

GENERAL STRUCTURE NOTES:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(50)	2006	35	43

GENERAL SPECIFICATIONS:

State of Hawaii, Department of Transportation Standard Specifications for Road and Bridge Construction, 1994, and Special Provisions prepared for this project.

DESIGN SPECIFICATIONS:

AASHTO LRFD Bridge Design Specifications, 2nd Edition, 1998

DESIGN LOADS:

1. Live Load: HL-93
2. Barrier Wall: AASHTO TL-1
3. Retaining Wall Active Earth Pressure: 45 PCF
4. Seismic Acceleration Coefficient: 0.45
5. Chain Link Fence: 15 PSF

GENERAL:

1. Refer to Standard Plans for additional details and notes not covered by details and typical drawings.
2. All items noted incidental will not be paid for separately.
3. Record drawings from Project No. SDR3(1) have been used to prepare the drawings. Actual conditions may vary from those indicated on the drawings. The Contractor shall verify all existing site conditions, elevations, dimensions, and structure configurations, member sizes, and connections prior to commencing with the work.
4. All vertical dimensions are measured plumb, and horizontal dimensions are measured flat unless otherwise noted.

FOUNDATION NOTES:

1. Excavation for all footings and stems shall be accomplished by maintaining as near a vertical cut as possible and it shall be the Contractor's responsibility to maintain the stability of the existing roadway prism throughout the course of work.
2. Footings shall be excavated and poured to neat lines as called for on the plans.
3. In the event of over-excavation, the space between the footing and ground shall be filled with a minimum of Class D concrete at the Contractor's expense and as directed by the Engineer.

CONCRETE:

1. Structural concrete shall be Class A.
2. The minimum cover measured from the surface of the concrete to the face of any reinforcing bar shall be as follows, except as noted otherwise:
  - a. Barrier Walls, Retaining Walls 2"
  - b. Concrete cast against and permanently exposed to earth 3"
3. Unless noted otherwise, chamfer all exposed concrete edges 3/4 inch.
4. Construction joints shall be located as shown on the Plans unless otherwise approved by the Engineer.

REINFORCING STEEL:

1. All reinforcing steel shall conform to the requirements of ASTM A615 and shall be deformed, Grade 60 unless noted otherwise.
2. All reinforcing steel, anchor bolts, dowels and other embedded items shall be securely tied in place prior to pouring of concrete.
3. Splice length for reinforcing steel shall be 56 bar diameters but shall be a minimum 2'-6" unless otherwise noted.
4. All dimensions relating to reinforcing bars are to centers of bars unless noted
5. Reinforcing bars shall be detailed in accordance with the latest edition of the ACI Detailing Manual and CRSI Placing Reinforcing Bars and Manual of Standard Practice, unless noted otherwise.

CHAIN LINK FENCE:

1. All fencing material including gate hardware shall be galvanized steel.
2. Posts, braces, and gate frames shall be in accordance with the Project Specifications.
3. Gate shall have knuckled selvage top and bottom.
4. Top of concrete wall shall be crowned to shed water.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
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EXP 04-30-08

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**GENERAL**  
**STRUCTURE NOTES**  
REMOVAL OF HALAULANI BRIDGE  
Hawaii Belt Road  
Federal Aid Project No. BR-019-2(50)  
Scale: As Noted      Date: July, 2006  
SHEET No. S1 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(50)	2006	36	43

ESTIMATED QUANTITIES			
ITEM NO.	ITEM	UNIT	TOTAL
202.0410	Hauling & Disposal of Demolished Halaulani Bridge Parts, and Removal of Remaining Footings	Lump Sum	
206.6100	Structure Excavation for Concrete Barrier Wall	Cu. Yd.	270
206.7200	Structure Backfill Material A for Concrete Barrier Wall	Cu. Yd.	235
503.1092	Concrete in Concrete Barrier Wall	<del>Cu. Yd.</del> L.S.	75
602.0091	Reinforcing Steel in Concrete Barrier Wall	Lbs.	11,500
607.0200	3'-0" High Chain Link Fence on Concrete Barrier Wall with Sleeve Mounted Posts	<del>Lin. Ft.</del> L.S.	110
607.0300	Chain Link Fence Gate 6'-0" High x 4'-0" Wide	Each	1
716.0001	Reinforcing Steel in Concrete Barrier Wall	Sq. Yd.	300

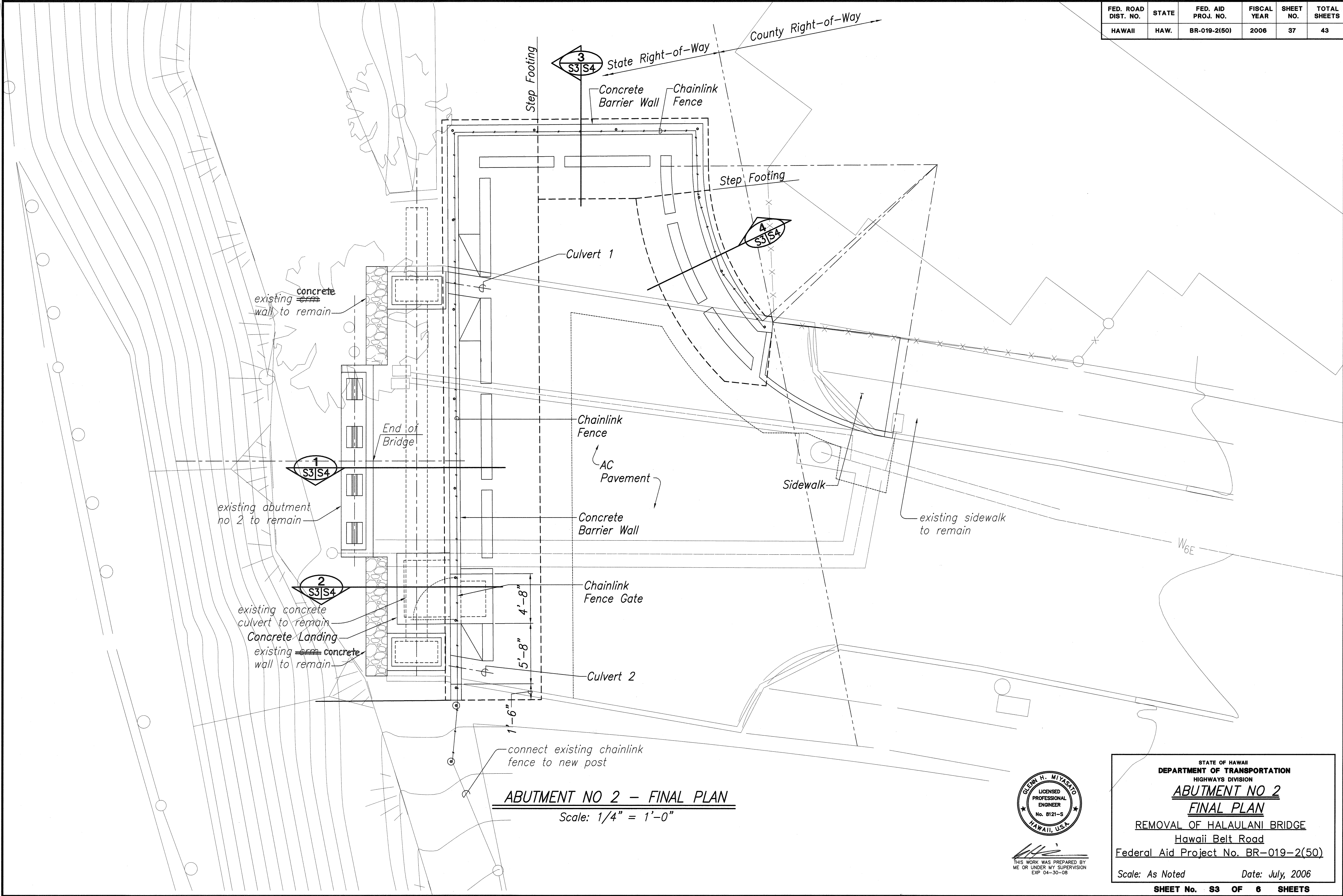
DEMOLITION AND CONSTRUCTION NOTES:

1. Refer to Hawaii Standard Specifications for Road, Bridge and Public Works Construction, (Hawaii 1994 Edition and Special Provisions)
2. The Contractor shall be solely responsible for the safety of workers and general public users of the bridge and roadway below the bridge at all times during demolition and construction.
3. The Contractor shall be solely responsible for the protection of new and existing structures, adjacent properties, and utilities from damage due to demolition and construction, and shall repair any damage at his own expense, to the satisfaction of the Engineer.
4. The Contractor shall verify the locations of all existing utility lines near the bridge and notify their respective owners prior to commencing with the work.
5. The Contractor shall be solely responsible for the methods of demolition and construction, adequacy of falsework and bracing, and other temporary measures used in the execution of the work. Such measures shall include, but are not limited to, shoring for excavation, bracing for forms and scaffolding, and shoring for demolition and construction equipment.
6. The Contractor shall prevent debris from falling on the roadway during demolition and construction. A Debris Control Scheme shall be submitted to the Engineer for review.
7. The Contractor shall submit shop drawings for the proposed demolition procedure to the Engineer for review. The drawings shall include the removal sequence and all shoring and bracing necessary for stability of the bridge components during each stage of removal. All shoring and bracing shall be designed for the appropriate loads by a structural engineer licensed in the State of Hawaii.
8. During demolition and removal operations, the Contractor shall take necessary precautions with regard to possible lead paint on steel components and asbestos in felt sheets between wood deck components.
9. The maximum load limit for the existing bridge is 6 tons.
10. The Contractor shall submit a Traffic Control Plan to the State for approval. The Contractor shall keep the roadway open to traffic and allow traffic to flow at the normal posted speed limit without any delay during the peak hours of 6:00 A.M. to 8:00 A.M. and 3:30 P.M. to 6:30 P.M. The Contractor shall not delay traffic for more than 5 minutes during the hours of 8:30 A.M. to 3:30 P.M.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ESTIMATED QUANTITIES**  
REMOVAL OF HALAULANI BRIDGE  
Hawaii Belt Road  
Federal Aid Project No. BR-019-2(50)  
Scale: AS NOTED      Date: July, 2006  
SHEET No. 32 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(50)	2006	37	43



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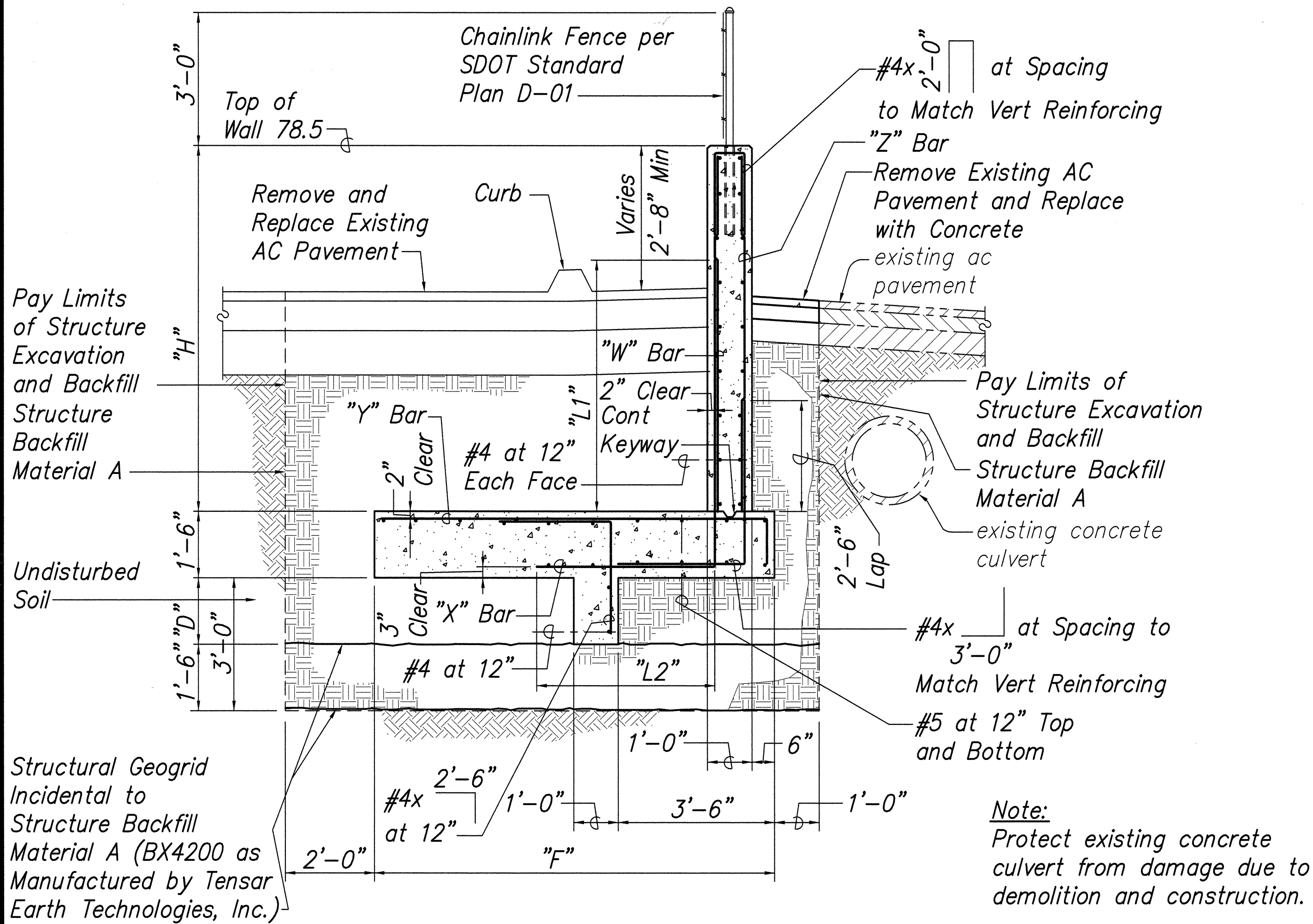
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**ABUTMENT NO 2**  
**FINAL PLAN**  
REMOVAL OF HALAULANI BRIDGE  
Hawaii Belt Road  
Federal Aid Project No. BR-019-2(50)

Scale: As Noted  
Date: July, 2006  
SHEET No. **S3** OF **6** SHEETS

"AS-BUILT"





Wall Height	Dimensions				Reinforcing			
"H"	"F"	"D"	"L1"	"L2"	"W" Bar	"X" Bar	"Y" Bar	"Z" Bar
8'-0"	9'-0"	1'-6"	5'-6"	4'-0"	#5 at 12"	#7 at 12"	#7 at 12"	#4 at 12"
7'-0"	7'-6"	1'-6"	4'-0"	4'-0"	#4 at 12"	#6 at 12"	#6 at 12"	#4 at 12"
6'-0"	7'-0"	1'-6"	4'-0"	4'-0"	#4 at 12"	#6 at 12"	#6 at 12"	#4 at 12"

### CONCRETE BARRIER WALL

Scale: 1/2" = 1'-0"

1

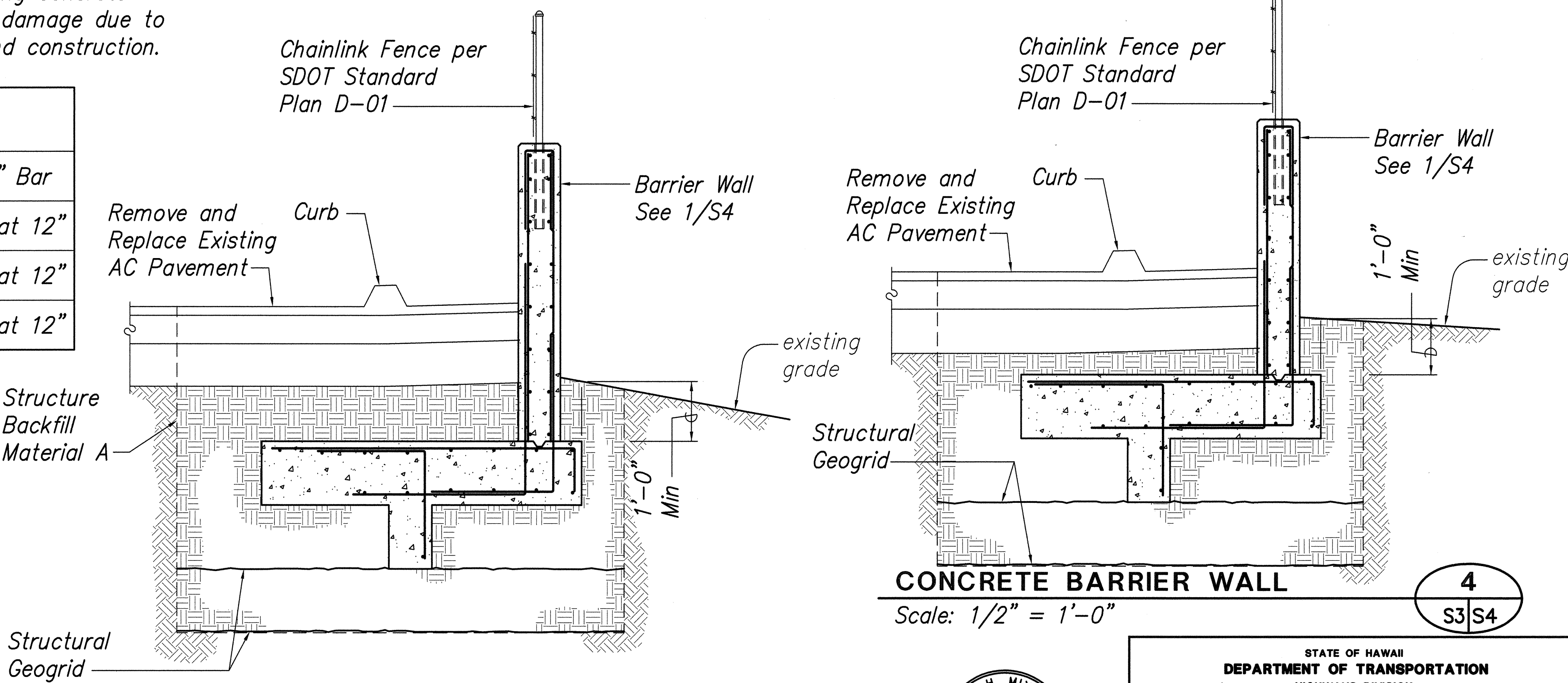
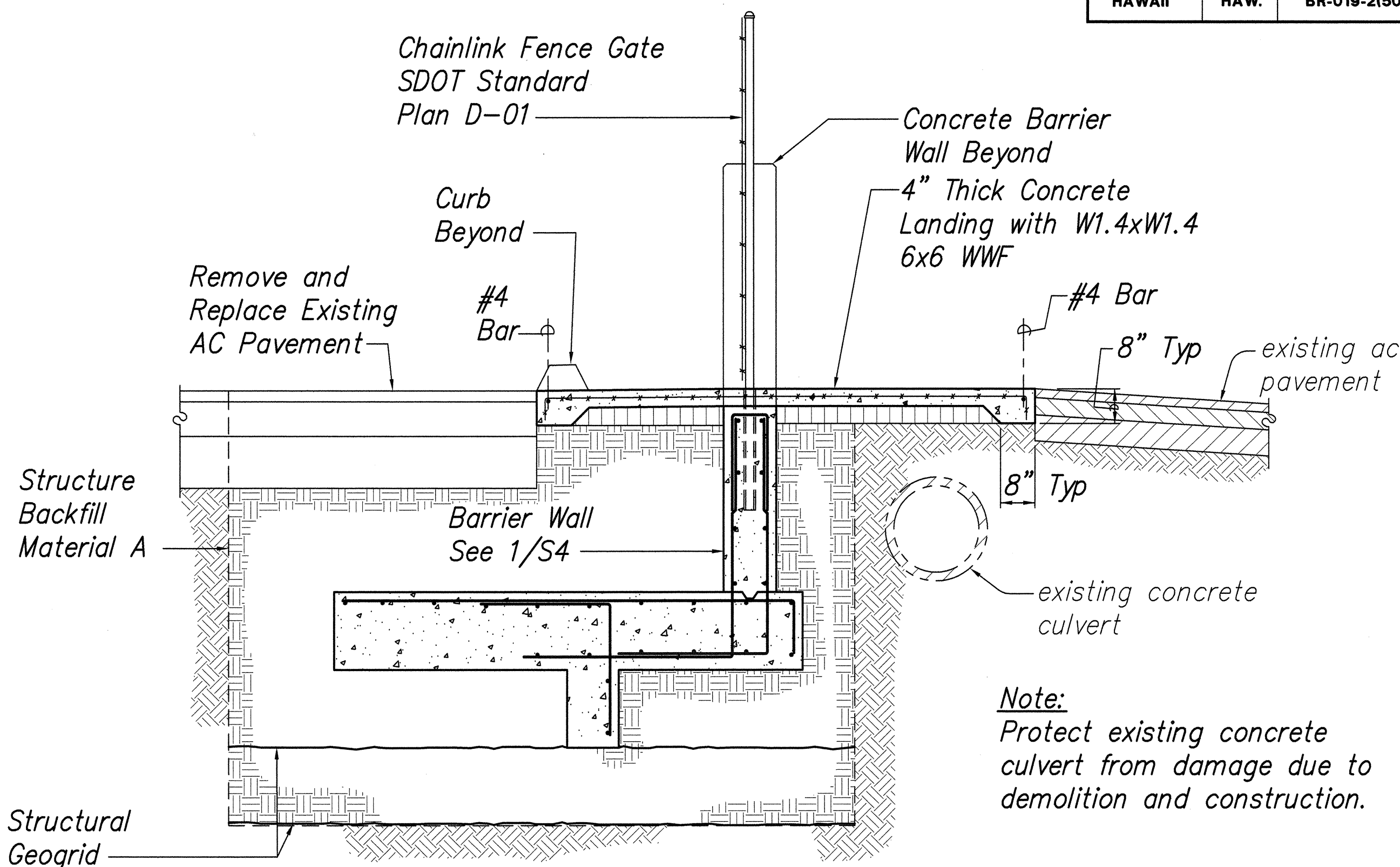
S3/S4

### BARRIER WALL AT FENCE GATE

Scale: 1/2" = 1'-0"

2

S3/S4



### CONCRETE BARRIER WALL

Scale: 1/2" = 1'-0"

3

S3/S4

### CONCRETE BARRIER WALL

Scale: 1/2" = 1'-0"

4

S3/S4



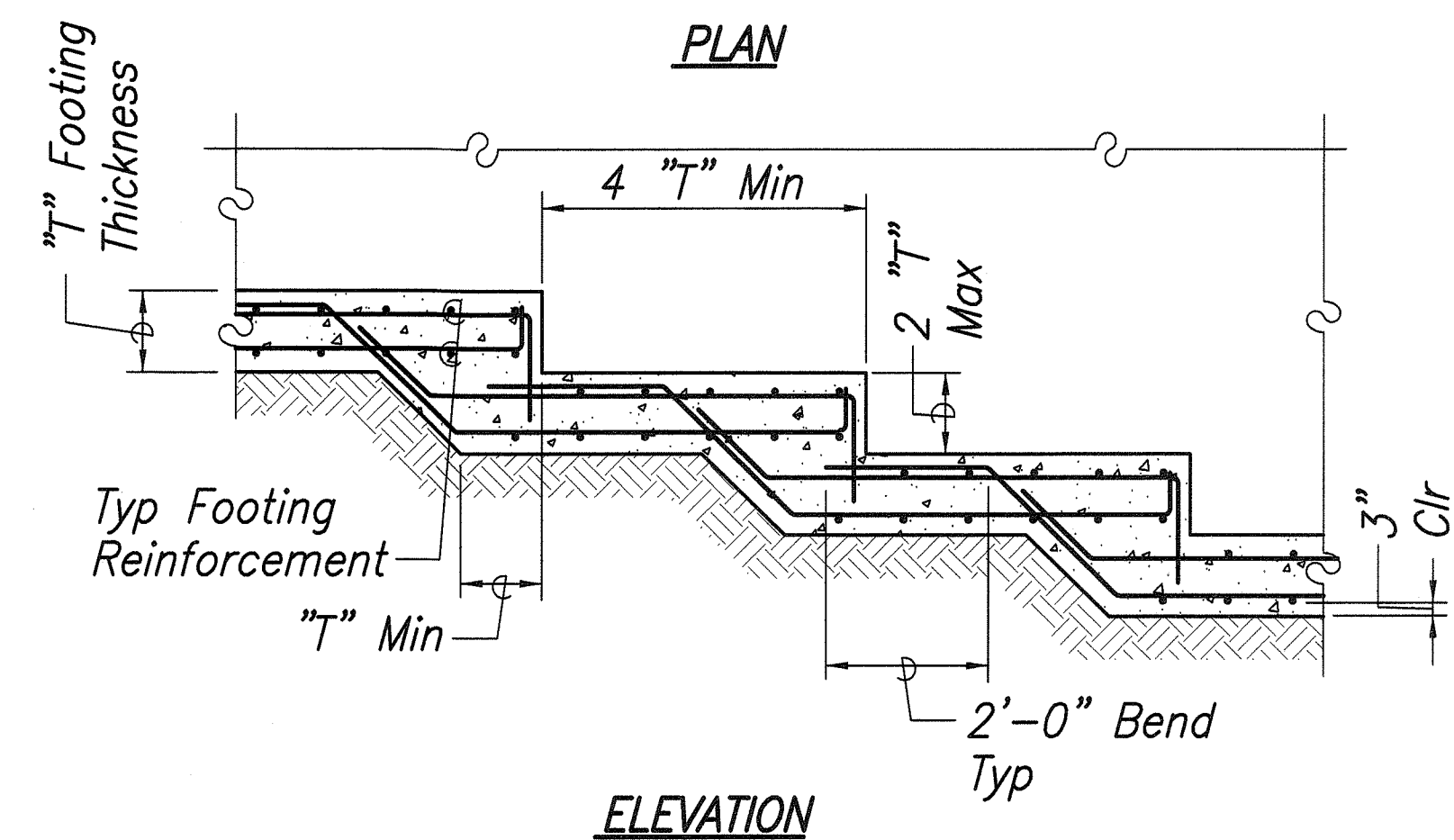
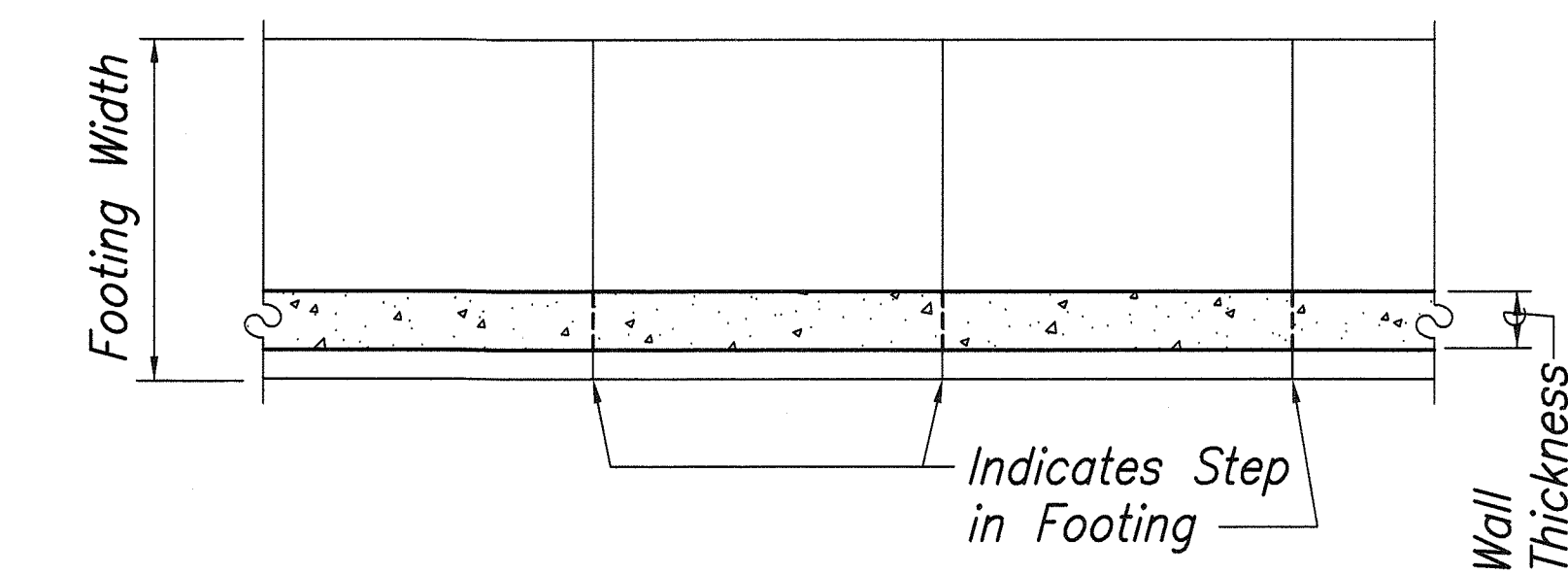
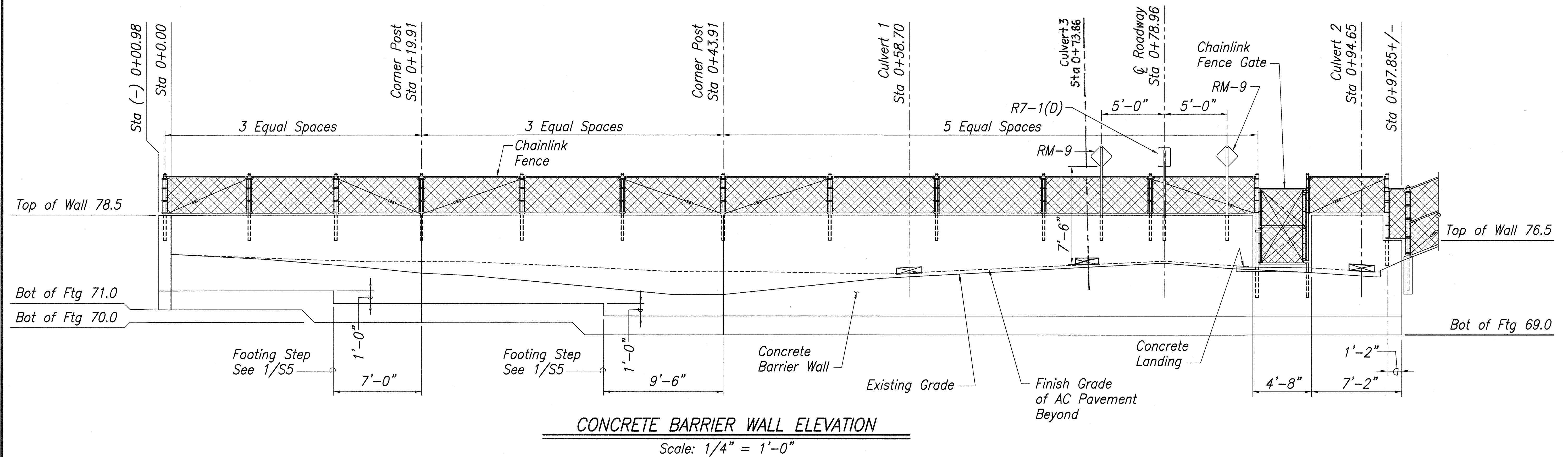
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**CONCRETE BARRIER  
WALL SECTIONS**  
REMOVAL OF HALAULANI BRIDGE  
Hawaii Belt Road  
Federal Aid Project No. BR-019-2(50)

Scale: As Noted Date: July, 2006

SHEET No. S4 OF 6 SHEETS

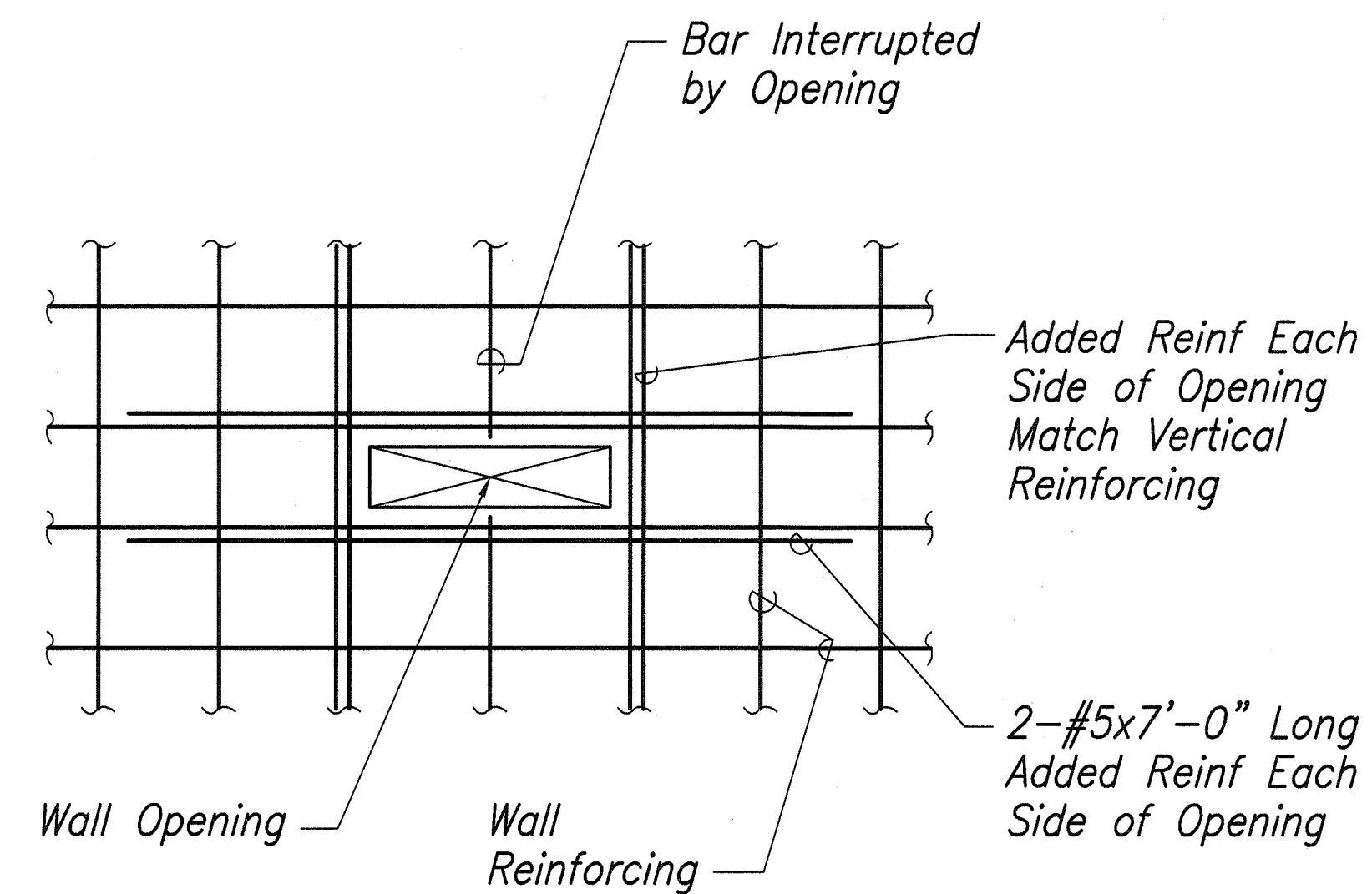
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(50)	2006	39	43



**STEP FOOTING DETAIL**

Scale: 3/4" = 1'-0"

1  
S5/S5

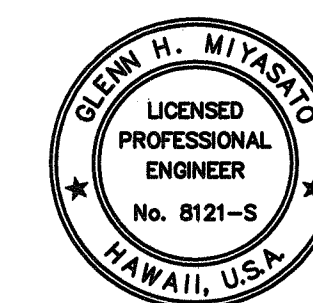


**WALL OPENING DETAIL**

Scale: 3/4" = 1'-0"

2  
S5/S5

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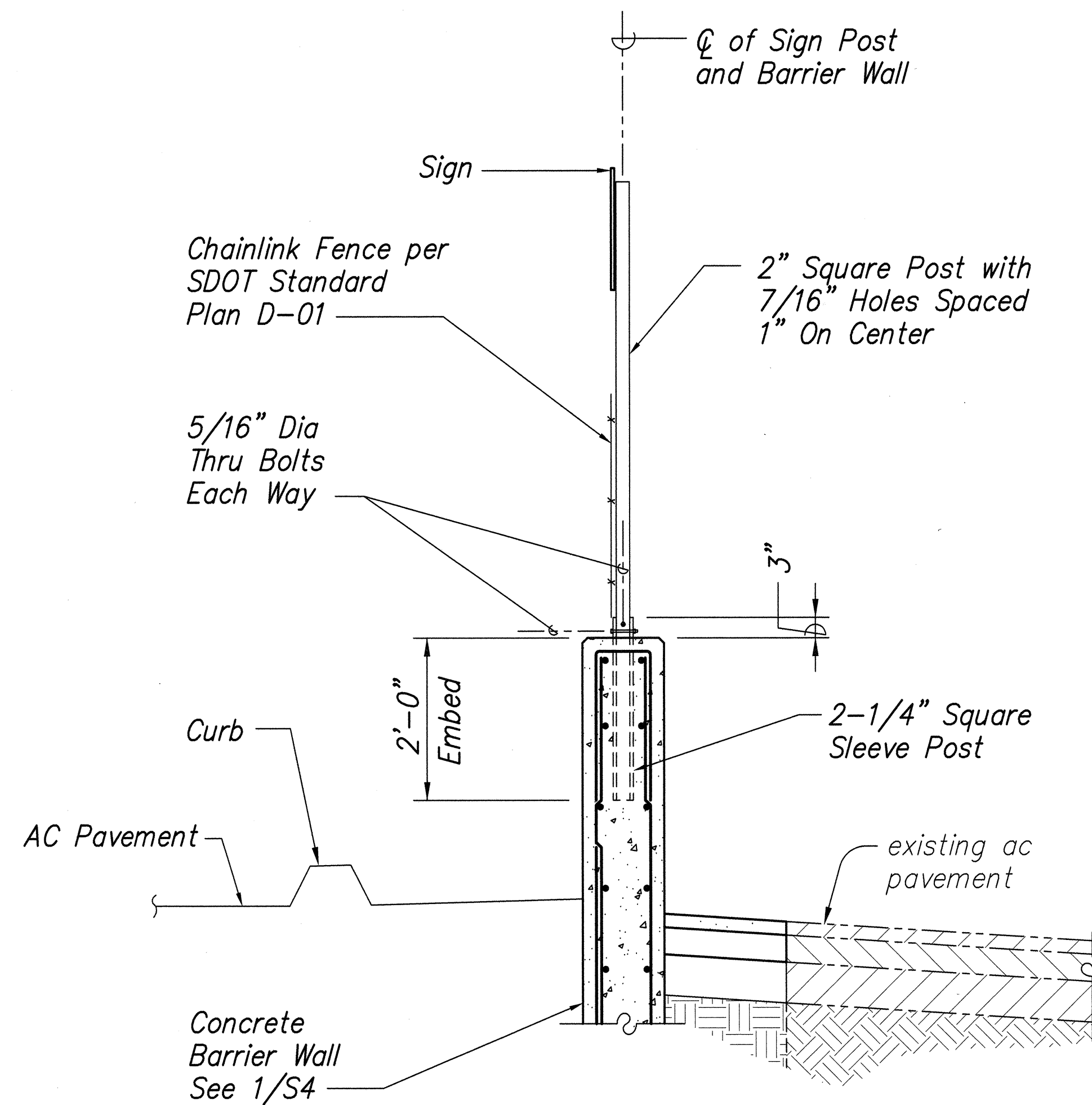
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STATE OF HAWAII  
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**CONCRETE BARRIER WALL  
 ELEVATION AND DETAIL**  
 REMOVAL OF HALAULANI BRIDGE  
 Hawaii Belt Road  
 Federal Aid Project No. BR-019-2(50)  
 Scale: As Noted  
 Date: July, 2006  
 SHEET No. **S5** OF **6** SHEETS

39

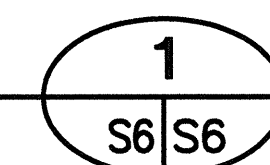
"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-019-2(50)	2006	40	43

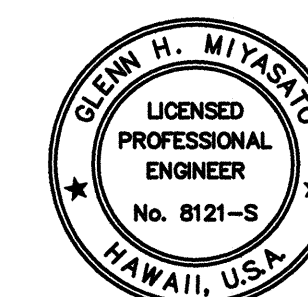


# **SIGN POST DETAIL**

Scale: 3/4" = 1'-0"



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STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**DETAILS**

REMOVAL OF HALAULANI BRIDGE  
 Hawaii Belt Road  
 Federal Aid Project No. BR-019-2(50)

Scale: As Noted Date: July, 2006

SHEET No. S6 OF 6 SHEETS