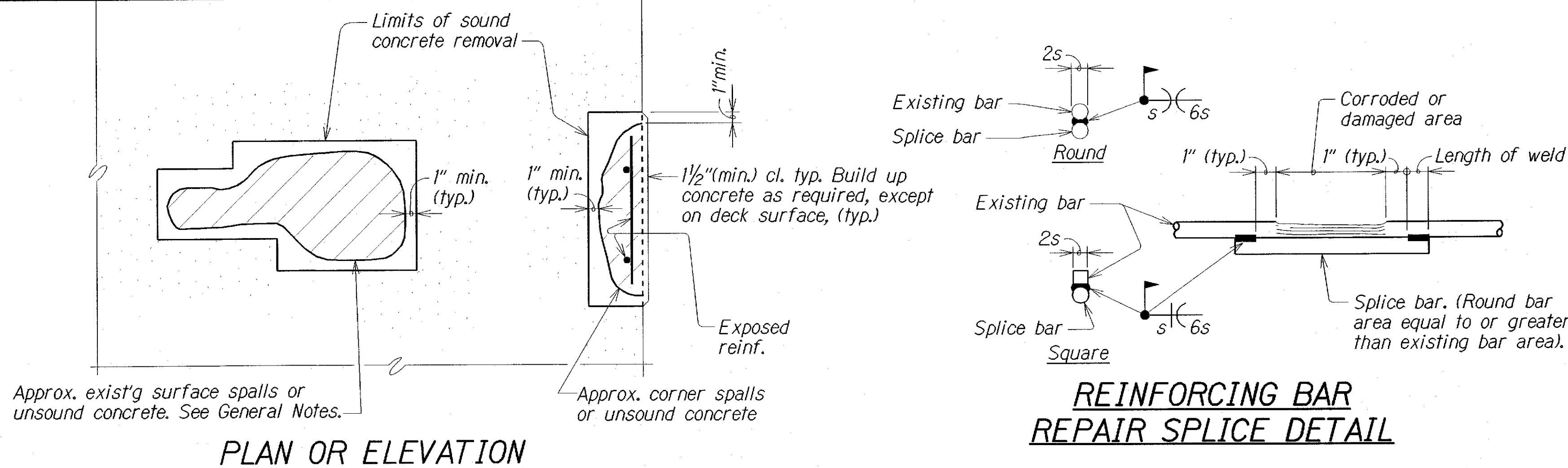
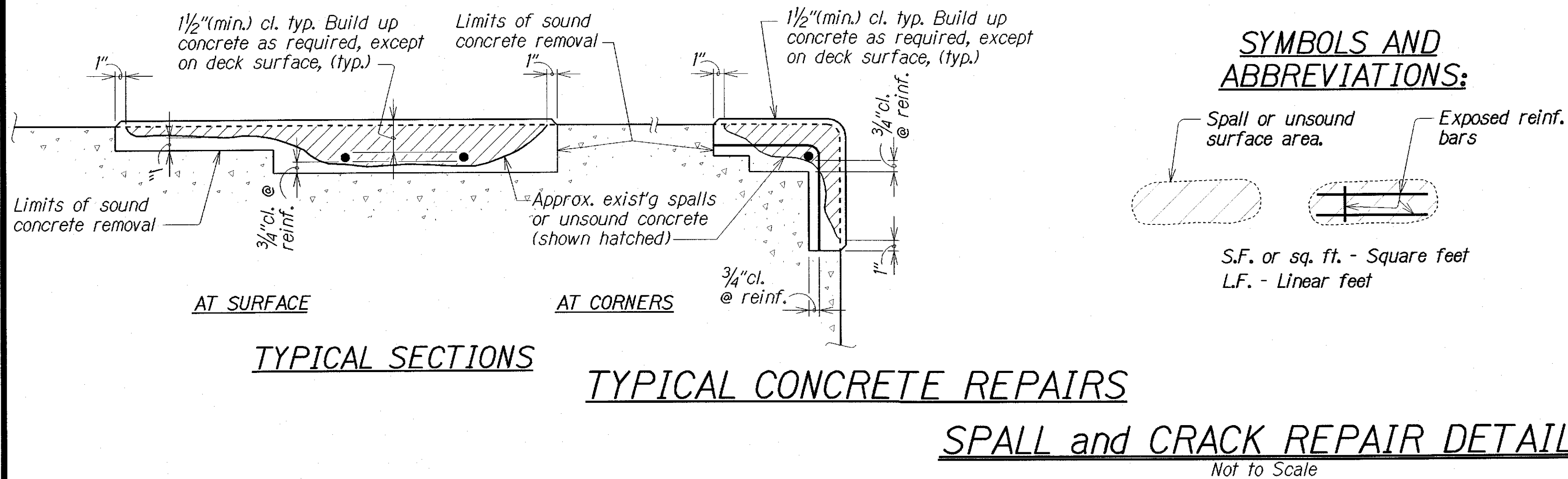


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04M	2004	ADD. 6	11



INDEX TO DRAWINGS	
SHEET NO.	SHEET TITLE
Q1	Index to Drawings, General Notes, Estimated Quantities and Spall and Crack Repair Details
Q2	New Bikeway/Walkway Metal Railing and Expansion Joint Replacement, Sand Is. Road--2nd Bridge
Q3	New Bikeway/Walkway Metal Railing Details, Sand Island Road--2nd Bridge
Q4	Deck Expansion Joint Replacement Details, Sand Island Road--2nd Bridge
Q5	Partial Plan--Spall Repair Locations, Waialae Off-Ramp (Structure No. 20)
Q6	Limits of Demolition for Oahu Sugar Reinforced Concrete Flume



ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QTY	UNITS
202.0110	Removal of Existing Overpass Structure	L.S.	L.S.
507.4000	Bike Railing	783	L.F.
676.1000	Spall Repair	1,500	S.F.
677.1000	Bridge Joint Replacement	274	L.F.

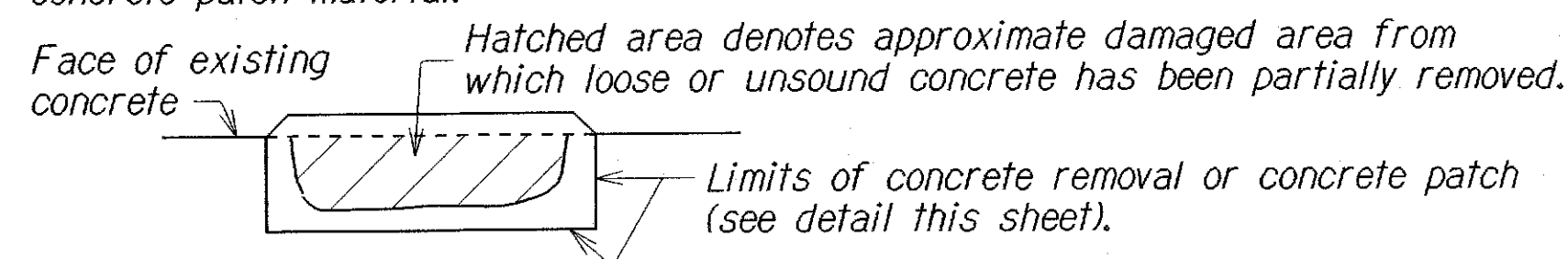
GENERAL NOTES

GENERAL:

1. New reinforcing steel to be ASTM A 615. All welded reinforcing steel to be ASTM A 706.
2. All welding shall be done in accordance with the current edition of the Reinforcing Steel Welding Code AWS D1.4.
3. See Special Provision "Section 676--Concrete Repair" for repair material.
4. Shotcrete shall not be used to make repairs.
5. All work not listed in the Proposal Schedule shall be considered incidental and will not be paid for seperately.
6. The Contractor shall protect the public and environment from dust pollution and other damages resulting from the blasting, chipping and drilling operation. The Contractor shall be aware of and follow all State, Federal and County environmental regulations and provide containment to prevent abrasives, dust and debris from dispersing into surrounding areas and into the stream or stream bank. The Contractor shall submit the method of containing and controlling pollution for acceptance to the Engineer.

SPALL REPAIR NOTES:

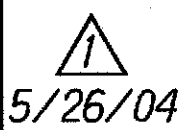
1. All deteriorated, damaged, cracked, spalled, honeycombed concrete or concrete over rusted reinforcing bars shall be removed as shown and repaired with an appropriate concrete patch material.



2. Once initial removals are made, proceed with the undercutting of all exposed corroded bars. Undercutting will provide clearance for under bar cleaning and full bar circumference bonding to surrounding concrete, and will secure the repair structurally. Provide minimum 3/4 inch (19 mm) clearance between exposed rebars and surrounding concrete or 1/4 inch (6 mm) larger than the largest aggregate in repair material, whichever is greater.
3. Concrete removals shall extend along the bars to locations along the bar free of bond inhibiting corrosion, and where the bar is well bonded to surrounding concrete.
4. If non-corroded reinforcing steel is exposed during the undercutting process, care shall be taken not to damage the bar's bond to surrounding concrete. If bond between bar and concrete is broken, undercutting of the bar shall be required.
5. Clean reinforcing steel by oil-free abrasive blasting down to sound metal.
6. Provide minimum 1 1/2" concrete cover over reinforcement.
7. Reinforcing bars that have rusted more than 25% of their original cross sectional area shall be strengthened as shown on "Reinforcing Bar Repair Splice Detail", this sheet.
8. Apply patch material per manufacturer's recommendations and instructions.
9. The Contractor shall sound and mark all locations to be repaired. The Contractor shall sound with a hammer or other suitable device and mark the location with paint the exact perimeter of the repairs. The Engineer will verify and measure the locations prior to the Contractor starting the work.

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. Repair of reinforcing bars.
3. Any work platforms required for access.
4. Any formwork required to place patch materials.



5/26/04

Quantity for spall repair corrected.

DATE

REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**INDEX to DRAWINGS, ESTIMATED
QUANTITIES, GENERAL NOTES
SPALL and CRACK REPAIR DETAILS**

Bridge Repairs at Various Locations
Project No. HWY-0-01-04M

Scale: As Noted

Date: May, 2004

SHEET No. Q1 OF 6 SHEETS

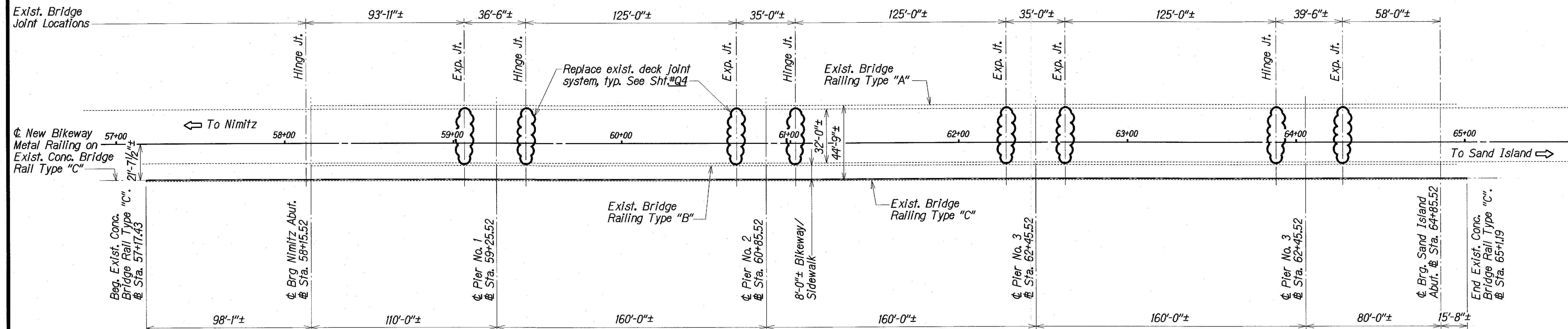
ADD. 6

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	MAY 2004
Q1	TRACED BY	MAY 2004
Q2	QUANTITIES BY	MAY 2004
Q3	CHECKED BY	MAY 2004

044/152/KSP/JWW/SOIL.WDOL.D01

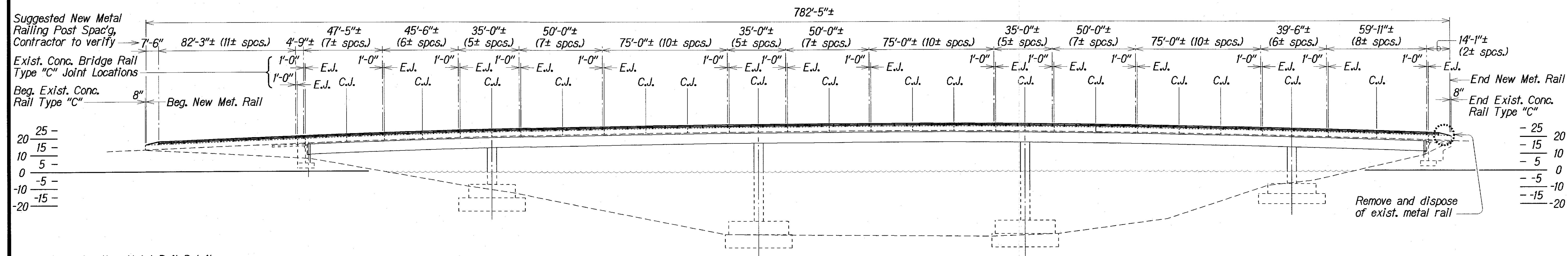
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04M	2004	7	11



See Sht.#Q4 for Deck Expansion Joint Replacement Details

LAYOUT PLAN
Scale: 1" = 30'



See Sht.#Q3 for New Metal Rail Details

ELEVATION
FACING MAUKA
Scale: 1" = 30'

**NEW BIKEWAY/WALKWAY METAL RAILING and DECK EXPANSION JOINT REPLACEMENT
SAND ISLAND ROAD-2nd BRIDGE**

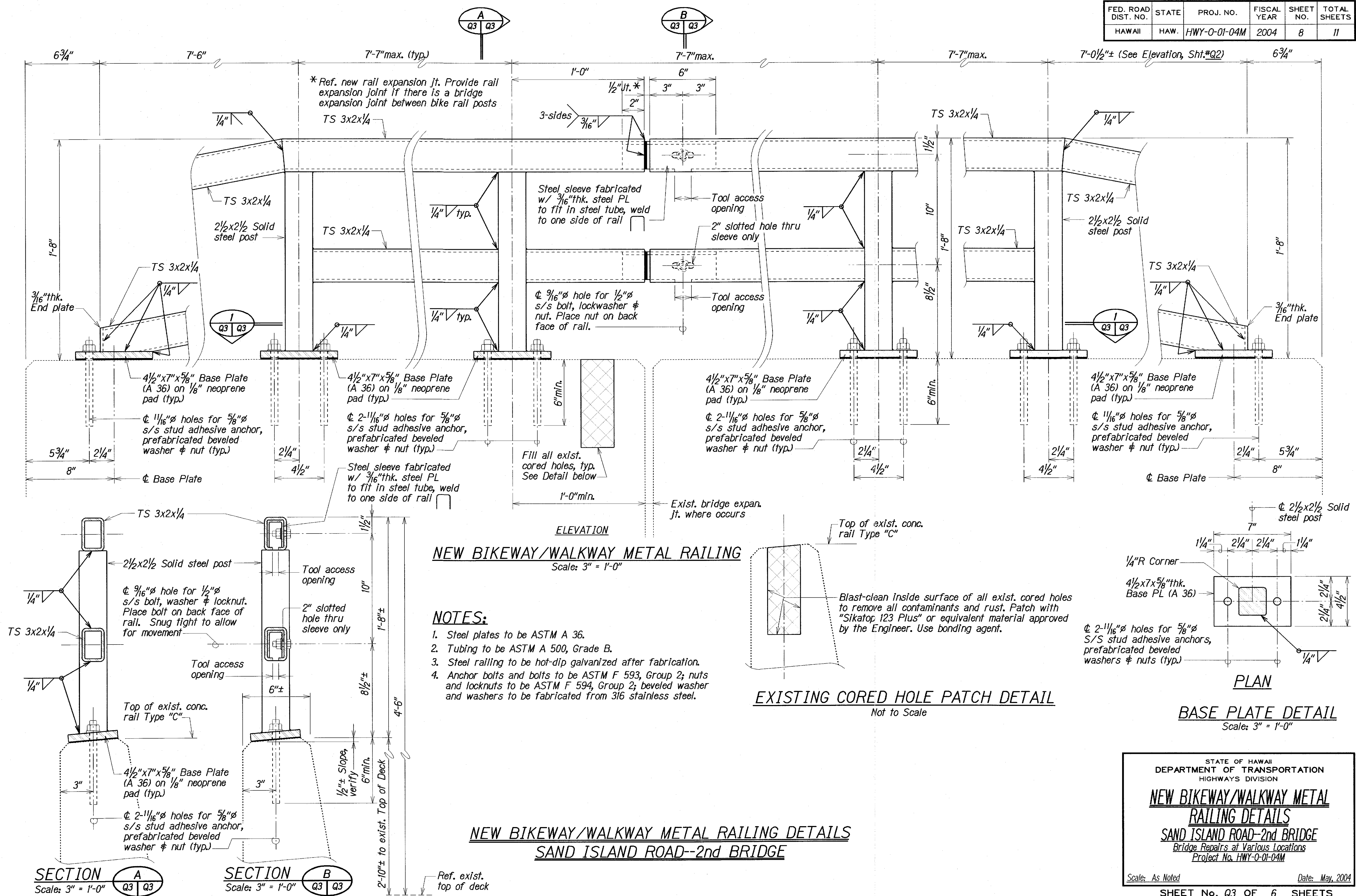
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**NEW BIKEWAY/WALKWAY METAL RAILING
and EXPANSION JOINT REPLACEMENT**
SAND ISLAND ROAD-2nd BRIDGE
Bridge Repairs at Various Locations
Project No. HWY-0-01-04M

Scale: As Noted
Date: May, 2004

SURVEY PLOTTED BY: KSG
 DATE: MAY 2004
 DRAWN BY: JWW
 DESIGNED BY: JWW
 CHECKED BY: PLS
 sand_walk_kbd.qcd
 db4/1st/2/ksq/www/sand_walk_kbd/

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04M	2004	8	11



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

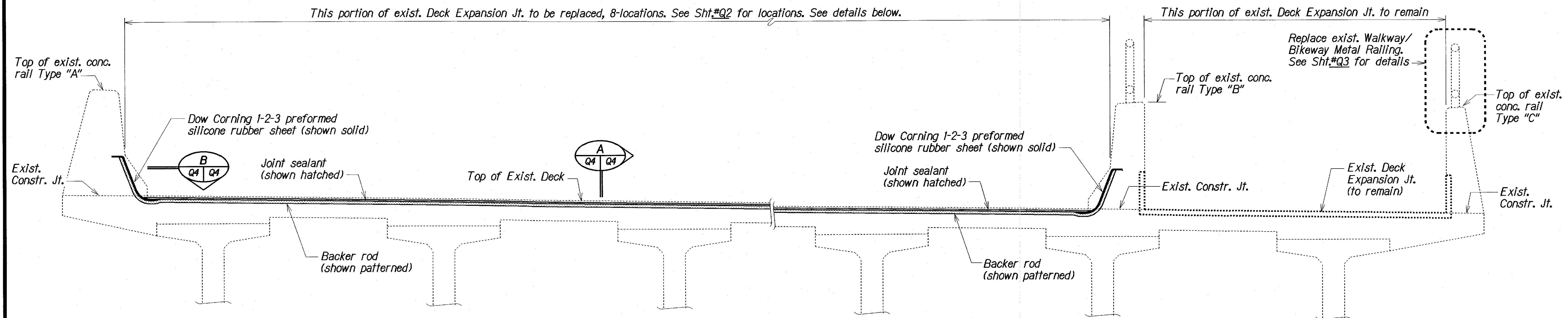
NEW BIKEWAY/WALKWAY METAL RAILING DETAILS

SAND ISLAND ROAD-2nd BRIDGE
Bridge Repairs at Various Locations
Project No. HWY-0-01-04M

Scale: As Noted Date: May, 2004

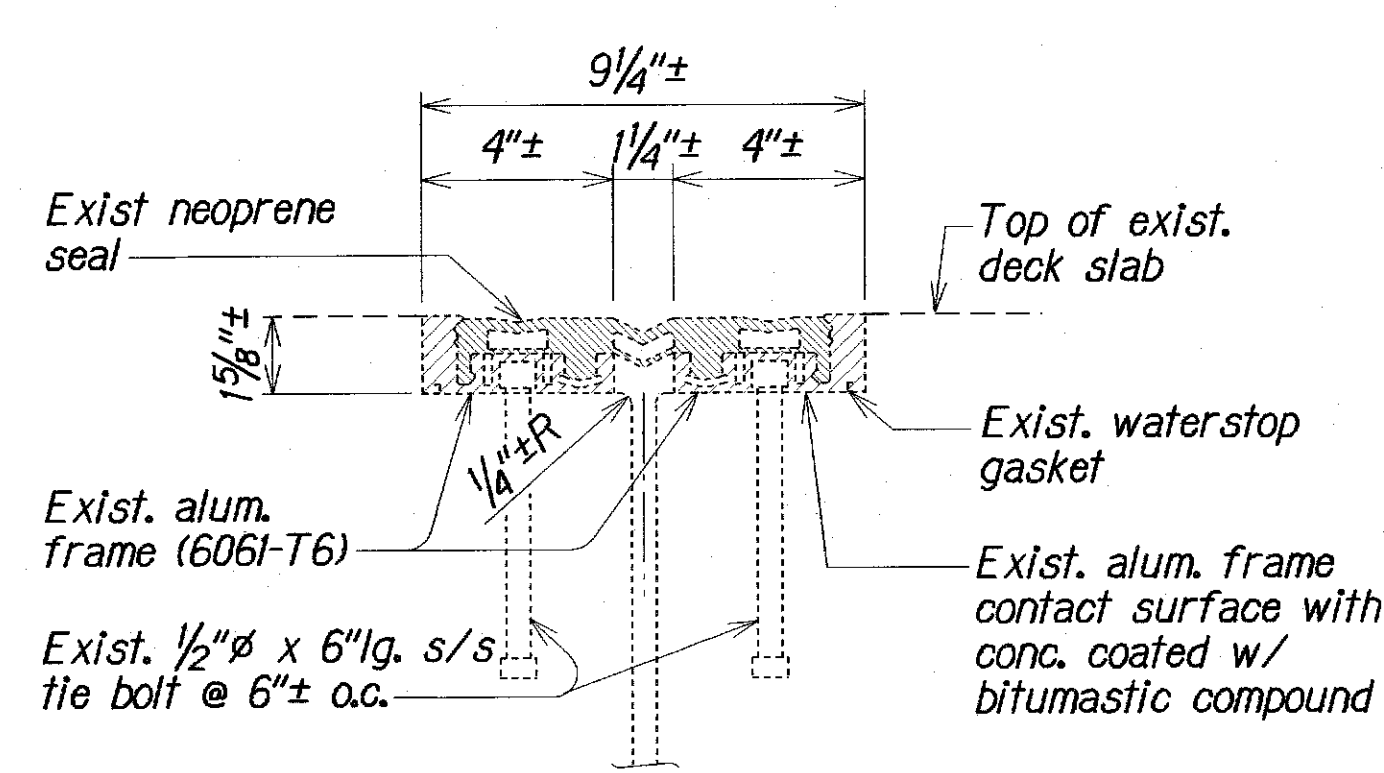
SHEET No. Q3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04M	2004	9	11



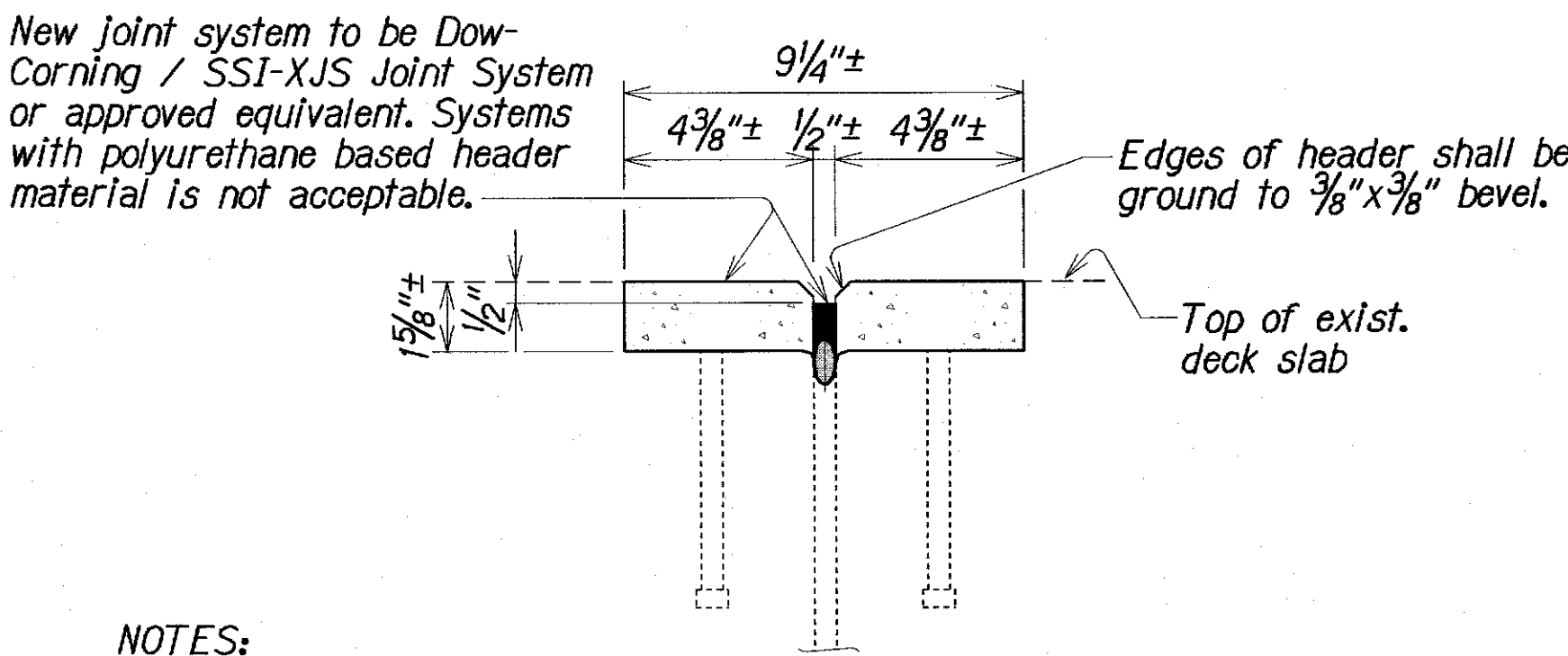
TYPICAL DECK SECTION SHOWING LIMITS OF EXISTING DECK EXPANSION JOINT REPLACEMENT

Not to Scale



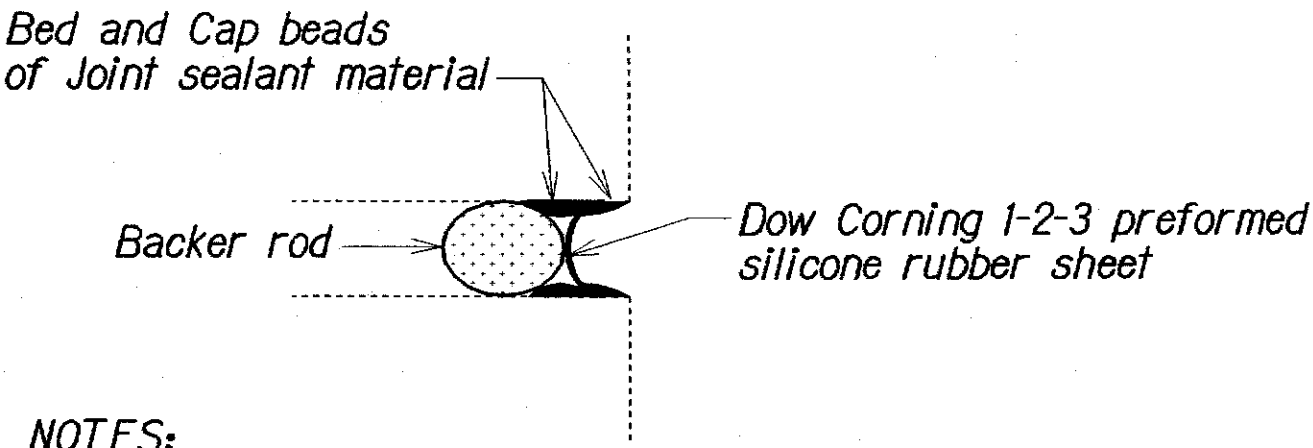
- NOTES:**
1. Remove existing expansion joint completely, including bitumastic compound.
 2. Existing tie bolts shall be cut flush with existing concrete surface.
 3. Abrasive-blast and clean existing concrete surface as specified by new joint manufacturer.

EXISTING DECK EXPANSION JOINT SECTION
D.S.BROWN & CO. DELASTIFLEX TYPE SM200



- NOTES:**
1. Cleaning and installation procedures shall conform to joint system manufacturers specifications.
 2. Any spalls in the existing concrete shall be filled with materials compatible with the new concrete and joint system. Filler or patch materials shall be submitted to the Engineer for approval. A bonding agent may be required.
 3. A representative of the manufacturer shall be present at start of work to demonstrate proper cleaning and installation procedures.

NEW DECK EXPANSION JOINT SECTION
DOW-CORNING / SSI-XJS JOINT SYSTEM or APPROVED EQUIVALENT



- NOTES:**
1. After cleaning and priming joint, place backer rod and install bedding bead of joint sealant material on joint faces.
 2. Insert Dow Corning 1-2-3 preformed sheet as shown.
 3. Place cap beads to seal edges of insert.
 4. Seal remainder of roadway.

SECTION THRU VERTICAL CURB
"DOW-CORNING 1-2-3 INSERT"

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	MAY 2004
DRAWN BY	KSG
DESIGNED BY	MM
CHECKED BY	MM
APPROVED BY	PTS

db4/usg/2/ksg/ww/sand_island_kbd/

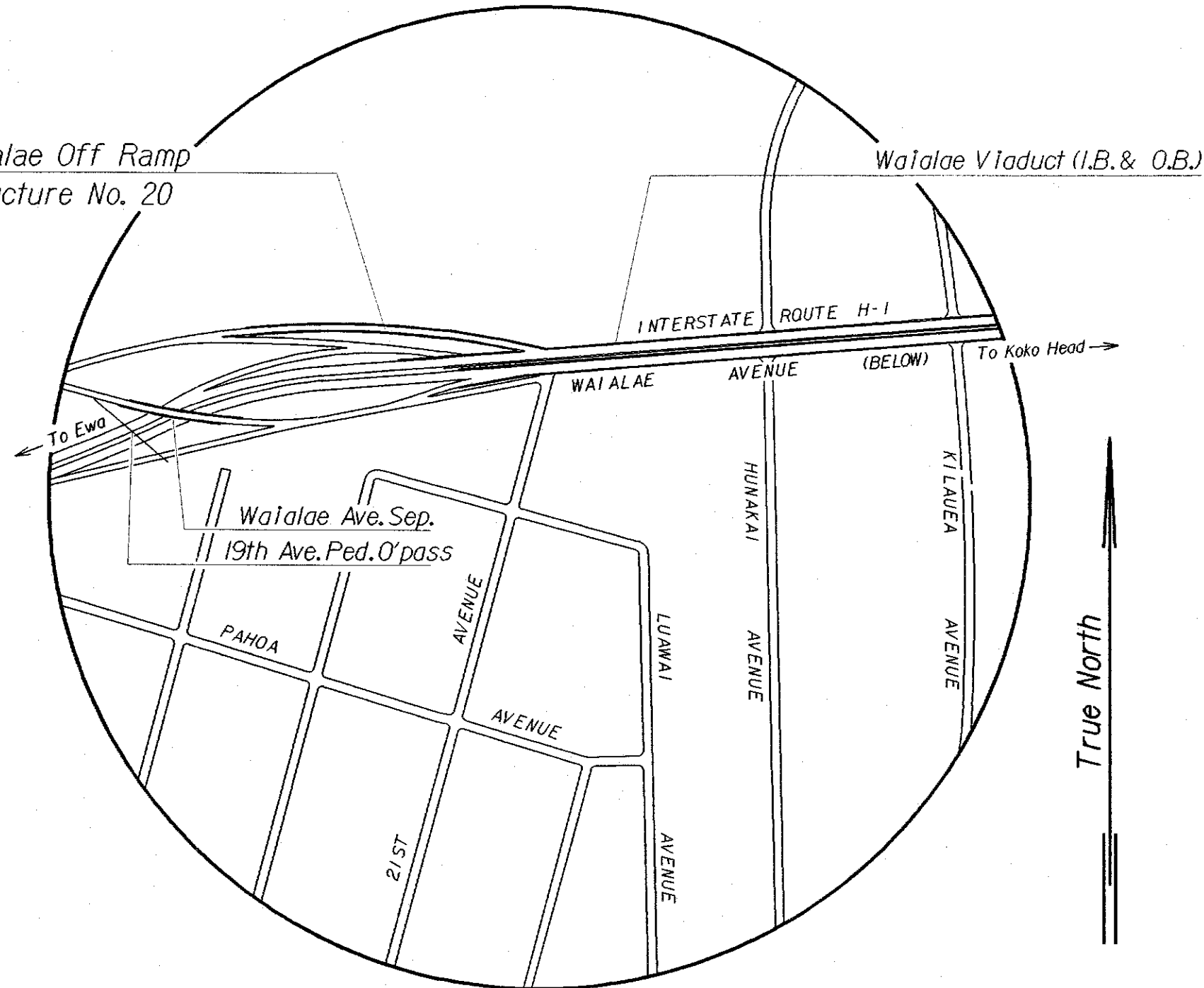
DECK EXPANSION JOINT REPLACEMENT DETAILS SAND ISLAND ROAD-2nd BRIDGE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

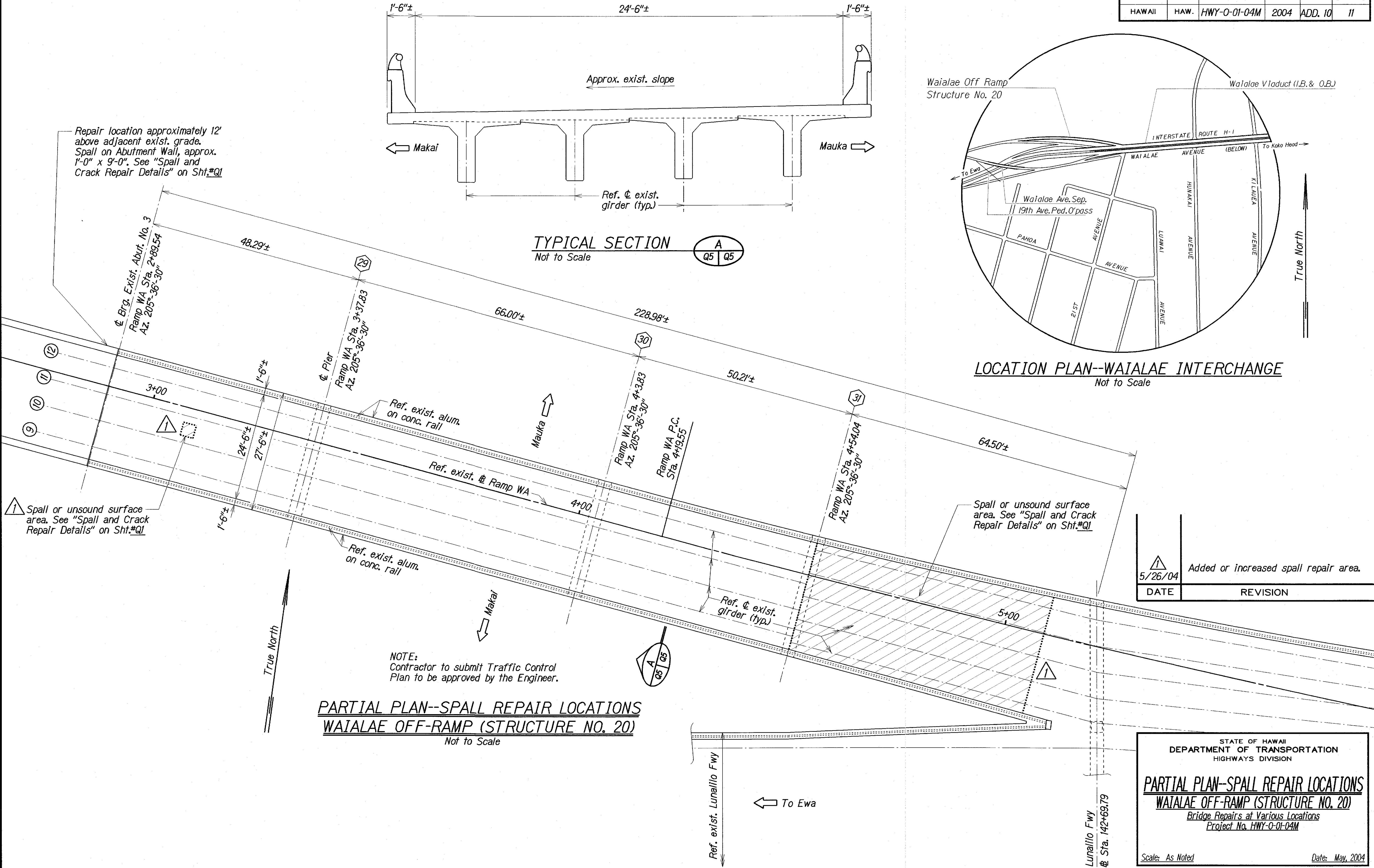
DECK EXPANSION JOINT
REPLACEMENT DETAILS
SAND ISLAND ROAD-2nd BRIDGE
Bridge Repairs at Various Locations
Project No. HWY-0-01-04M

Scale: As Noted Date: May, 2004
SHEET No. Q4 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04M	2004	ADD. 10	11



LOCATION PLAN--WAIALAE INTERCHANGE
Not to Scale

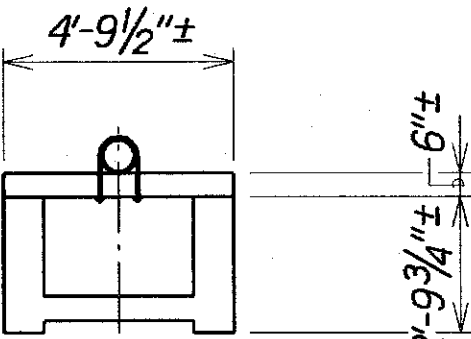
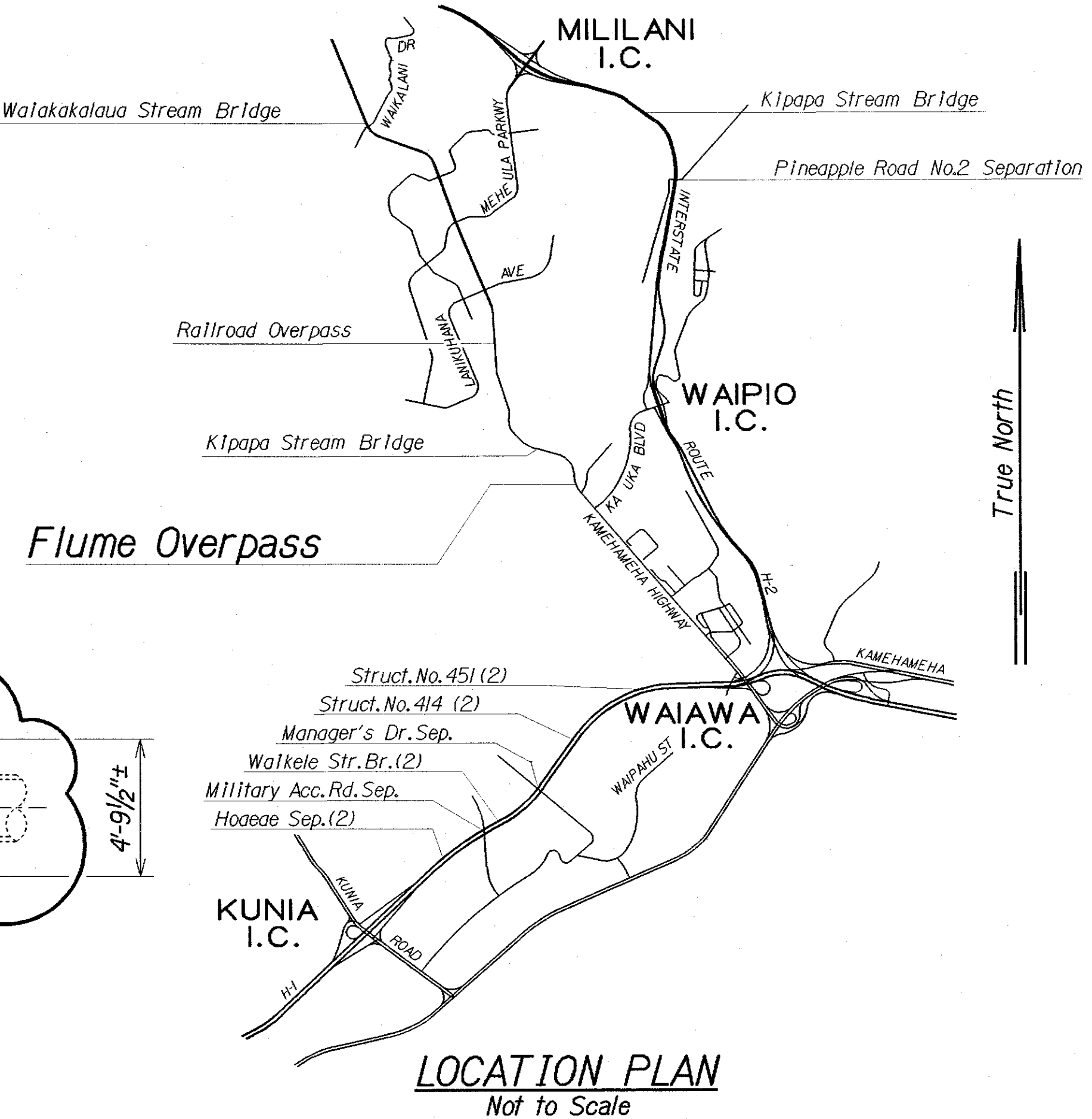
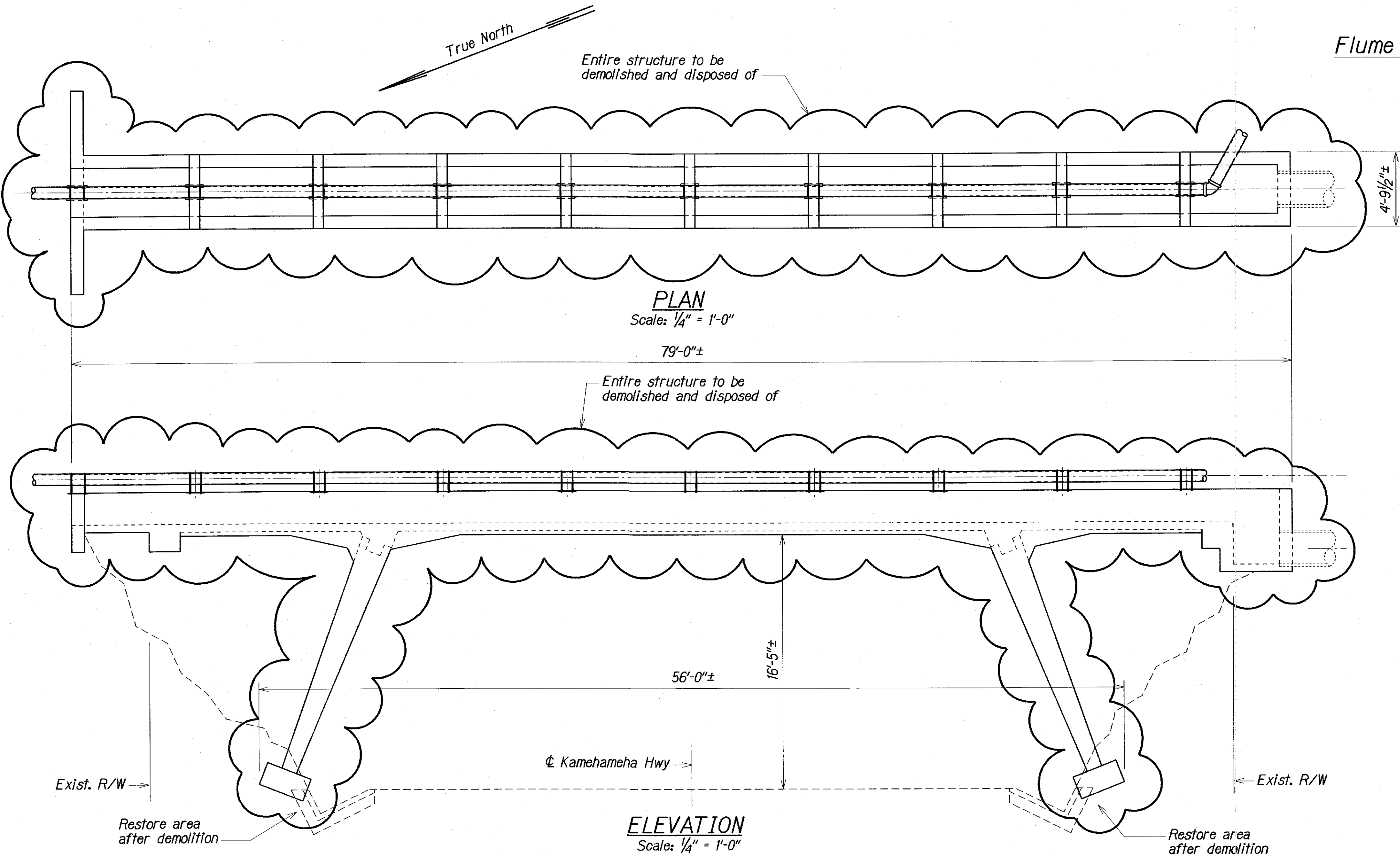


ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED	DESIGNED BY	MAY 2004
NOTED	CHECKED BY	MAY 2004
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sdm/ww/2/ksp/ww/sand/wwd/16d/

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04M	2004	11	11

- NOTES:
- Contractor to submit traffic control plan to be approved by the Engineer.
 - Reinforcing plan of the existing structure is available from State D.O.T., Highways, Bridge Design Section.
 - See Special Provisions "Section 202--Removal of Structures and Obstructions" for additional notes.
 - Original plans show 32.4 cu. yds. of Class "A" concrete.



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

DESIGNED BY	DATE
DRAWN BY	MAY 2004
CHECKED BY	MAY 2004
IN CHARGE	MAY 2004
NOTED BY	MAY 2004
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LIMITS of DEMOLITION for REINFORCED CONCRETE FLUME OVERPASS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LIMITS of DEMOLITION for OAHU SUGAR
REINFORCED CONCRETE FLUME
KAMEHAMEHA HIGHWAY
F.A.P. NO. 7F
Project No. HWY-0-01-04M

Scale: As Noted
Date: May, 2004

SHEET No. Q6 OF 6 SHEETS