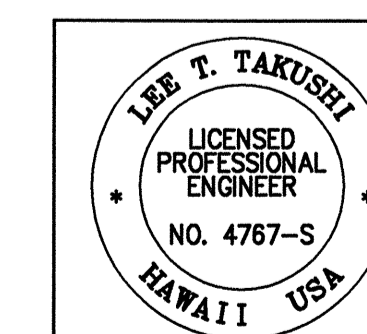


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	4	17



LONGITUDINAL SECTION ALONG ROADWAY
SCALE: 1" = 10'



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NIENIE BRIDGE
LAYOUT PLAN AND LONGITUDINAL SECTION

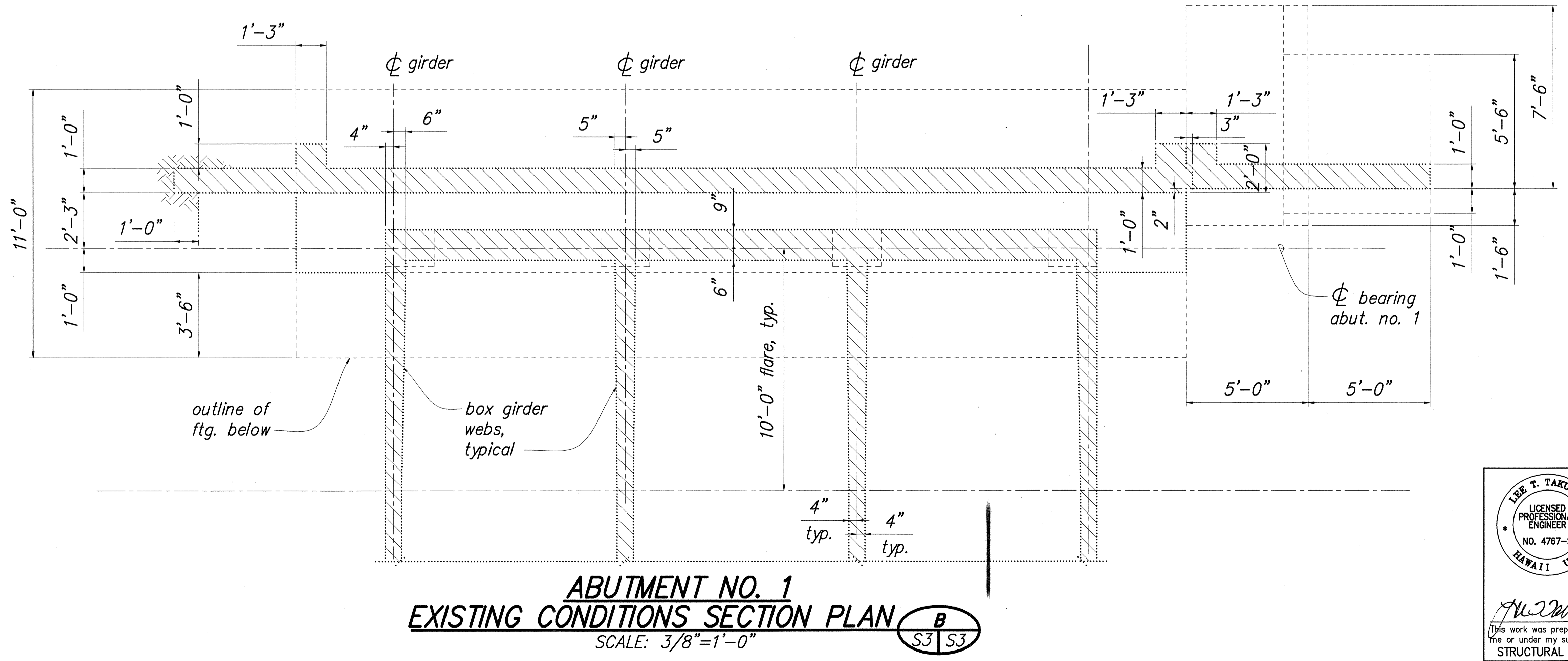
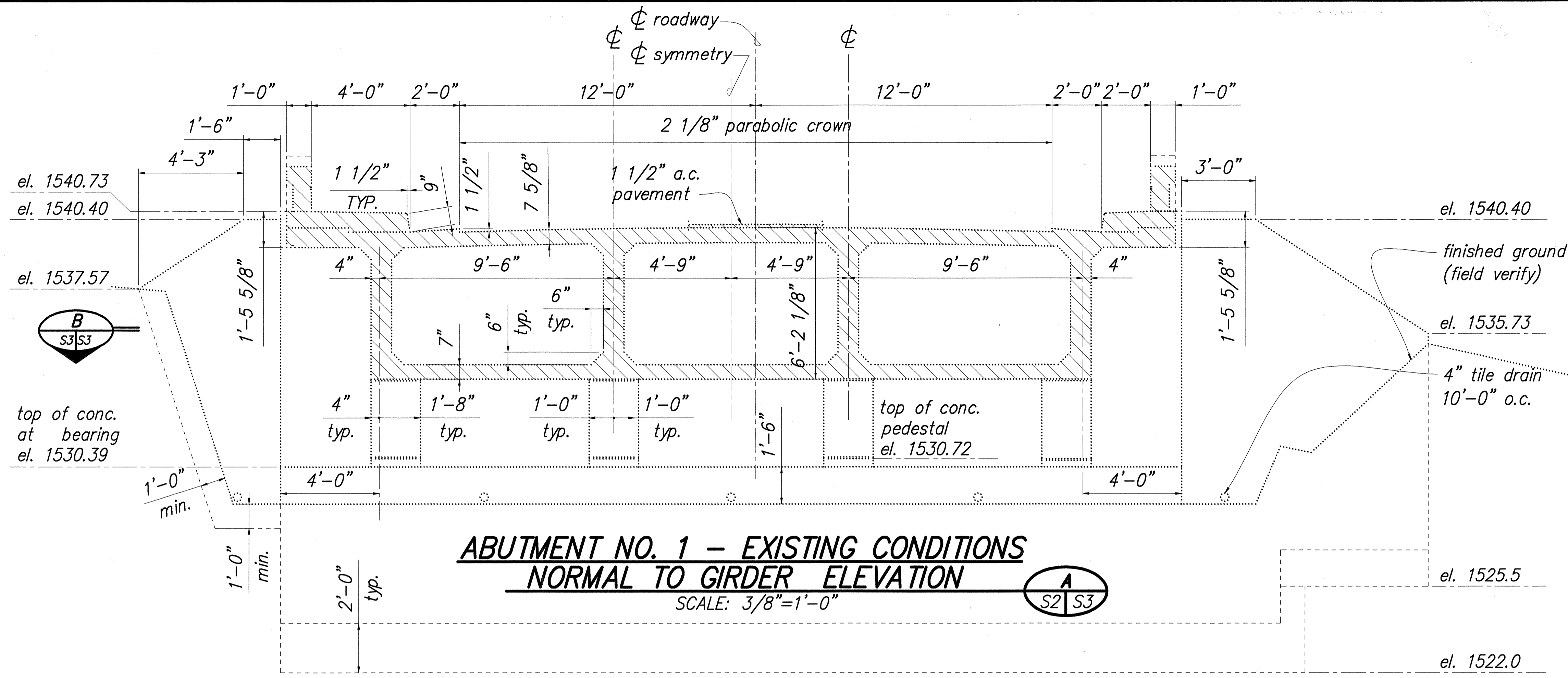
SEISMIC RETROFIT OF VARIOUS BRIDGES,
VICINITY OF HONOKAA AND KAWAIHAE
FEDERAL AID PROJECT NO. BR-0100(61)

SCALE: AS NOTED DATE: AUGUST 1999

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	5	17



SURVEY PLOTTED BY	DATE
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NOTED BY	
CHECKED BY	

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LEE T. TAKUSHI
LICENSED PROFESSIONAL ENGINEER
NO. 4767-S
HAWAII USA

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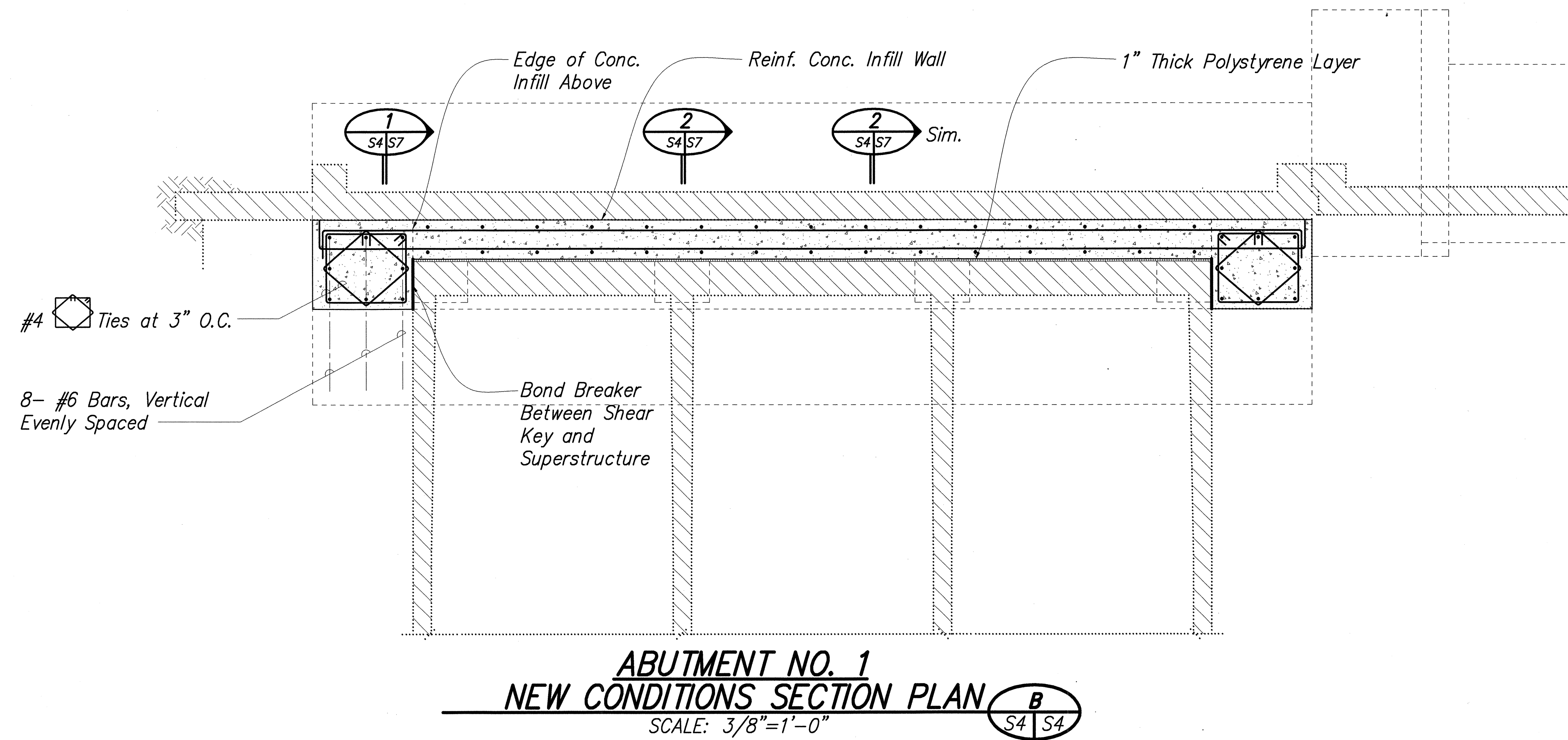
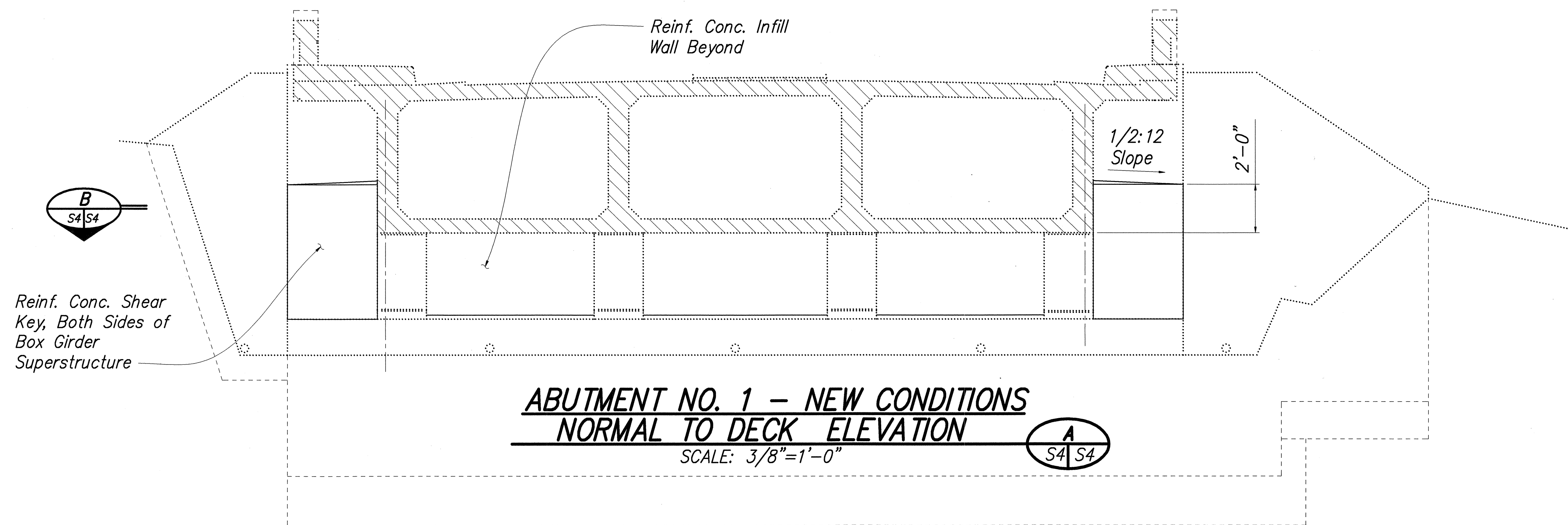
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**NIENIE BRIDGE
ABUTMENT NO. 1 - EXISTING CONDITIONS
ELEVATION AND SECTION**

SEISMIC RETROFIT OF VARIOUS BRIDGES,
VICINITY OF HONOKAA AND KAWAIHAE
FEDERAL AID PROJECT NO. BR-0100(61)

SCALE: AS NOTED DATE: AUGUST 1999

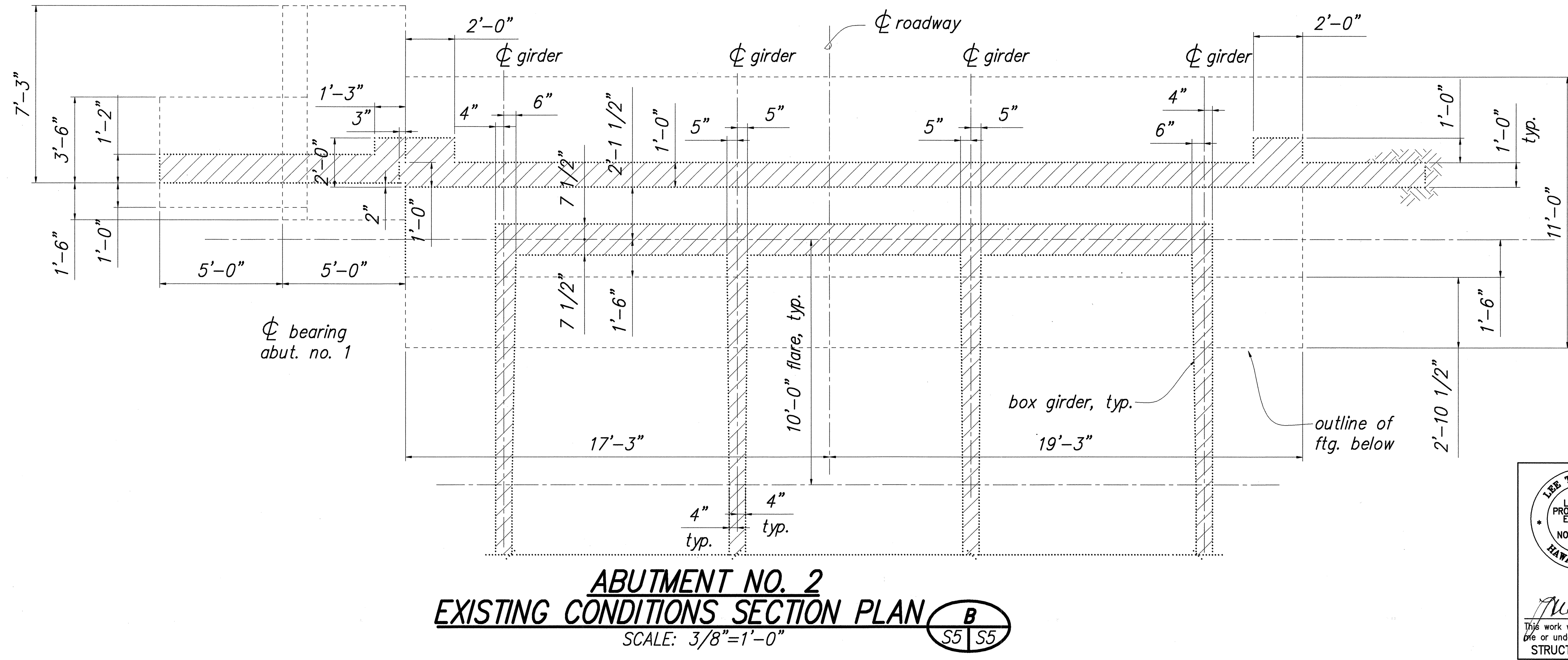
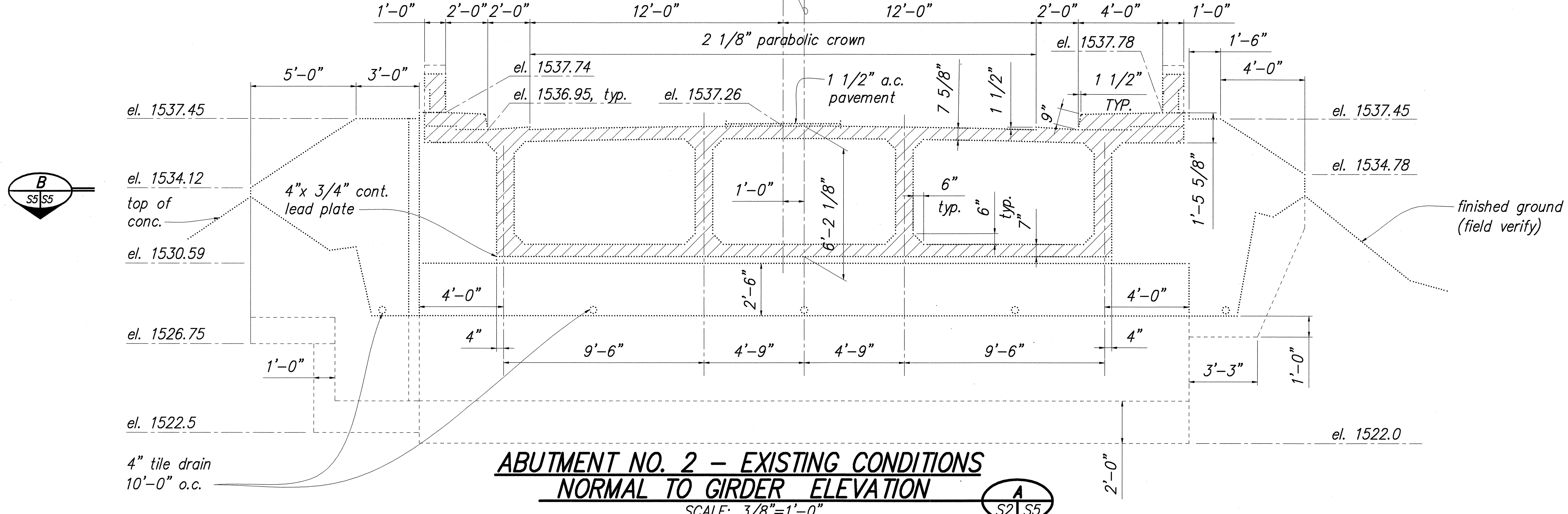
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	6	17



SURVEY PLOTTED BY: _____ DATE: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 NO. _____
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	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	NIENIE BRIDGE ABUTMENT NO. 1 - NEW CONDITIONS ELEVATION AND SECTION
SEISMIC RETROFIT OF VARIOUS BRIDGES, VICINITY OF HONOKAA AND KAWAIIHAE FEDERAL AID PROJECT NO. BR-0100(61)	
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	7	17



SURVEY PLOTTED BY: _____ DATE: _____
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 NOTE BOOK: _____
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LEE T. TAKUSHEI
LICENSED PROFESSIONAL ENGINEER
NO. 4767-S
HAWAII USA

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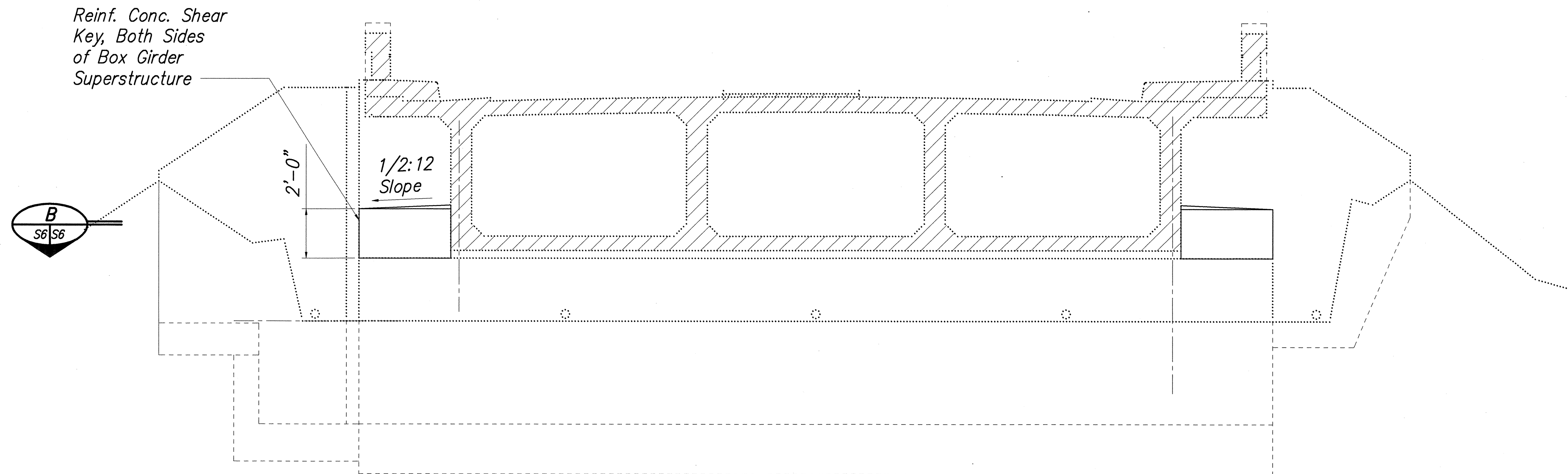
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**NIENIE BRIDGE
ABUTMENT NO. 2 - EXISTING CONDITIONS
ELEVATION AND SECTION**

SEISMIC RETROFIT OF VARIOUS BRIDGES,
VICINITY OF HONOKAA AND KAWAIHAE
FEDERAL AID PROJECT NO. BR-0100(61)

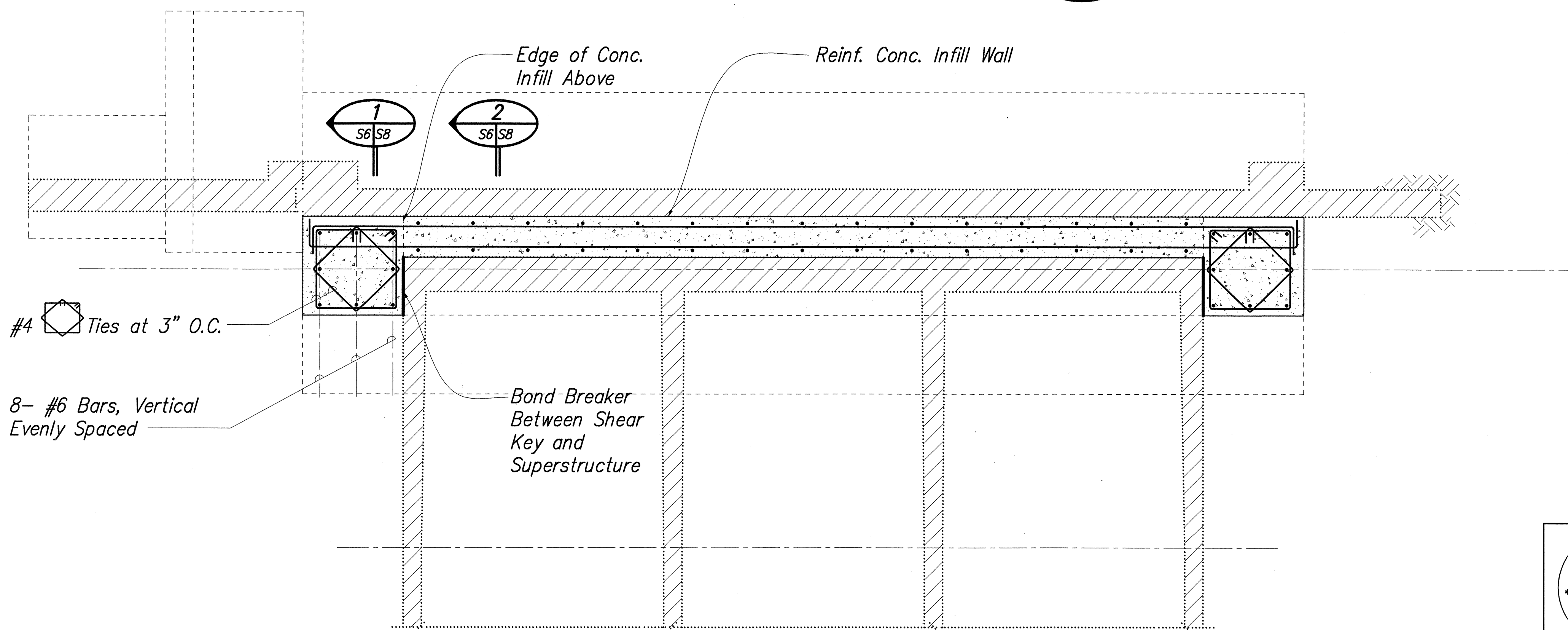
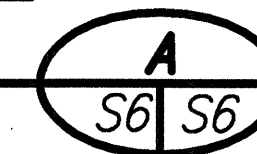
SCALE: AS NOTED DATE: AUGUST 1999

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	8	17



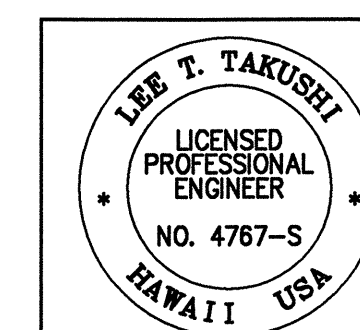
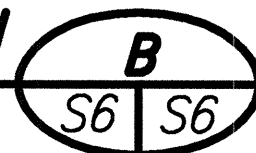
**ABUTMENT NO. 2 - NEW CONDITIONS
NORMAL TO DECK ELEVATION**

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



**ABUTMENT NO. 2
NEW CONDITIONS SECTION PLAN**

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



Lee T. Takushi
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**NIENIE BRIDGE
ABUTMENT NO. 2 - NEW CONDITIONS
ELEVATION AND SECTION**

SEISMIC RETROFIT OF VARIOUS BRIDGES,
VICINITY OF HONOKAA AND KAWAIHAE
FEDERAL AID PROJECT NO. BR-0100(61)

SCALE: AS NOTED

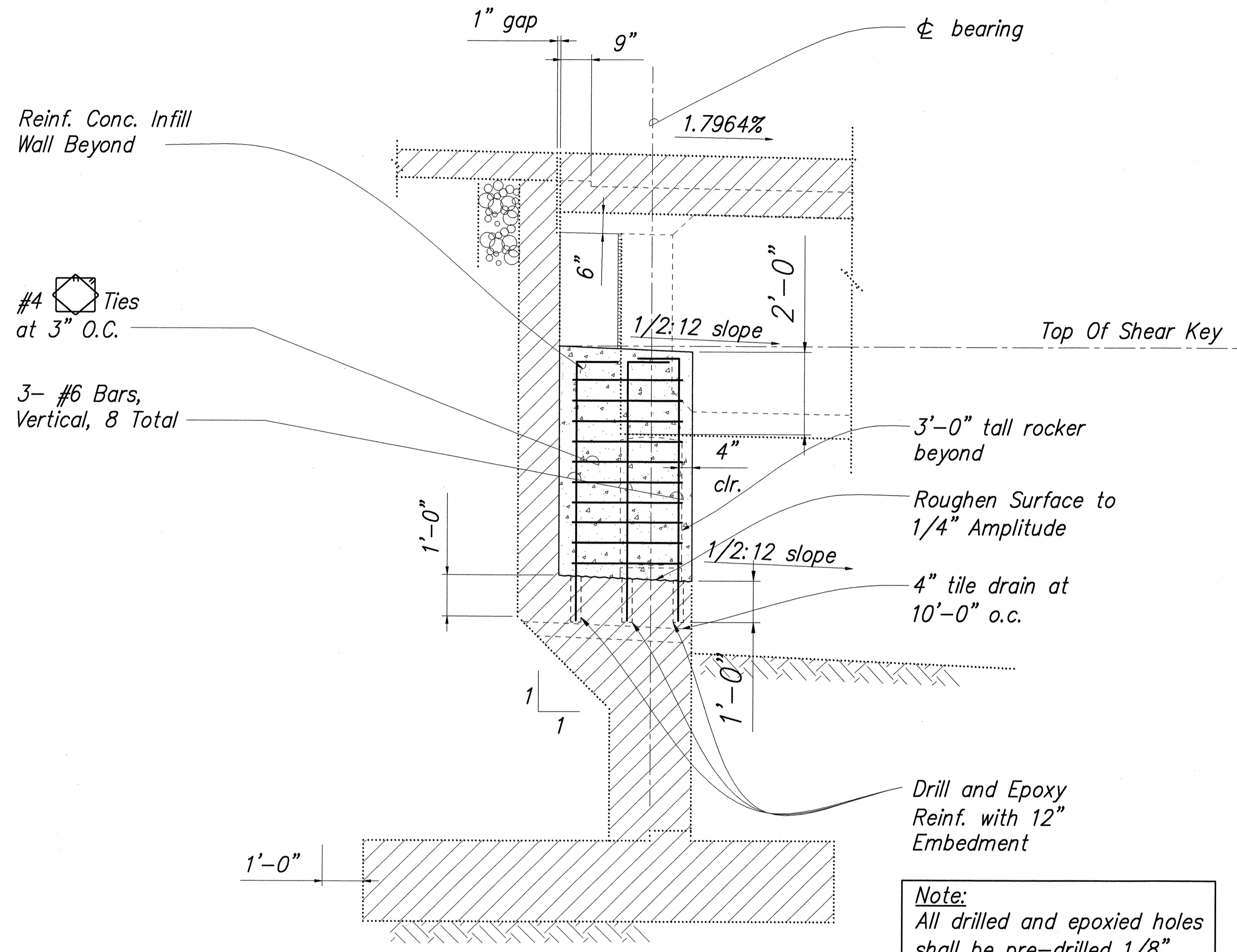
DATE: AUGUST 1999

SHEET No. S6 OF 15 SHEETS

SURVEY PLOTTED BY	DATE
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NOTE BOOK	
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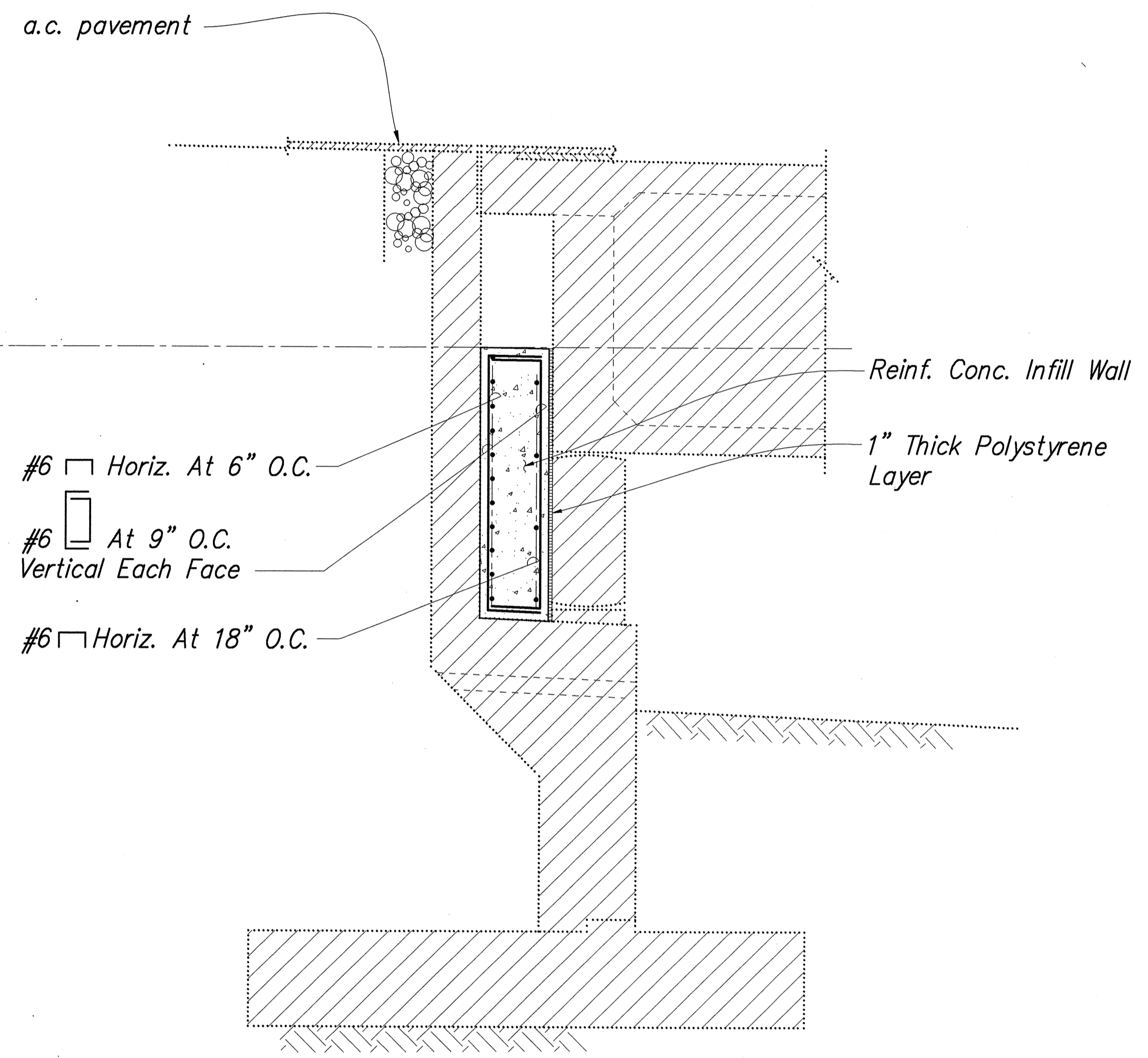
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	9	17



Note:
 All drilled and epoxied holes shall be pre-drilled 1/8" larger than embedded bars and cleaned of all debris before injecting epoxy.

DETAIL 1
 SCALE: 1/2"=1'-0" S4 | S7



DETAIL 2
 SCALE: 1/2"=1'-0" S4 | S7

ORIGINAL PLAN
 SURVEY PLOTTED BY
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 NOTE BOOK
 QUANTITIES BY
 CHECKED BY
 No.

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LEE T. TAKUSHI
 LICENSED PROFESSIONAL ENGINEER
 NO. 4767-S
 HAWAII USA

Lee Takushi
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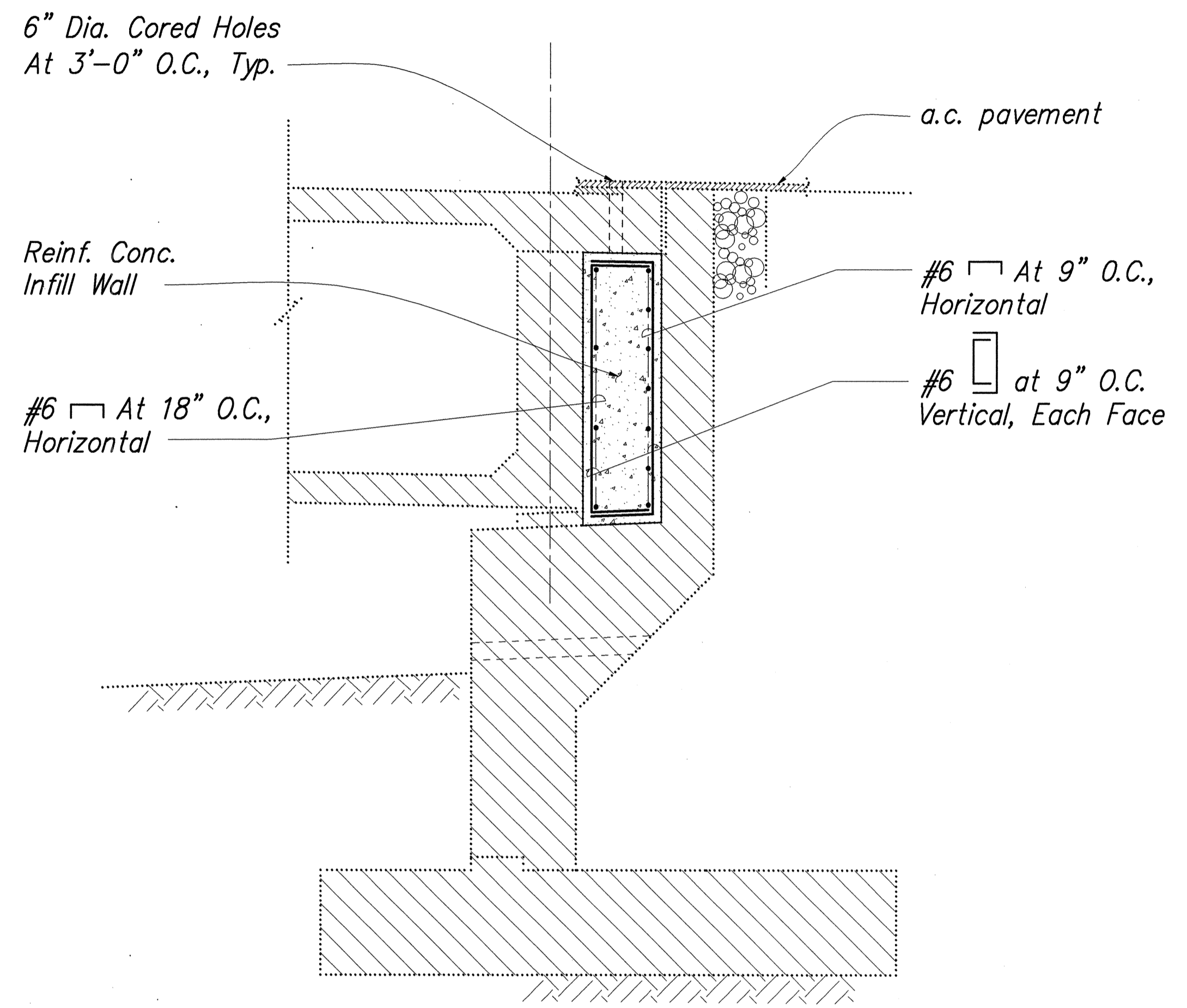
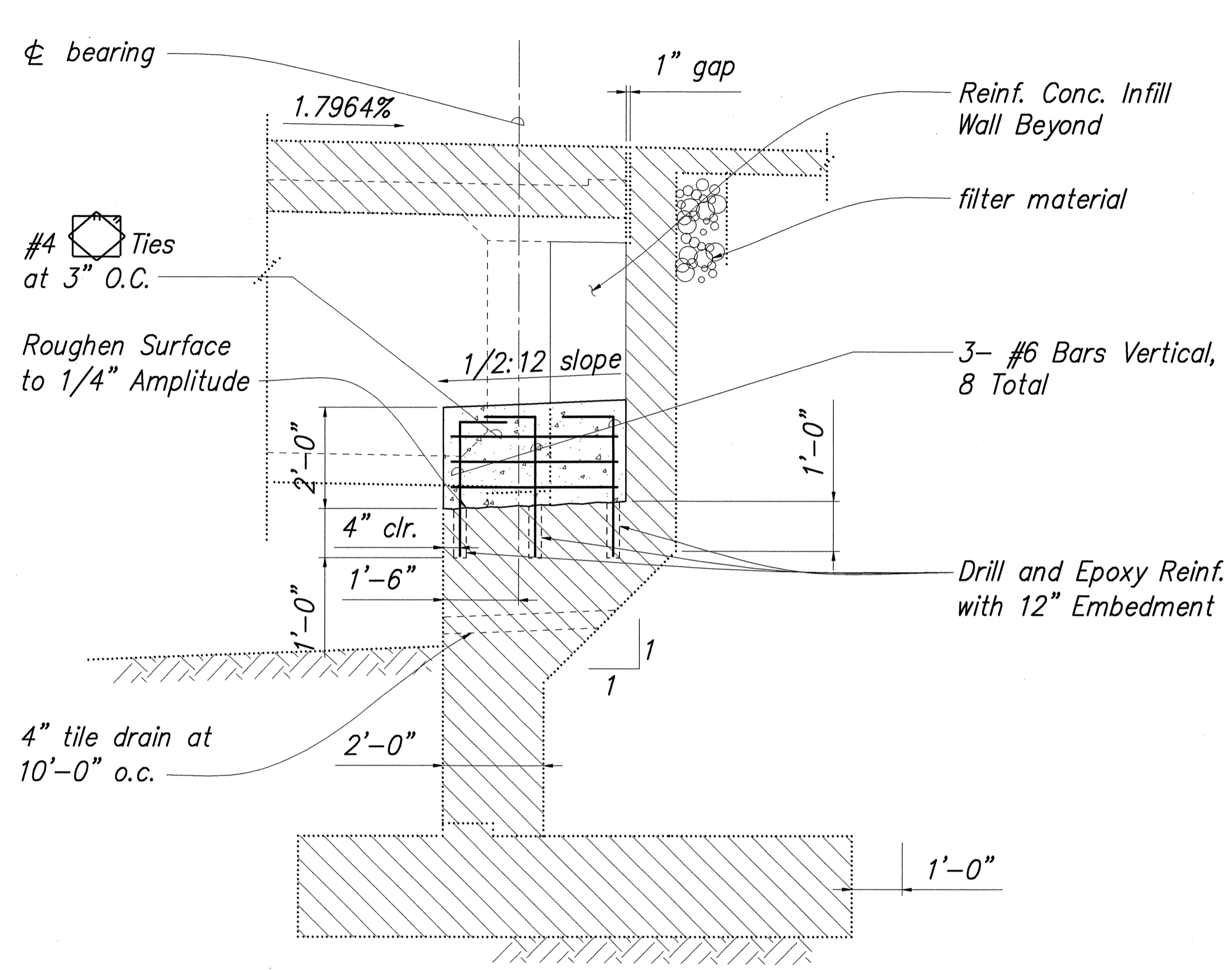
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**NIEIE BRIDGE
 ABUTMENT NO. 1
 DETAILS**

SEISMIC RETROFIT OF VARIOUS BRIDGES,
 VICINITY OF HONOKAA AND KAWAIHAE
 FEDERAL AID PROJECT NO. BR-0100(61)

SCALE: AS NOTED DATE: AUGUST 1999

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	10	17



Note:
 All drilled and epoxied holes shall be pre-drilled 1/8" larger than embedded bars and cleaned of all debris before injecting epoxy.

DETAIL 1
 SCALE: 1/2"=1'-0" S6 | S8

DETAIL 2
 SCALE: 1/2"=1'-0" S6 | S8

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

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LEE T. TAKUSHI
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 NO. 4767-S
 HAWAII USA

Lee T. Takushi
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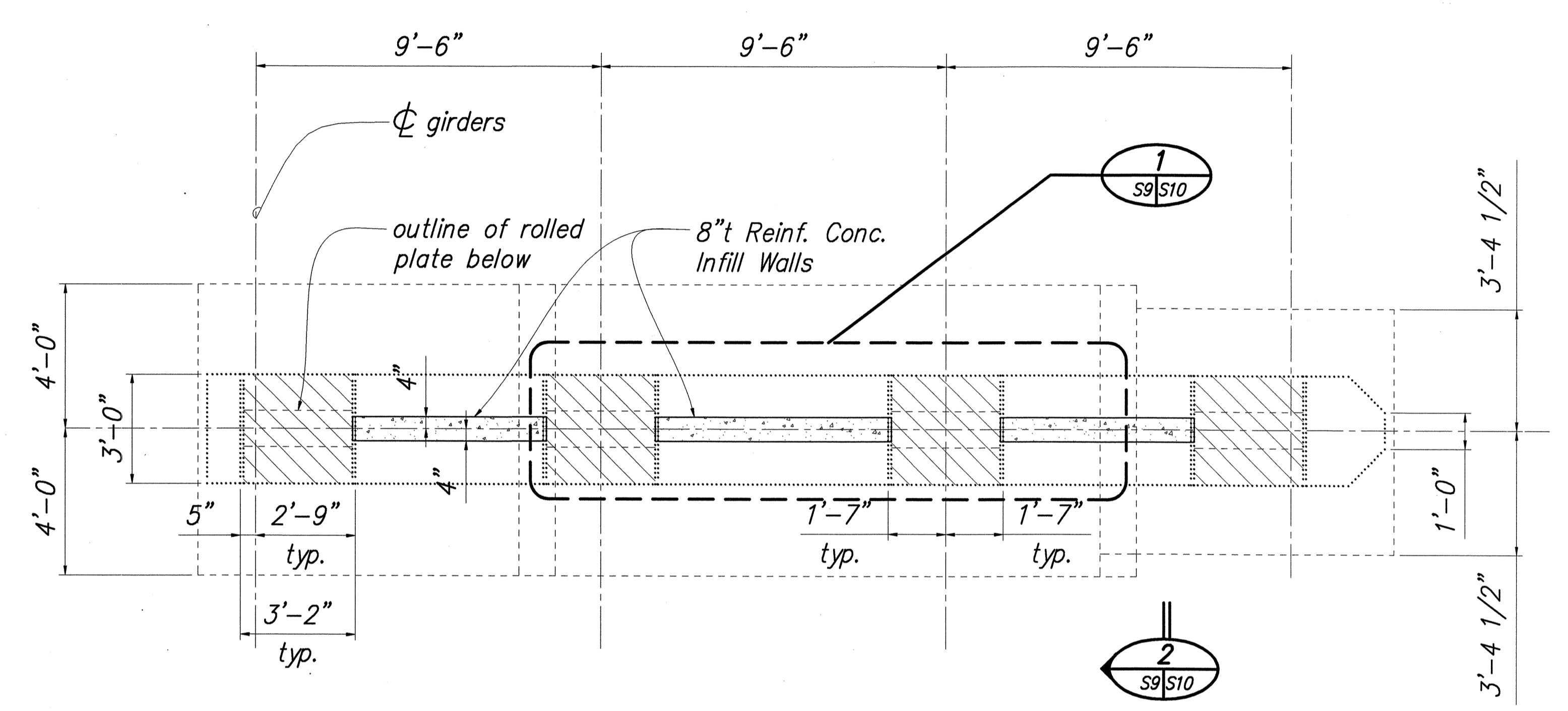
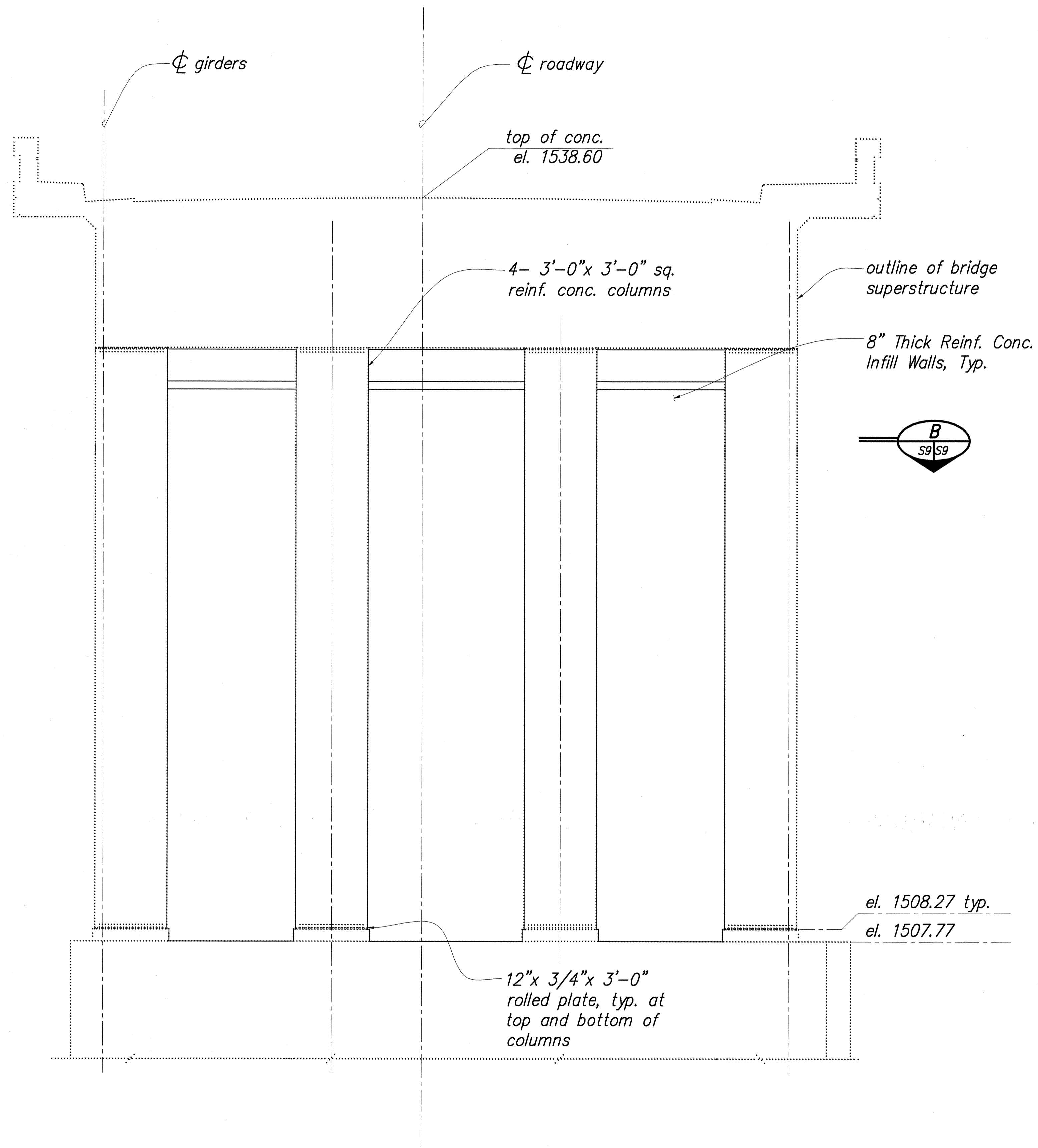
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**NIEHIE BRIDGE
 ABUTMENT NO. 2
 DETAILS**

SEISMIC RETROFIT OF VARIOUS BRIDGES,
 VICINITY OF HONOKAA AND KAWAIHAE
 FEDERAL AID PROJECT NO. BR-0100(61)

SCALE: AS NOTED DATE: AUGUST 1999

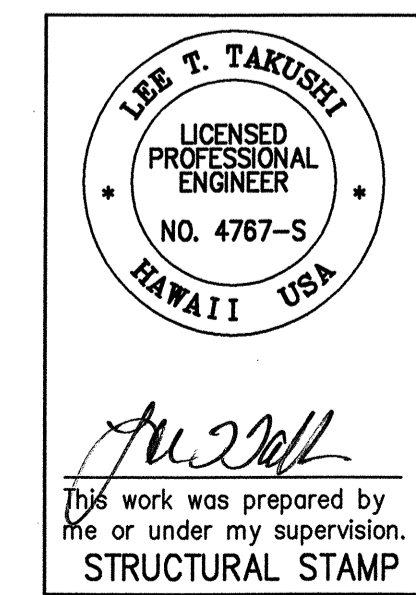
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0100(61)	1999	11	17



PLAN - PIER
SCALE: 3/8"=1'-0"

ELEVATION - PIER
SCALE: 3/8"=1'-0"

ORIGINAL PLAN
 SURVEY PLOTTED BY _____ DATE _____
 DRAWN BY _____
 TRACED BY _____
 NOTE BOOK _____
 QUANTITIES BY _____
 CHECKED BY _____
 No. _____
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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**NIENIE BRIDGE
 PIER ELEVATION
 AND SECTION**
 SEISMIC RETROFIT OF VARIOUS BRIDGES,
 VICINITY OF HONOKAA AND KAWAIHAE
 FEDERAL AID PROJECT NO. BR-0100(61)
 SCALE: AS NOTED DATE: AUGUST 1999

