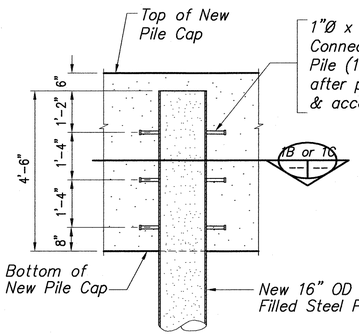
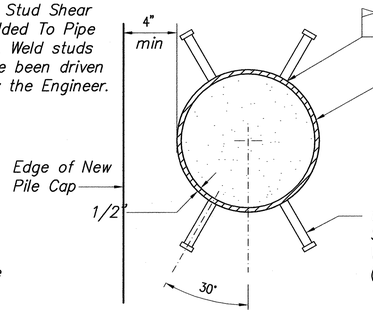
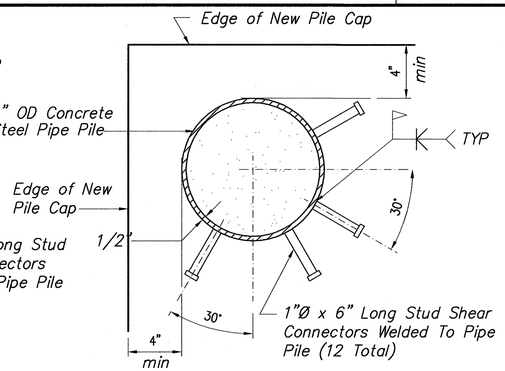
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-H1-1 (226)	2003	32	36



ELEVATION 1A
1/2" = 1'-0"



TYPICAL SECTION 1B
1 1/2" = 1'-0"



SECTION AT CORNER 1C
1 1/2" = 1'-0"

STEEL PIPE PILE TYPE 1 DETAILS 1 (S6 | S8)
(@ Pier 19 only)

See As Built-Dwgs On Sheet S-6

CONCRETE FILLED STEEL PIPE PILE NOTES

1. The Contractor shall refer to the "Special Provisions – Section 505 – Piling"
2. The Department of Transportation will furnish (free of charge) steel pipe piles of the diameters, quantities and lengths listed below:

Diameter	Quantity	Length (ft.)	Total Lin. Ft.
16"	93	40	3,720
24"	27	45	
24"	4	40	1,375

The piles are stored within the Project Site at the location indicated on the Civil Site Plan.

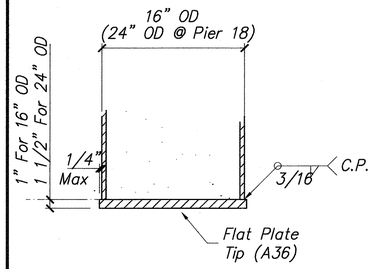
3. The Contractor shall fabricate the test piles to the lengths given in the following Test Pile Order List:

Location		Test Pile Tip Elevation (feet)	Pile Cut-off Elevation (feet)	Additional Pile Lengrh (feet)	Total Test Pile Lengrh (feet)
Pier 18	TP-1	(-)37.5	20.0	10	67.5
(R4)	TP-20	(-)37.5	20.0	10	67.5
Pier 19	TP-1	(-)49.7	29.3	31	110.0
(R3)	TP-26	(-)49.7	25.3	10	85.0
Pier 21	TP-1	(-)37.4	(-)1.9	10	45.5
(R1)	TP-16	(-)37.4	(-)1.9	10	45.5

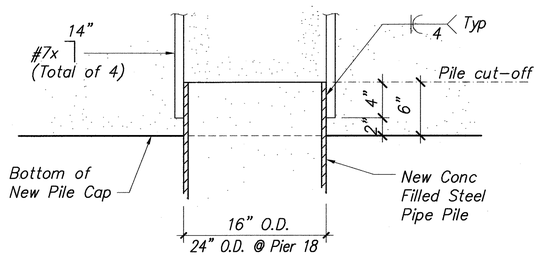
4. All pile driving and splicing operations shall be monitored by the Engineer.
5. The bottom of the pile tip elevations shall be verified by the Engineer prior to placing concrete.
6. Concrete shall not be placed without approval of the Engineer.
7. Pile tip elevations shown in the foundation plans are estimated elevations. Actual pile tip elevations will be determined by the Engineer.
8. Piles shall not be filled with concrete until all piles for the piled footing have been driven and accepted by the Engineer, and after studs (or rebar dowels) have been welded to the piles.
9. Department Furnished Steel Pipe Piles conform to ASTM A252, Grade 3 and possess at least the following section properties:

O.D. = 16"	O.D. = 24"
Thickness = 1/2"	Thickness = 1/2"
Area = 21.22 $in.^2$	Area = 32.21 $in.^2$
Moment of Inertia = 632.6 $in.^4$	Moment of Inertia = 2212.7 $in.^4$

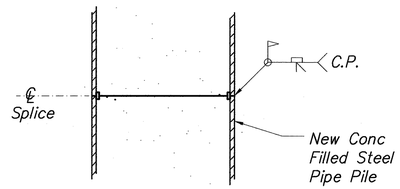
10. Stud Shear Connectors : See Special Provisions Section 505 for Properties.
11. Concrete shall have a minimum 28 day compressive strength of 4500 psi.
12. Welding Procedures, Inspection & Testing Requirements: See Subsection 505.03(c) of Special Provisions.



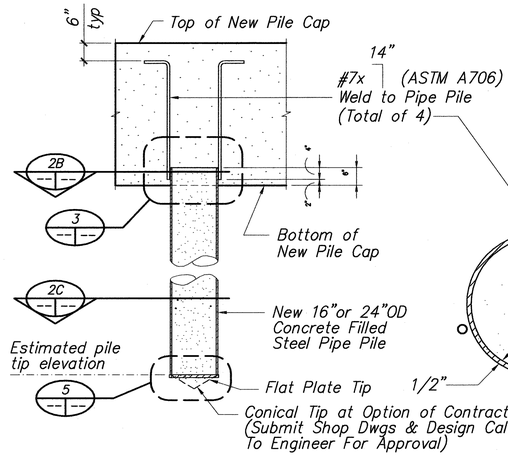
PILE TIP DETAIL 5 (S8 | S8)
1 1/2" = 1'-0"



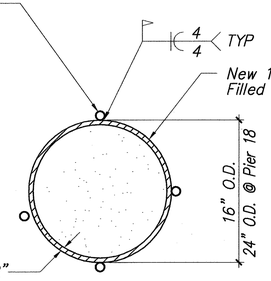
DETAIL 3 (S8 | S8)
1 1/2" = 1'-0"



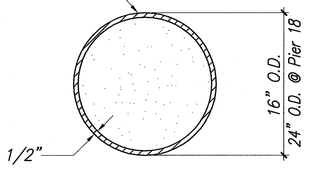
PILE SPLICE DETAIL 4 (S8 | S8)
1 1/2" = 1'-0"



NEW PILE ELEVATION 2A
1/2" = 1'-0"



SECTION 2B
1 1/2" = 1'-0"



SECTION 2C
1 1/2" = 1'-0"

STEEL PIPE PILE TYPE 2 DETAILS 2 (S6 | S8)

RECORD DRAWING

The details, locations and other information shown are based on information provided by others. The design consultant cannot assure the accuracy and completeness of the information. The user of this drawing shall be responsible to verify its accuracy and completeness

See As Built-Dwgs On Sheet S-6a

PILED FOOTING RETROFIT SCHEDULE

Column Number	Footing Size (Exist in Ft)	Existing Transverse Reinforcing	Existing Longitudinal Reinforcing	New Bottom Reinf (4 sides)	d*	s*
R1 (21)	24x18x6	#11 Total 24	#11 Total 32	4 #11	43"	24"
R3 (19)	24x21x5.5	#11 Total 24	#11 Total 43	–	–	–
R4 (18)	24x15x5	#11 Total 21	#11 Total 31	7 #11	37"	24"

* 'd' & 's' refer to locations of #8 Dowels shown in Section 1B/S6

LEGEND FOR AS-BUILT POSTINGS

~~	Squiggly line for as-built deletion
~~100.00~~	Double line for as-built deletion
☒	"X" for as-built deletion
Roadway	Text for as-built posting

GRAPHIC SCALE:

1/2"=1'-0" 1' 0 1' 2' 3' 4' 6'

1 1/2"=1'-0" 1' 9" 6" 3" 0' 1' 2'

DEAN A. DOI
LICENSED PROFESSIONAL ENGINEER
No. 5580-S
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SATO & ASSOCIATES, INC.

DATE	REVISION
2/14/03	Added Pile Tip Detail

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PILE DETAILS, PILE FOOTING RETROFIT SCHEDULE

INTERSTATE ROUTE H-1, SEISMIC RETROFIT
KAPIOLANI INTERCHANGE, PHASE 2
FEDERAL AID PROJECT NO. BR-H1-1(226)

SCALE: AS NOTED DATE: SEPT 2002

SHEET No. S8 OF 9 SHEETS

ORIGINAL PLANS | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

'/users/project/96025.02/ph2ki-s08

"AS-BUILT"

ADD. 32