

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83D-01-97M	1997	4	5

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:

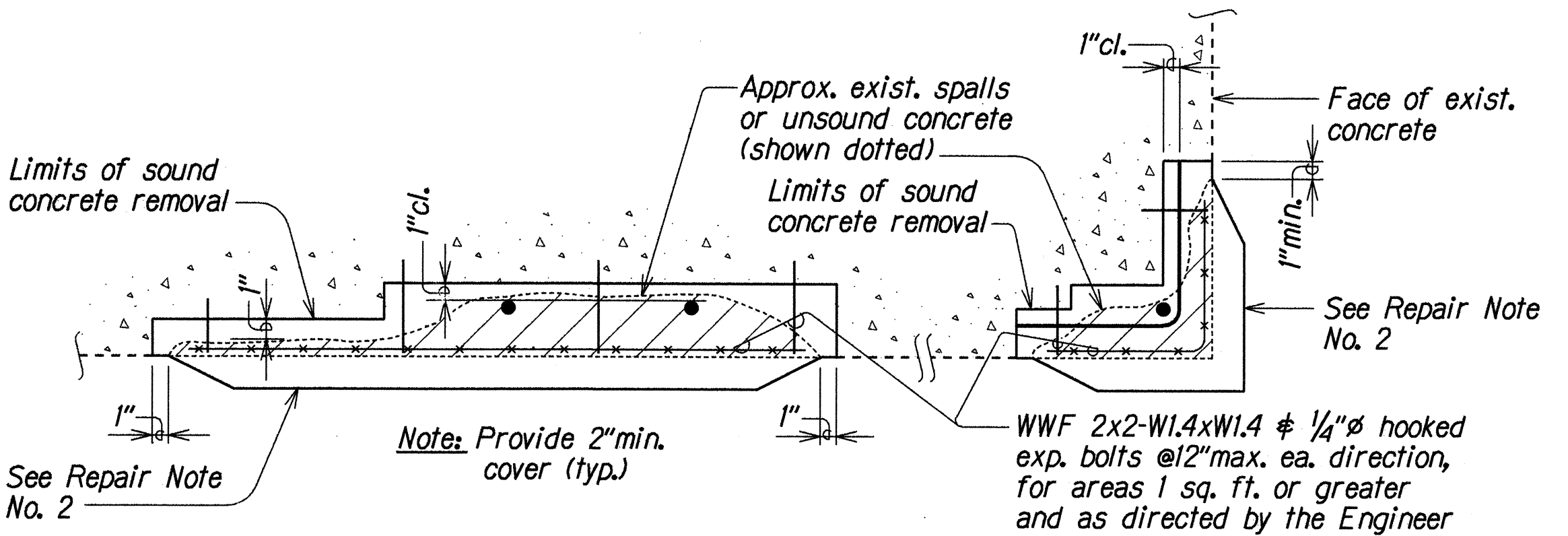
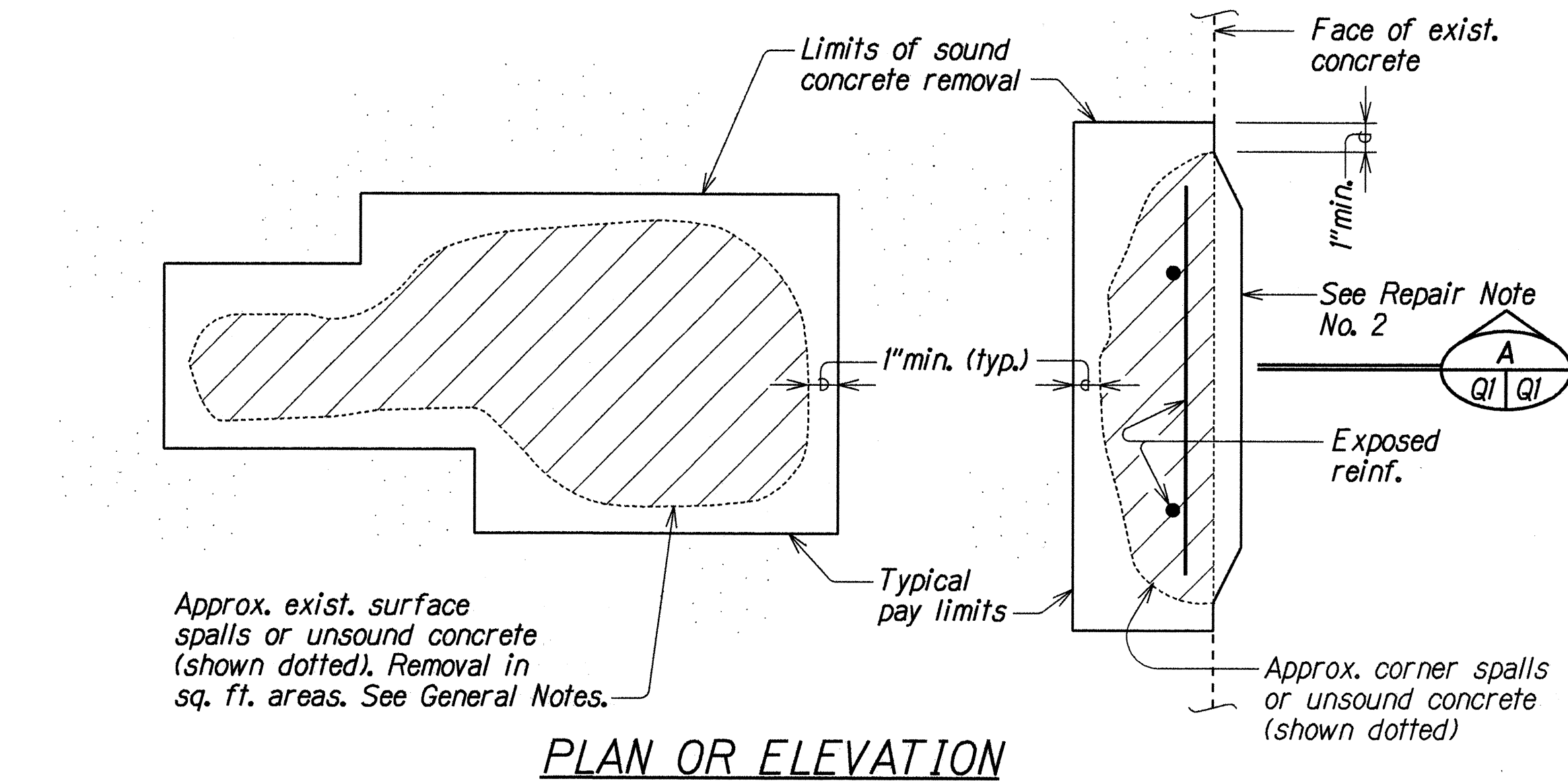
1. All reinforcing steel to be ASTM A 615 Grade 40.
2. All welding shall be done in accordance with the current edition of the Reinforcing Steel Welding Code AWS D1.4.
3. Maintenance & control of traffic--See Special Provisions sub-section 104.04.

SYMBOLS AND ABBREVIATIONS:

Spall or unsound surface area.	Exposed reinf. bars	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

ESTIMATED QUANTITIES			
ITEM NO.	ITEM	UNIT	QUANTITY
676J000	Spall Repair - Kaaawa Stream Bridge	S.F.	1,800 *
677J000	Crack Repair - Kaaawa Stream Bridge	L.F.	250 *

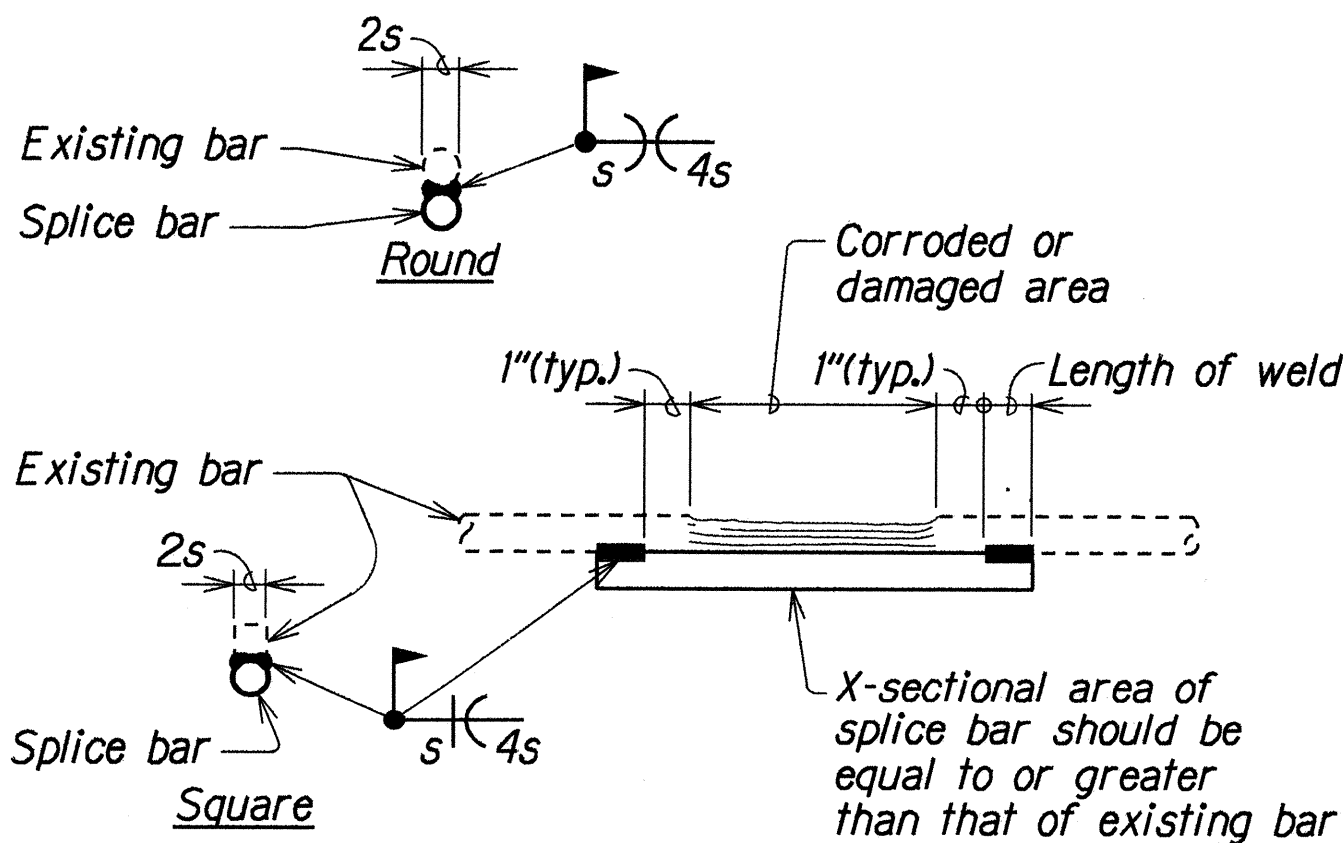
* Includes estimated overrun.



AT SURFACE AT CORNERS

TYPICAL CONCRETE REPAIRS

Not to Scale



REINFORCING BAR REPAIR SPLICE DETAIL

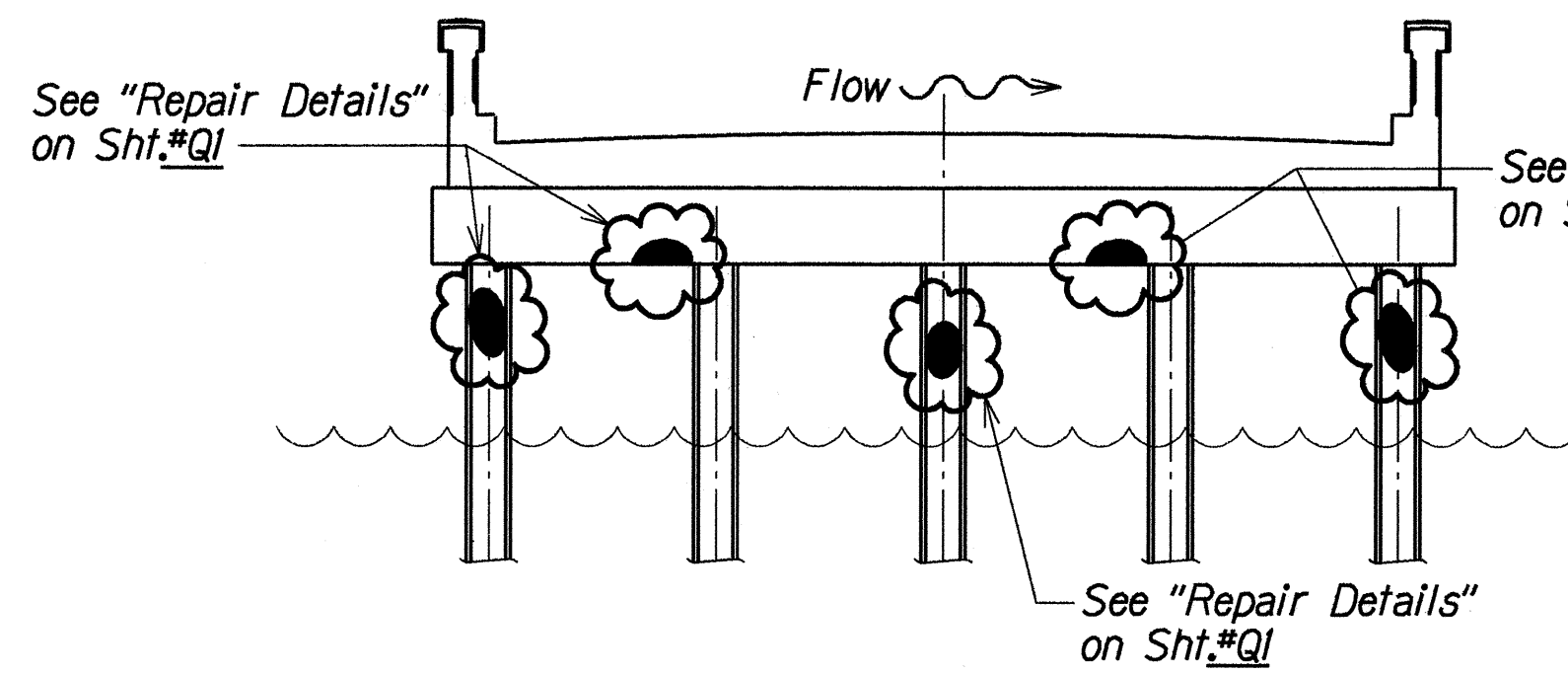
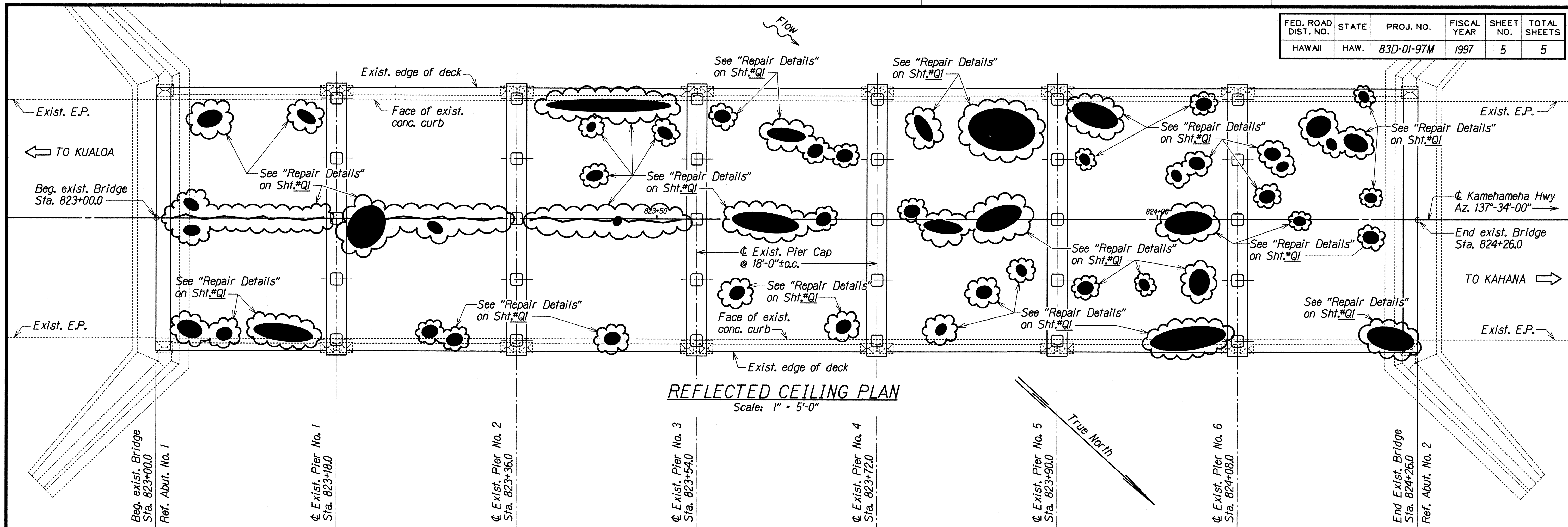
Not to Scale

ORIGINAL PLAN	DATE	DEC 1996
SURVEY PLOTTED BY	KSG	
DESIGNED BY	KSG	
QUANTITIES BY	KSG	
CHECKED BY	KSG	

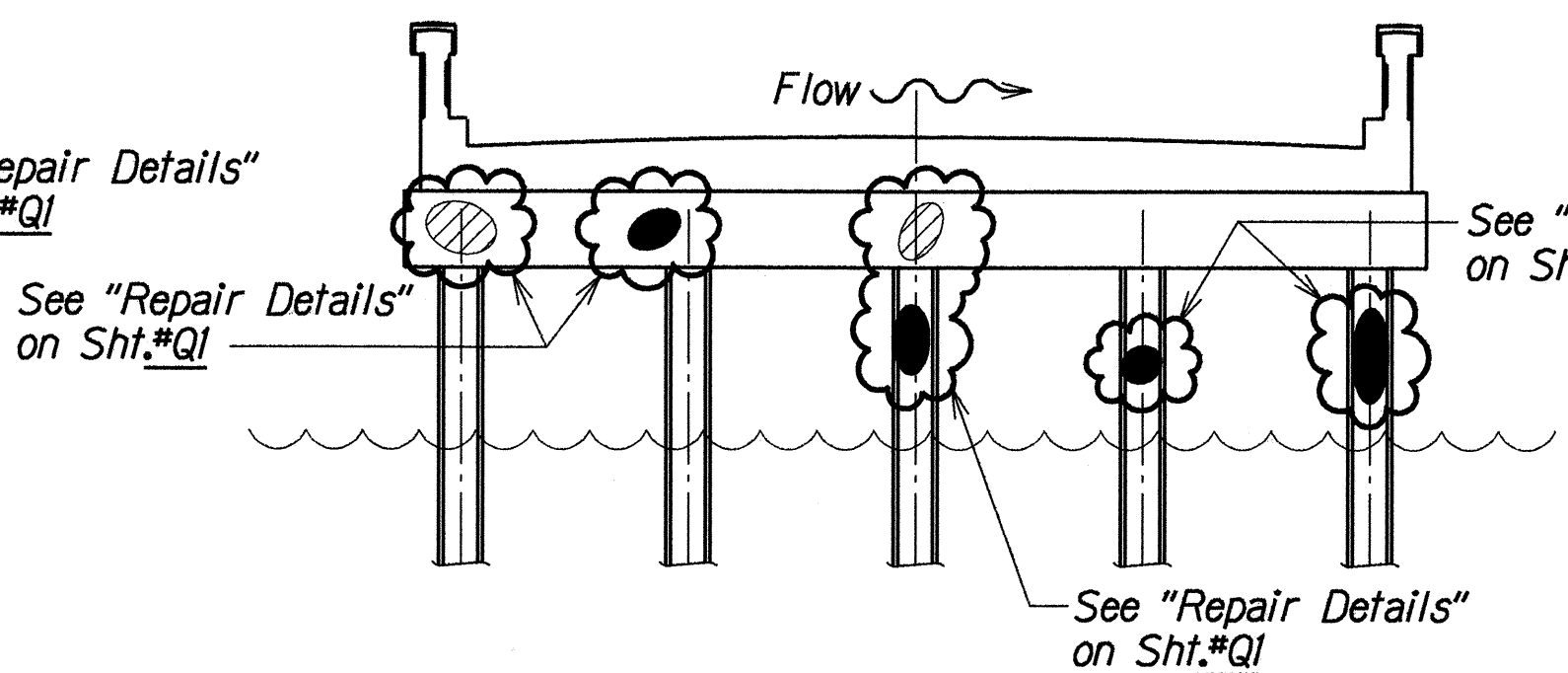
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
TYPICAL CONCRETE REPAIRS. GENERAL NOTES AND ESTIMATED QUANTITIES
KAMEHAMEHA HIGHWAY Repair Spalls at Soffit, Piles and Pier Caps on Kaaawa Stream Bridge Proj. No. 83D-01-97M
Scale: As Noted Date: Dec, 1996

SHEET No. 01 OF 2 SHEETS

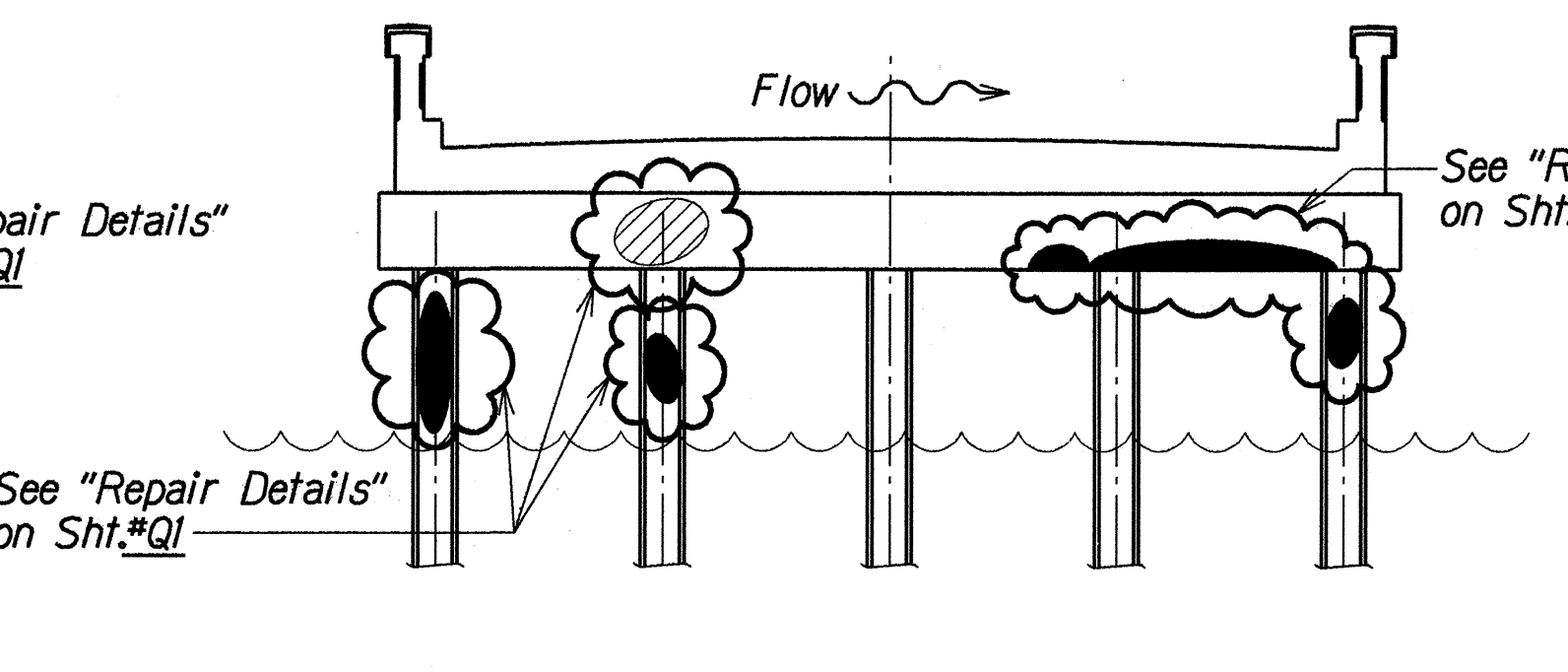
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83D-01-97M	1997	5	5



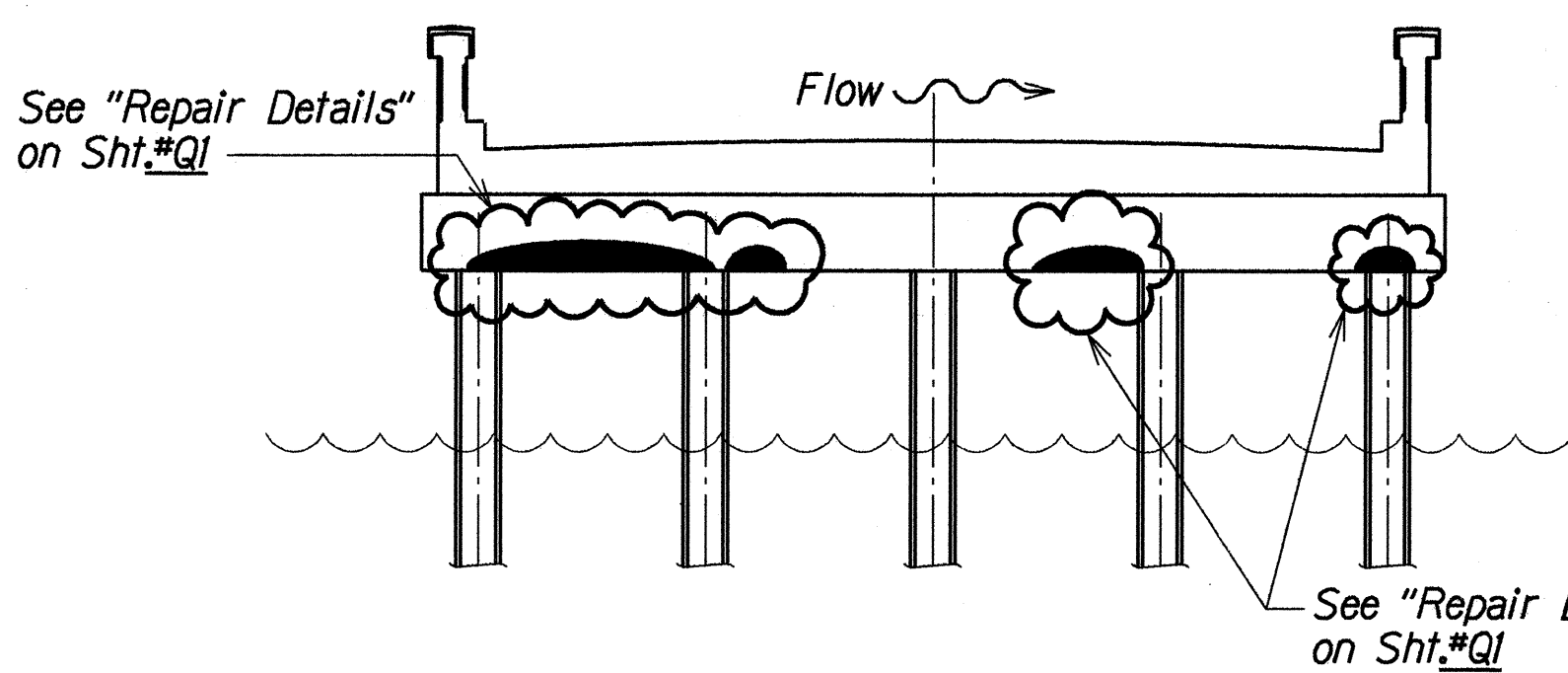
PIER NO. 1



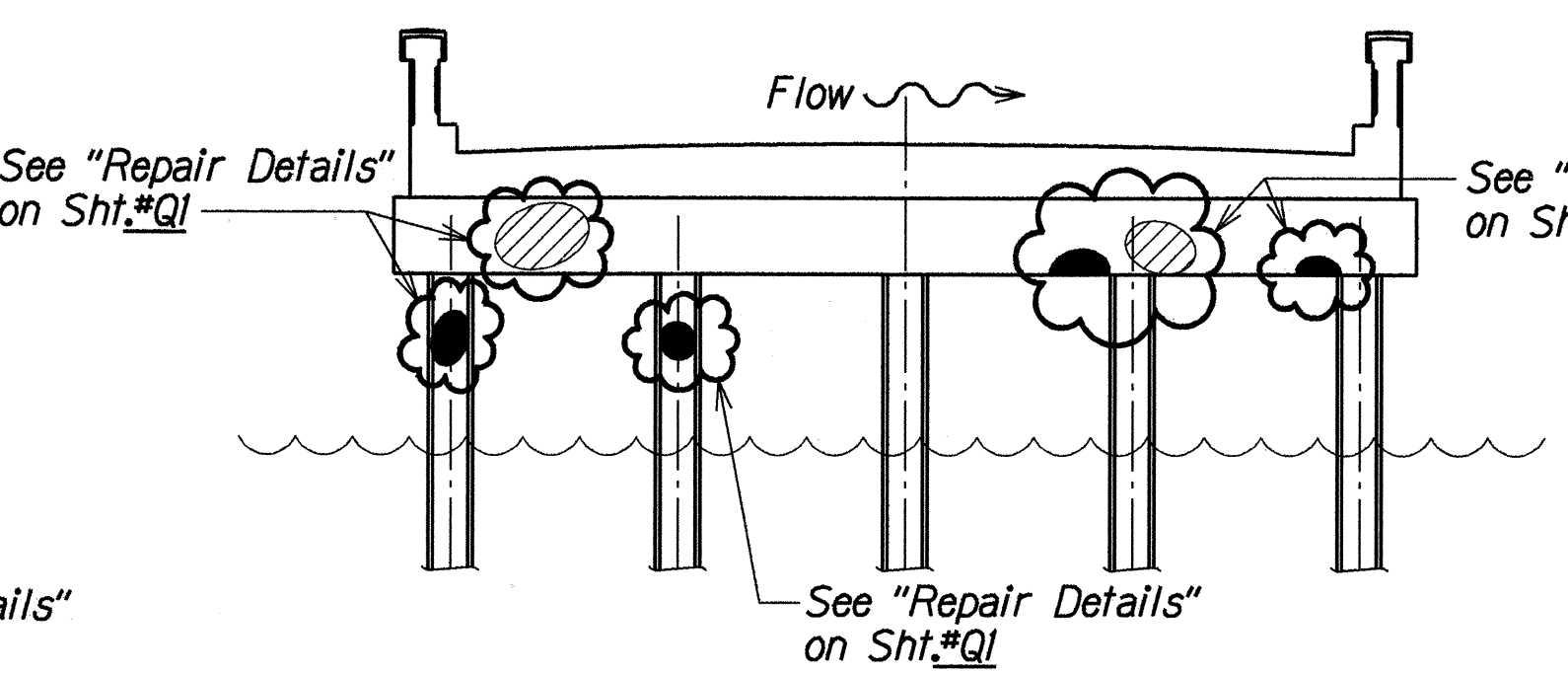
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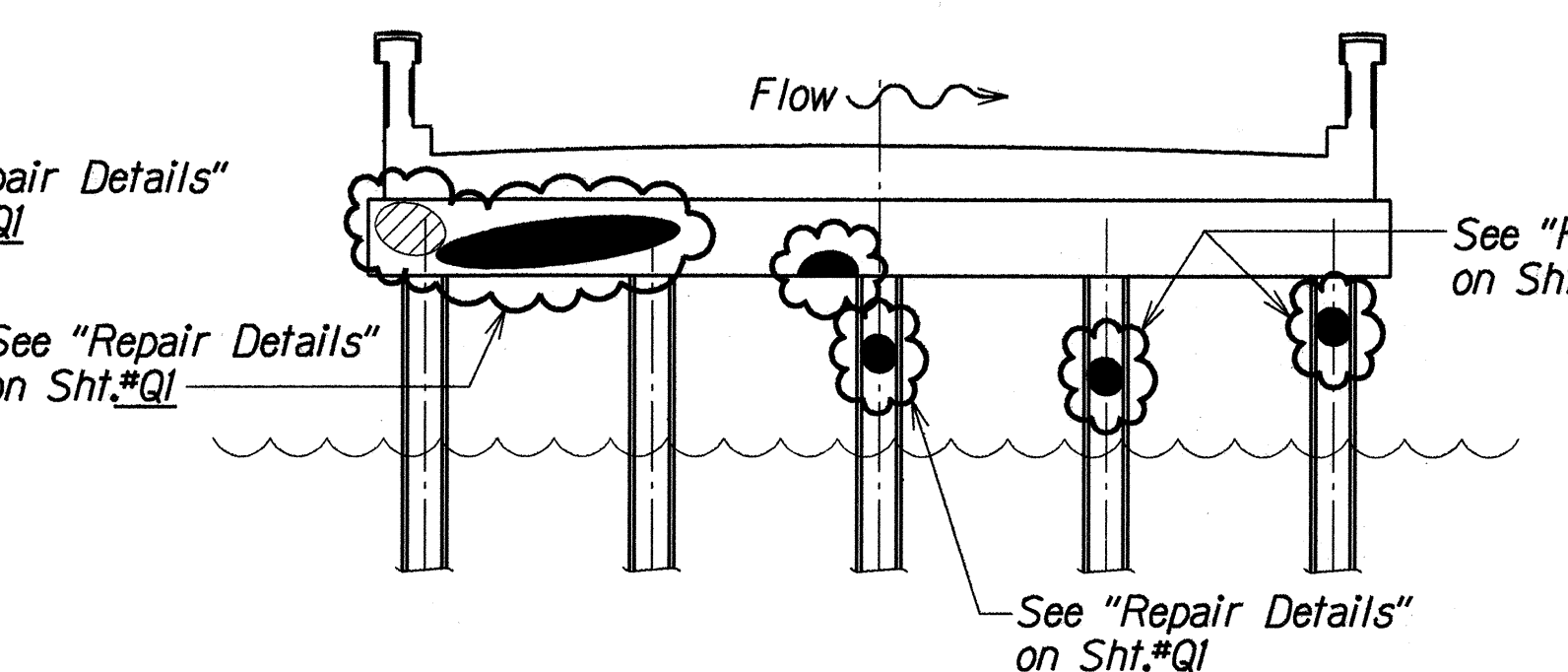
PIER NO. 3



PIER NO. 4



PIER NO. 5



PIER NO. 6

- Indicates Approximate Spall Location
- Indicates Approximate Hidden Spall Location
- Indicates Approximate Crack Location

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

PIER ELEVATIONS
KUALOA ELEVATION FACING KAHANA
Scale: 1" = 5'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

REFLECTED CEILING PLAN AND PIER ELEVATIONS SHOWING SPALL REPAIR LOCATIONS

Repair Spalls at Soffit, Piles and Pier Caps
on Kaaawa Stream Bridge
Project No. 83D-01-97M

Scale: As Noted Date: Dec, 1996

SHEET No. Q2 OF 2 SHEETS

DATE	DEC 1996
DESIGNED BY	ASG
TRACED BY	AGI
NOTE BOOK	AGI
QUANTITIES BY	AGI
CHECKED BY	DDO
ORIGINAL PLAN	NOVEMBER 2, 1996