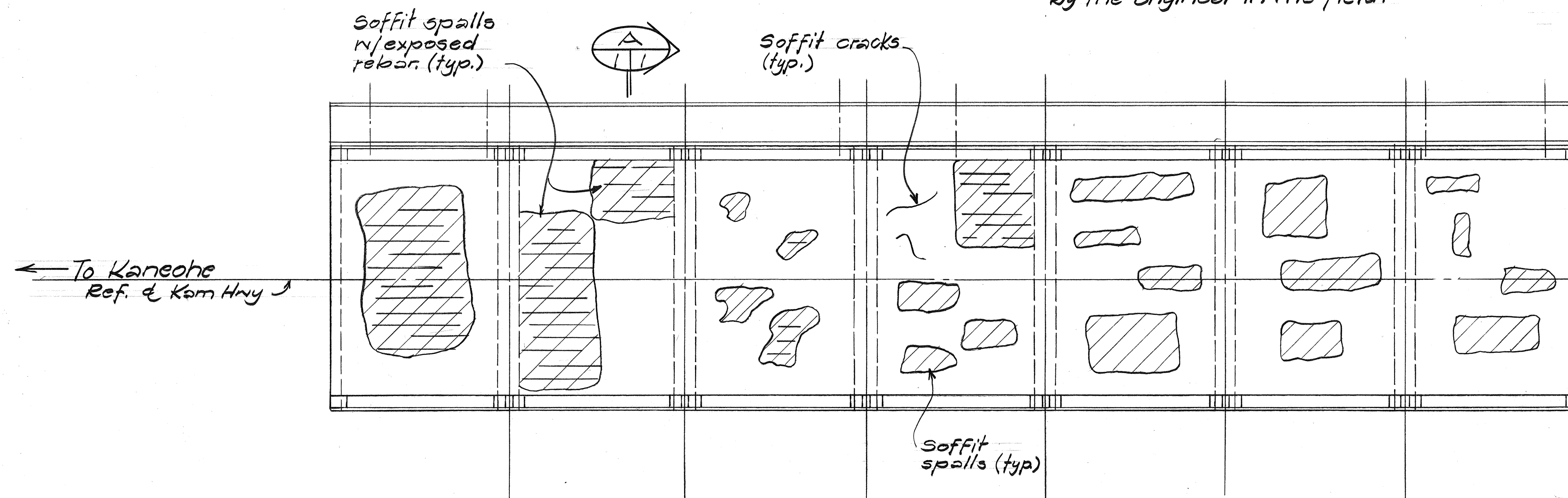


FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83D-02-88M	1988	3	4

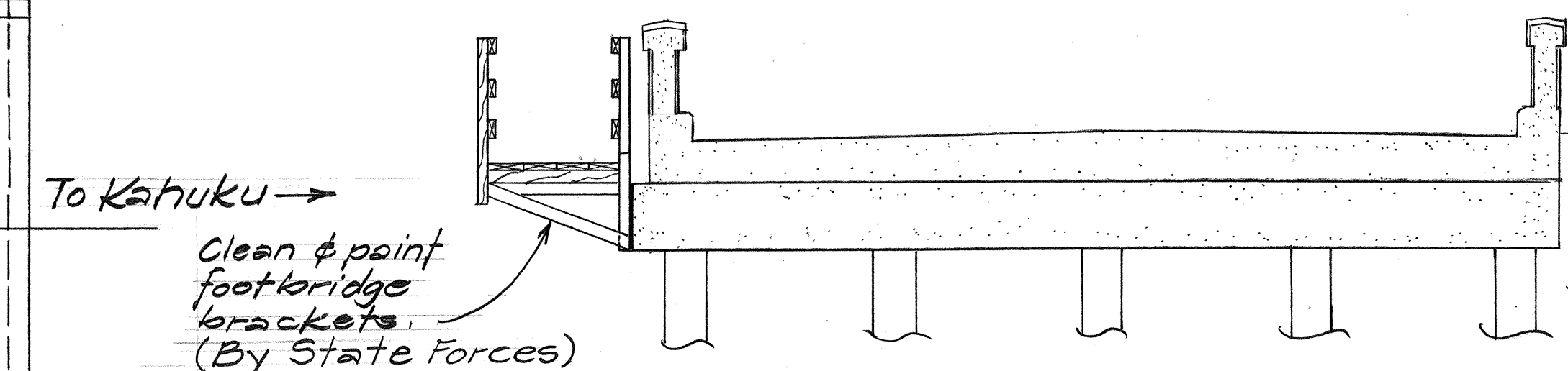
Note:
1. Crack and spall locations are for illustration purposes only. Actual locations are to be determined by the Engineer in the field.

2. The Contractor is directed to Subsection 695.03 (F) Protection of Property, Subsection 104.04 Maintenance of Traffic and Subsection 107.13 Public Convenience and Safety of the Standard Specification and for Special Provision.



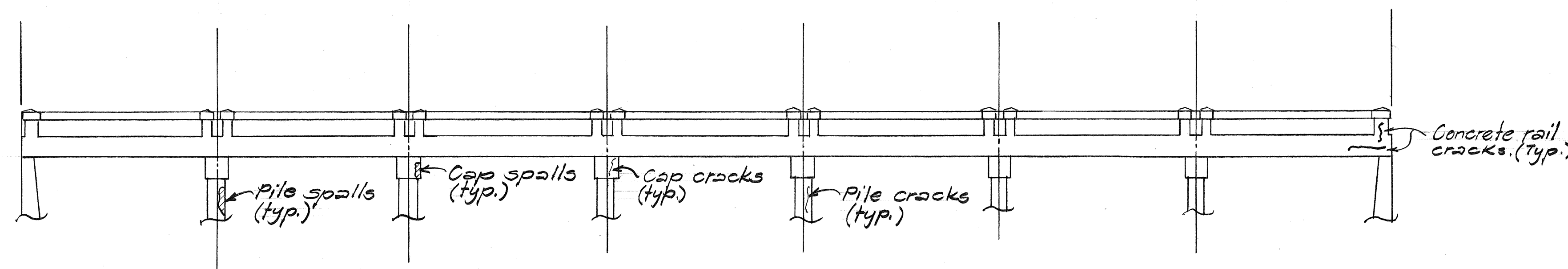
REFLECTED CEILING PLAN

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



SECTION

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



ELEVATION

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SOUTH PUNALUU BRIDGE

REPAIR

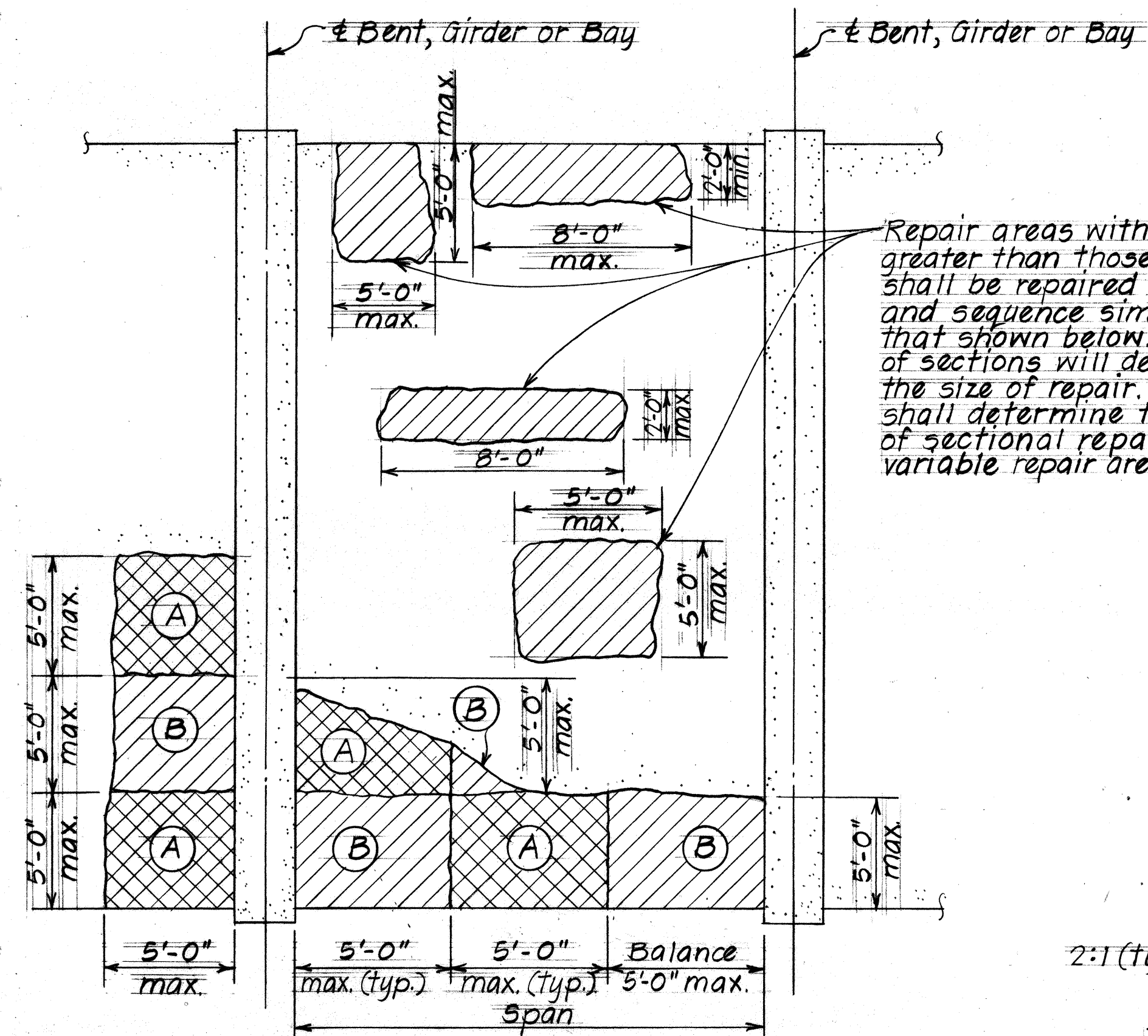
KAMEHAMEHA HIGHWAY

Proj. No. 83D-02-88M

Scale: As Shown Date: MAR., 1988

SHEET NO. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83D-02-88M	1988	4	4



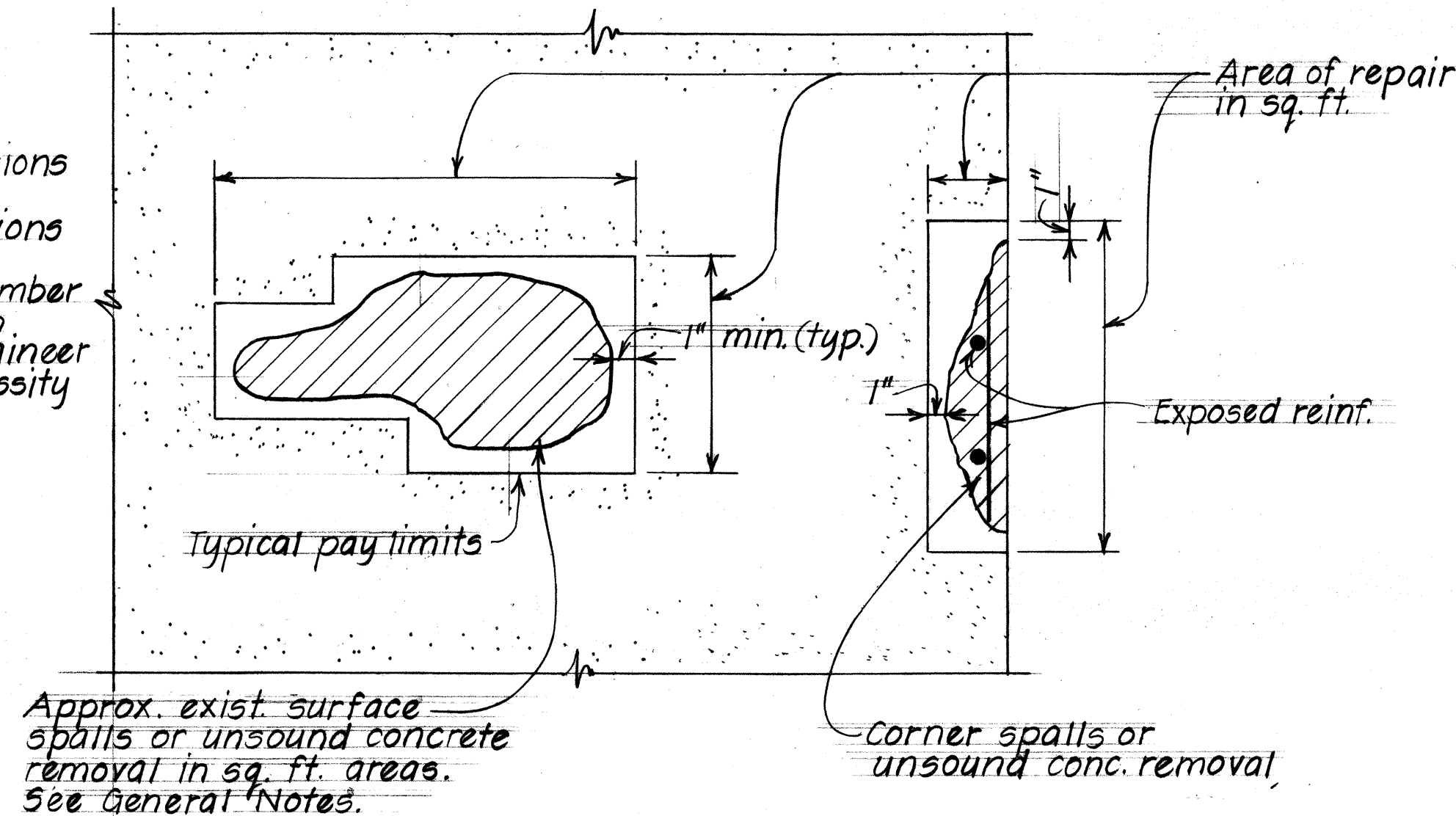
REFLECTED SPAN CEILING PLAN
Not to Scale

NOTE!

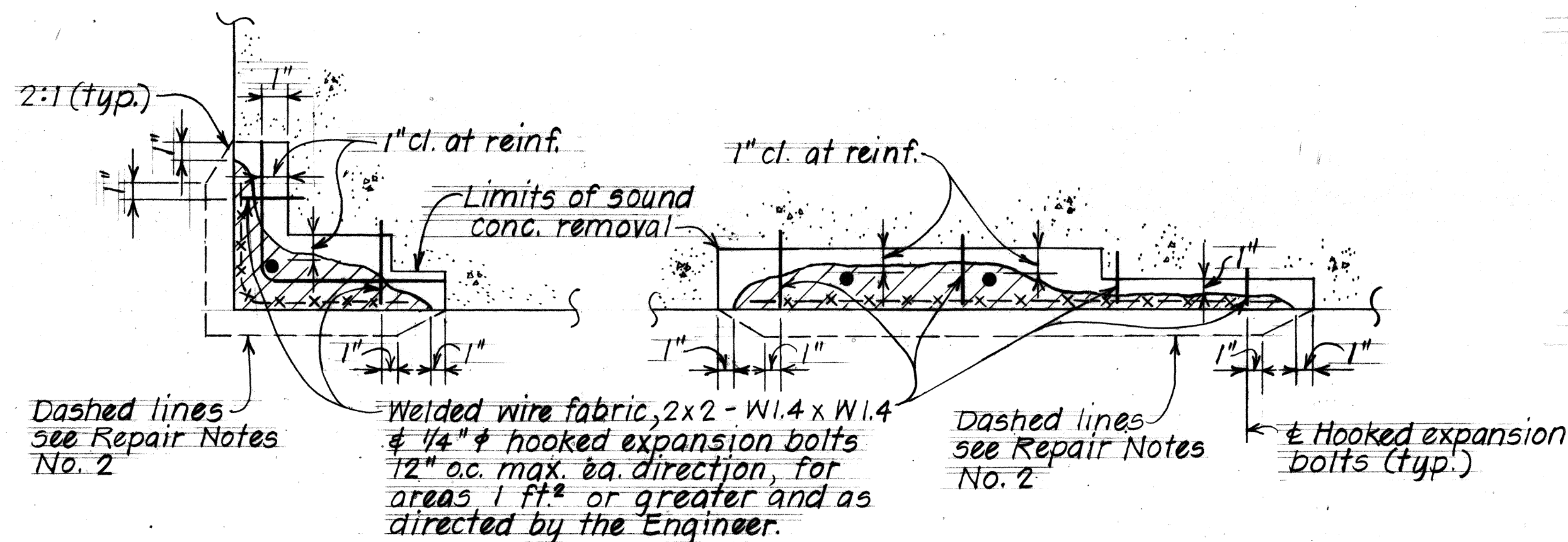
Slab damaged over a large area shall be repaired in sections A & B as shown. The sequence of repair for each section shall be as follows:

1. Repair section A
2. Start repair of section B 7 days after placing mortar for section A.

The necessity for sectional repairs will depend on the amount of reinforcing bars that has to be exposed and cleaned. The Engineer shall determine the necessity for sectional repairs after portions of the steel have been exposed.

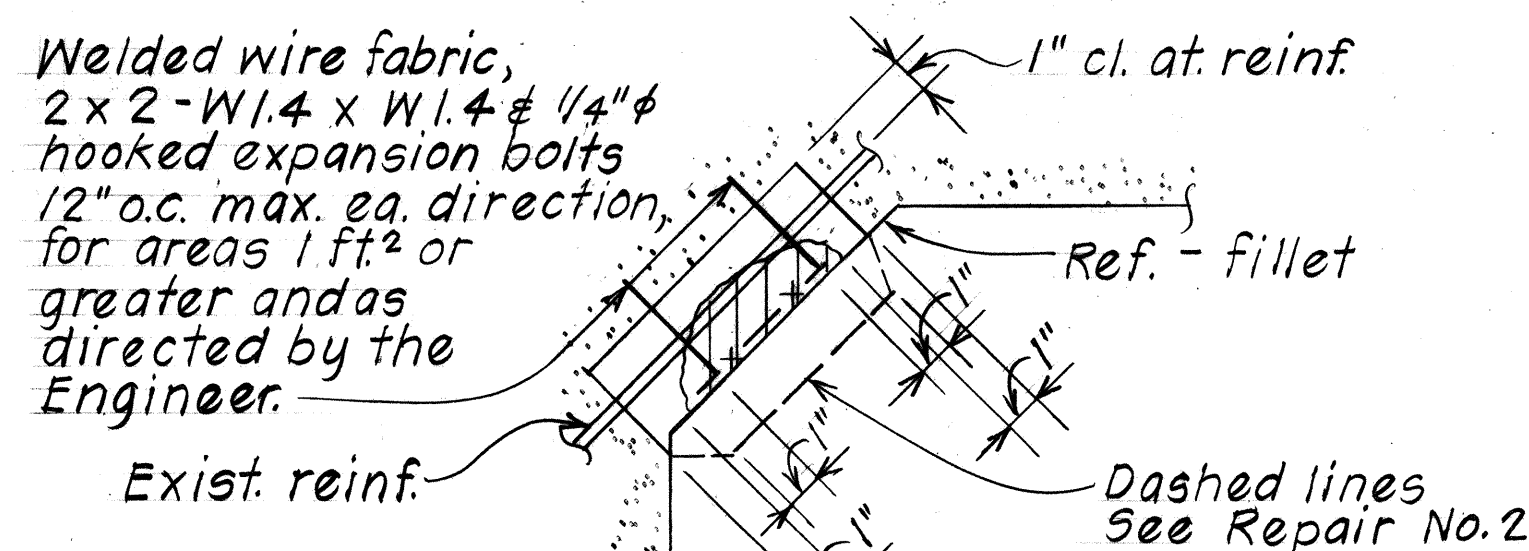


PLAN OR ELEVATION



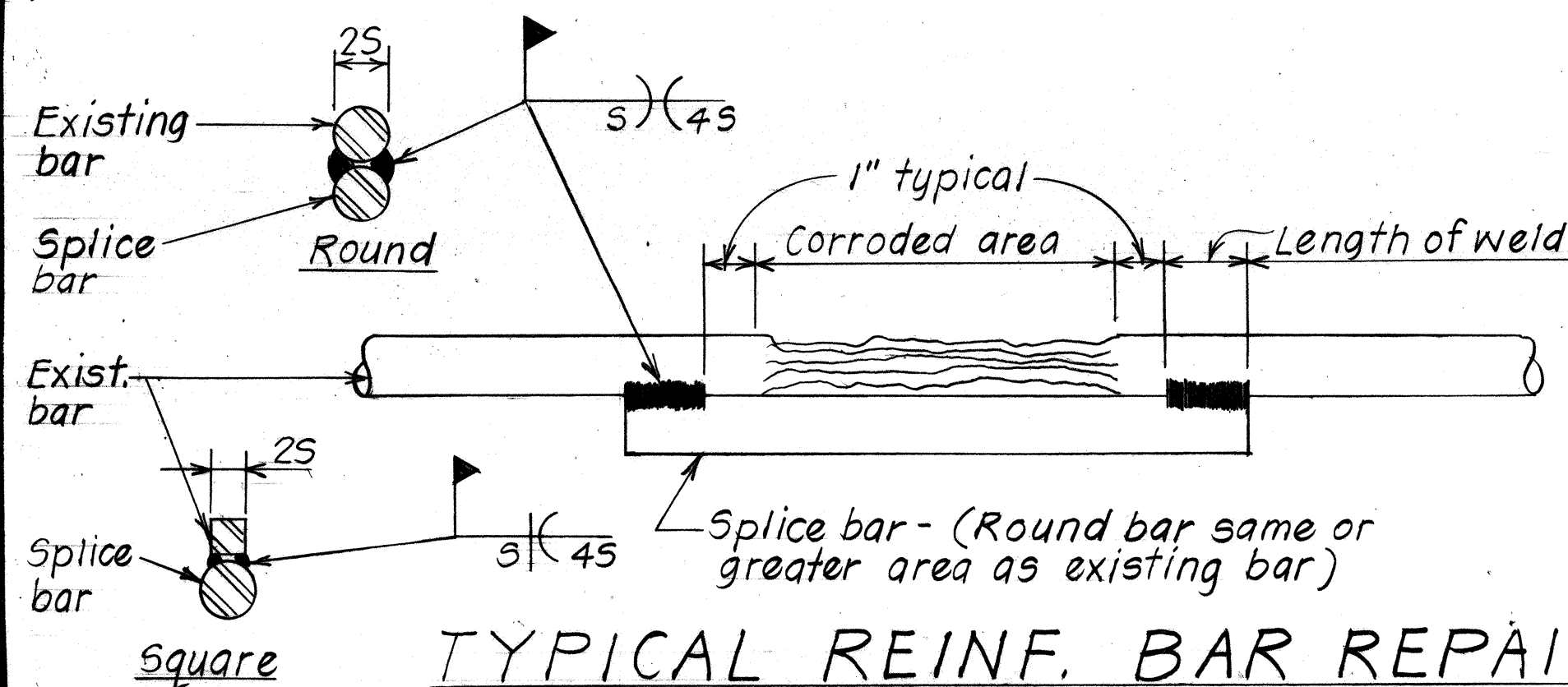
AT CORNER

AT SURFACE



AT FILLET

TYPICAL REPAIRS AT CONC. SPALLS
N.T.S.



TYPICAL REINF. BAR REPAIR SPLICE DETAIL
Not to Scale

NOTES

(For additional notes see sht. # 1.)

REPAIR NOTES:

1. Face of exist. concrete
2. Provide min. 2" conc. 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 strengthened as shown on Repair Splice Detail this sheet.
4. Efflorescence shall be inspected and repaired as directed by the Engineer.
5. All cracks shall be repaired by applying epoxy under pressure. See Specifications.
6. The Engineer shall determine all areas to be repaired & the limits of repair at each area.
7. Apply Hydro Clear 16 Waterproofing or equivalent 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 of repairs & shall not be paid for separately.

1. Expansion bolts & other miscellaneous hardware including hot-dipped galvanized and welded wire fabric.
2. Cleaning of all exposed, corroded reinforcing steel to sound metal.
3. Reinforcing bars of repair splice for strengthening corroded bars.
4. Furnishing and application of Hydro Clear 16 Waterproofing Material.

GENERAL:

1. All reinforcing steel to be ASTM A615 Grade 40.
2. All welding shall be done in accordance with the Reinforcing Steel Welding Code AWS D12.1.
3. Maintenance & control of traffic - see Special Provisions sub-section 104.04 & sub-section 676.03(A).
4. Repairs to the underside of slab shall be made in sections & sequences as indicated in note at left.

SYMBOLS & ABBREVIATIONS

- Exposed reinf. bars where occurs
- SS - Surface spall (Concrete)
- S.C. - Surface crack (Concrete)
- H.C. - Hairline crack
- #; sq. ft.; S.F. - Square feet
- L.F. - Linear feet

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SOUTH PUNALUU BRIDGE
REPAIR
KAMEHAMEHA HIGHWAY

Proj. No. 83D-02-88M

Scale: As Shown

Date: MAR, 1988

SHEET NO. 2 OF 2 SHEETS