

GENERAL NOTES

DESIGN SPECIFICATIONS:

CUT RETAINING WALLS

- 1. AASHTO LRFD Bridge Design Specifications, 2nd Edition 1998, with all subsequent Interim revisions.
- 2. AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 4th Edition 2001 with al subsequent Interim revisions.
- 3. State of Hawaii, Department of Transportation Memorandum HWY-DB 2.7490 dated 8/13/2002.

MATERIALS:

- 1. Reinforced Concrete: f'c = 4,000 psi
- 2. Reinforcing Steel: ASTM A 615, Grade 60
- 3. Admixture in Concrete: See Special Provisions
- 4. All expansion joints, control joints, premolded joint filler and flashing material shall be incidental to concrete and will not be paid for separately.

CONSTRUCTION METHODS:

- 1. Refer to Hawaii Standard Specifications for Road, Bridge and Public Works Construction, 1994 Edition and Special Provisions.
- 2. Except as noted otherwise, all dimensions are measured plumb.
- 3. All footings shall bear on firm undisturbed natural soils or properly compacted embankment fill.
- 4. Excavation for all footings and footing keys shall be accomplished by maintaining as near a vertical cut as possible. In the event of over-excavation, the space between the footing or footing key and ground shall be filled with a minimum of Class D concrete at no cost to the State and as directed by the Engineer.
- 5. Steel reinforcing shall be supported, bent and placed as per the ACI Detailing Manual, 1994.
- 6. The minimum cover measured from the surface of the concrete to the face of any reinforcing bars shall be as follows, except as noted otherwise:
 - A. Concrete cast or finished to a smooth surface: 2"
 - B. Concrete cast against and permanently exposed to earth: 3"
- 7. At time concrete is placed, reinforcing shall be free from mud, oil, laitance or other coatings adversely affecting bond capacity.
- 8. Reinforcement, dowels and other embedded items shall be positively secured before pouring.
- 9. All dimensions relating to reinforcing bars (e.g. spacing of bars, etc.) are to centers of bars unless noted otherwise.
- 10. For steel reinforcing, stagger all splices where possible.
- 11. For concrete finish, see Special Provisions.
- 12. For concrete barrier and transition, provide control joints at 30'-0" maximum spacing, unless noted otherwise.

REFERENCE:

- 1. Refer to Standard Plans for additional details and notes not covered by details and typical drawings.

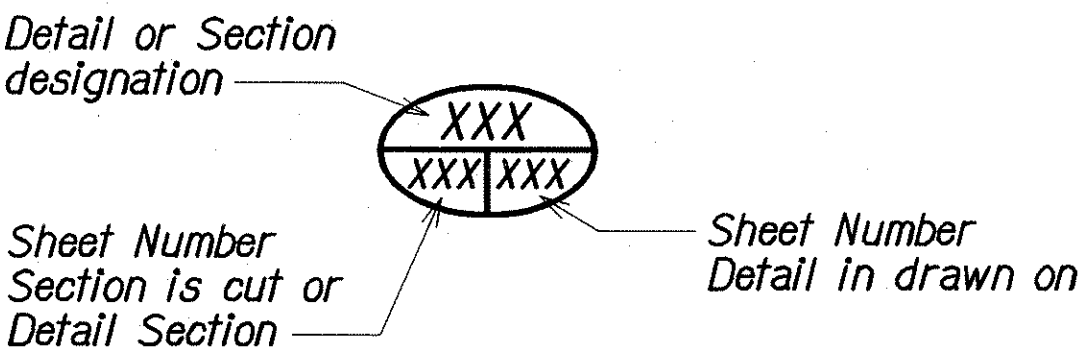
GENERAL:

- 1. All items noted incidental will not be paid for separately.
- 2. The Contractor shall verify the locations of all existing utility lines and notify their respective owners before commencing with any work.
- 3. The Contractor shall verify all grades and dimensions in the field before commencing with any work.
- 4. The Contractor shall be solely responsible for the protection of adjacent property, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer. He shall conduct his work in such a manner and provide such temporary shoring other measures as may be necessary to insure the safety of all concerned and to protect existing structures.
- 5. The Contractor, at his own expense, shall keep the project area free from dust nuisance. The work shall be in conformance with the air pollution control standards and regulations of the Sate of Hawaii Department of Health.
- 6. Structural excavation and structural backfill for Type "4E" Median Barrier, Type "4T" Median Barrier Transition and Type "4TS" Median Barrier for Traffic Signal Standard shall be considered incidental to the contract items and not be paid for separately.
- 7. Unless noted otherwise, chamfer all exposed concrete edges three-quarters (¾) of an inch.
- 8. 4" PVC drains shall be provided in retaining walls at eight feet on-center maximum spacing. PVC drains and slotted underdrains shall be considered incidental to concrete in retaining walls.
- 9. Contract items will be paid for in units indicated in the Estimated Quantities.
- 10. The Contractor shall restore the areas disturbed by the Type "4E" Median Barrier, Type "4T" Median Barrier Transition and Type "4TS" Median Barrier for Traffic Sgnal Standard construction to the existing grade and condition unless otherwise shown on the plans and specifications. All work to restore disturbed areas shall be incidental to the contract items and not be paid separately.

ABBREVIATIONS

#	Baseline	psi	Pounds per Square Inch
Bot.	Bottom	PVC	Polyvinylchloride
cl.	Clear	R, Rad.	Radius
Conc.	Concrete	Reinf.	Reinforcement, Reinforcing
Exist.	Existing	Sta.	Station
Fin.	Finish	Std.	Standard
Gr., gr.	Grade	typ., Typ.	Typical
		w/	With
		W	Width

SYMBOLS



INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
Q1	General Notes, Index to Drawings, Estimated Quantities, Abbreviations and Symbols
Q2	Concrete Barrier - Location Plan, Sta. 66+70.80 to Sta. 76+69.00
Q3	Concrete Barrier - Plan and Elevation
Q4	Concrete Barrier - Sections

ESTIMATED QUANTITIES

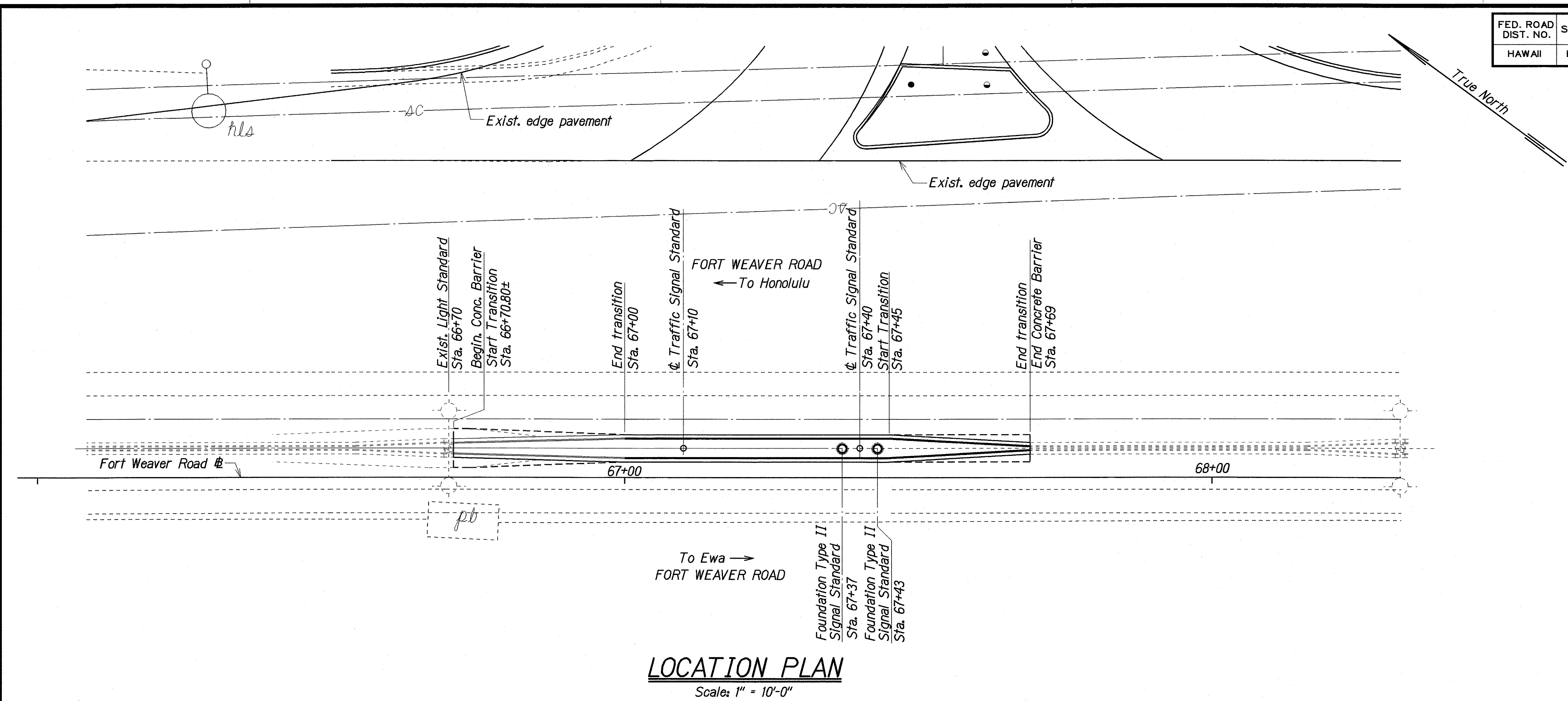
ITEM. NO.	DESCRIPTION	UNITS	QUANTITY
606.4170	Type "4E" Median Barrier	Lump Sum	(35 Lin. ft.)
606.4171	Type "4T" Median Barrier Transition	Lump Sum	(53 Lin. ft.)
606.4200	Type "4TS" Median Barler for Traffic Signal Standard	Lump Sum	(1 ea.)
623.2041	Foundation for Type II Signal Standard with 36 Feet Mast Arm Intergal with Concrete Median Barrier	Lump Sum	(2 ea.)

ORIGINAL PLAN	DESIGNED BY	DATE
NOTE BOOK	DESIGNED BY	DATE
QUANTITIES BY	DESIGNED BY	DATE
CHECKED BY	DESIGNED BY	DATE

Changed and added to General Notes
2/9/04

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GEN. NOTES, INDEX to DWGS., ESTIM. QUANT'S, ABBREVIATIONS and SYMBOLS KUNIA ROAD IMPROVEMENTS VICINITY OF SOUTH KUPUNA LOOP TO VICINITY OF HONOWAI STREET Proj. No. HWY-0-01-04 Scale: As Noted Date: Dec. 2003	
SHEET No. Q1 OF 4 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04	2004	34	61



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
PLAN	LWA	DEC 2003
NOTE BOOK	OKT	DEC 2003
QUANTITIES BY	OKT	DEC 2003
CHECKED BY	PTS	DEC 2003

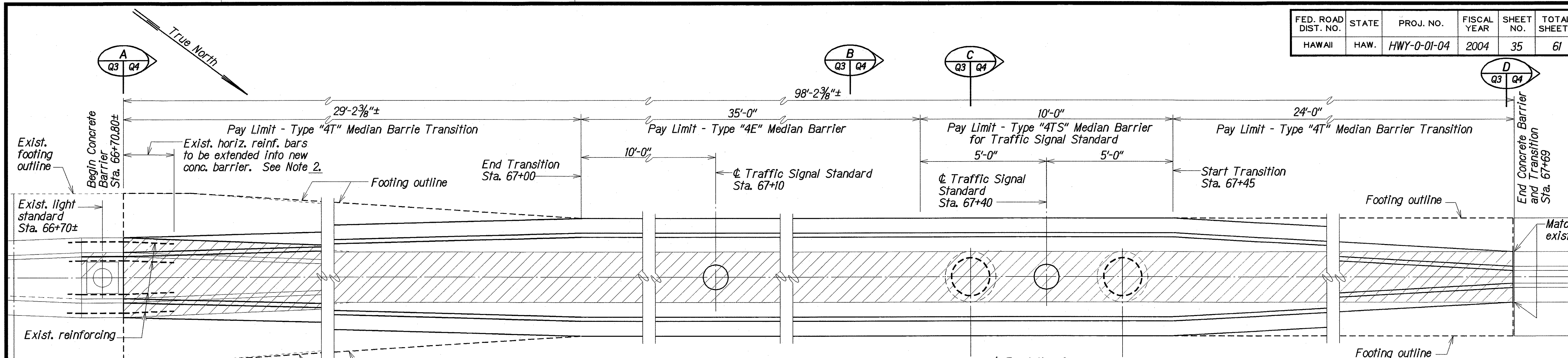
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONCRETE BARRIER LOCATION PLAN
STA. 66+70.80 TO STA. 76+69.00
KUNIA ORAD IMPROVEMENTS
VICINITY OF SOUTH KUPUNA LOOP TO
VICINITY OF HONOWAI STREET
Project No. HWY -0-01-04

Scale: As Noted Date: Dec. 2003

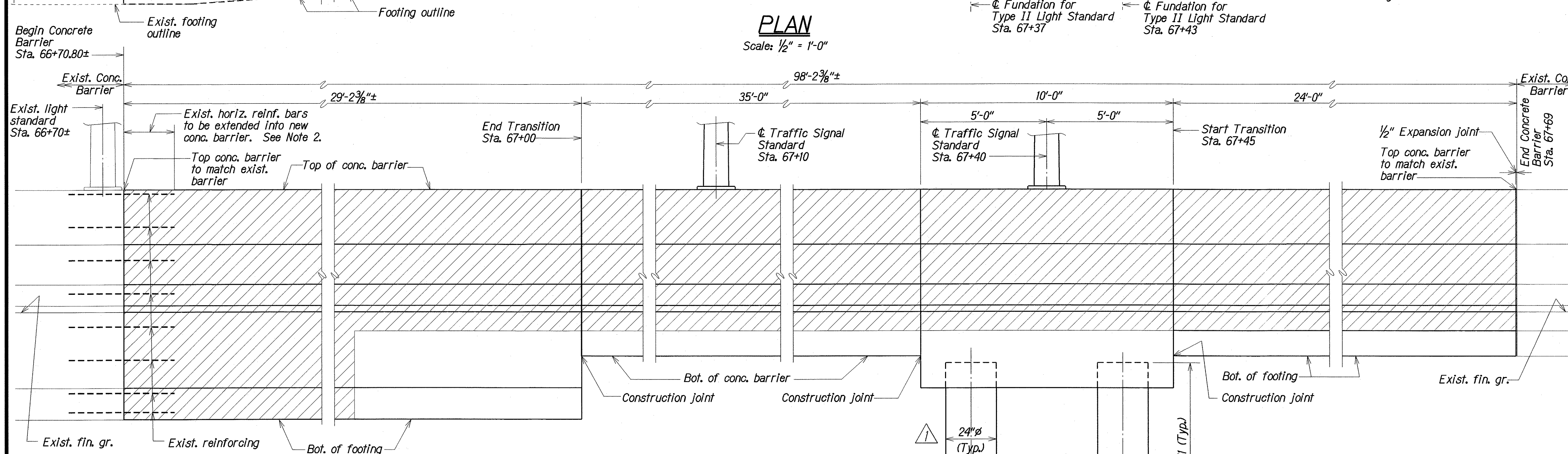
SHEET No. Q2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04	2004	35	61



PLAN

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



ELEVATION

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

NOTE:

1. Hatched area denotes concrete removal.
2. Incorporate min. 2'-0" of existing horizontal reinforcing into new Type "4T" Median Barrier Transition on existing Light Standard side.

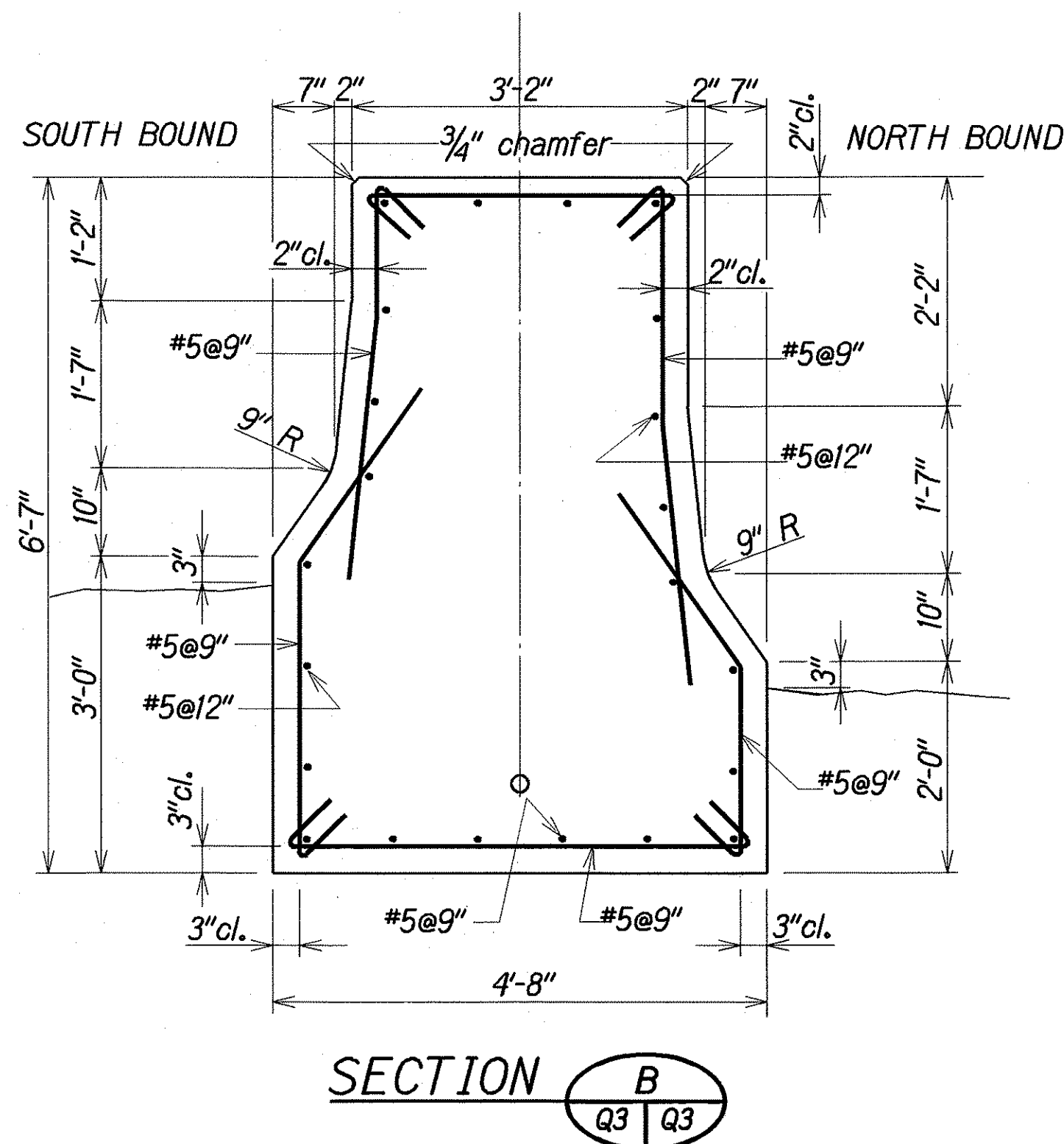
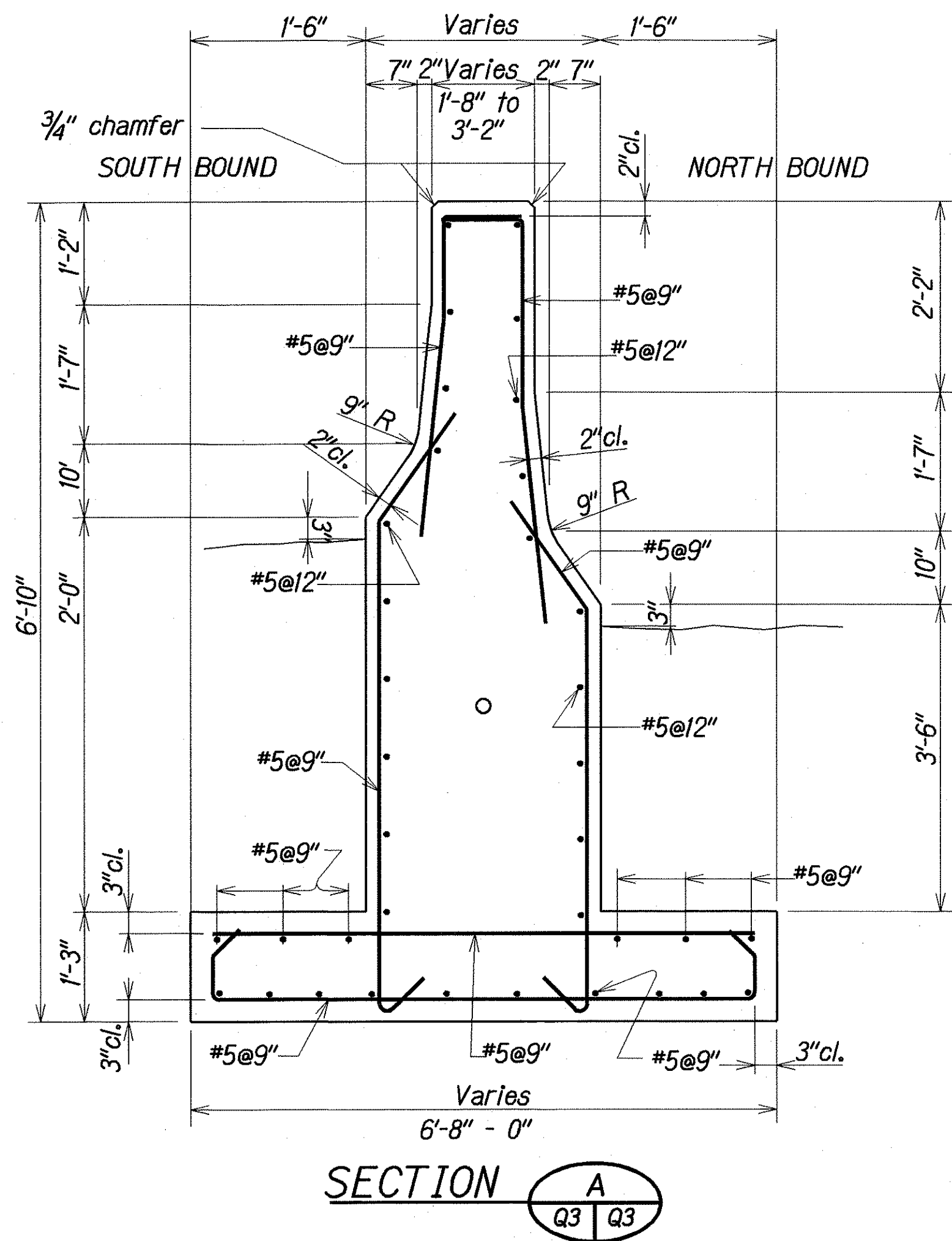
SURVEY PLOTTED BY	DATE
DRAWN BY	DEC 2003
TRACED BY	DEC 2003
NOTE BOOK	DEC 2003
QUANTITIES BY	DEC 2003
CHECKED BY	DEC 2003

1	Added drill shaft dimension.
2/9/04	DATE
	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION CONCRETE BARRIER PLAN AND ELEVATION KUNIA ROAD IMPROVEMENTS VICINITY OF SOUTH KUPUNA LOOP TO VICINITY OF HONOWAI STREET Project No. HWY -0-01-04	
Scale: As Noted	Date: Dec. 2003

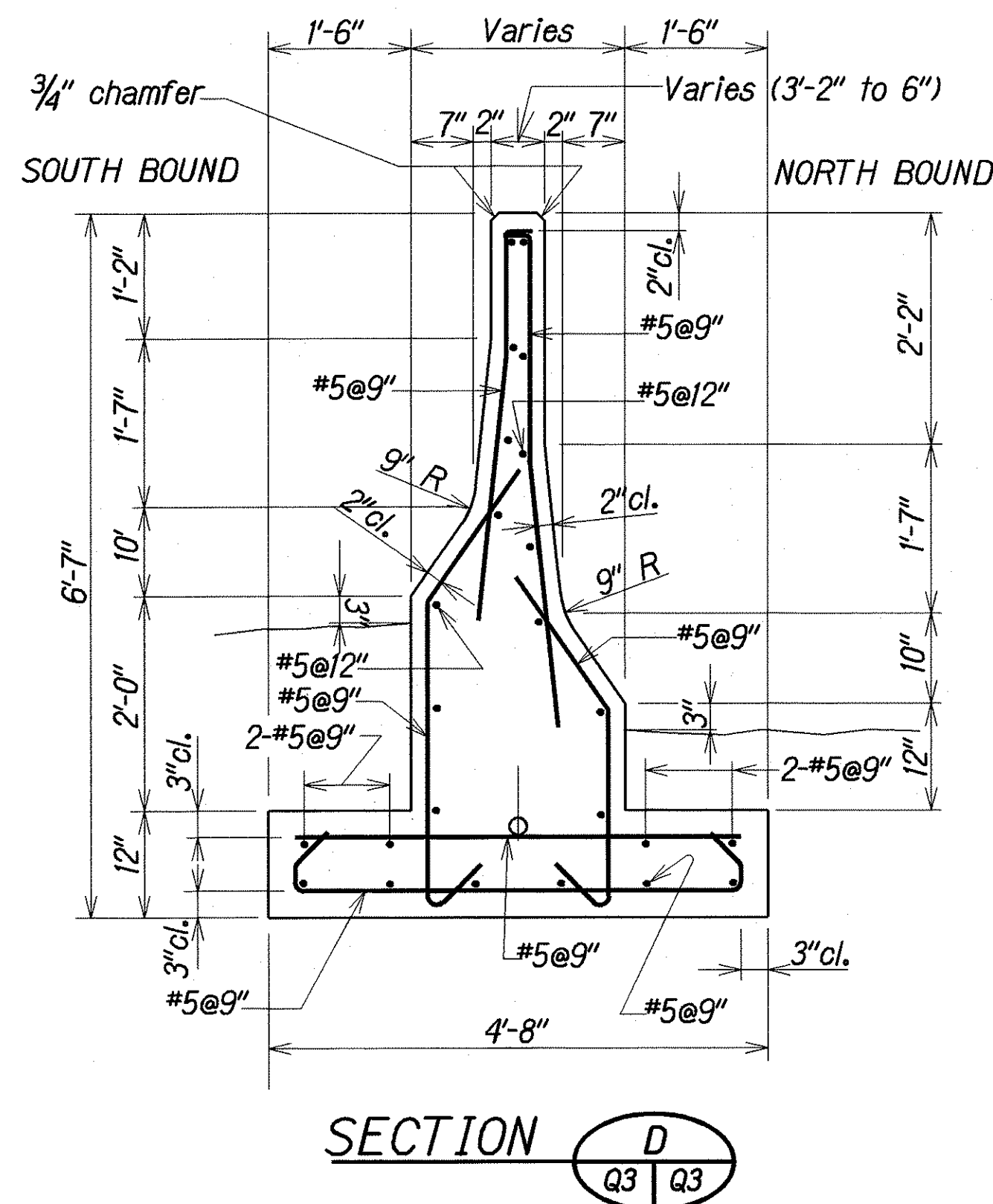
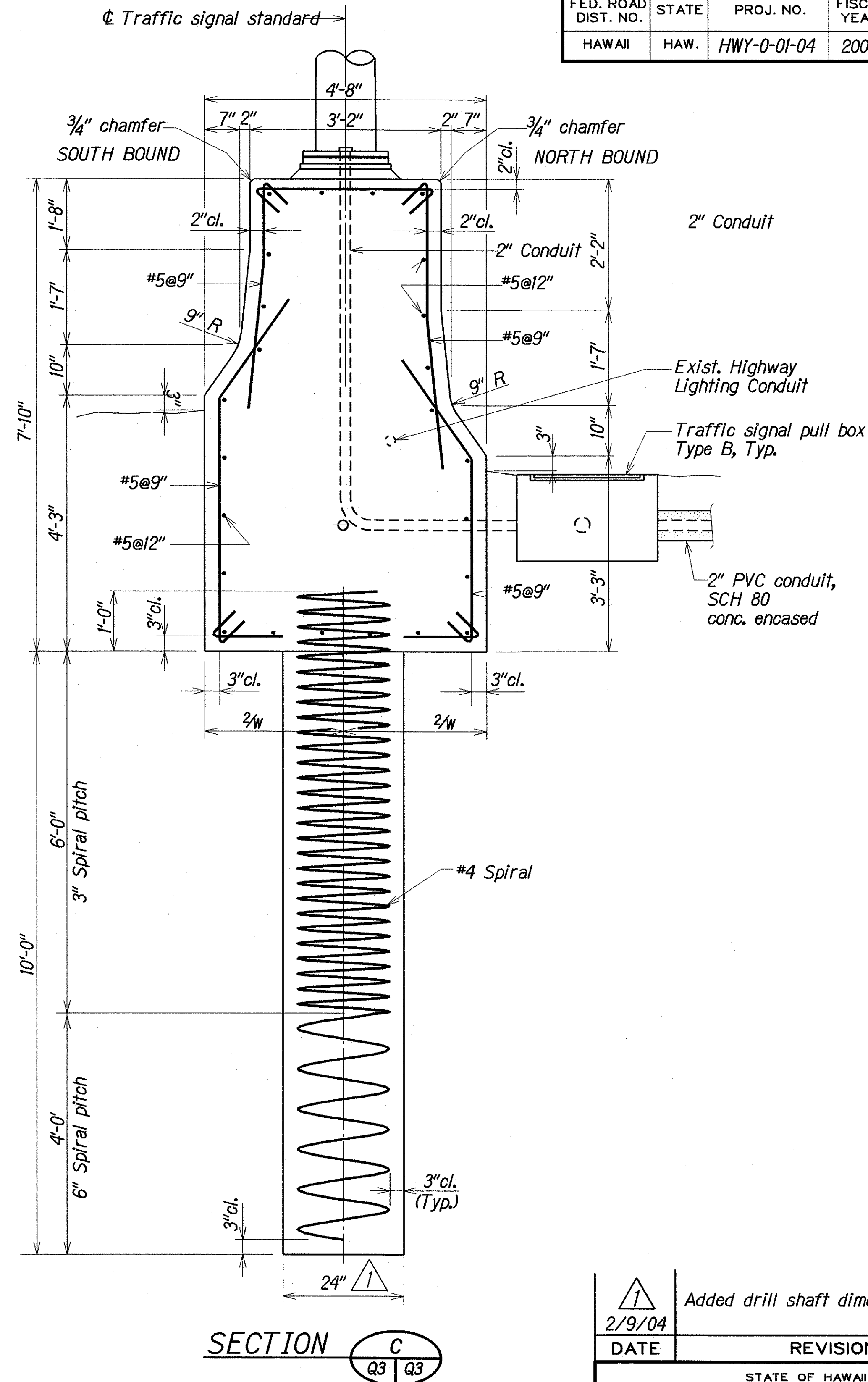
SHEET No. Q3 OF 4 SHEETS

ADD. 35

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04	2004	36	61



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



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRIVEN BY	DEC 2003
REVISIONS	DESIGNED BY	DEC 2003
CHECKED BY	Q3/Q3	DEC 2003

Added drill shaft dimension.	REVISION
2/9/04	
DATE	
STATE OF HAWAII	
DEPARTMENT OF TRANSPORTATION	
HIGHWAYS DIVISION	
CONCRETE BARRIER SECTIONS	
KUNIA ROAD IMPROVEMENTS	
VICINITY OF SOUTH KUPUNA LOOP TO	
VICINITY OF HONOWAI STREET	
Project No. HWY-0-01-04	
Scale: As Noted	Date: Dec. 2003

SHEET No. Q4 OF 4 SHEETS

ADD. 36