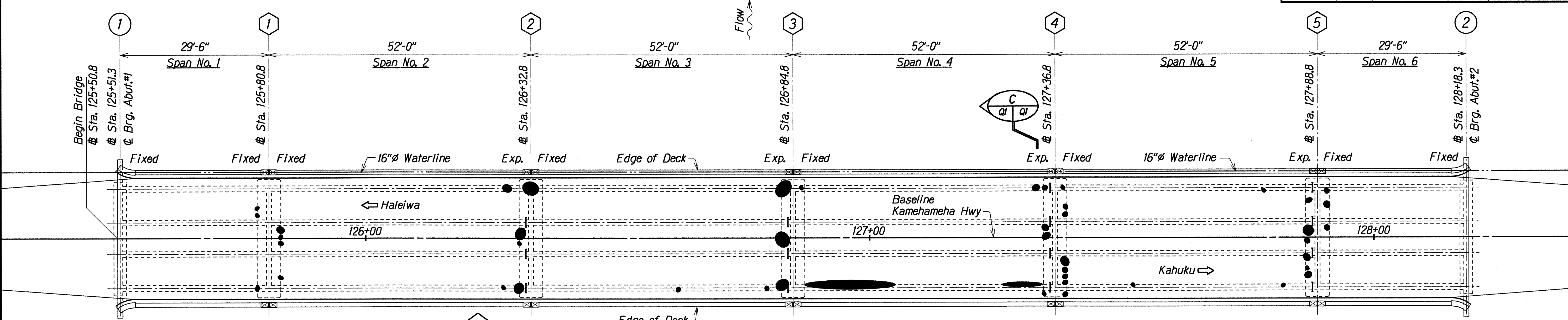
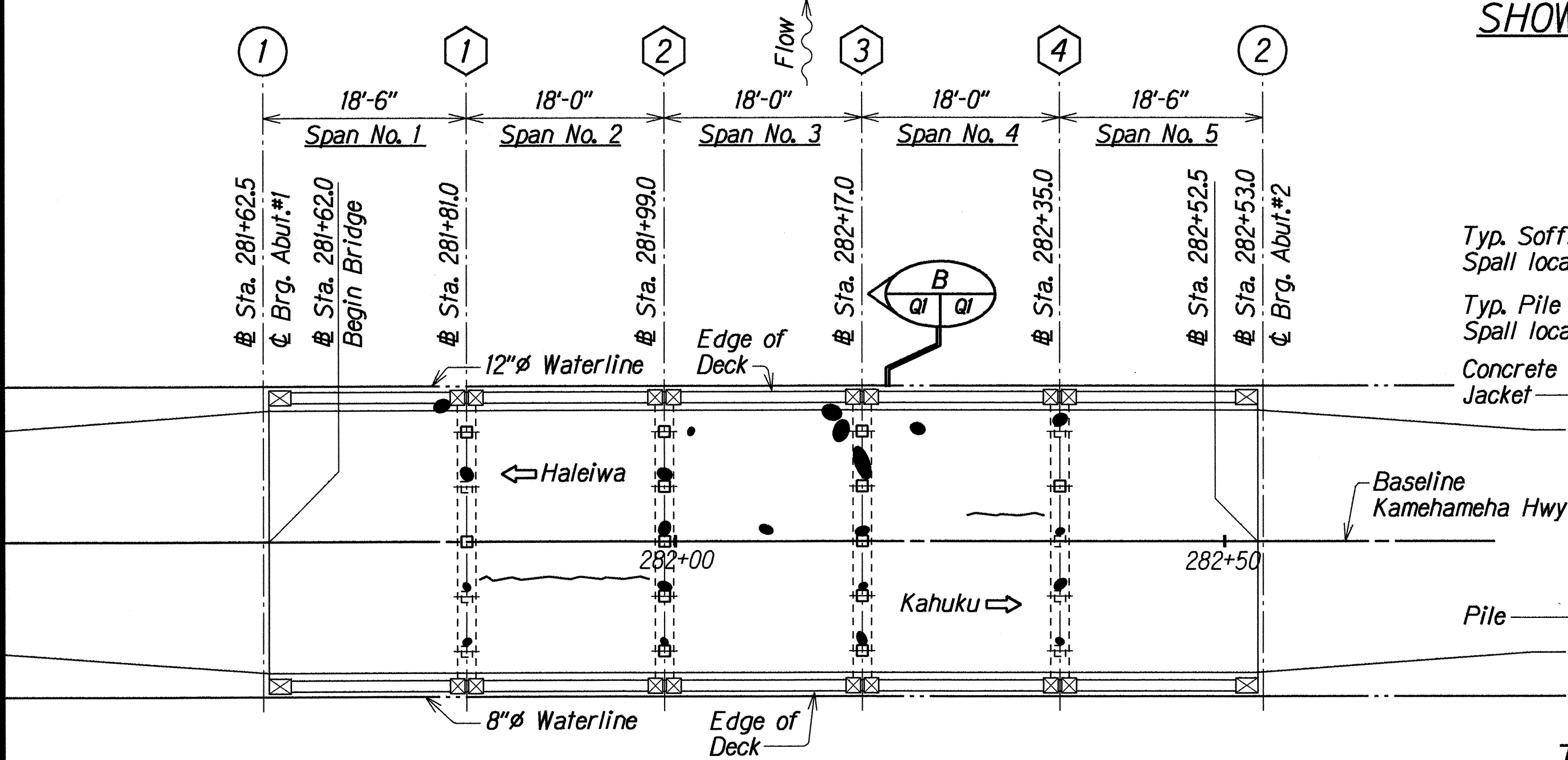


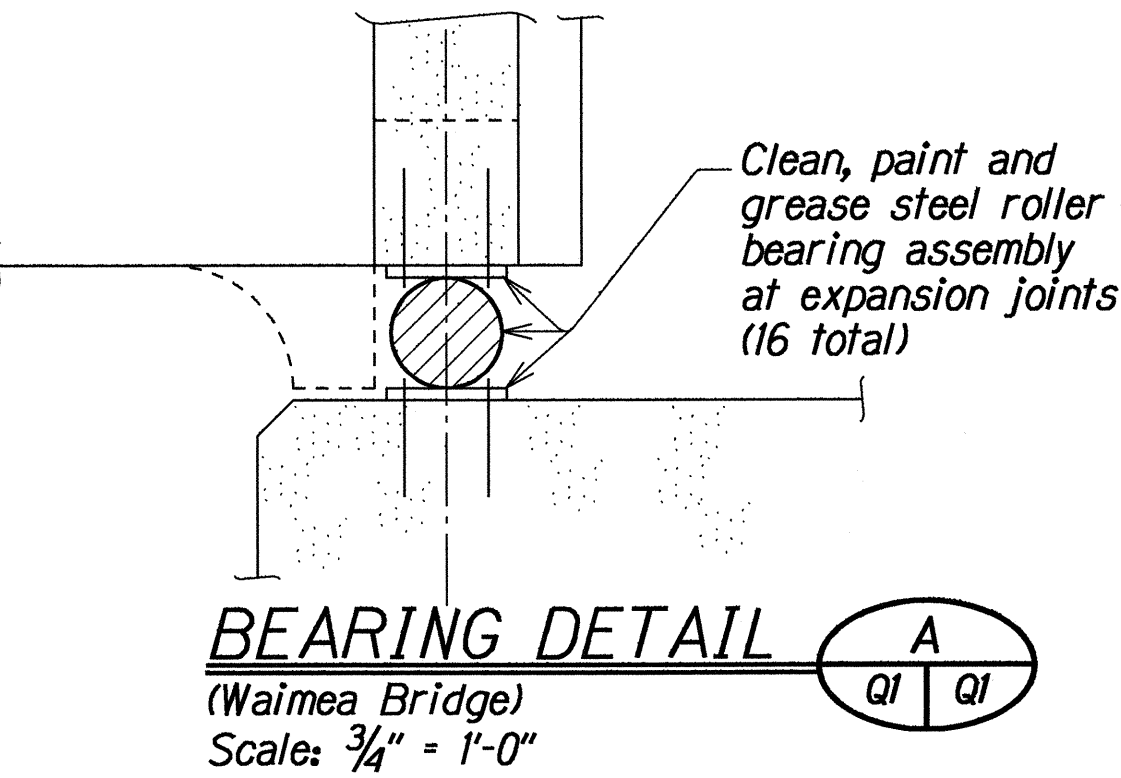
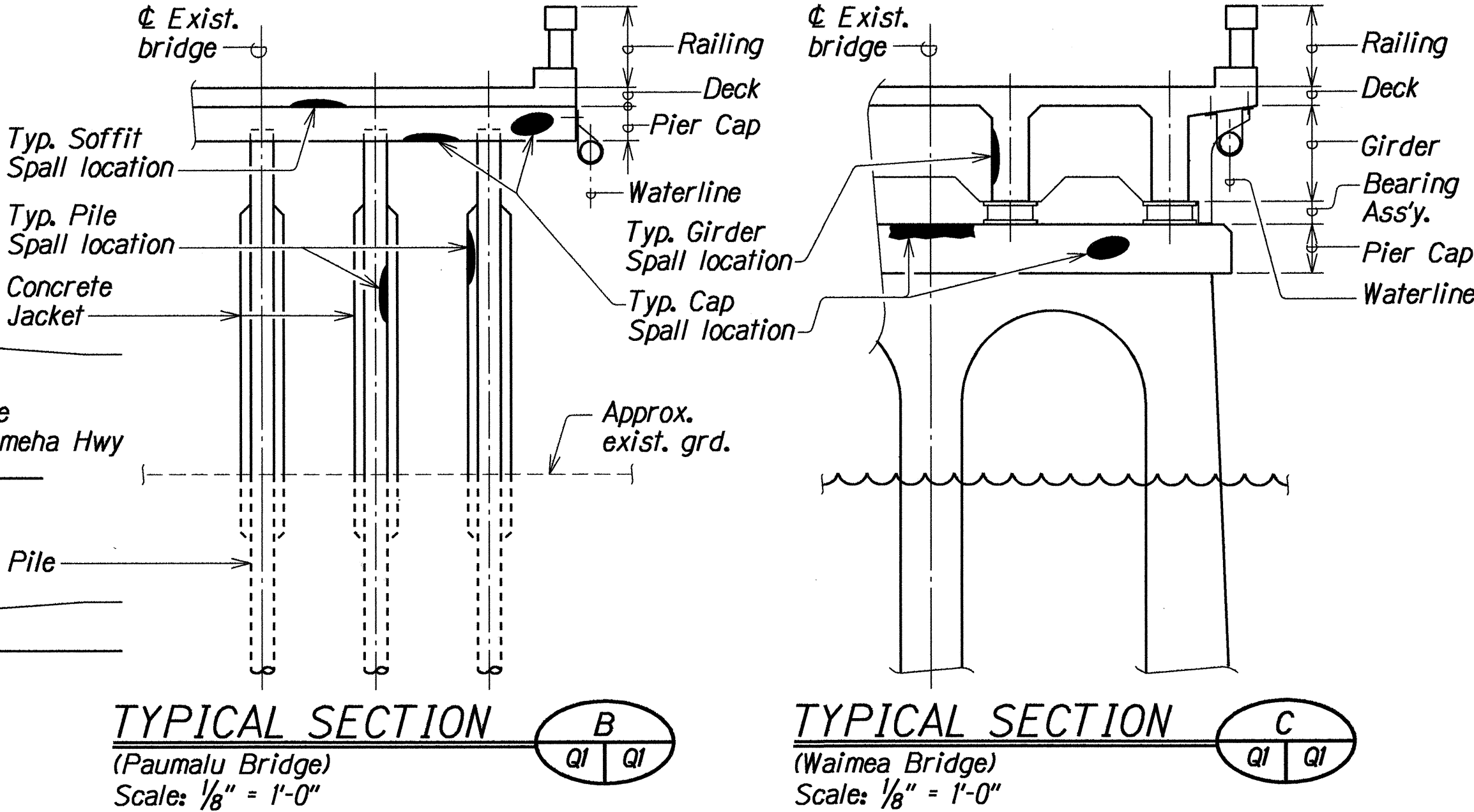
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(30)	1994	5	11



WAIMEA BRIDGE--REFLECTED CEILING PLAN
SHOWING SPALL LOCATIONS
 Sta. 125+51.3 to Sta. 128+18.3
 Scale: 1" = 10'-0"



PAUMALU BRIDGE--REFLECTED CEILING PLAN
SHOWING SPALL LOCATIONS
 Sta. 281+62.5 to Sta. 282+53.0
 Scale: 1" = 10'-0"



NOTE:
 Spall locations are for illustrative purposes only. Actual location to be determined by the Engineer in the field.

KEY TO SYMBOLS:

Girder Spall location	Soffit Spall location
Cap Spall location	Pile Spall location
Roller bearing assembly at expansion joints (16-total)	Cap Spall location
	Soffit Crack

Waimea Bridge **Paumalu Bridge**

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
676.1000	Repair of Spalls for Waimea Bridge	S.F.	600*
676.1010	Repair of Spalls for Paumalu Bridge	S.F.	800*
677.1000	Soffit Crack Repair for Paumalu Bridge	L.F.	65*
695.1000	Cleaning, Painting and Greasing of Steel Roller Bearing Assemblies	L.S.	L.S.

*Includes estimated overrun

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

REHABILITATION AND BRIDGE REPAIR DETAILS

WAIMEA BRIDGE AND PAUMALU BRIDGE REFLECTED CEILING PLANS (SHOWING SPALL LOCATIONS), TYPICAL SECTIONS AND ESTIMATED QUANTITIES

Scale: As Noted Fed. Aid Proj. No. STP-083-1(30) Date: Mar, 1994

SURVEY PLOTTED BY	DATE
DRAWN BY	MAR 1994
TRACED BY	MAR 1994
NOTED BY	MAR 1994
QUANTITIES BY	MAR 1994
CHECKED BY	MAR 1994

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(30)	1994	6	11

GENERAL NOTES

REPAIR NOTES:

1. All deteriorated, damaged, cracked, spalled, honeycombed concrete or concrete over rusted reinforcing bars shall be removed as shown and repaired with hand-placed mortar or shotcrete. ⚠
2. Provide minimum 2" concrete cover over reinforcement or welded wire fabric. See specifications for welded wire fabric requirements.
3. Reinforcing bars that have rusted more than 25% of their original cross sectional area shall be cleaned and strengthened as shown on "Reinforcing Bar Repair Splice Detail", this sheet. ⚠
4. The Engineer shall determine all areas to be repaired and the limits of repair at each area.
5. Apply silane waterproofing as approved by the Engineer. Application shall be according to the Manufacturer's recommendations.

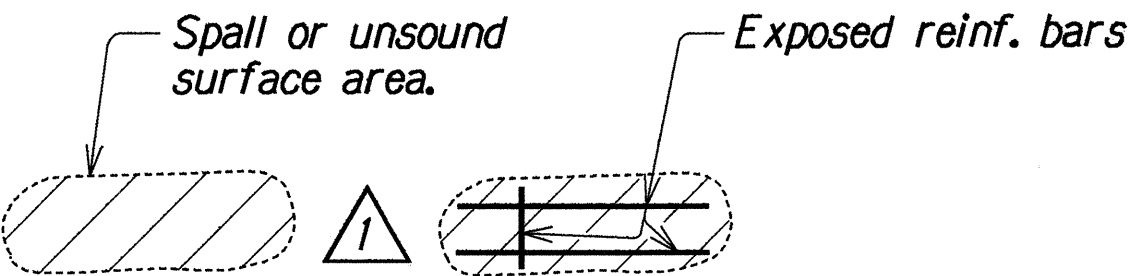
INCIDENTAL ITEMS: The following items shall be considered incidental to the various pay items for repairs and will not be paid for separately: ⚠

1. Cleaning of all exposed, corroded reinforcing steel to sound metal.
2. Reinforcing bars for repair splice. ⚠
3. Furnishing and application of silane waterproofing material.

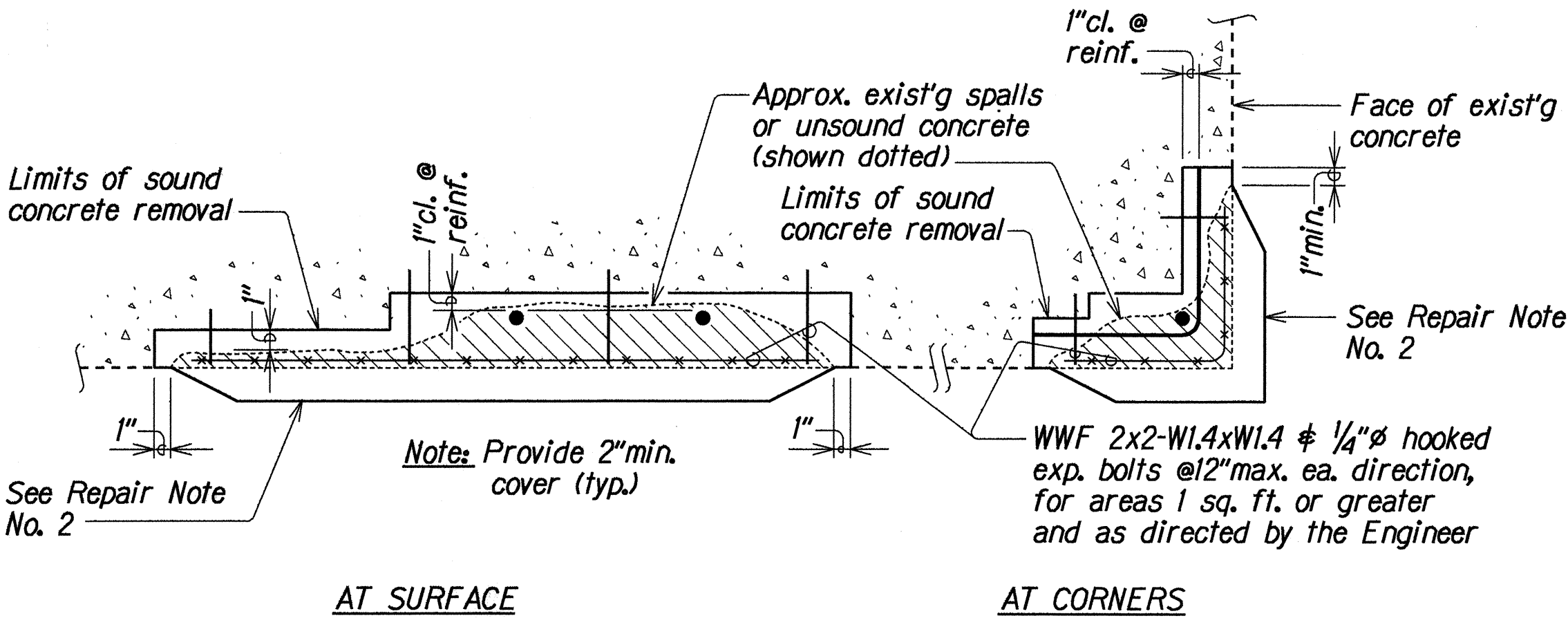
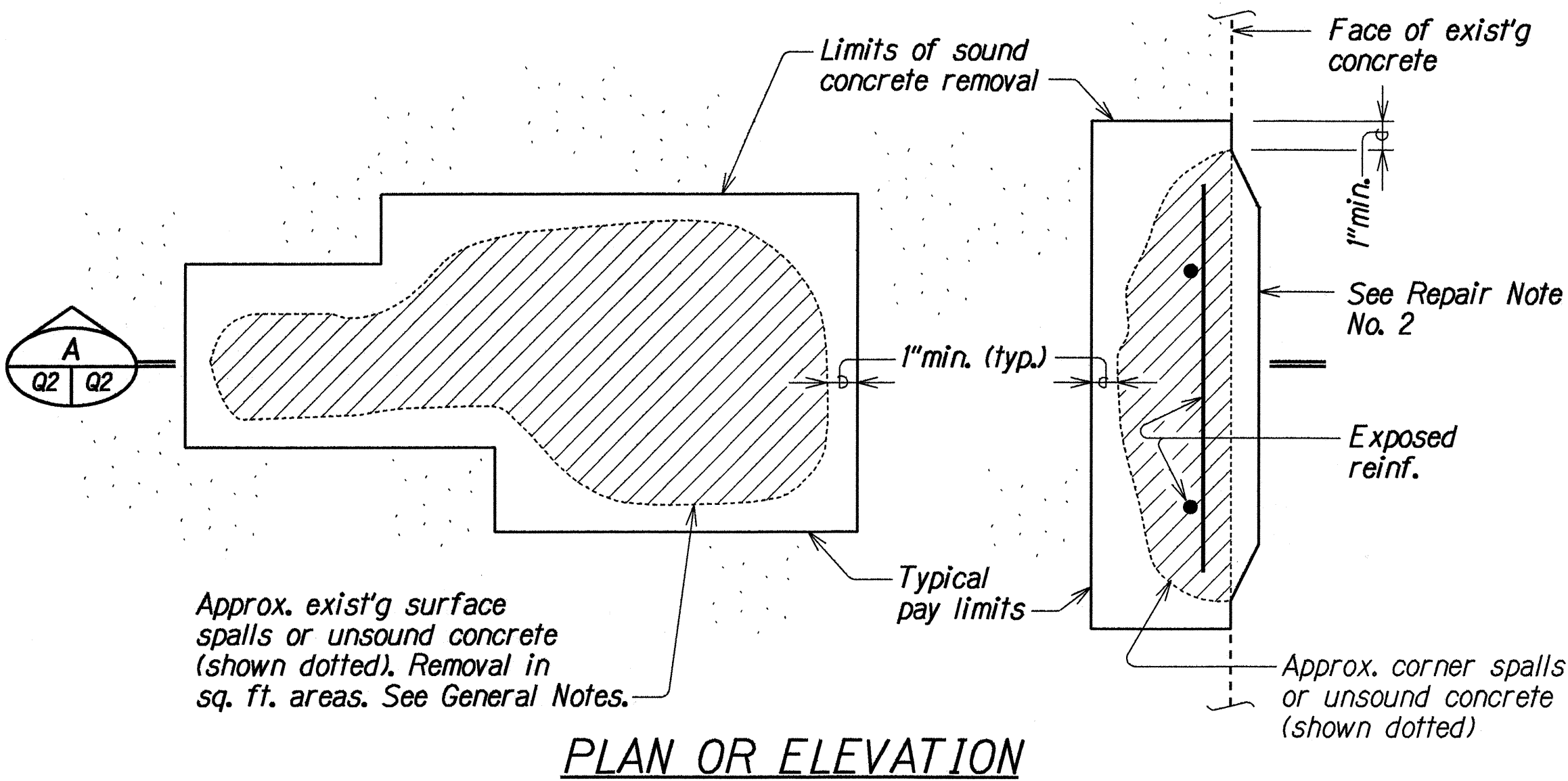
GENERAL:

1. All reinforcing steel to be ASTM A 615 Grade 40.
2. All welding shall be done in accordance with the current edition of the Reinforcing Steel Welding Code AWS D1.4.
3. Maintenance & control of traffic--See Special Provisions sub-section 104.04.

SYMBOLS AND ABBREVIATIONS:



S.S.: Surface spall (Concrete)
 S.C.: Surface crack (Concrete)
 H.C.: Hairline crack
 S.F. or sq. ft.: Square feet
 L.F.: Linear feet

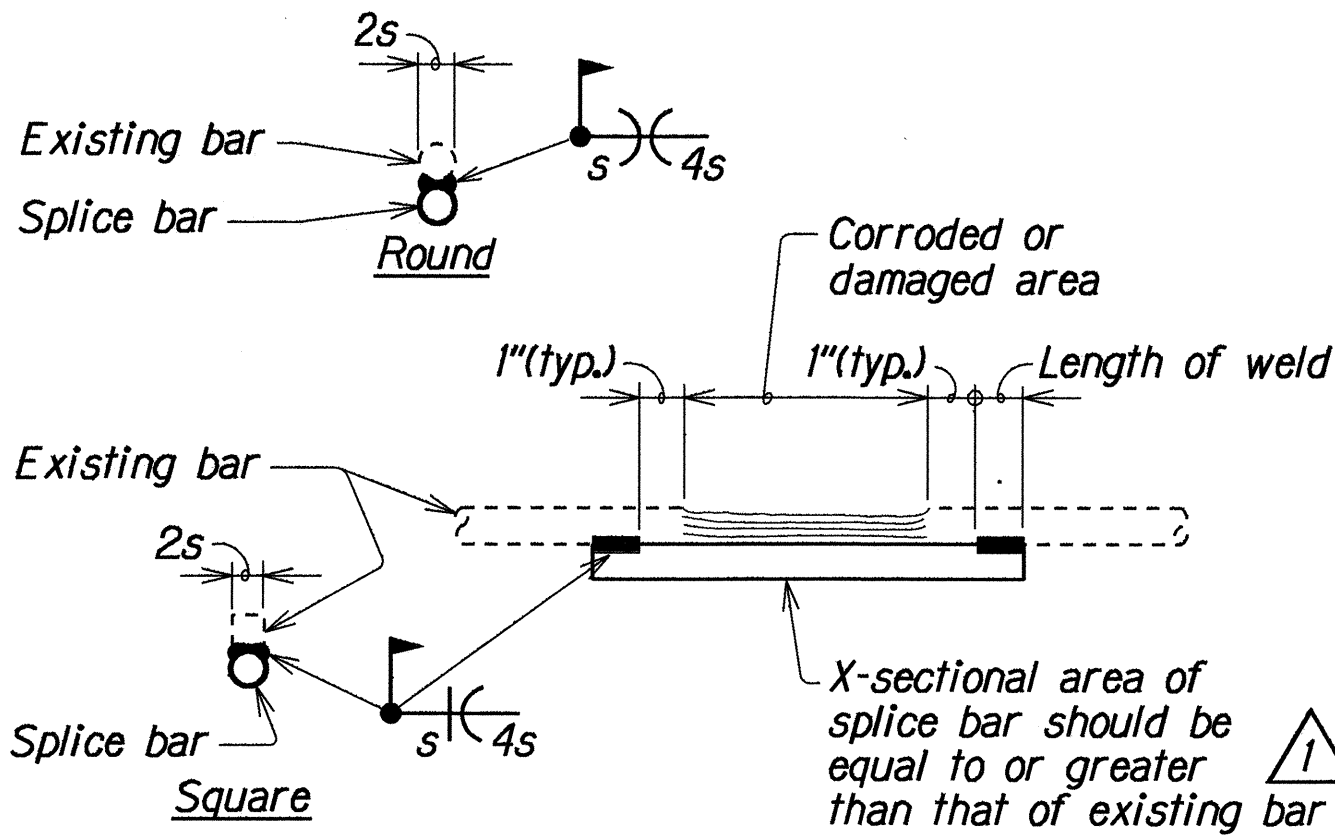


AT SURFACE AT CORNERS

TYPICAL SECTIONS

TYPICAL CONCRETE REPAIRS ⚠

Not to Scale



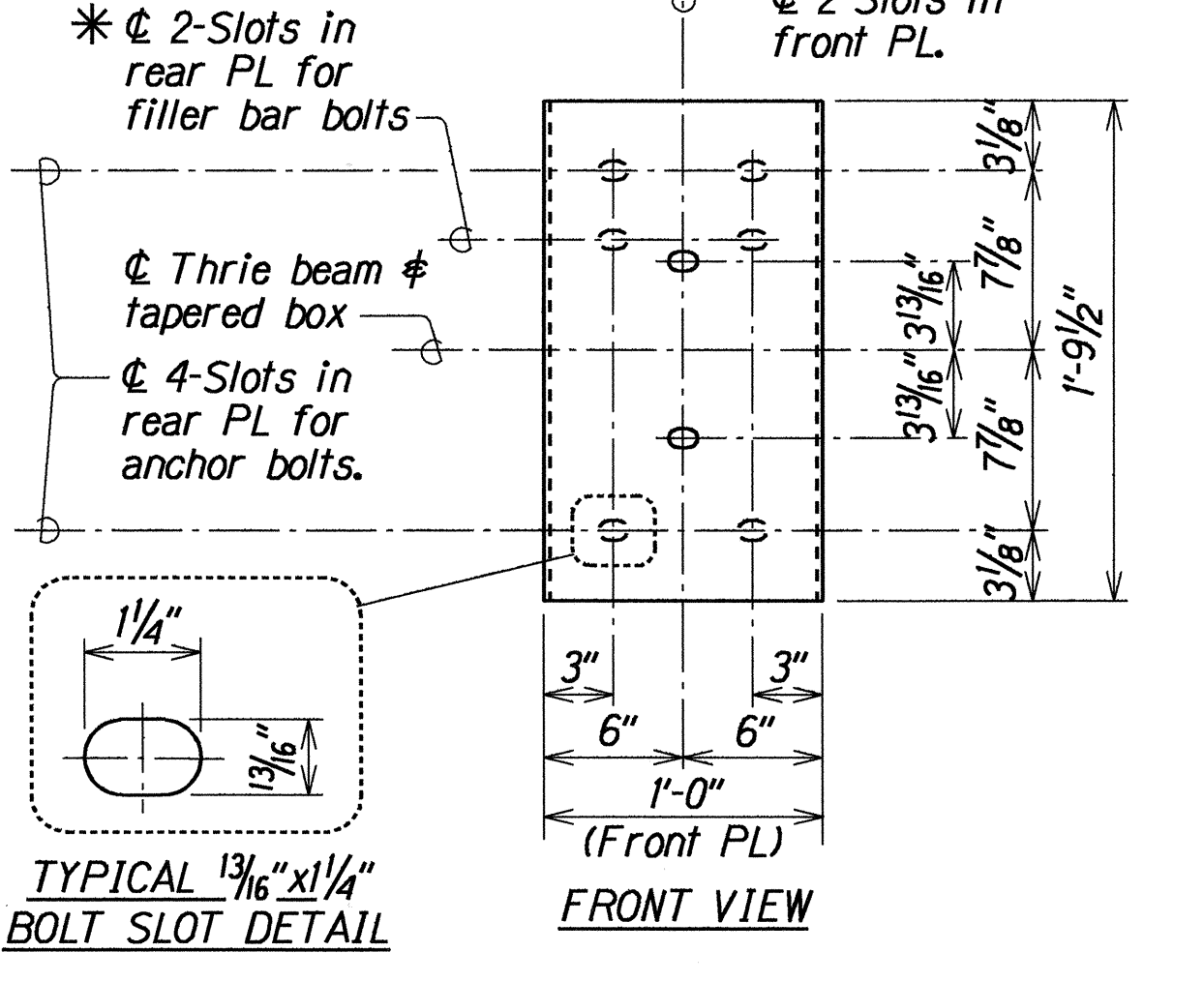
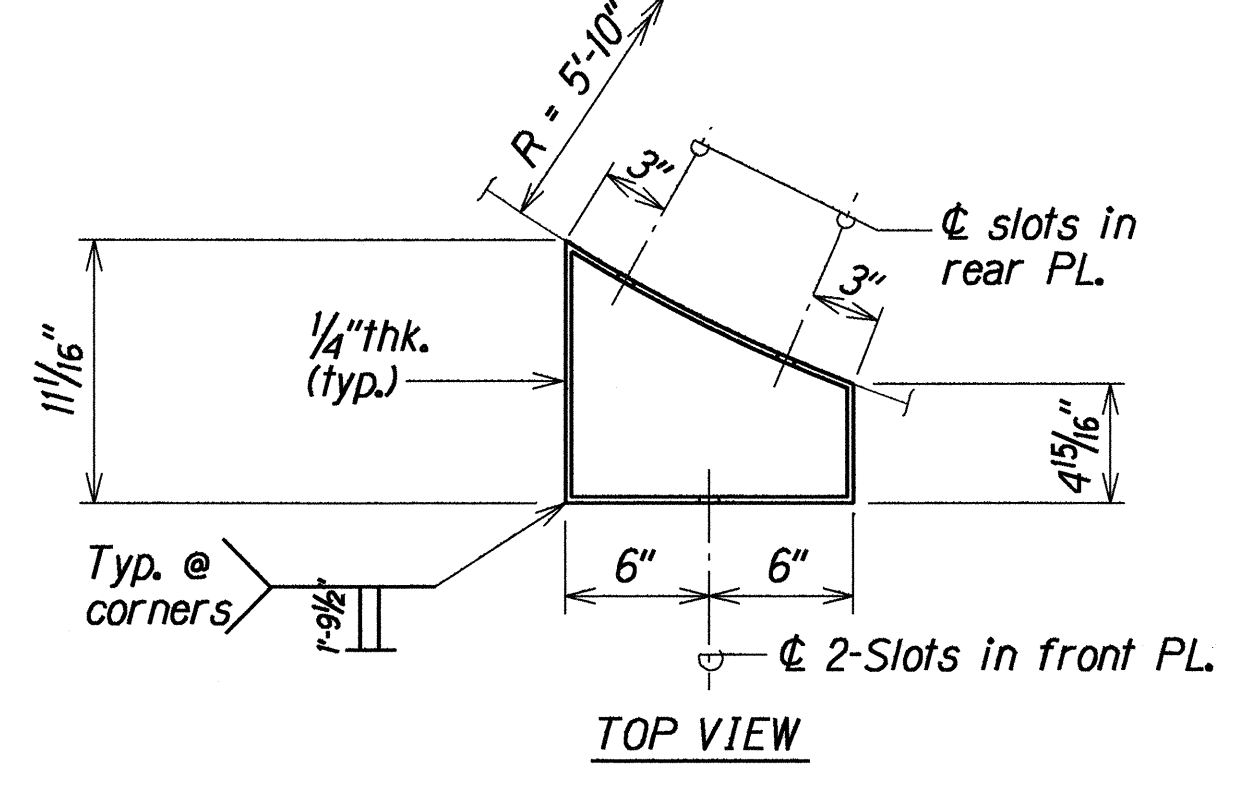
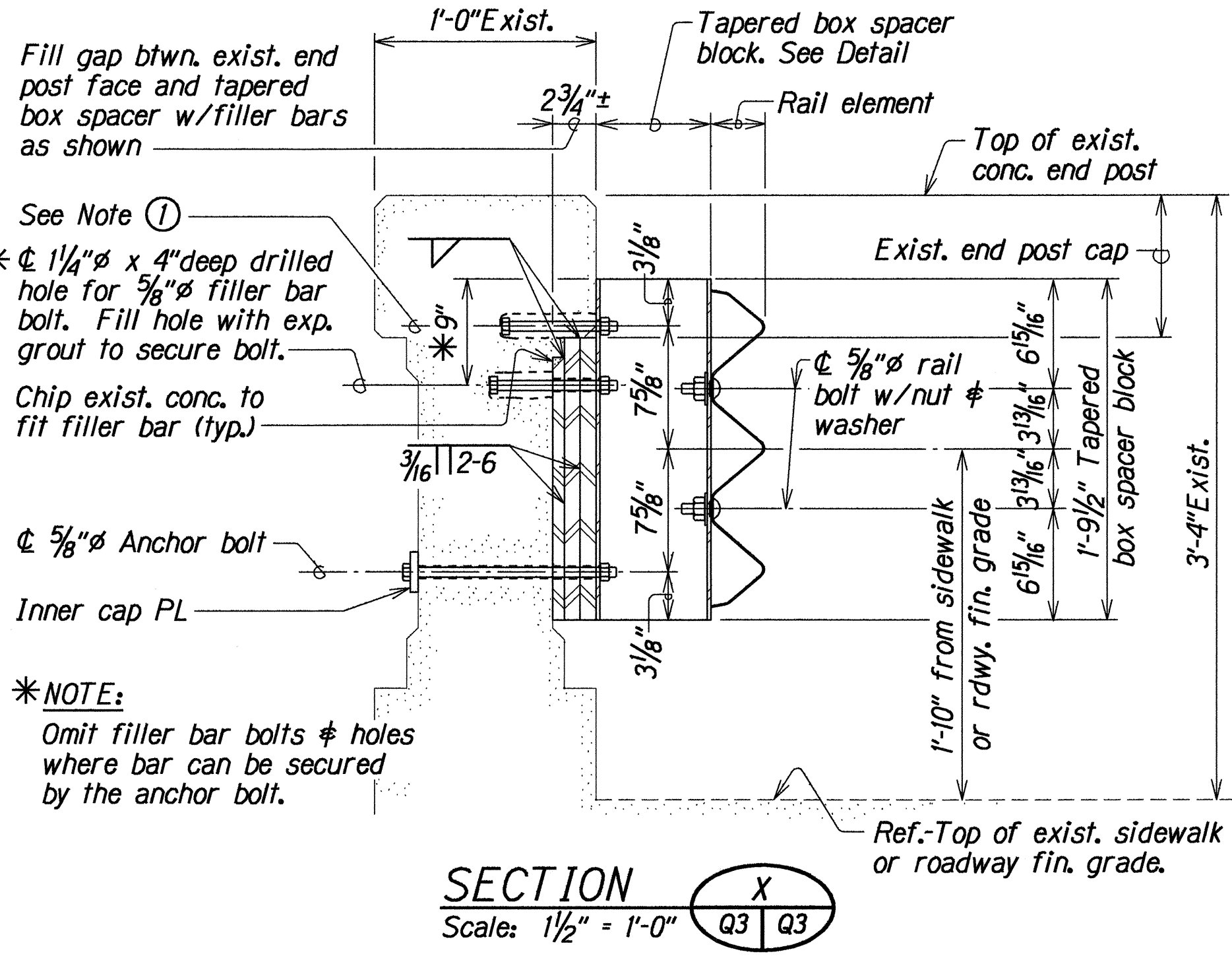
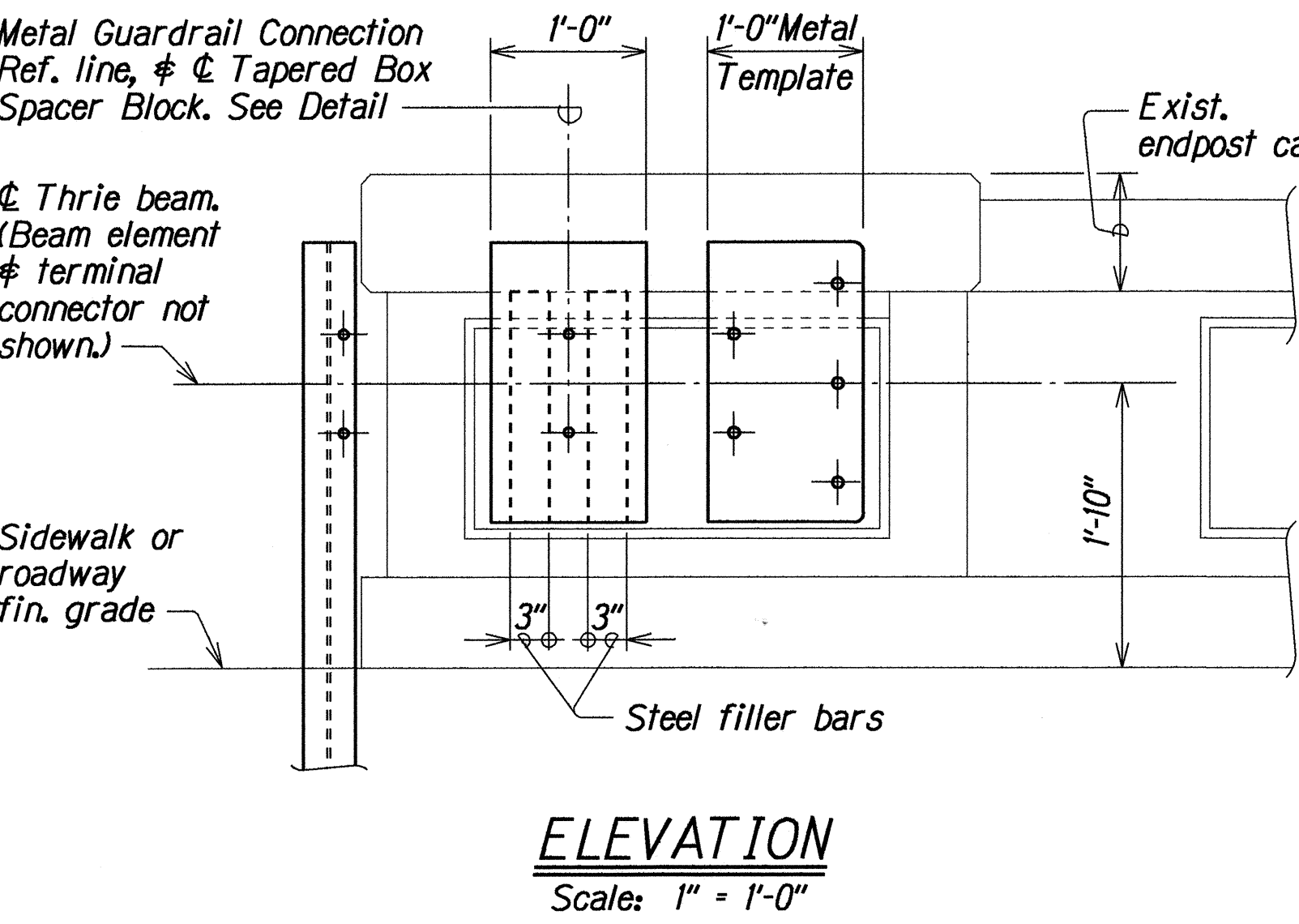
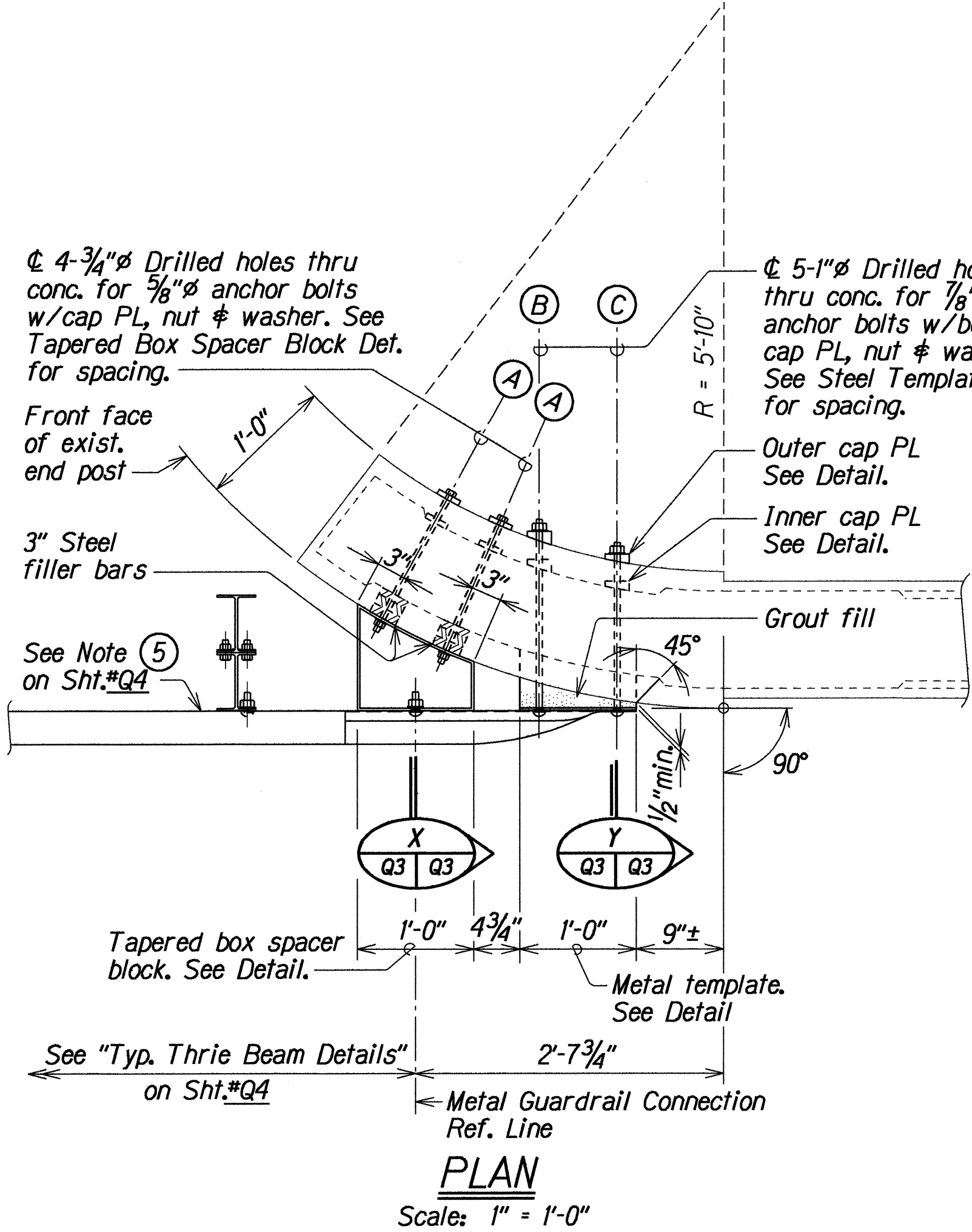
REINFORCING BAR REPAIR SPLICE DETAIL

ORIGINAL PLAN	DATE	DESIGNED BY	CHECKED BY
NOTE BOOK	XXX	XXX	XXX
QUANTITY 2.00	XXX	XXX	XXX
DATE	DATE	DATE	DATE

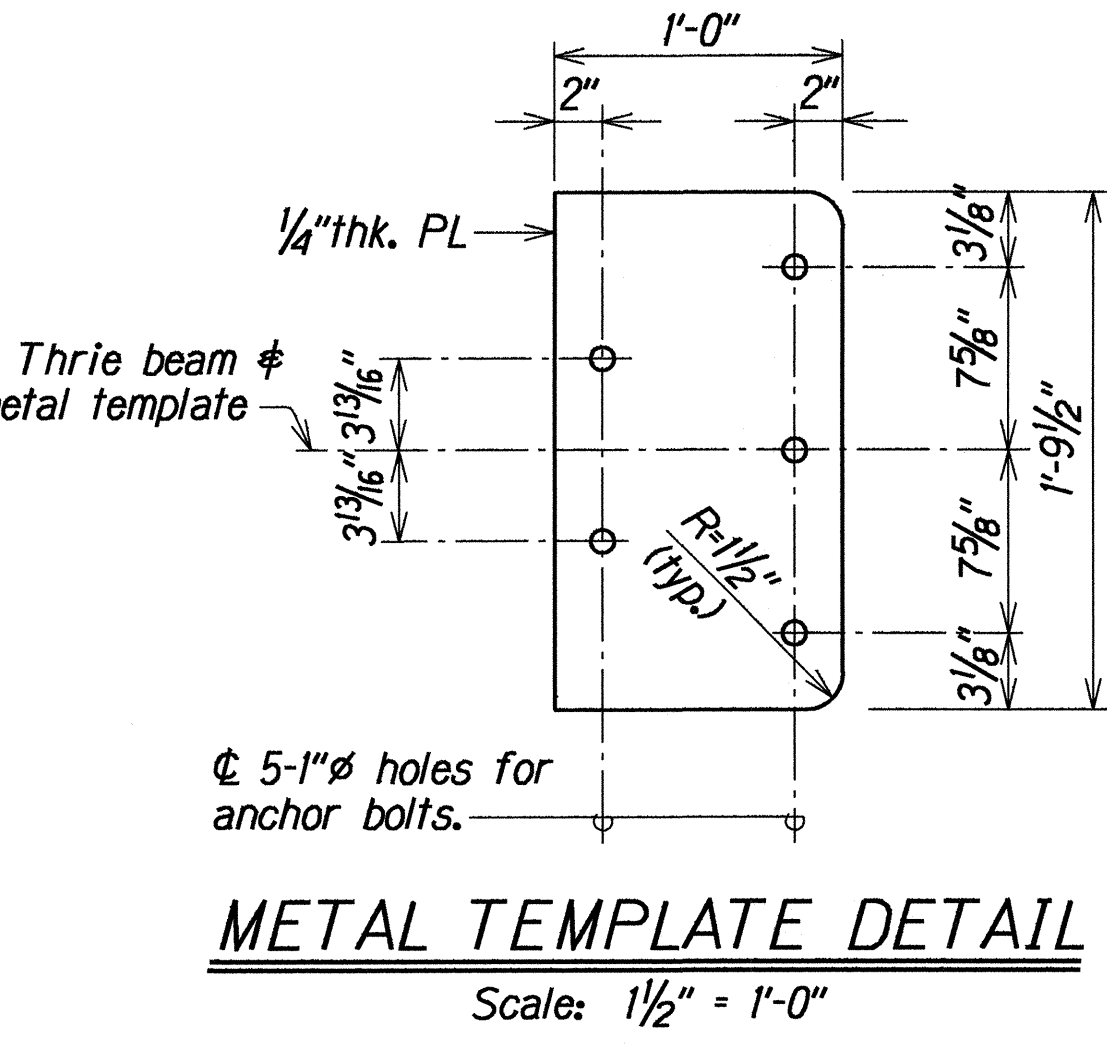
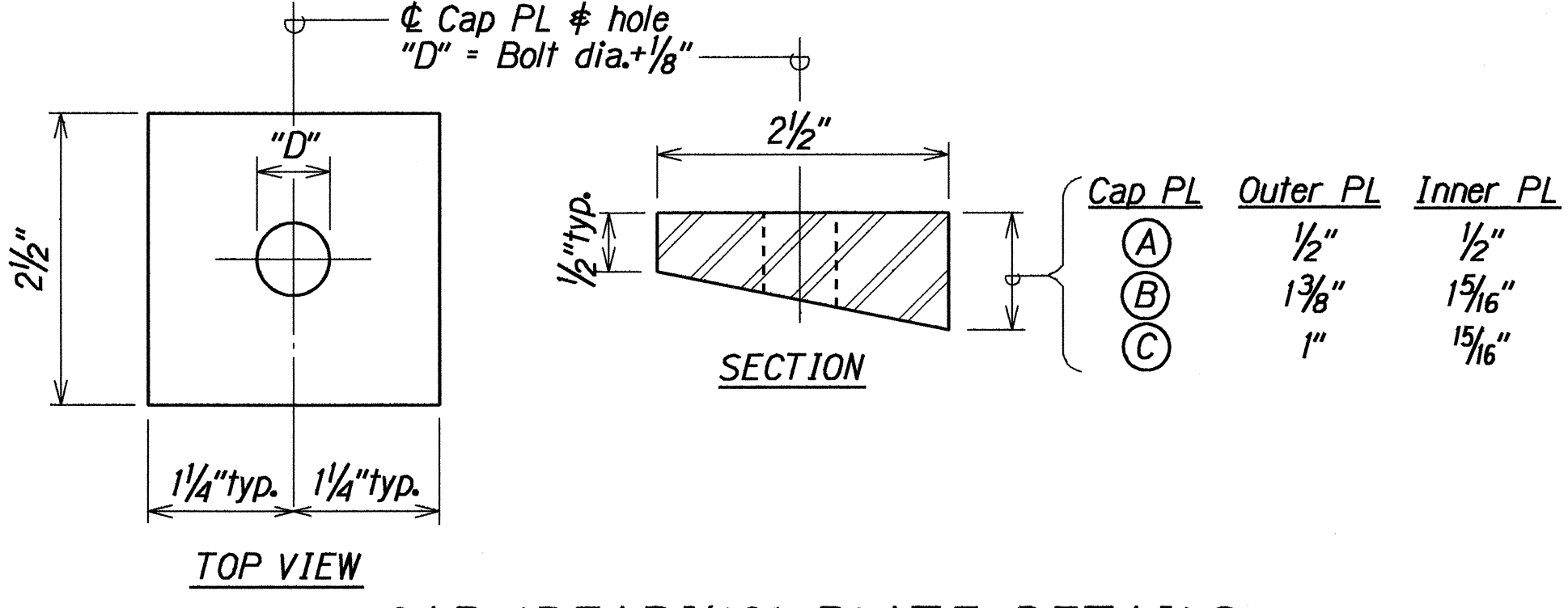
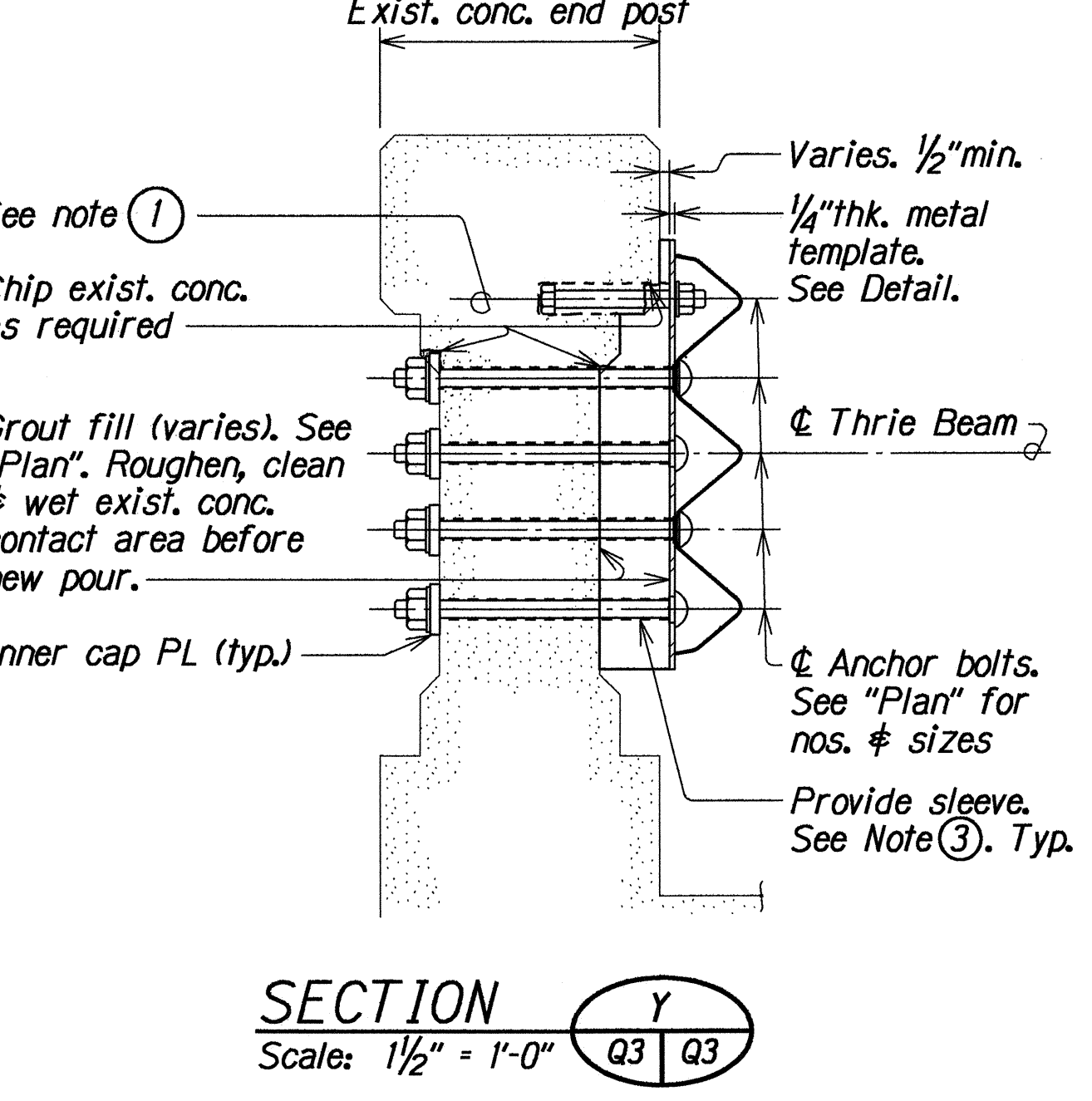
⚠	Revised Details and General Notes
6/14/94	
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION REHABILITATION AND BRIDGE REPAIR DETAILS WAIMEA BRIDGE AND PAUMALU BRIDGE TYPICAL CONCRETE REPAIRS AND GENERAL NOTES Scale: As Noted Fed. Aid Proj. No. STP-083-1(30) Date: Mar, 1994
SHEET No. Q2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(30)	1993	7	11



TAPERED BOX SPACER BLOCK DETAILS
 Scale: 1 1/2" = 1'-0"

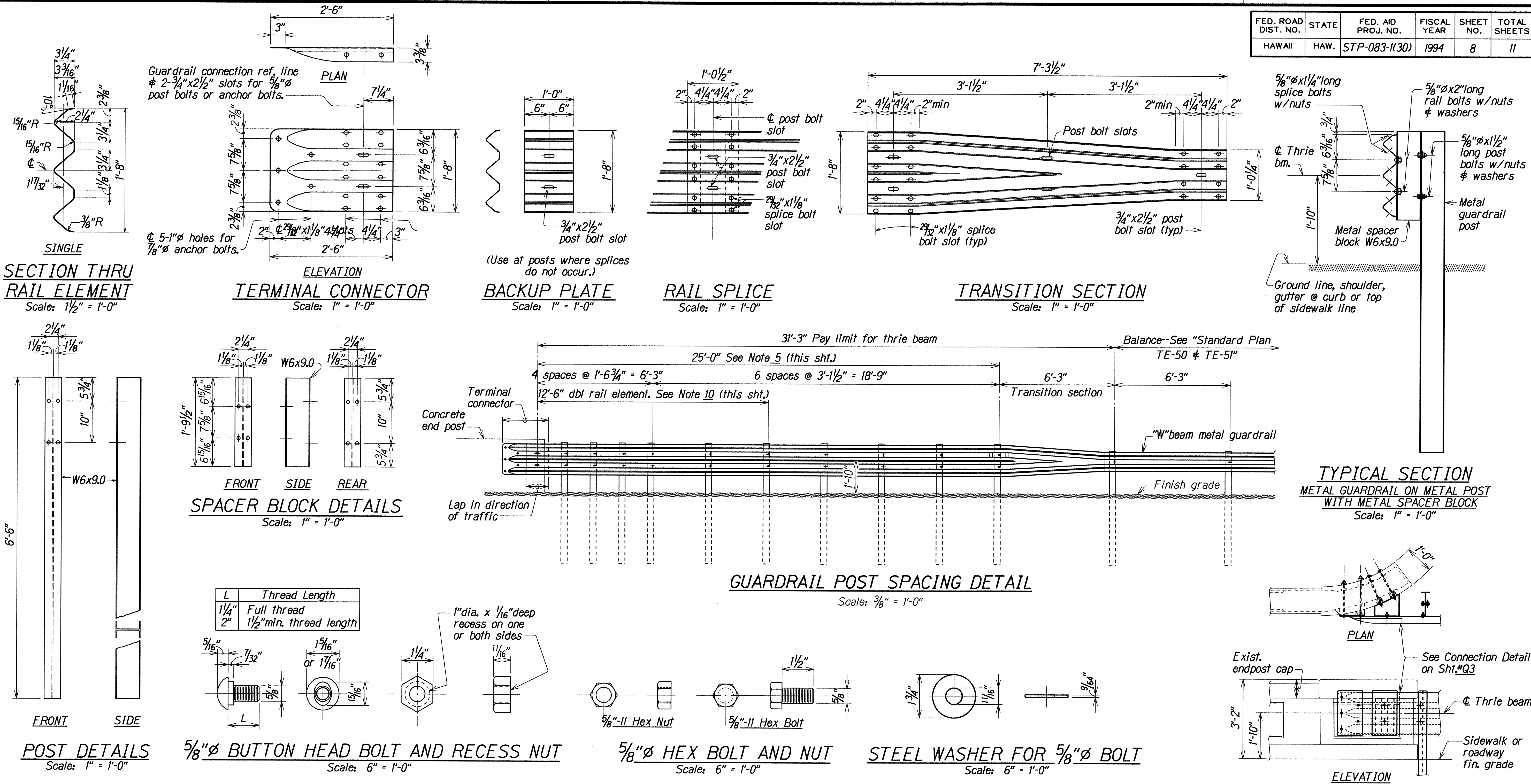


TYPE "B" CONNECTION DETAILS

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
REHABILITATION AND BRIDGE REPAIR DETAILS
WAIMEA BRIDGE END POST TYPE "B" CONNECTION DETAILS
 Fed. Aid Proj. No. STP-083-1(30)
 Scale: As Noted Date: Mar, 1994
 SHEET No. Q3 OF 4 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	MAR 1994
NOTE BOOK	XXX
QUANTITIES BY	MAR 1994
CHECKED BY	MAR 1994
ORIGINAL PLAN	
DATE	
BY	
DATE	
BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(30)	1994	8	11



TYPE 3 THRIE BEAM GUARDRAIL AND APPURTENANCES DETAILS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**REHABILITATION AND BRIDGE
REPAIR DETAILS**
WAIMEA BRIDGE TYPE 3 THRIE BEAM
GUARDRAIL AND APPURTENANCES DETAILS
Fed. Aid Proj. No. STP-083-1(30)

Scale: As Noted Date: Mar, 1994

SHEET No. Q4 OF 4 SHEETS