

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

Land Development Division

Date: 02/02/2021

**Addendum No. 9**

to

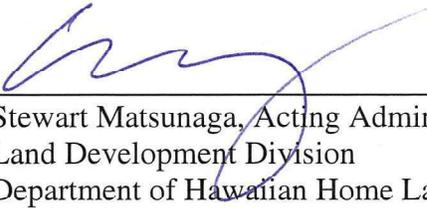
Invitation For Bids  
IFB-21-HHL-007

**Laiopua Village 4 Subdivision, Phase 2 - Hema**

Notice to All Prospective Offerors

This addendum is hereby made a part of the contract documents for Laiopua Village 4 Subdivision, Phase 2 – Hema, IFB-21-HHL-007, and it shall amend the said contract documents as detailed within this Addendum document.

APPROVED:



\_\_\_\_\_  
Stewart Matsunaga, Acting Administrator  
Land Development Division  
Department of Hawaiian Home Lands

Please execute and immediately return the receipt below to the Department of Hawaiian Home Lands via facsimile to: **(808) 620-9299, Ms. Sara Okuda, Land Development Division, or scan and E-mail to: [sara.t.okuda@hawaii.gov](mailto:sara.t.okuda@hawaii.gov).**

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Receipt of Addendum No. 9 for Laiopua Village 4 Subdivision, Phase 2 – Hema, Invitation for Bids No.: IFB-21-HHL-007, is hereby acknowledged.

Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name of Firm/Company

\_\_\_\_\_  
Date

**Addendum No. 9**  
**Laiopua Village 4 Subdivision, Phase 2 – Hema**  
**IFB-21-HHL-007**

This Addendum No. 9 shall incorporate the following amendments to IFB-21-HHL-007:

1. Repaving of Kookoolau Street – Deleted Bid Item No. 106. Multiple Prime Contractors performing work under separate agreements with DHHL may be present near the project location, adjacent to and abutting the Project Contract Limits. The Contractor shall coordinate activities, sequence of work, protective barriers and any and all areas of work interfacing with other Prime Contractor’s work. Contractor shall provide finishes, walks, landscape, etc. at abutting Contract Limits so no additional work will be required. Any damage to existing improvements incurred during construction shall be repaired and/or replaced, to County and DHHL Standards, in conjunction with all other Contractors. These issues shall be resolved between Contractors and at no additional cost to DHHL. Revised Bid Offer Form, attached.
2. Bid Offer Form – Revised/updated line items and quantities in Bid Offer Form, attached.
3. Grading Plans – Revised grading quantities, some slope areas not required to be graded. Revised Sheets 13-15, attached.
4. Wall Profiles – Added Wall Profiles sheet to Plans, Sheet 15A, attached.
5. Plans, Sheet 18 – Keep Note 2. All sewer frames and covers shall be traffic rated.
6. Plans, Sheet 21 – Delete Note R2. No concrete header and end road barrier are required.
7. Plans, Sheet 23 – Delete Note W3. No 8” cap and pipe marker are required.
8. Cross Sections - Revised Sheets 45-50, attached.
9. Structural Plans – Revised Sheets S-1 to S-6, as indicated by Delta 1, attached.
10. Specifications – Section 02721 – Storm Drain System – Part 2 Products – Pipe material shall be Reinforced Concrete Pipe, Class III.

**STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS**

**BID OFFER FORM FOR**

**LAIOPUA VILLAGE 4 SUBDIVISION, PHASE 2 - HEMA**

**KAILUA-KONA, ISLAND OF HAWAII, HAWAII**

**TAX MAP KEY  
( 3 ) 7-4-21:12 (PORTION)**

**IFB No.: IFB-19-HHL-010**

Chairman  
Hawaiian Homes Commission  
Department of Hawaiian Home Lands  
91-5420 Kapolei Parkway  
Kapolei, Hawaii 96707

The undersigned has carefully examined, read, and understands the terms and conditions in the Plans and Specifications, Special Conditions attached hereto, DHHL Construction General Conditions, and General Conditions specified in the Invitation for Bids (IFB) No. IFB-19-HHL-010. The State of Hawaii's (State) Contract for Goods and Services Based on Competitive Sealed Bids AG-003 Rev. 6/22/2009, AG-008 103D General Conditions, are included by reference and made part hereof and available upon written request to the Procurement Officer. The undersigned hereby submits the following offer to perform the work for IFB No. IFB-19-HHL-010 as specified herein, all in accordance with the true intent and meaning thereof.

The undersigned understands and agrees that:

1. The State reserves the right to reject any and all offers and to waive any items that are defective when, in the State's opinion, such rejection or waiver will be in the best interest of the State. A solicitation may be rejected in whole or part when in the best interest of the State.
2. If awarded the contract, all services will be in accordance with Hawaii Revised Statutes (HRS) § 103-55.5.
3. In submitting this offer, the Offeror is not in violation of HRS Chapter 84, concerning prohibited State contracts.
4. By submitting this offer, the Offeror certifies that the offer was independently arrived at without collusion and the Offeror did not participate in any practices to restrict competition.
5. It is understood that the failure to receive any addendum shall not relieve the Offeror from any obligation under this IFB.

Laiopua Village 4 Subdivision,  
Phase 2 - Hema  
IFB-19-HHL-010

Bid Offer Form  
R1/20/2021

Date: \_\_\_\_\_

The undersigned represents that it is: **(Check ✓ one only)**

- A **Hawaii business** incorporated or organized under the laws of the State of Hawaii; **OR**
- A **Compliant Non-Hawaii business** not incorporated or organized under the laws of the State of Hawaii, is or shall be registered at the State of Hawaii Department of Commerce and Consumer Affairs Business Registration Division (DCCA-BREG) to do business in the State of Hawaii.

State of incorporation: \_\_\_\_\_

Offeror is:

- Sole Proprietor
- Partnership
- Corporation
- Joint Venture
- Other: \_\_\_\_\_

Federal ID No.: \_\_\_\_\_

Hawaii General Excise Tax ID No.: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_

E-Mail Address.: \_\_\_\_\_

Payment address (other than street address below)

\_\_\_\_\_  
(Street Address, City, State, Zip Code)

Business address

\_\_\_\_\_  
(Street Address, City, State, Zip Code)

Respectfully submitted:

\_\_\_\_\_  
Authorized (Original) Signature

\_\_\_\_\_  
Name and Title (Please Type or Print)

\* \_\_\_\_\_  
**Exact Legal Name of Company (Offeror)**

\*If Offeror shown above is a "dba" or a "division" of a corporation, furnish the exact legal name of the corporation under which the awarded contract will be executed:

\_\_\_\_\_

The following bid is hereby submitted for \_\_\_\_\_ to the Department of Hawaiian Home Lands.

Item No.	Estimated Quantity	Description	Unit Price	Total
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The prices bid herein for the following items shall include all materials, labor, tools, equipment, machinery and all incidentals necessary to install or to construct these items in place complete all in accordance with the plans and specifications, and shall constitute a lump sum bid for the performance of this work

**ROADWAYS**

1	L.S.	Mobilization, including obtaining insurance, bonds, permits, scheduling, submittals, and other activities to mobilize for project.	
		Lump Sum	\$ _____

2	L.S.	Demobilization, including removing excess materials and equipment, clean-up, report after grading, including certification (as graded topographical survey and certification letter for grades).	
		Lump Sum	\$ _____

3	L.S.	Temporary Erosion Control Measures and compliance with the National Pollution Discharge Elimination System (NPDES) Permit, including submittals to the State Department of Health (inclusive of, but not limited to, installation and removal of silt fences, BMP's, watering and roadway cleaning).	
		Lump Sum	\$ _____

4	L.S.	New dust screen bordering Keanalehu Drive along lots 1 to 26, in place complete to be removed and disposed of offsite once the road subgrade is being prepared for paving. (1,600 LF)	
		Lump Sum	\$ _____

5	L.S.	New dust screen bordering Manawalea Street along lots 26 to 45, in place complete to be removed and disposed of offsite once the road subgrade is being prepared for paving. (1,300 LF)	Lump Sum	\$ _____
6	L.S.	New dust screen bordering Kookoolau Street along lots 46 to 125, in place complete to be removed and disposed of offsite once the road subgrade is being prepared for paving. (1,550 LF)	Lump Sum	\$ _____
7	L.S.	Clearing and Grubbing of subdivision site including off-site disposal of all cleared and grubbed materials, including vegetative and unsuitable materials per Technical Specifications Section 02100 ( Approximately 27.3 Acres)	Lump Sum	\$ _____
8	L.S.	Fine grading of roadway area (186,000 SF)	Lump Sum	\$ _____
9	L.S.	6" Base course under pavement areas (13,642 SY)	Lump Sum	\$ _____
10	L.S.	2" AC pavement (13,642 SY)	Lump Sum	\$ _____
11	L.S.	Standard integral concrete curb and gutter. (8,338 LF)	Lump Sum	\$ _____

12	L.S.	Reinforced Class "B" concrete sidewalk, 4" thick. (50,144 SF)	Lump Sum	\$ _____
13	L.S.	4" Base Course under sidewalk area including under curb ramps and driveways, curbs and gutters (50,144 SY)	Lump Sum	\$ _____
14	L.S.	Reinforced Class "B," including detectable warning strip, concrete curb ramp, 4" thick. (3,000 SF)	Lump Sum	\$ _____
15	L.S.	Reinforced concrete driveway apron, 4" thick. (12,251 SF)	Lump Sum	\$ _____
16	L.S.	Street monument. (18 EA)	Lump Sum	\$ _____
17	L.S.	Street name sign (14 EA)	Lump Sum	\$ _____
18	L.S.	Demolition and removal of existing concrete header and end road barrier with markers	Lump Sum	\$ _____
19	L.S.	Smooth Riding Connection to existing pavement, curb, gutter and sidewalk at: Ohemakai St. and Ko'oko'olau St. Koai'a St. and Ko'oko'olau St. 'Ilie'e Pl. and Ko'oko'olau St. Kawelu Pl. and Ko'oko'olau St.	Lump Sum	\$ _____

20 L.S Privacy Vinyl Fence and Guardrail along Manawalea St. (along lots 26 to 45) (1,338 LF)

Lump Sum \$ \_\_\_\_\_

21 L.S Retaining Wall (along lots 27 to 30) (295 LF)

Lump Sum \$ \_\_\_\_\_

22 L.S Retaining Wall (along lots 114 to 115) (163 LF)

Lump Sum \$ \_\_\_\_\_

23 L.S Retaining Wall (at lot 108) (53 LF)

Lump Sum \$ \_\_\_\_\_

<b>SUB-TOTAL FOR ROADWAYS</b>	\$
<b>(Items 1-23, inclusive)</b>	\$ _____

**LOT GRADING**

24 L.S Excavation for grading including 2 foot over excavation in the lot and roadway areas as required per the Geotechnical Report, as per plans (80,980 CY)

Lump Sum \$ \_\_\_\_\_

25 L.S Embankment including fine grading and fill to finish grade including 2" minus capping material, as per plans (70,310 CY)

Lump Sum \$ \_\_\_\_\_

<b>SUB-TOTAL FOR LOT GRADING</b>	\$
<b>(Items 24 &amp; 25, inclusive)</b>	\$ _____

**SEWER SYSTEM**

26	L.S	Unclassified excavation for 8" sewer lines, cradles and manholes, including backfill and manhole seals (2,828 CY)	Lump Sum	\$ _____
27	Allow	6" minus backfill as necessary, in place complete.  Unit Price to be used for item \$ _____ / C.Y.	Allowance	\$ <u>20,000</u>
28	L.S	¾" Base Course backfill, in place complete. (623 CY)	Lump Sum	\$ _____
29	L.S	8" Sewer Pipe. (4,109 LF)	Lump Sum	\$ _____
30	L.S	6" Sewer Pipe including excavation and backfill (2,270 LF)	Lump Sum	\$ _____
31	L.S	8"x6" Sewer Pipe Wye (81 EA)	Lump Sum	\$ _____
32	L.S	6"x6" Sewer Pipe Wye (62 EA)	Lump Sum	\$ _____
33	L.S	6" Sewer Pipe 1/8 Bend (81 EA)	Lump Sum	\$ _____
34	L.S	6" x4" Reducer (122 EA)	Lump Sum	\$ _____

35	L.S	Pipe marker (122 EA)	Lump Sum	\$ _____
36	L.S	4-inch Sewer Pipe advance riser (485 LF)	Lump Sum	\$ _____
37	L.S	4-inch long sweep bend including 12"x12" concrete block (85 EA)	Lump Sum	\$ _____
38	L.S	6-inch cleanout with cap (57 EA)	Lump Sum	\$ _____
39	L.S	4-inch cleanout with cap (85 EA)	Lump Sum	\$ _____
40	L.S	Reinforced concrete manhole base (23 EA)	Lump Sum	\$ _____
41	L.S	Manhole frame and cover (23 EA)	Lump Sum	\$ _____
42	L.S	Standard plain manhole, 6' - 6.99' (6 EA)	Lump Sum	\$ _____
43	L.S	Standard plain manhole, 7' - 7.99' (2 EA)	Lump Sum	\$ _____
44	L.S	Standard plain manhole, 8' - 8.99' (1 EA)		

		Lump Sum	\$ _____
45	L.S	Standard plain manhole, 9' - 9.99' (2 EA)	
		Lump Sum	\$ _____
46	L.S	Standard plain manhole, 10' - 10.99' (2 EA)	
		Lump Sum	\$ _____
47	L.S	Standard plain manhole, 11' - 11.99' (2 EA)	
		Lump Sum	\$ _____
48	L.S	Standard plain manhole, 12' - 12.99' (1 EA)	
		Lump Sum	\$ _____
49	L.S	Drop manhole G-2, 12' - 12.99'. (1 EA)	
		Lump Sum	\$ _____
50	L.S	Drop manhole G-1, 14' - 14.99' (1 EA)	
		Lump Sum	\$ _____
51	L.S	Shallow Drop manhole H-1, 8' - 8.99' (1 EA)	
		Lump Sum	\$ _____
52	L.S	Shallow drop manhole H-4, 9' - 9.99' (1 EA)	
		Lump Sum	\$ _____
53	L.S	Shallow drop manhole I-2, 10' - 10.99' (1 EA)	
		Lump Sum	\$ _____
54	L.S	Drop manholes G-4 & F-1, 13' - 13.99' (2 EA)	
		Lump Sum	\$ _____

55	L.S.	Connection to existing 8" sewer in Ko'oko'olau Street at Station 9+30.19±, including removing existing plug, excavation and backfilling.	Lump Sum	\$ _____
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<b>SUB-TOTAL FOR SEWER SYSTEM (Items 26 to 55, inclusive)</b>
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<b>WATER SYSTEM</b>
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56	L.S.	Unclassified excavation for 8" water mains, manholes and appurtenances, including backfill and pipe cushion. (940 CY)	Lump Sum	\$ _____
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57	Allow	6" minus backfill as necessary, in place complete.  Unit Price to be used for item \$ _____ / C.Y.	Allowance	\$ <u>10,000</u>
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58	L.S.	Pipe Cushion Material as required, in place complete. (550 CY)	Lump Sum	\$ _____
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59	L.S.	8" Water Pipe. (3,632 LF)	Lump Sum	\$ _____
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60	L.S.	6" Water Pipe (173 LF)	Lump Sum	\$ _____
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61	L.S.	Water Pipe fittings. (3,950 Lbs) 1 - 12" Sleeve @ 110 1 - 12" x 8" Reducer @ 165 3 - 8" x 8" Tee @ 185	Lump Sum	\$ _____
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8 - 8" x 6" Tee @ 175  
 1 - 8" x 4" Reducer @ 80  
 2 - 8" 1/4 Bend @ 125  
 2 - 8" 1/8 Bend @ 110  
 2 - 8" Sleeve @ 95  
 1 - 8" Cap @ 45  
 11 - 6" 1/4 Bend @ 85

Lump Sum \$ \_\_\_\_\_

62 L.S 8" Gate valve, Class 200. (9 EA)

Lump Sum \$ \_\_\_\_\_

63 L.S 6" Gate valve, Class 200. (8 EA)

Lump Sum \$ \_\_\_\_\_

64 L.S 1" Air relief valve including manhole and appurtenances. (2 EA)

Lump Sum \$ \_\_\_\_\_

65 L.S 8" Cap with 2" IPT (1 EA)

Lump Sum \$ \_\_\_\_\_

66 L.S 8" Cap (1 EA)

Lump Sum \$ \_\_\_\_\_

67 L.S Fire hydrant, 4.0' curb to invert. (8 EA)

Lump Sum \$ \_\_\_\_\_

68 L.S 1" Service lateral with Type A service connection and all appurtenances off main. (8 EA)

Lump Sum \$ \_\_\_\_\_

69	L.S	1-1/2" Service lateral with Type C service connection and all appurtenances off main. (46 EA)	Lump Sum	\$ _____
70	L.S	Type "X" meter box. (100 EA)	Lump Sum	\$ _____
71	L.S	Pipe marker. (1 EA)	Lump Sum	\$ _____
72	L.S	Valve box including cast iron frame and cover, pipe sleeve and concrete anchor pad. (17 EA)	Lump Sum	\$ _____
73	L.S	Class "B" concrete for reaction blocks, gate valve anchor blocks, etc. (11 CY)	Lump Sum	\$ _____
74	L.S	Reinforced Concrete Jacket for Sewer (10 LF)	Lump Sum	\$ _____
75	L.S	8" Cap with 2" C. O. (Temporary for testing.) (4 EA)	Lump Sum	\$ _____
76	L.S	Class "B" concrete for reaction blocks, gate valve anchor blocks, etc. (Temporary for Testing) (3 CY)	Lump Sum	\$ _____
77	L.S	2" Cleanout/Manhole (2 EA)	Lump Sum	\$ _____

78	L.S.	Pressure Reducing Valve Station, in place complete (see Sheet 36 for layout and materials schedule)	Lump Sum	\$ _____
79	L.S.	6" CMU Wall around Pressure Reducing Valve Station easement	Lump Sum	\$ _____
80	L.S.	Connection to existing main. (4 EA)	Lump Sum	\$ _____
81	L.S.	Chlorination and testing.	Lump Sum	\$ _____

<b>SUB-TOTAL FOR WATER SYSTEM (Items 56 to 81, inclusive)</b>
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\$ _____
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<b>STORM DRAIN SYSTEM</b>
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82	L.S.	Unclassified excavation for drain lines, catch basins, and drywells, including backfill and pipe cushion. (1,360 CY)		
		Unit Price to be used for item \$ _____ / C.Y. for added excavation as needed		
		Lump Sum		\$ _____
83	Allow	6" minus backfill 12" thick if necessary, below the pipe cushion as required in the Geotech Report, in place complete.		
		Unit Price to be used for item \$ _____ / C.Y.		
		Allowance		\$ <u>8,000.00</u>

84	L.S	Standard reinforced concrete catch basin, Type A complete, including top slab and gutter. (13 EA)	Lump Sum	\$ _____
85	L.S	Standard reinforced concrete catch basin over drywells, Modified Type A complete, including top slab and gutter. (20 EA)	Lump Sum	\$ _____
86	L.S	Drywells (5 ft Diameter) (20 ft Deep, minimum), including concrete pipe rings, crushed rocks, footings for concrete pipe rings, backfill, in place complete (20 EA)	Lump Sum	\$ _____
87	L.S	18" Storm Drain Pipe, Reinforced Concrete Pipe, Class III (501 LF)	Lump Sum	\$ _____
88	L.S	Assistance in testing drywells including providing 4000 gallon tanker trucks, water for testing, hoses and operators for discharging water into drywells (for testing by others) (20 EA)	Lump Sum	\$ _____
89	L.S	Assistance in re-testing drywells including providing 4000 gallon tanker trucks, water for testing, hoses and operators for discharging water into drywells (for testing by others) (20 EA)	Lump Sum	\$ _____
<b>SUB-TOTAL FOR STORM DRAIN SYSTEM (Items 82 to 89 inclusive)</b>				<b>\$ _____</b>

**TRAFFIC SIGNAGE AND STRIPING**

90	L.S.	R1-1 "STOP" sign with street name signs and post (7 EA)	Lump Sum	\$ _____
91	L.S.	R7-1 "NO PARKING ANYTIME" sign and post (6 EA)	Lump Sum	\$ _____
92	L.S.	R2-1 (25) "SPEED LIMIT 25" sign and post (9 EA)	Lump Sum	\$ _____
93	L.S.	W14-1 "DEAD END" sign and post (1 EA)	Lump Sum	\$ _____
94	L.S.	W1-1L "LEFT TURN ARROW" sign and post (1 EA)	Lump Sum	\$ _____
95	L.S.	W1-1R "RIGHT TURN ARROW" sign and post (1 EA)	Lump Sum	\$ _____
96	L.S.	Type "DB" two way blue reflector for F.H. (7 EA)	Lump Sum	\$ _____
97	L.S.	Double 4-inch wide, yellow center line (1,700 LF)	Lump Sum	\$ _____
98	L.S.	12-inch wide, solid wide stop bar (70 LF)		

		Lump Sum	\$ _____
99	L.S	12-inch wide, solid white crosswalk line (275 LF)	

		Lump Sum	\$ _____
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<b>SUB-TOTAL FOR TRAFFIC SIGNAGE AND STRIPING (Items 90 to 99 inclusive)</b>
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\$ _____
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<b>MISCELLANEOUS ITEMS</b>
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100	L.S.	Fire Contingency Plan, including preparation, submittal and processing for DHHL acceptance, and all labor, materials and equipment necessary for its implementation throughout the duration of the entire contract
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		Lump Sum	\$ _____
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101	L.S	Project sign for Department of Hawaiian Home Lands (DHHL), in place complete (1 EA)
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		Lump Sum	\$ _____
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102	L.S	Project sign for United States Department of Agriculture (USDA), in place complete (1 EA)
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		Lump Sum	\$ _____
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103	Allow	Additional work to backfill large lava tubes inadvertently encountered that extend greater than 25 feet in either direction beyond the end points of the surface opening and exceed 5 feet in its smallest diameter as measured through the 25-foot length and/or show obvious evidence of transmitting water
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		Allowance	\$ <u>150,000.00</u>
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104 L.S. Temporary traffic control inclusive of, but not limited to preparing and processing a traffic control plan for County approval and all work that may be required by the County as a condition of approval to work in the County right-of-way

Lump Sum \$ \_\_\_\_\_

105 Allow DHHL field directed changes

Allowance \$ 250,000.00

**SUB-TOTAL FOR MISCELLANEOUS ITEMS  
(Items 100 to 105 inclusive)**

\$ \_\_\_\_\_

**EXTERIOR ELECTRICAL IMPROVEMENTS**

106 L.S. Furnish and Install One 2-Inch Concrete Encased HELCO Conduits. Work shall consist of excavation and providing 2" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per HELCO requirements, complete and in place. (2,600 LF)

Lump Sum \$ \_\_\_\_\_

107 L.S. Furnish and Install Two 2-Inch Concrete Encased HELCO Conduits. Work shall consist of excavation and providing 2" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per HELCO requirements, complete and in place. (2,000 LF)

Lump Sum \$ \_\_\_\_\_

108 L.S Furnish and Install Three 2-Inch Concrete Encased HELCO Conduits. Work shall consist of excavation and providing 2" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per HELCO requirements, complete and in place. (200 LF)

Lump Sum \$ \_\_\_\_\_

109 L.S Furnish and Install One 3-Inch Concrete Encased HELCO Conduits. Work shall consist of excavation and providing 3" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per HELCO requirements, complete and in place. (3,300 LF)

Lump Sum \$ \_\_\_\_\_

110 L.S Furnish and Install One 3-Inch Direct Buried HELCO Conduit. Work shall consist of excavation and providing 3" diameter conduit, with spacers, couplings and appurtenances, backfilled per HELCO requirements, complete and in place. (1,500 LF)

Lump Sum \$ \_\_\_\_\_

111 L.S Furnish and Install Two 3-Inch Concrete Encased HELCO Conduits. Work shall consist of excavation and providing 3" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per HELCO requirements, complete and in place. (850 LF)

Lump Sum \$ \_\_\_\_\_

112 L.S Furnish and Install Three 3-Inch Concrete Encased HELCO Conduits. Work shall consist of excavation and providing 3" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per HELCO requirements, complete and in place. (350 LF)

Lump Sum \$ \_\_\_\_\_

113 L.S Furnish and Install Four 3-Inch Direct Buried HELCO Conduits. Work shall consist of excavation and providing 3" diameter conduits, with spacers, couplings and appurtenances, backfilled per HELCO requirements, complete and in place. (50 LF)

Lump Sum \$ \_\_\_\_\_

114 L.S Furnish and Install Two 2-Inch Concrete Encased Street Light PVC Schedule 40 Type Conduit. Work shall consist of excavation and providing 2" diameter conduit, with spacers, couplings, appurtenances, and concrete jacket, backfilled as required, complete and in place. (1,300 LF)

Lump Sum \$ \_\_\_\_\_

115 L.S Furnish and Install Two 2-Inch Direct Buried Street Light PVC Schedule 80 Type Conduit. Work shall consist of excavation and providing 2" diameter conduit, with spacers, couplings and appurtenances, backfilled as required, complete and in place. (3,350 LF)

Lump Sum \$ \_\_\_\_\_

116 L.S Furnish and Install 2'x 3' Reinforced Concrete Pullbox with precast concrete covers, provided in accordance with HELCO standard drawing No. 30-2006, complete and in place. (47 EA)

Lump Sum \$ \_\_\_\_\_

117 L.S Furnish and Install 3'x 5' Reinforced Concrete Handhole with precast concrete covers, provided in accordance with HELCO standard drawing No. 15501, complete and in place. (8 EA)

Lump Sum \$ \_\_\_\_\_

118	L.S	Furnish and Install 4'x 6' Reinforced Concrete Handhole with precast concrete covers, provided in accordance with HELCO standard drawing No. 15501, complete and in place. (16 EA)	Lump Sum	\$ _____
119	L.S	6'x 7' Transformer Pad Lot. Work shall consist of reinforced concrete transformer pad and ground rod, provided as indicated on the drawings and in accordance with HELCO standard drawing. (16 EA)	Lump Sum	\$ _____
120	L.S	Furnish and Install Street Lighting Standard (30W LED). Work shall consist of excavating, constructing reinforced concrete foundation, backfilling, and providing street lighting standard, luminaire and bracket arm in accordance with the County of Hawaii's Department of Public Works Standards and as indicated on the drawings, complete and in place. (36 EA)	Lump Sum	\$ _____
121	L.S	Furnish and Install 17"x30" Quazite Tier 22 Pullbox with precast covers, in accordance with the County of Hawaii's Department of Public Works Standards and as indicated on the drawings, complete and in place. (36 EA)	Lump Sum	\$ _____
122	L.S	Street Lighting Circuit(s) (Multiple System). Work shall consist of providing cables and accessories from street lighting standard to nearest HELCO secondary cable, complete and in place. (4,650 LF)	Lump Sum	\$ _____

**TOTAL FOR EXTERIOR ELECTRICAL IMPROVEMENTS**  
**(Items 106 to 122, Inclusive)**

\$ \_\_\_\_\_

**TELECOMMUNICATION WORK**

123 L.S Furnish and Install Two 1-Inch Direct Buried Telecom Conduits (Tel/CATV) - UD(1X2-1"). Work shall consist of excavation and providing 1" diameter conduits, with spacers, couplings and appurtenances, backfilled per Telecom requirements, complete and in place. (1,400 LF)

Lump Sum

\$ \_\_\_\_\_

124 L.S Furnish and Install Two 1-Inch Concrete Encased Telecom Conduits (Tel/CATV) - UD(1X2-1")E. Work shall consist of excavation and providing 1" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per Telecom requirements, complete and in place. (600 LF)

Lump Sum

\$ \_\_\_\_\_

125 L.S Furnish and Install Four 1-Inch Concrete Encased Telecom Conduits (Tel/CATV) - UD(2X2-1")E. Work shall consist of excavation and providing 1" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per Telecom requirements, complete and in place. (1,300 LF)

Lump Sum

\$ \_\_\_\_\_

126 L.S Furnish and Install Six 1-Inch Direct Buried Telecom Conduits (Tel/CATV) - UD(3X2-1"). Work shall consist of excavation and providing 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (50 LF)

Lump Sum

\$ \_\_\_\_\_

127 L.S Furnish and Install Four 4-Inch Direct Buried Telecom Conduits (Tel/CATV) - UD(2X2-4"). Work shall consist of excavation and providing 4" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (100 LF)

Lump Sum

\$ \_\_\_\_\_

128 L.S Furnish and Install Two 4-Inch Concrete Encased Telecom Conduits - UD(1X2-4")E. Work shall consist of excavation and providing 4" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per Telecom requirements, complete and in place. (550 LF)

Lump Sum

\$ \_\_\_\_\_

129 L.S Furnish and Install Two 4-Inch & Two 1-Inch Direct Buried Telecom Conduits - UD(1x2-4") & UD(1x2-1")D. Work shall consist of excavation and providing 4" & 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (500 LF)

Lump Sum

\$ \_\_\_\_\_

130 L.S Furnish and Install Two 4-Inch & Four 1-Inch Direct Buried Telecom Conduits - UD(1x2-4") & UD(2x2-1")D. Work shall consist of excavation and providing 4" & 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (1,000 LF)

Lump Sum

\$ \_\_\_\_\_

131 L.S Furnish and Install Two 4-Inch & Six 1-Inch Direct Buried Telecom Conduits - UD(1x2-4") & UD(2x3-1")D. Work shall consist of excavation and providing 4" & 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (150 LF)

Lump Sum \$ \_\_\_\_\_

132 L.S Furnish and Install Two 4-Inch & Eight 1-Inch Direct Buried Telecom Conduits - UD(1x2-4") & UD(2x4-1")D. Work shall consist of excavation and providing 4" & 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (150 LF)

Lump Sum \$ \_\_\_\_\_

133 L.S Furnish and Install Two 4-Inch & Ten 1-Inch Direct Buried Telecom Conduits - UD(1x2-4") & UD(2x5-1")D. Work shall consist of excavation and providing 4" & 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (50 LF)

Lump Sum \$ \_\_\_\_\_

134 L.S Furnish and Install Two 4-Inch Direct Buried Telecom Conduits - UD(1x2-4")D. Work shall consist of excavation and providing 4" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (2,300 LF)

Lump Sum \$ \_\_\_\_\_

135 L.S Furnish and Install Four 4-Inch & Four 1-Inch Direct Buried Telecom Conduits - UD(2x2-4") & UD(2x2-1")D. Work shall consist of excavation and providing 4" & 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (50 LF)

Lump Sum \$ \_\_\_\_\_

136 L.S Furnish and Install Four 4-Inch & Two 1-Inch Direct Buried Telecom Conduits - UD(2x2-4") & UD(1x2-1")D. Work shall consist of excavation and providing 4" & 1" diameter conduits, with spacers, couplings, and appurtenances, backfilled per Telecom requirements, complete and in place. (100 LF)

Lump Sum \$ \_\_\_\_\_

137 L.S Furnish and Install Six 1-Inch Concrete Encased Telecom Conduits - UD(2X3-1")E. Work shall consist of excavation and providing 1" diameter conduits, with spacers, couplings, appurtenances, and concrete jacket, backfilled per Telecom requirements, complete and in place. (100 LF)

Lump Sum \$ \_\_\_\_\_

138 L.S Furnish and Install 13"x 24" x 30" Type UHC 13x24x30 Polymer Concrete Pullbox with polymer concrete covers, cable racks, and ground rod, provided in accordance with Telecom standard requirements, complete and in place. (2 EA)

Lump Sum \$ \_\_\_\_\_

139 L.S Furnish and Install 30"x 48" x 36" Type UHC 30x48 Polymer Concrete Pullbox with 20K "traffic" rated polymer concrete covers, cable racks, and ground rod, provided in accordance with Telecom standard requirements, complete and in place. (23 EA)

Lump Sum

\$ \_\_\_\_\_

140 L.S Furnish and Install 3'x 5' Type UH-35 reinforced concrete handhole with galvanized slip-not covers, "Telecom" inscribed on covers. Provided in accordance with Telecommunication System requirements, Type UH-3x5. (2 EA)

Lump Sum

\$ \_\_\_\_\_

141 L.S Furnish and Install Housing Ground Assembly Unit BM 2(5/8)(8), with copper clad ground rod clamp and the required length of bare #6 AWG tinned copper ground wire connected to an auxiliary grounding connector within the housing, provided in accordance with Telecom standard requirements, complete and in place. (2 EA)

Lump Sum

\$ \_\_\_\_\_

<b>TOTAL FOR TELECOMMUNICATION WORK</b> <b>(Items 123 to 141, Inclusive)</b>
---

\$ _____
----------

BASE BID COST ANALYSIS DATA  
RECAPITULATION

I. ROADWAY	(Items 1 to 23, inclusive)	\$ _____
II. LOT GRADING	(Item 24 & 25, inclusive)	\$ _____
III. SEWER SYSTEM	(Items 26 to 55, inclusive)	\$ _____
IV. WATER SYSTEM	(Items 56 to 81 inclusive)	\$ _____
V. STORM DRAIN SYSTEM	(Items 82 to 89, inclusive)	\$ _____
VI. TRAFFIC SIGNAGE AND STRIPING	(Items 90 to 99, inclusive)	\$ _____
VII. MISCELLANEOUS ITEMS	(Items 100 to 105, inclusive)	\$ _____
VIII. EXTERIOR ELECTRICAL WORK	(Items 106 to 122, inclusive)	\$ _____
IX. TELECOMMUNICATION WORK	(Items 123 to 141, inclusive)	\$ _____
<b>TOTAL BASE BID (Items 1 to 141)</b>		<b>\$ _____</b>

TOTAL SUM BID = \_\_\_\_\_ Dollars(\$\_\_\_\_\_).

**The prices herein for the above items shall include all materials, labor, tools, equipment, machinery and all incidentals necessary, inclusive of general excise tax to install or to construct these items in place complete and in accordance with the plans and specifications contained in this IFB.**

The CONTRACTOR shall complete all work as specified or indicated in the Contract Documents on or before Four Hundred And Twenty Six ( 426 ) calendar days after receiving written Notice to Proceed, subject to extensions, as may be granted.

## APPRENTICESHIP AGREEMENT PREFERENCE

Hawaii Revised Statutes §103-55.6 (ACT 17, SLH 2009) provides for a Hawai'i Apprenticeship Preference for public works contracts having an estimated value of \$250,000.00 or more. The preference shall be in the form of a 5% bid adjustment applied to the bidder's amount for bidders that are parties to apprenticeship agreements. The estimated value of this public works contract is \$250,000.00 or more and the apprenticeship agreement preference **shall** apply.

To be eligible for the preference, the bidder shall:

1. Be a party to an apprenticeship agreement registered with the DLIR at the time the bid is made for each apprenticeable trade the bidder will employ to construct the public works project for which the bid is being made.
  - a. The apprenticeship agreement shall be registered and conform to the requirements of HRS Chapter 372.
  - b. Subcontractors do not have to be a party to an apprenticeship agreement for the bidder to obtain the preference.
  - c. The bidder is not required to have apprentices in its employ at the time the bid is submitted to qualify for the preference.
  - d. If a bidder's employee is multi-skilled and able to perform work in more than one trade (for example, a project requires a carpenter and a laborer, and the employee is a carpenter, but is also able to perform the work of a laborer), the bidder need only be a party to the carpenter's apprenticeship agreement and does not need to be a party to the laborer's apprenticeship agreement in order to qualify for the preference. The bidder is not "employing" a laborer, only a carpenter, and so only needs to be a party to the carpenter's apprenticeship agreement.
  - e. Qualification for the preference is given on a project-by-project basis and depends upon the specific offer for a specific project. A bidder's employees may vary from project to project and may qualify for the preference on one project but may not qualify on another project. For example, on one project, if the bidder only employs carpenters to perform work in the carpentry and labor trades, then the bidder only needs to be a party to the carpenter's apprenticeship agreement in order to qualify for the preference. However, on another project if the same bidder employs both carpenters and laborers, then the bidder will not qualify for the preference if the bidder is only a party to the carpenter's apprenticeship agreement and not the laborer's apprenticeship agreement.
2. State the trades the bidder will employ to perform the work;
3. For each trade to be employed to perform the work, the bidder shall submit a completed signed original *CERTIFICATION OF BIDDER'S PARTICIPATION IN APPROVED*

*APPRENTICESHIP PROGRAM UNDER ACT 17 (Certification Form 1)* verifying the participation in an apprenticeship program registered with the State Department of Labor and Industrial Relations (DLIR);

4. The *Certification Form 1* shall be authorized by an apprenticeship sponsor of the DLIR list of registered apprenticeship programs. The authorization shall be an original signature by an authorized official of the apprenticeship sponsor; and
5. The completed *Certification Form 1* for each trade must be submitted by the bidder with the offer. A facsimile or copy is acceptable to be submitted with the offer; however, the completed **signed original** must be submitted within five (5) working days of the due date of the offer. If the signed original is not received within this timeframe, the preference may be denied. Previous certifications shall not apply.

Failure to comply with ALL of the conditions noted above, without exception, shall disqualify the Bidder from qualifying for, and thus receiving, benefit of the Hawai'i Apprenticeship Preference.

The *Certification Form 1* and the List of Construction Trades in Registered Apprenticeship Programs is available on the DLIR website at: <http://labor.hawaii.gov/wdd/>.

Upon receiving *Certification Form 1*, the DHHL will verify with DLIR that the apprenticeship program is on the list of apprenticeship programs registered with the DLIR. If the program(s) are not confirmed by the DLIR, the bidder will not qualify for the preference.

If the bidder is certified to participate in an apprenticeship program for each trade which will be employed by the bidder for the project, a preference will be applied to decrease the bidder's total bid amount by five per cent (5%) for evaluation purposes.

Should the bidder qualify for other preferences (for example, Hawaii Products Preference), all applicable preferences shall be applied to the bid amount.

While preference for Hawai'i Apprenticeship will be taken into consideration to determine the low bidder, the contract awarded shall be the original bid amount, exclusive of any preferences. The preference is only for evaluation purposes.

The bidder hereby certifies that it will employ the following apprenticeable trades to perform the work for this project:





## METHOD OF AWARD

Bidder is required to bid on the entire project. The low bidder shall be determined by the procedures outlined in items 1) through 4) below:

- 1) Prior to opening of bids, the State will determine the amount of funds available for the project. This amount will be designated the "control amount". The control amount shall be announced at, and prior to the opening of bids.
- 2) The Base Bid and Alternate, if any, of each Bidder will be adjusted to reflect the applicable preferences in accordance with Chapter 103D, HRS. The Alternate, if any, will then be added to the Base Bid and compared with the control amount.
- 3) The low bidder shall be the Bidder having the lowest aggregate amount, within the control amount (after application of the various preferences), for the Base Bid plus the Alternate, if any.
- 4) If adding the Alternate, if any, would make the aggregate amount exceed the control amount for all Bidders, the low bidder shall be the Bidder having the lowest Base Bid after application of the various preferences.

It is further understood and agreed that:

- 1) The Chairman reserves the right to reject any and/or all bids and waive any defects when, in his opinion, such rejection or waiver will be in the best interest of the State.
- 2) After determining the low bidder, an award may be made either on the amount of the Base Bid alone, or including the Alternate (exclusive of preferences), if:
  - a. It is in the best interest of the State;
  - b. Funds are available at time of the award; and
  - c. The combination of the Base Bid plus Alternate does not change the apparent low bidder.
- 3) In the event the Base Bid for all Bidders exceed the control amount, the Chairman reserves the right to negotiate with the lowest responsible and responsive bidder to award a contract within available funds.
- 4) In the event the award is made for the Base Bid alone, the Chairman reserves the right to amend the contract at a later date to include the Alternate should funds subsequently become available.

## OTHER CONDITIONS

- 1) The liquidated damages per working day for failure to complete the work on time have been determined and are noted in the Special Conditions of the sample contract.
- 2) By submitting this bid, the undersigned is declaring that his firm has not been assisted or represented on this matter by an individual who has, in a State capacity, been involved in the subject matter of this contract in the past one (1) year.
- 3) By submitting this bid, the undersigned is declaring that Bidder's own organization will perform at least 20% of the contractor's work. For the purposes of this section, the Contractor's work is defined as: direct cost labor for contractor's forces; direct cost materials installed by the contractor's direct cost labor force; direct cost equipment, either owned or leased, used by the contractor's direct cost labor force; and field overhead cost to include: field supervision, field office trailer (if any), field office equipment and supplies, etc.
- 4) Upon the acceptance of the bid by the Chairman, the undersigned must enter into and execute a contract for the same and furnish a Performance and Payment Bond, as required by law. These bonds shall conform to the provisions of Sections 103D-324 and 325, Hawaii Revised Statutes, and any law applicable thereto.
- 5) The quantities given herewith are approximate only and are subject to increase or decrease.
- 6) The estimated quantities shown for items for which a UNIT PRICE is asked in this bid are only for the purpose of comparing on a uniform basis bids offered for the work under this contract. No claim shall be filed for anticipated profit or loss because of any difference between the quantities of the various classes of work done or the materials and equipment actually installed and the said estimated quantities. Payment on UNIT PRICE items will be made only for the actual number of units incorporated into the finished project at the contract UNIT PRICE.
- 7) If the product of the UNIT PRICE BID and the number of units does not equal the total amount stated by the undersigned in the Bid for any item, it will be assumed that the error was made in computing the total amount. For the purpose of determining the lowest Bidder, the stated UNIT PRICE alone will be considered as representing the Bidder's intention and the total amount bid on such items shall be considered to be the amount arrived at by multiplying the UNIT PRICE by the number of units.
- 8) Certification for Safety and Health Programs for Bids in Excess of \$100,000. In accordance with Sections 103D-327 and 396-18, Hawaii Revised Statutes, by submitting this bid, the undersigned certifies that his firm will have a written Safety and Health Plan for this project that will be available and implemented by the Notice to Proceed date of

this project. Details of the requirements of this plan may be obtained from the Department of Labor and Industrial Relations, Occupational, Safety and Health Division.

- 9) Any contract arising out of this offer is subject to the approval of the Department of the Attorney General as to form, and to all further approvals, including the approval of the Governor, required by statute, regulation, rule, order, or other directive.

Receipt of the following addenda issued by the Department is acknowledged by the date(s) of receipt indicated below:

	Date		Date
Addendum No. 1	_____	Addendum No. 5	_____
Addendum No. 2	_____	Addendum No. 6	_____
Addendum No. 3	_____	Addendum No. 7	_____
Addendum No. 4	_____	Addendum No. 8	_____

It is understood that failure to receive any such addendum shall not relieve the Contractor from any obligation under this IFB as submitted.

Bid Security in the amount of: \_\_\_\_\_

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ )

as required by law, is enclosed herewith in the form of:

- |  |   |
|--|---|
| <input type="checkbox"/> Surety Bond (*1)            | <input type="checkbox"/> Official Check (*3)    |
| <input type="checkbox"/> Legal Tender (*2)           | <input type="checkbox"/> Share Certificate (*3) |
| <input type="checkbox"/> Cashier's Check (*3)        | <input type="checkbox"/> Teller's Check (*3)    |
| <input type="checkbox"/> Certificate of Deposit (*3) | <input type="checkbox"/> Treasurer's Check (*3) |
| <input type="checkbox"/> Certified Check (*3)        |   |

Respectfully submitted,

\_\_\_\_\_  
Name of Company, Joint Venture or Partnership

\_\_\_\_\_  
License No.

By \_\_\_\_\_  
Signature (\*4)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
Telephone No.: \_\_\_\_\_

(IF A CORPORATION, AFFIX CORPORATE SEAL TO SIGNATURE, BE SURE TO FILL IN ATTACHED LIST OF SUBCONTRACTORS. THIS BID FORM MAY NOT BE ALTERED AND BIDDERS MAY NOT QUALIFY OR CONDITION THEIR BIDS IN ANY WAY.)

PLEASE FILL OUT THE ATTACHED CERTIFICATE OF RESOLUTION GIVING EVIDENCE OF THE AUTHORITY OF THIS OFFICER TO SUBMIT BIDS ON BEHALF OF THE COMPANY.

NOTES:

- \*1. Surety bond underwritten by a company licensed to issue bonds in this State;
- \*2. Legal tender; or
- \*3. A certificate of deposit; share certificate; or cashier's, treasurer's, teller's, or official check accepted by, and payable on demand to the State by a bank, a savings institution, or credit union insured by the Federal Deposit Insurance Corporation of the National Credit Union Administration.
  - A. These instruments may be utilized only to a maximum of \$100,000.
  - B. If the required security or bond amount totals over \$100,000, more than one instrument not exceeding \$100,000 each and issued by different financial institutions shall be accepted.
- \*4. Please attach to this page evidence of the authority of this officer to submit bids on behalf of the Company, and also the names and residence addresses of all officers of the Company.
- \*5. Fill in all blank spaces with information asked for or bid may be invalidated. BID MUST BE INTACT; MISSING PAGES MAY INVALIDATE YOUR BID.

CERTIFICATE OF RESOLUTION

I, \_\_\_\_\_, Secretary of \_\_\_\_\_, a Hawaii Corporation, do hereby certify that the following is a full, true and correct copy of a resolution duly adopted by the Board of Directors of said Corporation, at its meeting duly called and held at the office of the Corporation \_\_\_\_\_, Hawaii, on \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, at which a quorum was present and acting throughout; and that said resolution has not been modified, amended or rescinded and continues in full force and effect.

“RESOLVED that any individual at the time holding the position(s) of \_\_\_\_\_, be, and each of them hereby is, authorized to execute on behalf of the Corporation any bid, proposal or contract for the sale or rental of the products of the Corporation or for the services to be performed by the Corporation and to execute any bond required by any such bid, proposal or contract with the United States Government or the State of Hawaii or the City and County of Honolulu, or any County of Municipal Government of said State, or any department or subdivision of any of them.”

IN WITNESS THEREOF, I have hereunto set my hand and affixed the corporate seal of said \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Secretary

END OF BID

TRUE NORTH  
SCALE: 1" = 40'



FOR CONTINUATION SEE SHEET 14

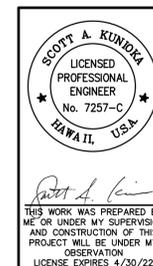
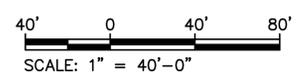
**EARTHWORK QUANTITIES**  
 EXC. = 80,980 CU. YDS.  
 EMB. = 70,310 CU. YDS.  
 AREA TO BE GRADED = 27.3 ACS.

- NOTES:**
1. EARTHWORK QUANTITIES ARE FOR GRADING PERMIT PURPOSES.
  2. QUANTITIES DO NOT INCLUDE SHRINKAGE AND GRUBBING LOSSES.
  3. CONTRACTOR SHALL VERIFY EXIST SITE CONDITIONS PRIOR TO BID.
  4. SEE TYPICAL LOT GRADING DETAILS, SHEET 11 FOR SWALE DETAILS.

**LEGEND**

- 440--- EXIST. CONTOURS
- 440— FINISH CONTOUR LINES
- FUTURE LOT LINE
- (17) LOT NUMBER
- 442.94 FINISH SPOT GRADE
- eg/ts EXISTING GROUND/TOP OF SIDEWALK
- Y Y NEW 2:1 SLOPE
- FLOW DIRECTION
- ← SWALE

**GRADING PLAN 1**  
SCALE: 1" = 40'



REVISION DATE	DESCRIPTION	MADE BY	APPROVED
1/29/2021	ADDENDUM 8	SAK	

DEPARTMENT OF HAWAIIAN HOME LANDS  
 LA'IOPIUA VILLAGE 4 SUBDIVISION  
 PHASE 2 - HEMA  
 TAX MAP KEY: (3)-7-4-21-12 (PORTION)  
 KAILUA-KONA, NORTH KONA, HAWAII

**GRADING PLAN 1**

Approved: \_\_\_\_\_ DATE: \_\_\_\_\_  
 COUNTY ENGINEER, DPW, COUNTY OF HAWAII

AKINAKA & ASSOCIATES, LTD.  
 CONSULTING ENGINEERS

FILE	POCKET	FOLDER	NO.

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 Last Saved: 1/29/2021  
 Plotted on: 2/2/2021  
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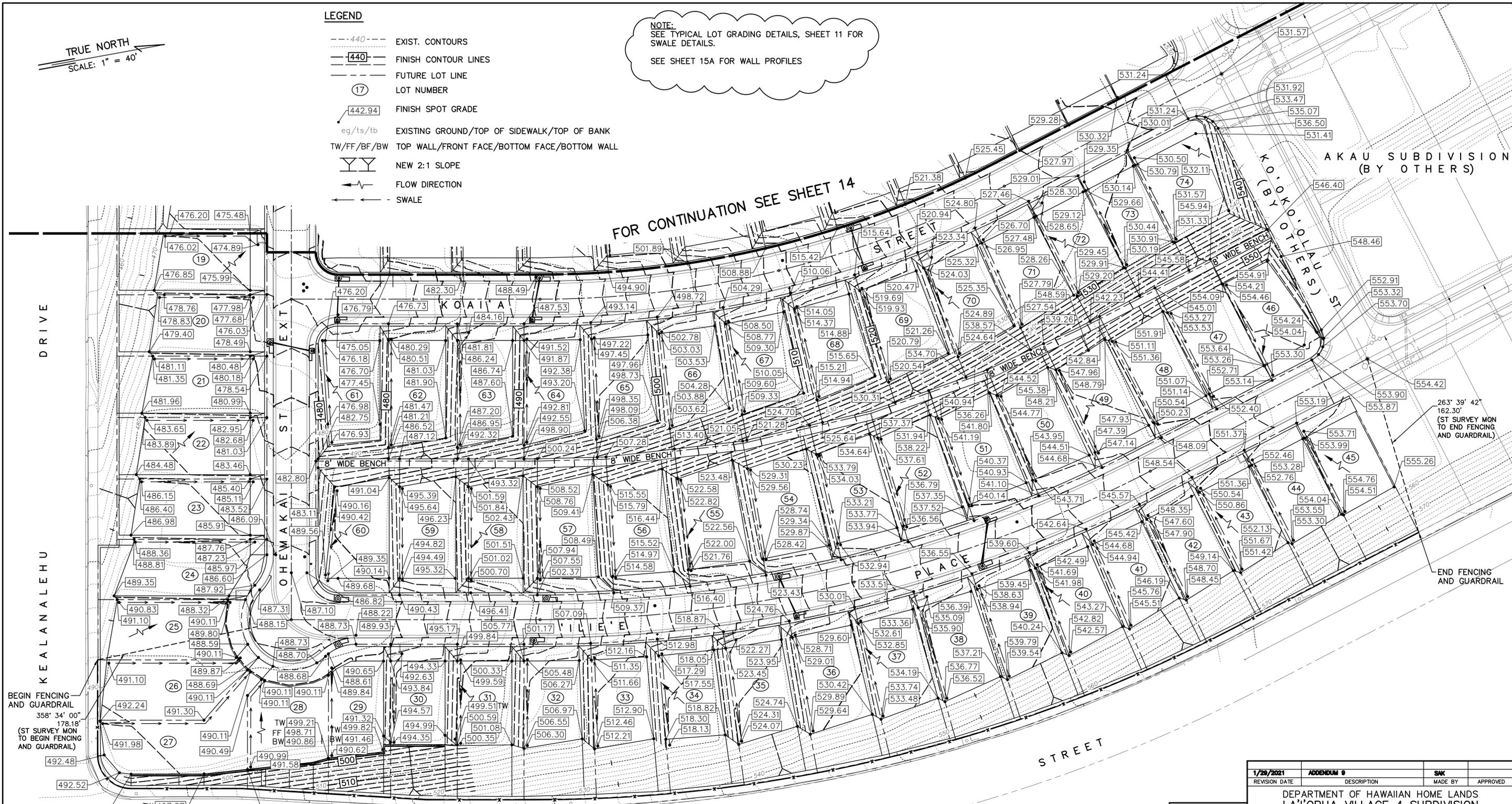


TRUE NORTH  
SCALE: 1" = 40'

- LEGEND**
- 440 --- EXIST. CONTOURS
  - 440 --- FINISH CONTOUR LINES
  - --- FUTURE LOT LINE
  - (17) LOT NUMBER
  - 442.94 FINISH SPOT GRADE
  - eg/ts/tb EXISTING GROUND/TOP OF SIDEWALK/TOP OF BANK
  - TW/FF/BF/BW TOP WALL/FRONT FACE/BOTTOM FACE/BOTTOM WALL
  - NEW 2:1 SLOPE
  - FLOW DIRECTION
  - SWALE

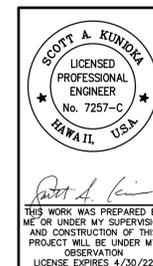
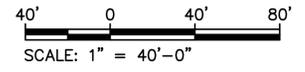
NOTE:  
SEE TYPICAL LOT GRADING DETAILS, SHEET 11 FOR SWALE DETAILS.  
SEE SHEET 15A FOR WALL PROFILES

FOR CONTINUATION SEE SHEET 14

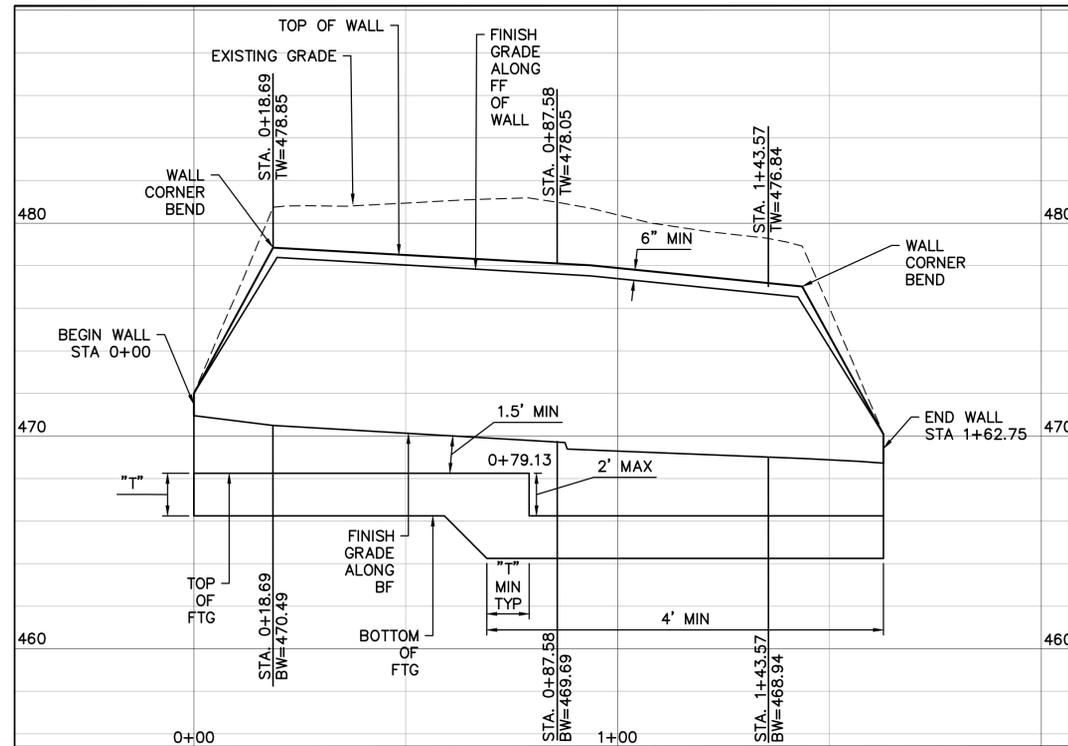


g:\dhh11-02 latopua village  
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 Last Save by: AINOUE  
 Last Saved: 2/1/2021  
 Plotted on: 2/2/2021

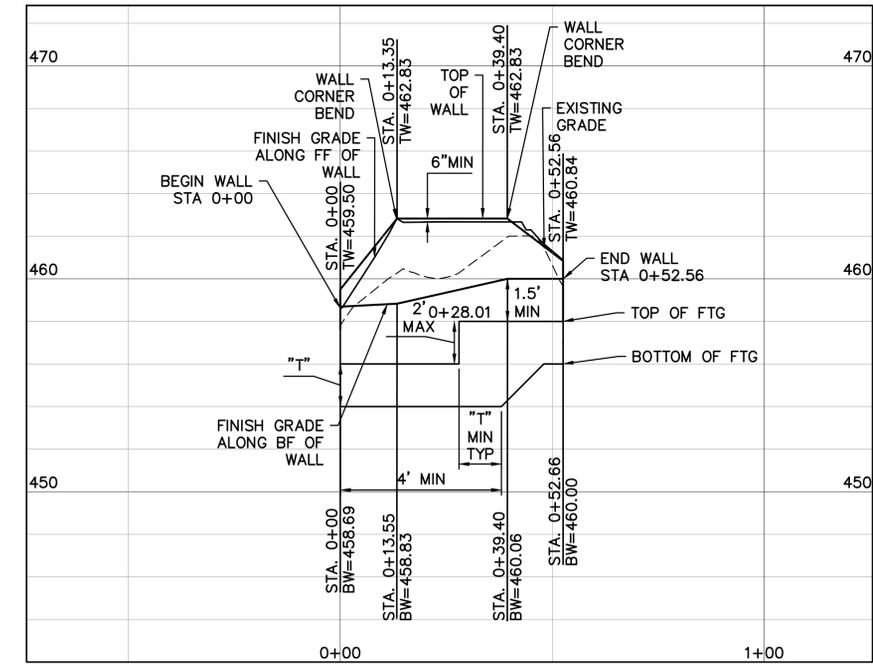
**GRADING PLAN 3**  
SCALE: 1" = 40'



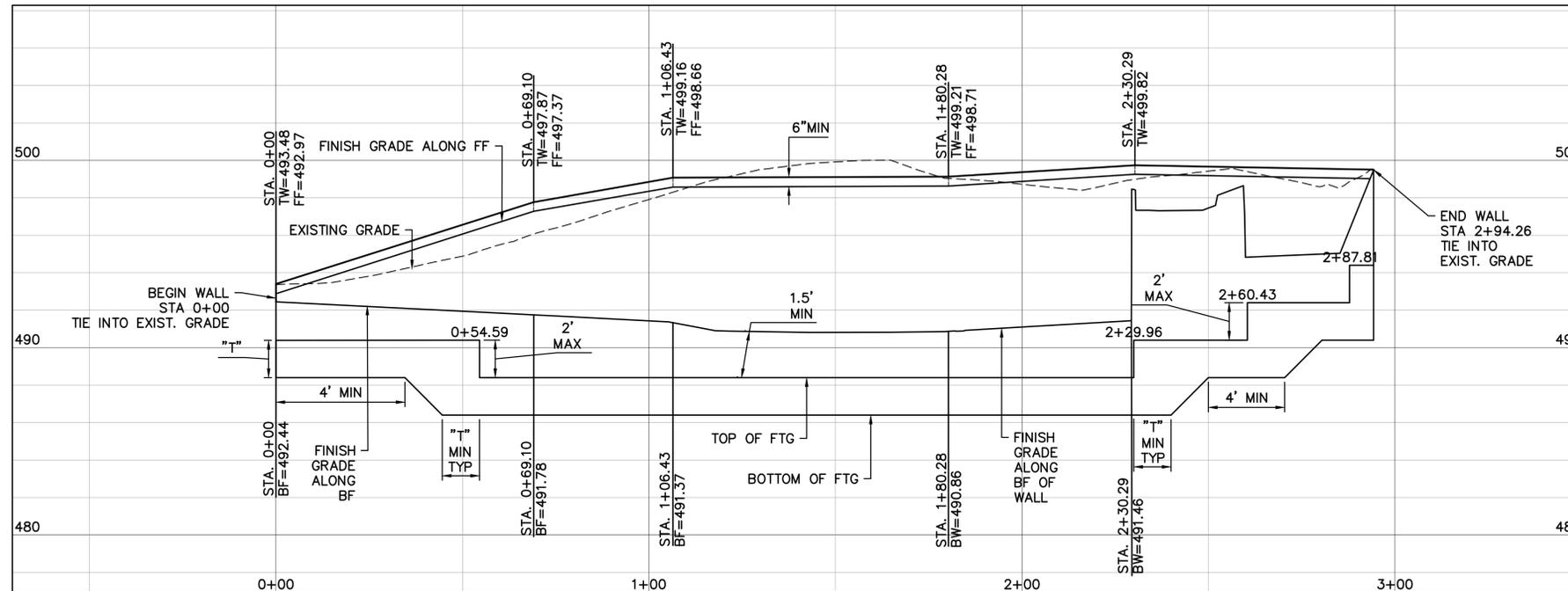
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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY (3) 7-4-21-12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<b>GRADING PLAN 3</b>			
Approved: _____		DATE _____	
COUNTY ENGINEER, DPW, COUNTY OF HAWAII <b>AKINAKA &amp; ASSOCIATES, LTD.</b> CONSULTING ENGINEERS			
FILE	POCKET	FOLDER	NO.



**WALL A PROFILE**  
 SCALE: 1" = 20' (HORIZ)  
 1" = 4' (VERT)



**WALL B PROFILE**  
 SCALE: 1" = 20' (HORIZ)  
 1" = 4' (VERT)



**WALL C PROFILE**  
 SCALE: 1" = 20' (HORIZ)  
 1" = 4' (VERT)

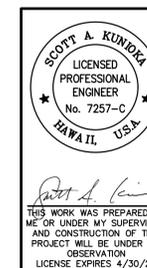
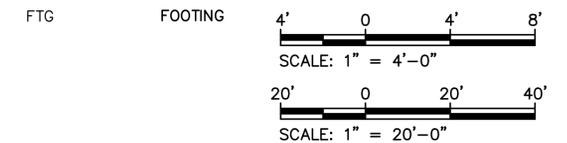
NOTE:  
 SEE PAGE 51, DETAIL (4) S-1  
 FOR TYP WALL CORNER BEND DETAIL

SEE PAGE 51, DETAIL (5) S-1  
 FOR TYP STEP FOOTING DETAIL

SEE RETAINING WALL SHEETS 55 & 56 FOR  
 RETAINING WALL DETAILS

**LEGEND**

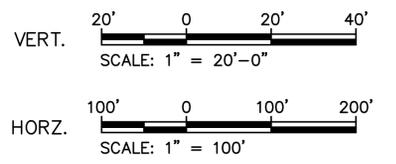
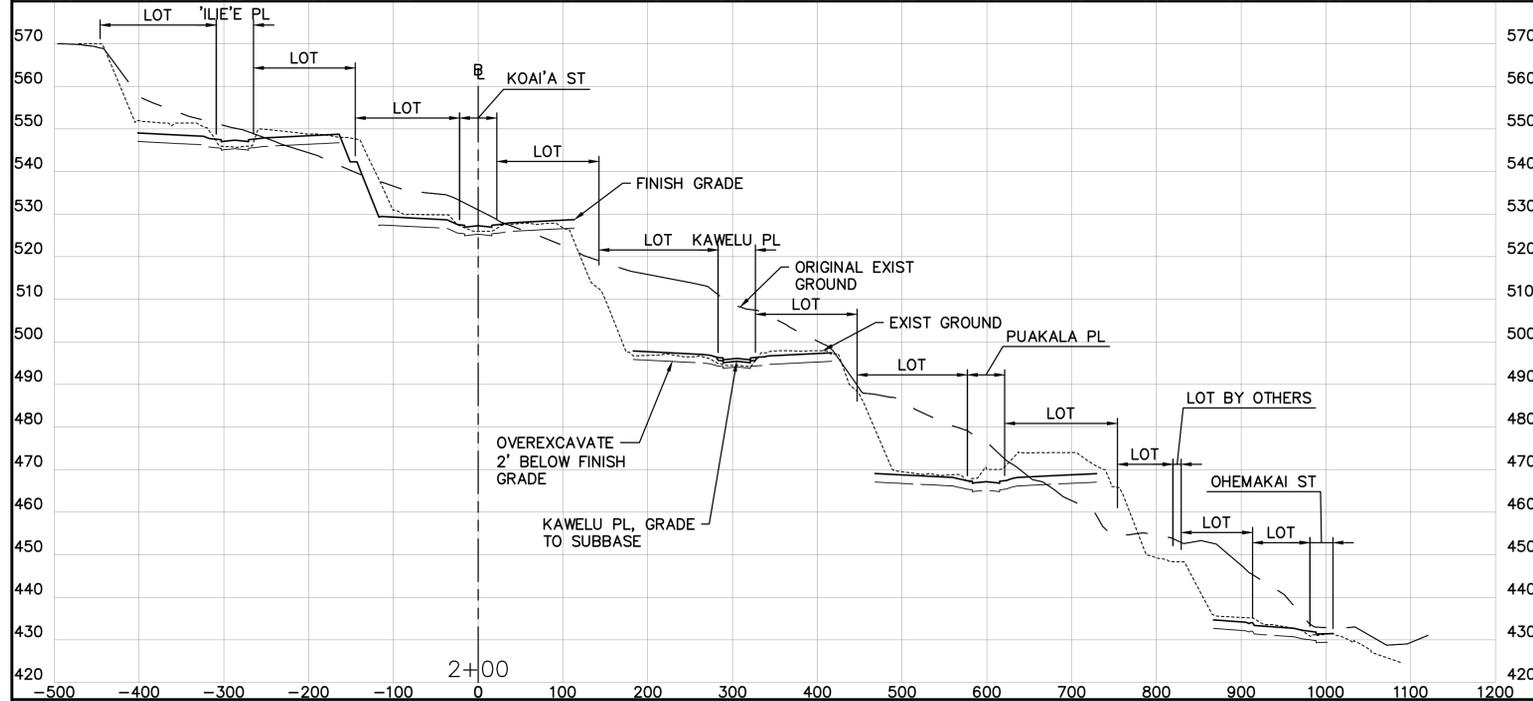
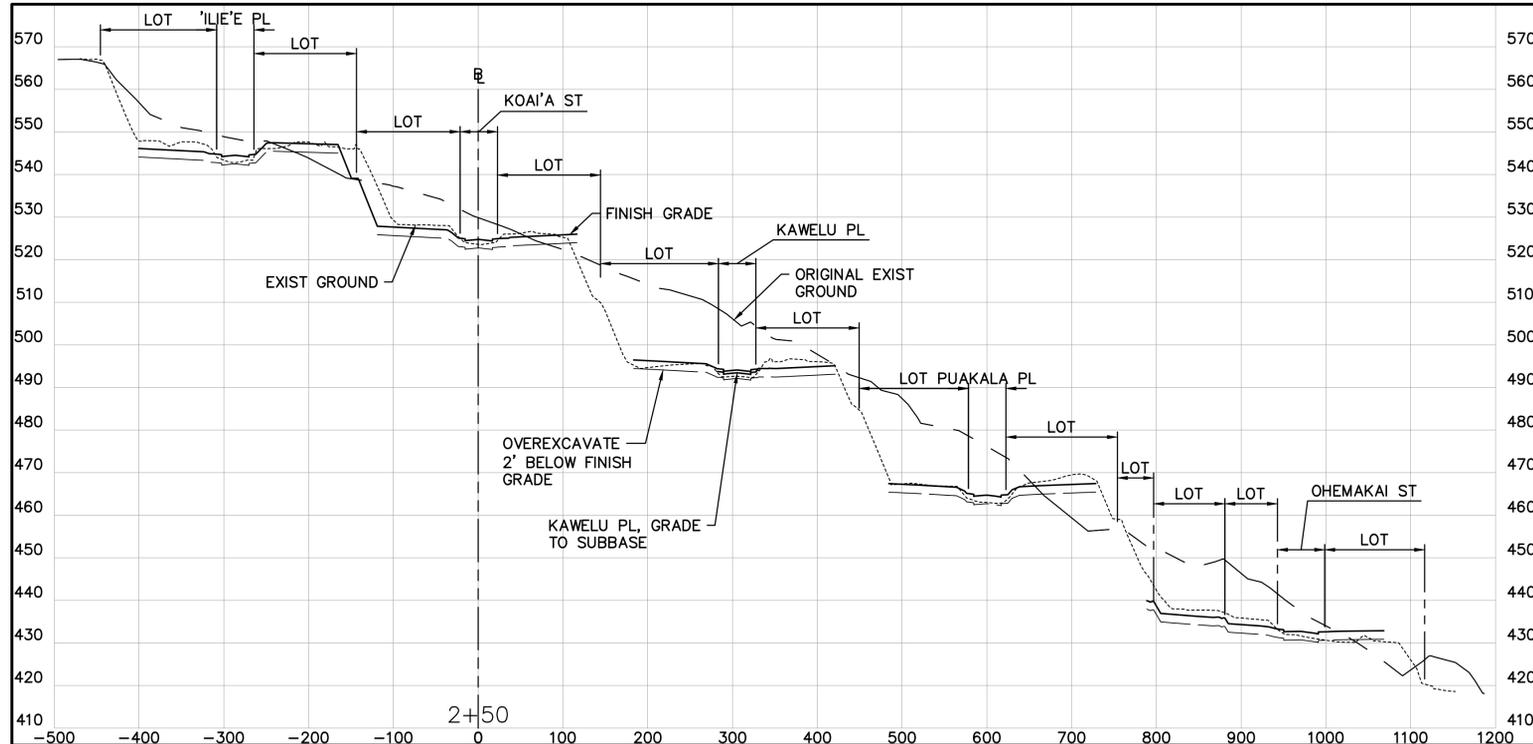
TW/BW/FF/BF TOP OF WALL/BOTTOM OF WALL/FRONT FACE/ BOTTOM FACE



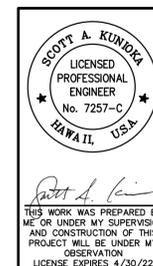
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DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<h2>WALL PROFILES</h2>			
Approved: _____			
COUNTY ENGINEER, DPW, COUNTY OF HAWAII		DATE	
AKINAKA & ASSOCIATES, LTD. CONSULTING ENGINEERS			

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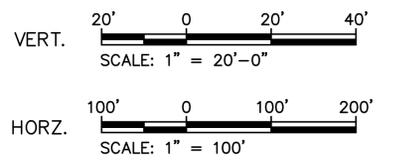
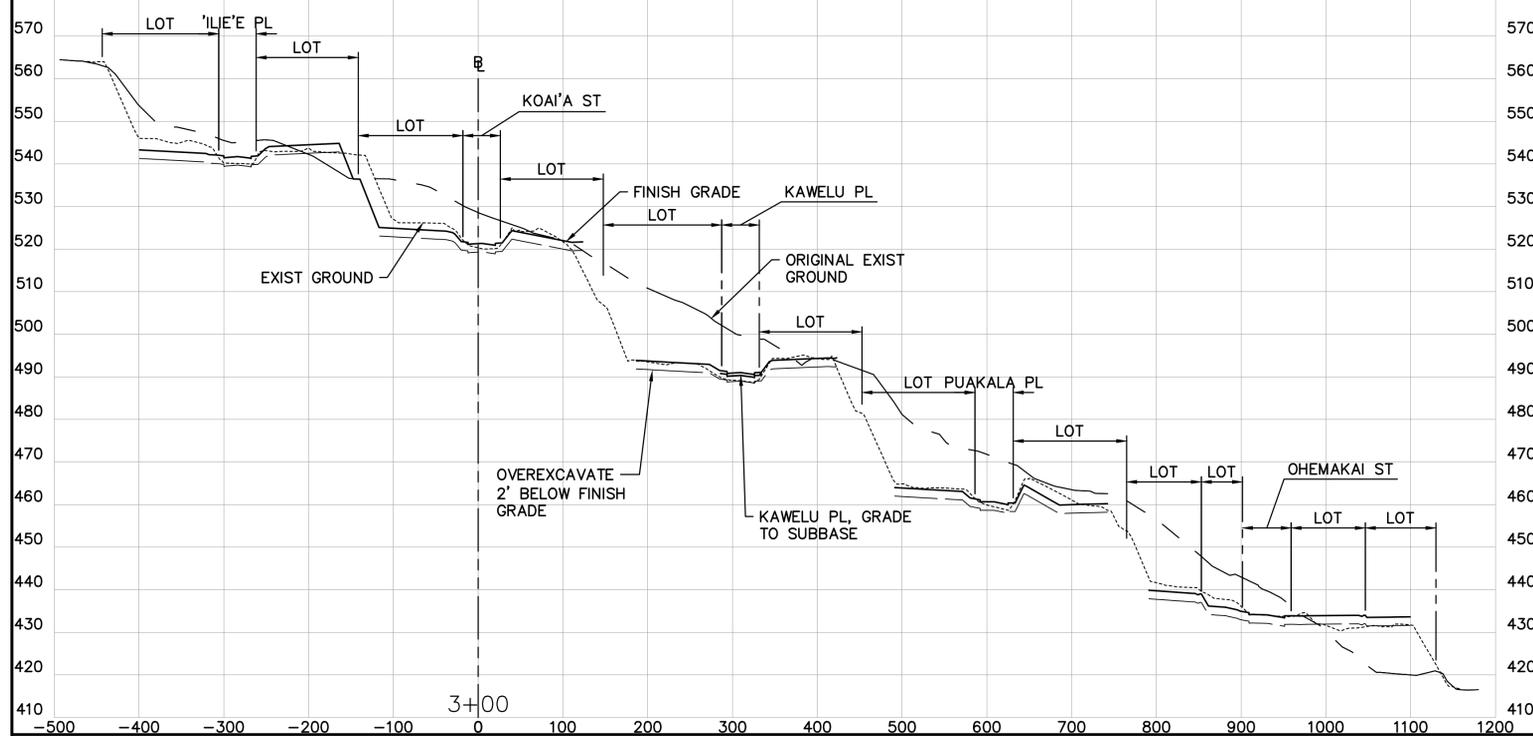
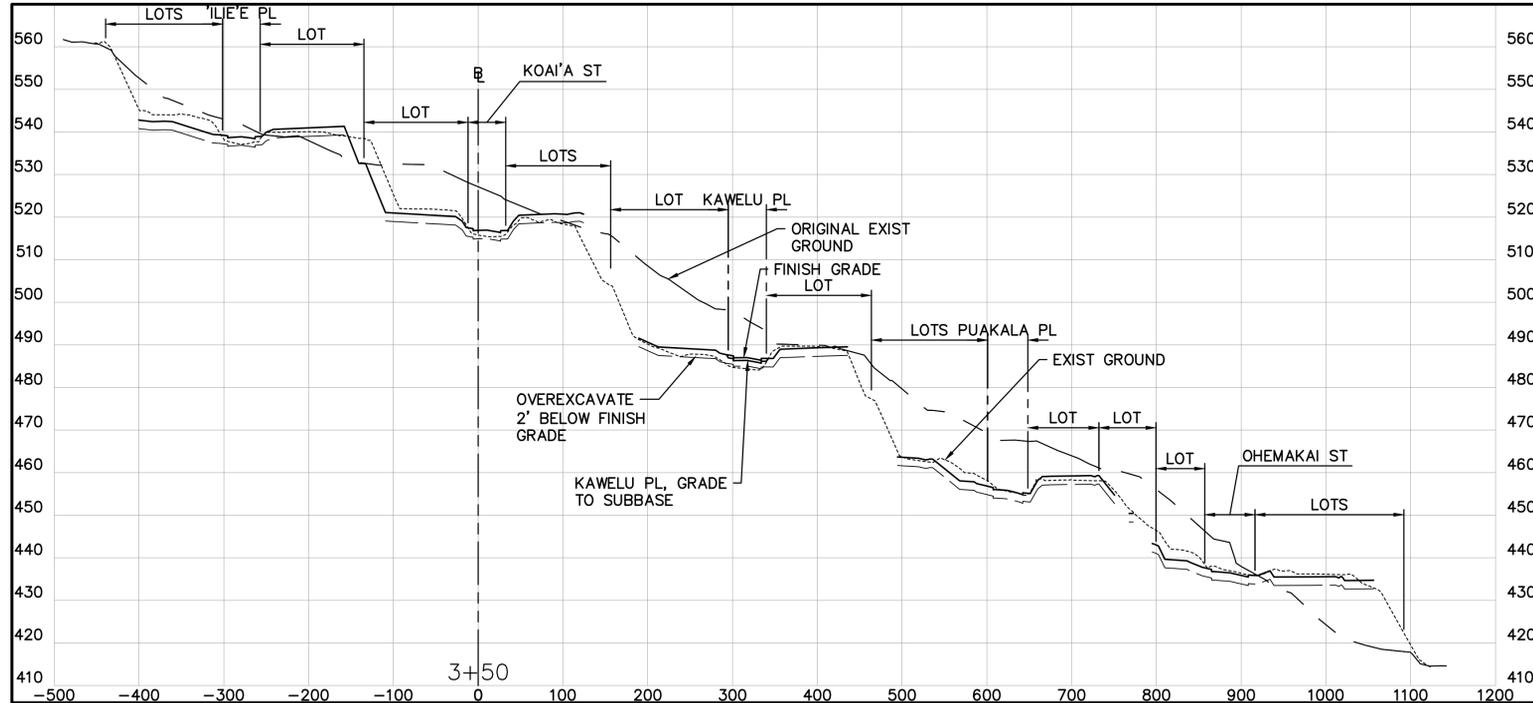




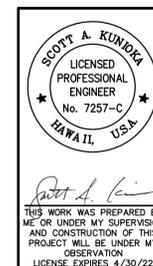
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1/29/2021	ADDENDUM 9	SAK	
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<b>CROSS SECTIONS</b> <b>STA 2+00 TO STA 2+50</b>			
Approved: _____		DATE _____	
COUNTY ENGINEER, DPW, COUNTY OF HAWAII		AKINAKA & ASSOCIATES, LTD.	
CONSULTING ENGINEERS			
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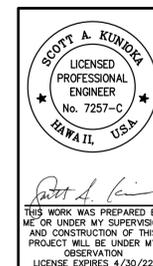
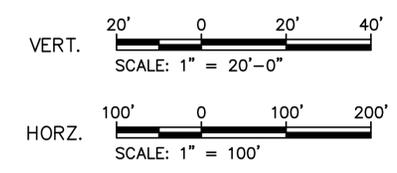
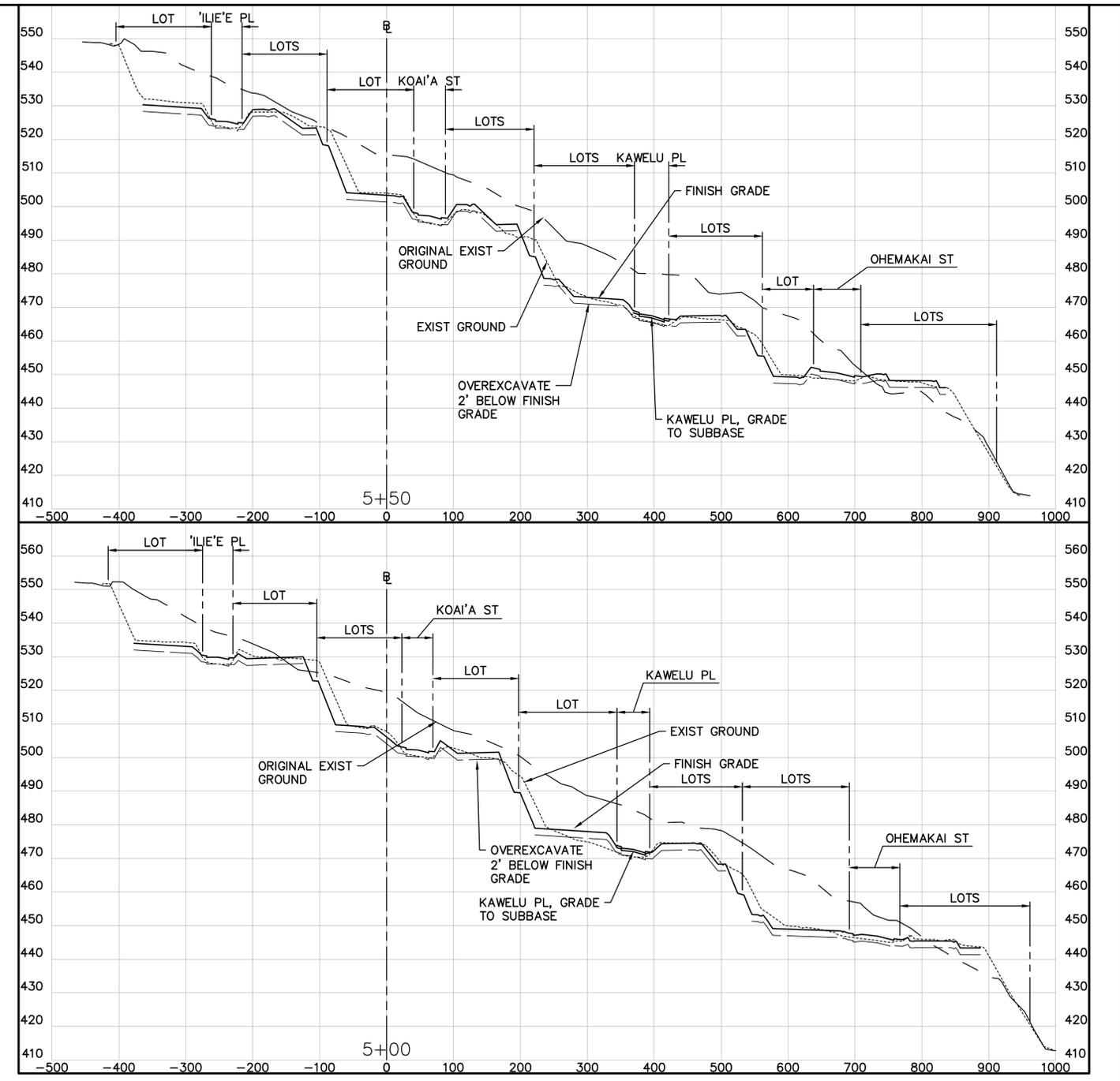
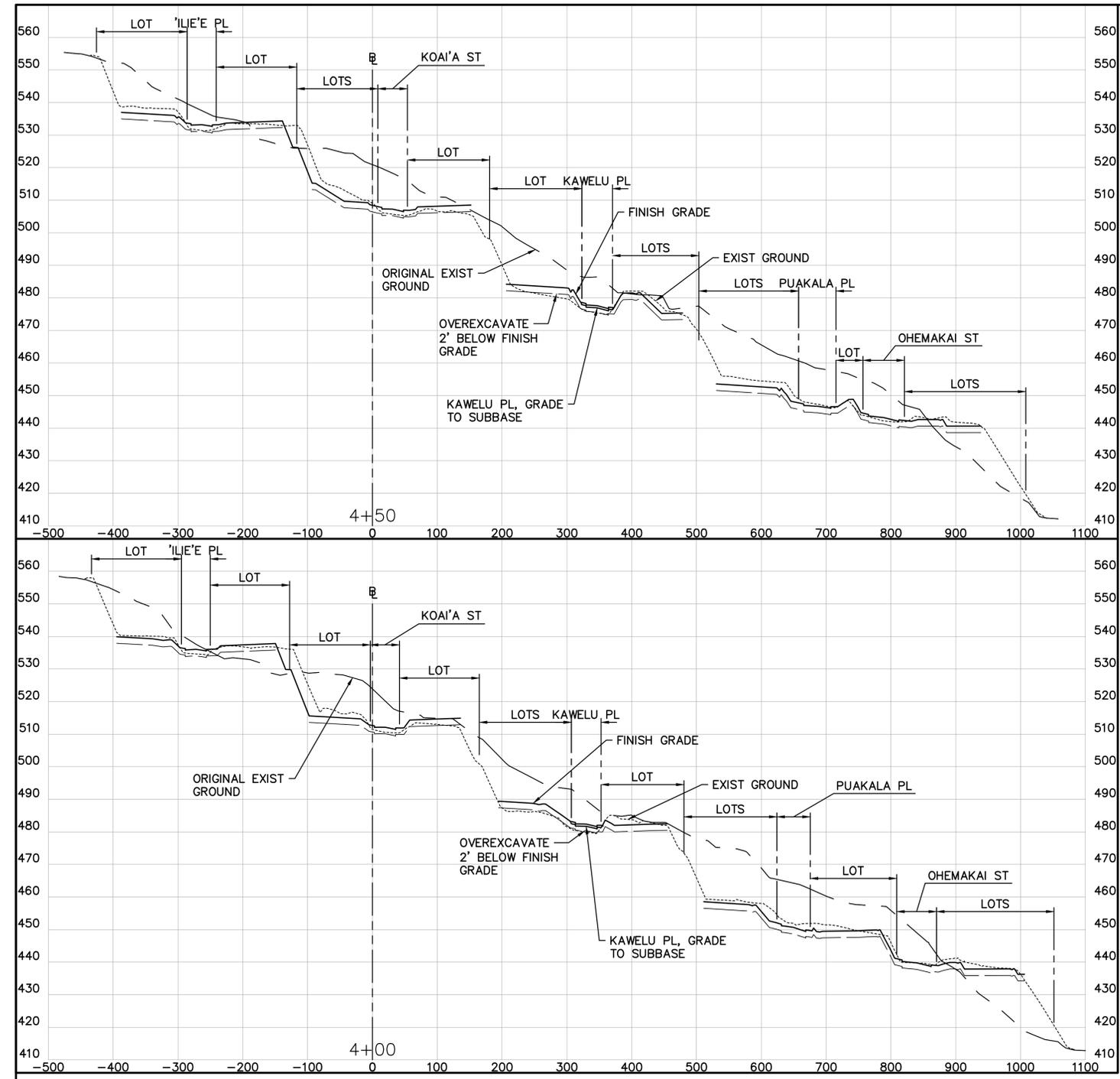
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7/29/2021	ADDENDUM 9	SAK	
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<b>CROSS SECTIONS</b> <b>STA 3+00 TO STA 3+50</b>			
Approved:		DATE	
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AKINAKA & ASSOCIATES, LTD. CONSULTING ENGINEERS			
FILE	POCKET	FOLDER	NO.

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1/29/2021	ADDENDUM 9	SAK	

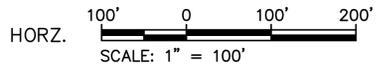
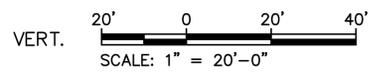
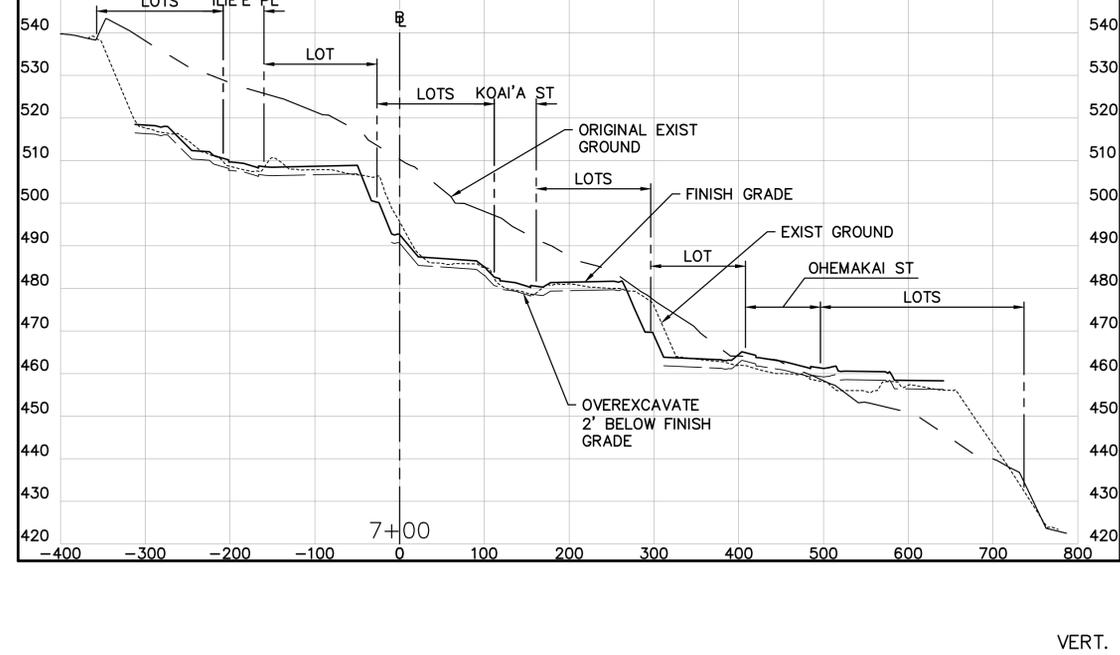
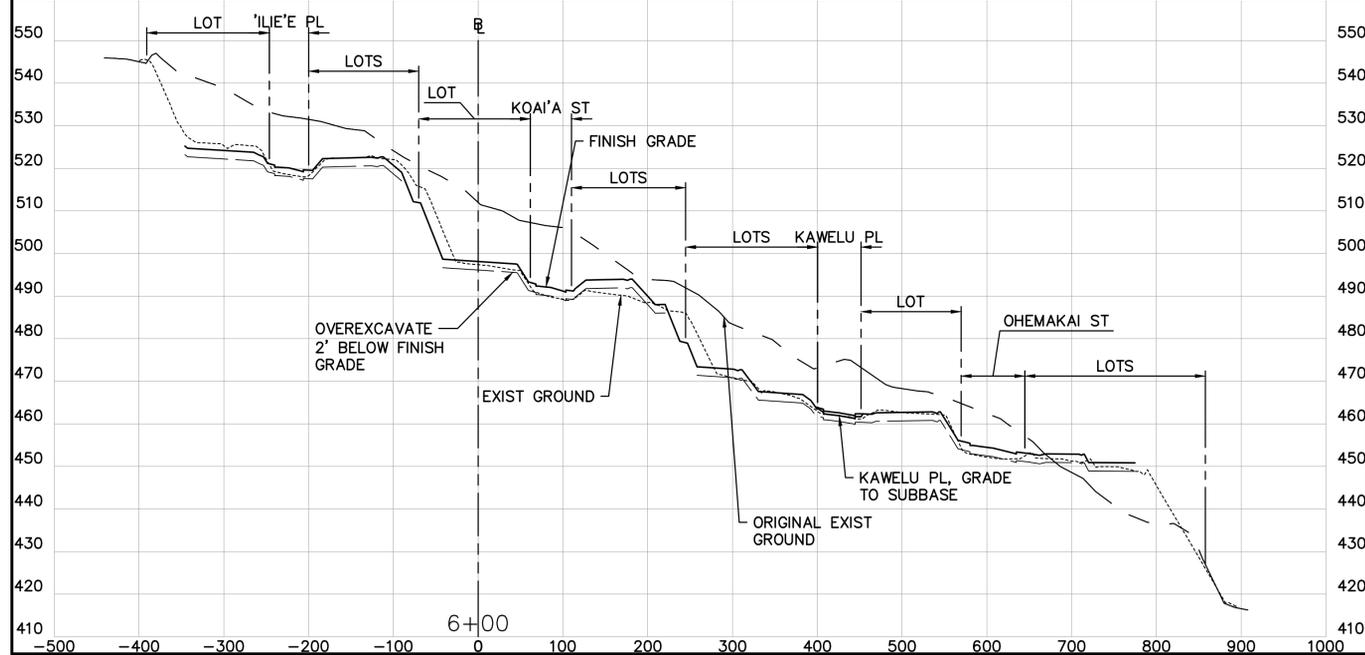
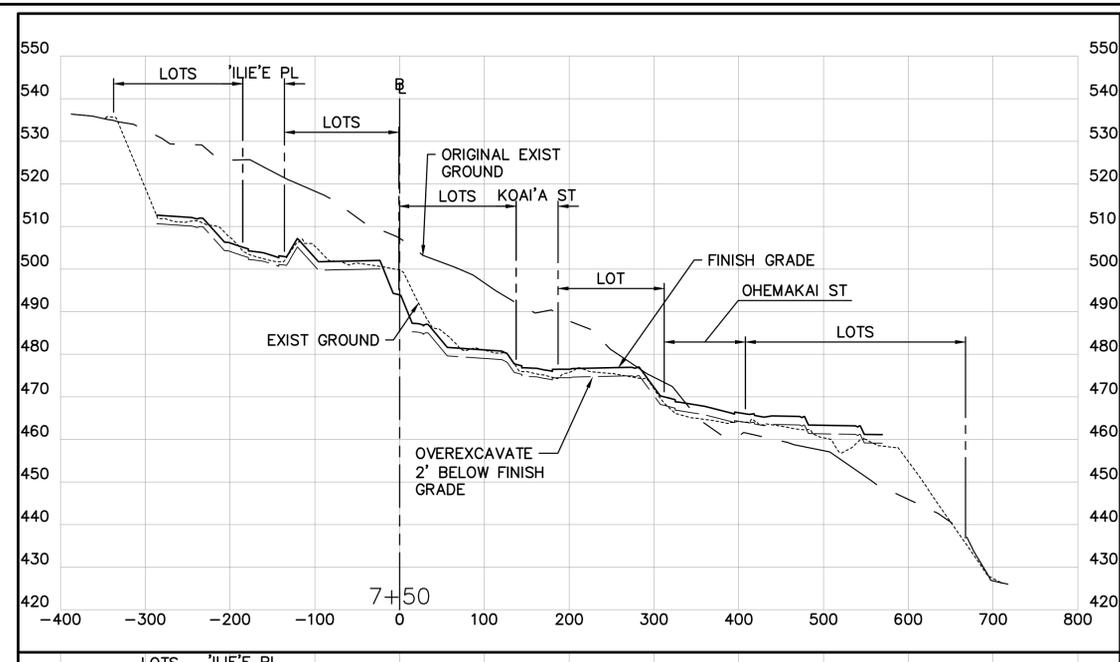
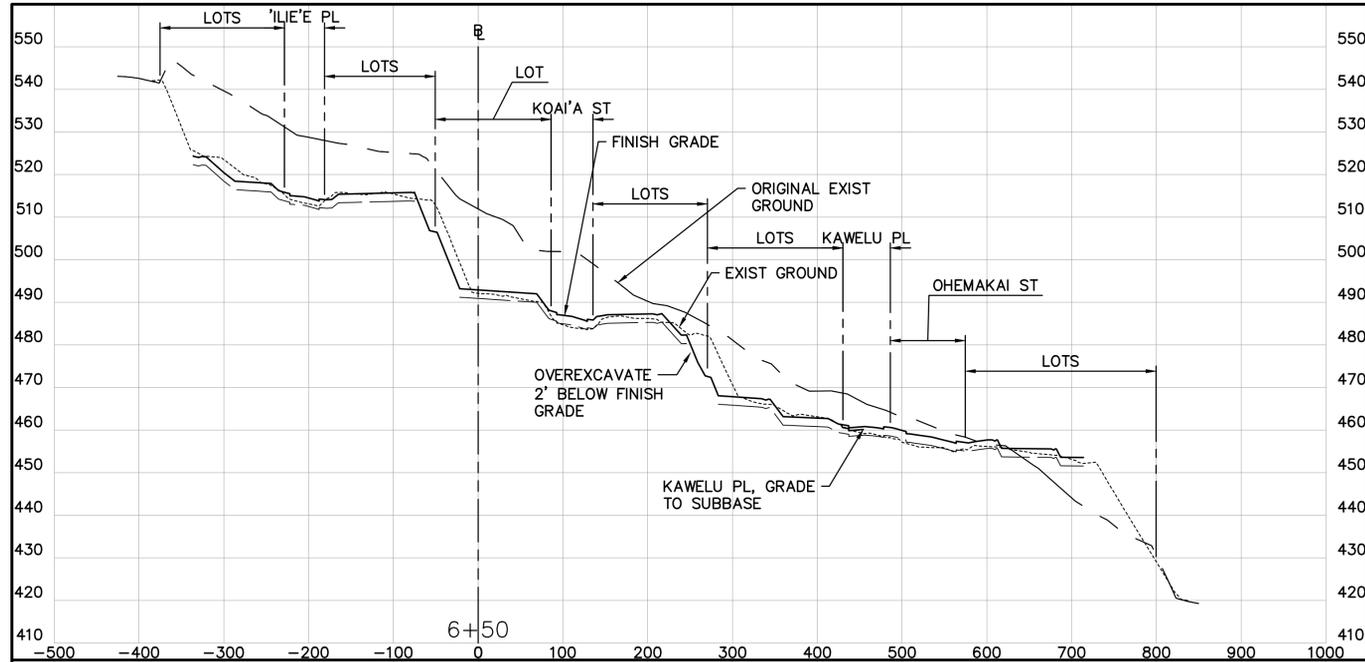
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LA'IOPIUA VILLAGE 4 SUBDIVISION  
PHASE 2 - HEMA  
TAX MAP KEY: (3) 7-4-21:12 (PORTION)  
KAILUA-KONA, NORTH KONA, HAWAII

**CROSS SECTIONS  
STA 4+00 TO STA 5+50**

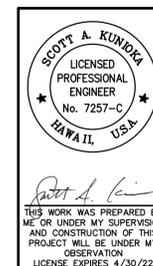
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COUNTY ENGINEER, DPW, COUNTY OF HAWAII DATE \_\_\_\_\_

AKINAKA & ASSOCIATES, LTD.  
CONSULTING ENGINEERS

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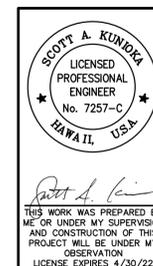
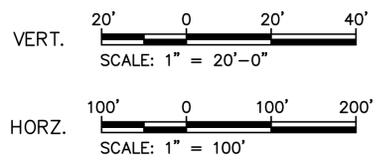
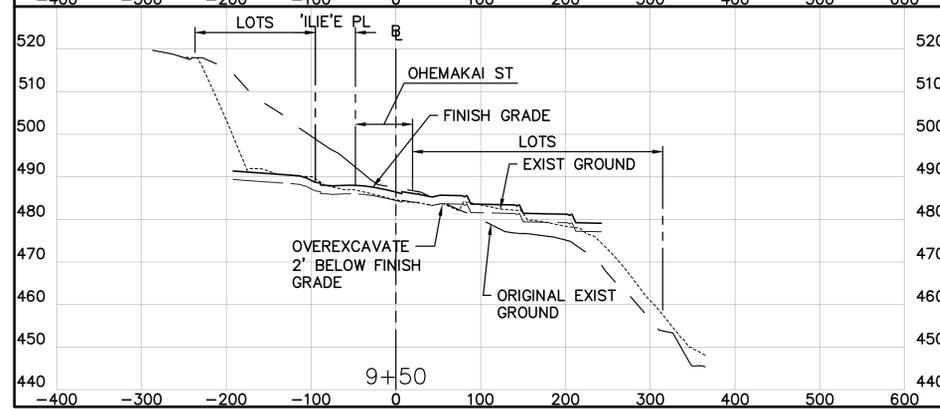
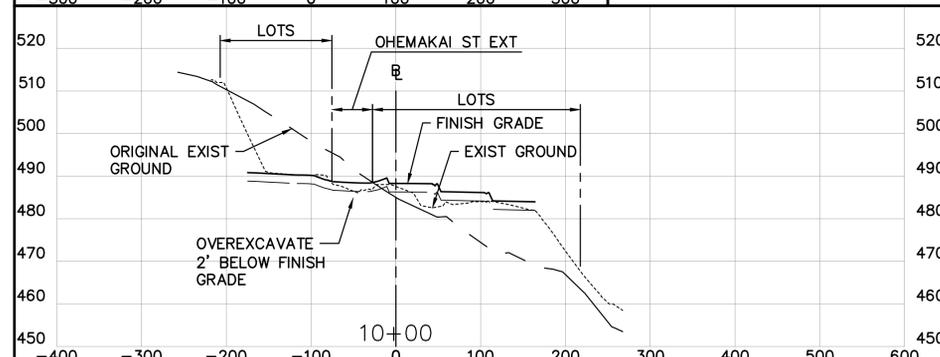
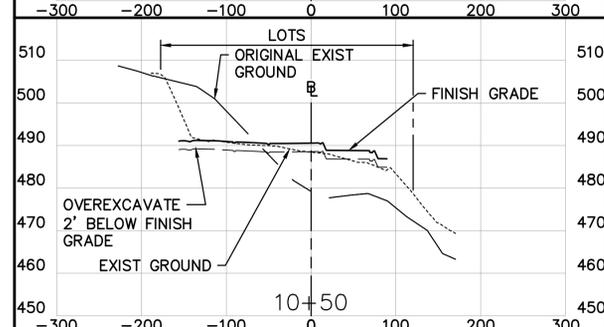
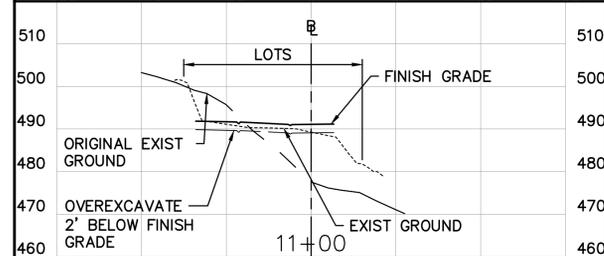
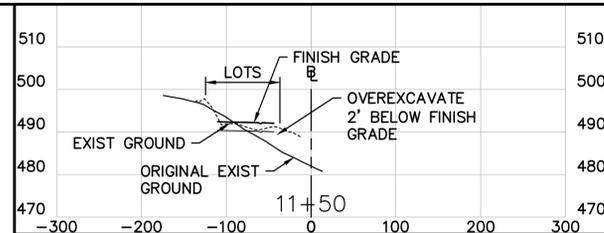
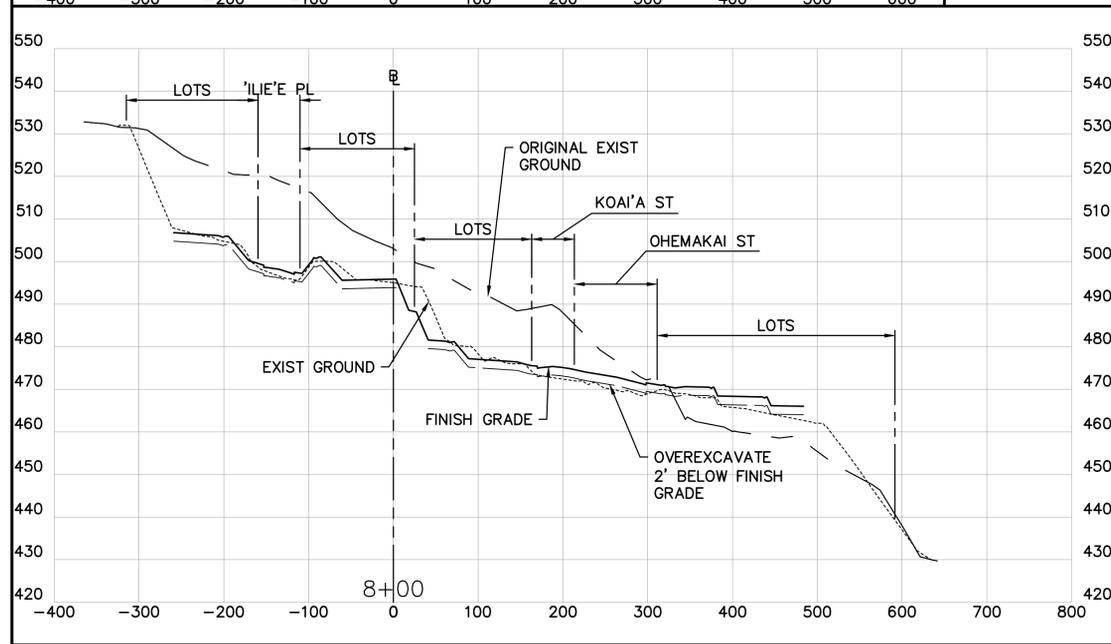
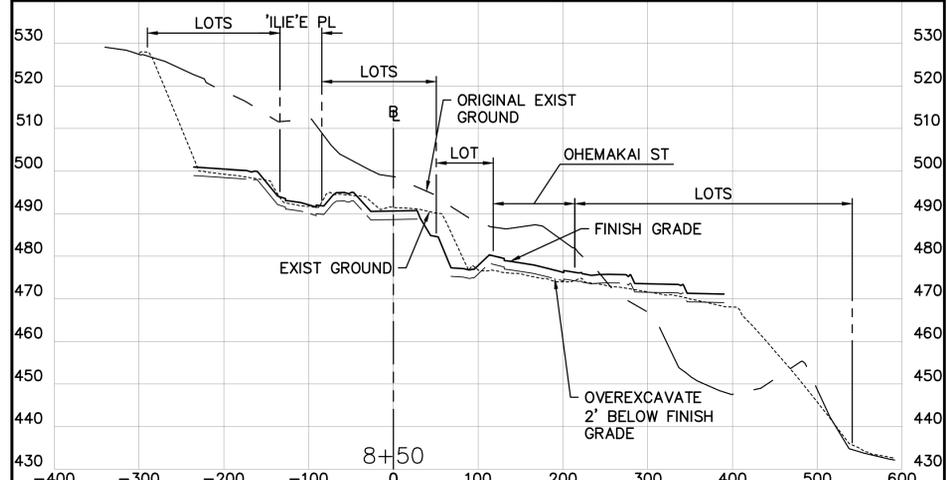
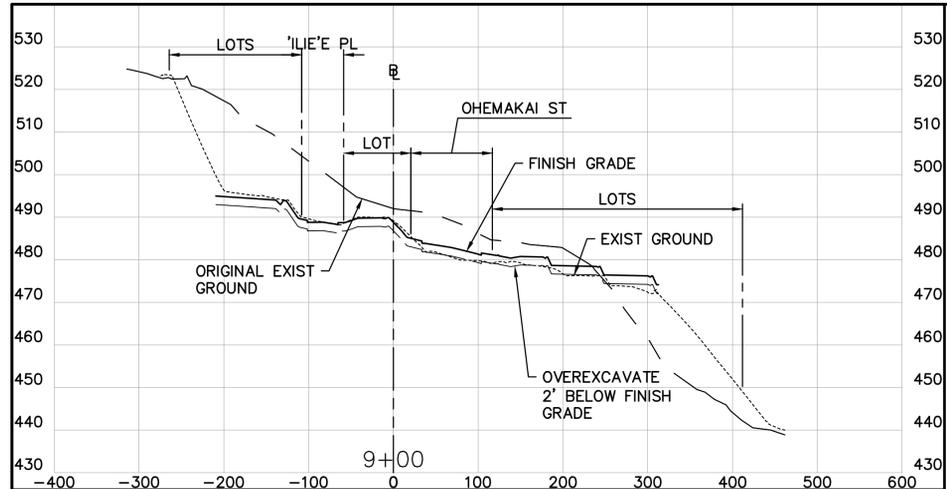
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1/29/2021	ADDENDUM 9	SAK	
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<b>CROSS SECTIONS</b> <b>STA 6+00 TO STA 7+50</b>			
Approved:		DATE	
COUNTY ENGINEER, DPW, COUNTY OF HAWAII			
<b>AKINAKA &amp; ASSOCIATES, LTD.</b> CONSULTING ENGINEERS			

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1/29/2021	ADDENDUM 9	SAK	
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DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<b>CROSS SECTIONS</b> <b>STA 8+00 TO STA 11+50</b>			
Approved: _____		DATE _____	
COUNTY ENGINEER, DPW, COUNTY OF HAWAII		DATE _____	
<b>AKINAKA &amp; ASSOCIATES, LTD.</b> CONSULTING ENGINEERS			
FILE	POCKET	FOLDER	NO.

**GENERAL:**

- A. WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE BUILDING CODE OF THE COUNTY OF HAWAII (AMENDED IBC, 2006 EDITION). HOWEVER, WHERE REFERENCE IS MADE TO PERFORMANCE CONFORMING TO OTHER STANDARDS THE MORE STRINGENT SHALL APPLY.
- B. THE CONTRACTOR SHALL COMPARE ALL THE CONTRACT DOCUMENTS WITH EACH OTHER AND REPORT IN WRITING TO THE ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
- C. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING WORK. REPORT IN WRITING TO THE ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.
- E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED FOR STABILITY OF STRUCTURAL MEMBERS AND SYSTEMS.
- F. CONSTRUCTION LOADING SHALL NOT EXCEED DESIGN LIVE LOAD UNLESS SPECIAL SHORING IS PROVIDED. ALLOWABLE LOADS SHALL BE REDUCED IN AREAS WHERE THE STRUCTURE HAS NOT ATTAINED FULL DESIGN STRENGTH.
- G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THE ADJACENT PROPERTIES, STRUCTURES, STREETS AND UTILITIES DURING THE CONSTRUCTION PERIOD.
- H. DETAILS NOTED AS TYPICAL ON THE STRUCTURAL DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS SPECIFICALLY SHOWN OR NOTED.

**DESIGN CRITERIA:**

- A. BASIC WIND SPEED AND EXPOSURE \_\_\_\_\_ 105 MPH, EXPOSURE C
- B. ALLOWABLE FOUNDATION BEARING CAPACITIES
  - a. DEAD LOAD + LIVE LOAD \_\_\_\_\_ 3,000 PSF
  - b. DEAD LOAD + LIVE LOAD + WIND OR SEISMIC \_\_\_\_\_ 4,000 PSF

**FOUNDATION:**

- A. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATION FROM SURFACE WATER, GROUND WATER OR SEEPAGE, AND OBTAIN NPDES PERMIT, IF REQUIRED.
- B. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEETING, AND SHORING NECESSARY TO PRESERVE EXCAVATIONS AND EARTH BANKS.
- C. FOOTINGS SHALL BEAR ON UNDISTURBED IN-SITU FIRM SOILS. BOTTOM OF FOOTINGS SHALL BE COMPACTED TO PROVIDE A RELATIVELY FIRM AND SMOOTH BEARING SURFACE PRIOR TO PLACEMENT OF REINFORCING STEEL AND CONCRETE. IF SOFT AND/OR LOOSE MATERIALS ARE ENCOUNTERED AT THE BOTTOM OF FOOTING EXCAVATIONS, THEY SHALL BE OVER-EXCAVATED TO EXPOSE THE UNDERLYING FIRM MATERIALS. THE OVER-EXCAVATED AREAS SHALL BE BACKFILLED WITH SELECT GRANULAR MATERIAL COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION OR THE FOOTING BOTTOM MAY BE EXTENDED DOWN TO THE UNDERLYING COMPETENT MATERIAL.

**CONCRETE:**

- A. CONCRETE CONSTRUCTION SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE ACI 318.
- B. CONCRETE SHALL BE REGULAR WEIGHT HARD ROCK CONCRETE AND SHALL HAVE THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:
  - a. FOOTINGS \_\_\_\_\_ 4,000 PSI
  - b. FENCE POST FOOTING \_\_\_\_\_ 3,000 PSI
  - c. CATCH BASIN \_\_\_\_\_ 4,000 PSI
  - d. P/C DRYWELL \_\_\_\_\_ SEE CIVIL DWGS
  - e. WALL \_\_\_\_\_ 4,000 PSI
  - f. ALL OTHER CONCRETE \_\_\_\_\_ 3,000 PSI
- C. CONCRETE DELIVERY TICKETS SHALL RECORD ALL FREE WATER IN THE MIX: AT BATCHING BY PLANT, FOR CONSISTENCY BY DRIVER, AND ANY ADDITIONAL REQUEST BY CONTRACTOR IF PERMITTED BY THE MIX DESIGN.
- D. ALL INSERTS, ANCHOR BOLTS, PLATES, AND OTHER ITEMS TO BE CAST IN THE CONCRETE SHALL BE HOT-DIPPED GALVANIZED ACCORDING TO ASTM A153 UNLESS OTHERWISE NOTED.
- E. REINFORCING BARS, ANCHOR BOLTS, INSERTS, AND OTHER ITEMS TO BE CAST IN THE CONCRETE SHALL BE SECURED IN POSITION PRIOR TO PLACEMENT OF CONCRETE.
- F. CONDUITS, PIPES, AND SLEEVES PASSING THROUGH A SLAB OR FOOTING AND NOT CONFORMING TO TYPICAL DETAILS SHALL BE LOCATED AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

**CONCRETE (CONT):**

- G. CONDUITS, PIPES, AND SLEEVES EMBEDDED WITHIN A SLAB OR WALL (OTHER THAN THOSE MERELY PASSING THROUGH) SHALL BE:
  - a. NO LARGER IN OUTSIDE DIMENSIONS THAN ONE THIRD THE OVERALL SLAB OR WALL THICKNESS IN WHICH THEY ARE EMBEDDED.
  - b. PLACED IN THE MIDDLE ONE THIRD OF SLAB OR WALL THICKNESS
  - c. SPACED NO CLOSER THAN THREE DIAMETERS OR WIDTHS ON CENTER.
- H. THE CONTRACTOR SHALL LOCATE CONSTRUCTION JOINTS SO AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE AND TO MINIMIZE SHRINKAGE STRESSES. SUBMIT LOCATION OF CONSTRUCTION JOINTS TO THE ENGINEER FOR APPROVAL, UNLESS OTHERWISE NOTED.
- I. NON-SHRINK GROUT SHALL BE A PREMIXED NON-METALLIC FORMULA, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 1 DAY AND 5,000 PSI IN 28 DAYS.

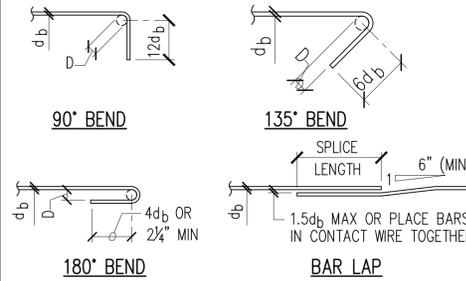
**REINFORCING STEEL:**

- A. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
- B. CLEAR CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
  - a. FOOTINGS, GRADE BEAMS, ETC. CAST AGAINST EARTH \_\_\_\_\_ 3"
  - b. FOOTINGS, GRADE BEAMS, ETC. FORMED AND EXPOSED TO EARTH OR WEATHER \_\_\_\_\_ 2"
  - c. BEAMS AND COLUMNS PRIMARY REINFORCEMENT, STIRRUPS, TIES AND SPIRALS \_\_\_\_\_ 1 1/2"
- C. REINFORCING STEEL SHALL BE SPLICED WHERE INDICATED ON PLANS. PROVIDE LAP SPLICE LENGTH PER TYPICAL DETAILS AND SCHEDULE, UNLESS OTHERWISE NOTED.
- D. MECHANICAL SPLICE CONNECTORS SHALL DEVELOP IN TENSION 125 PERCENT OF THE SPECIFIED MINIMUM YIELD STRENGTH OF REINFORCING BARS.
- E. BAR BENDS AND HOOKS SHALL BE "STANDARD HOOKS" IN ACCORDANCE WITH ACI 318.
- F. BARS SHALL BE PLACED AND SECURED IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE WITH PLACEMENT TOLERANCES PER ACI STANDARD 117.

**STRUCTURAL STEEL:**

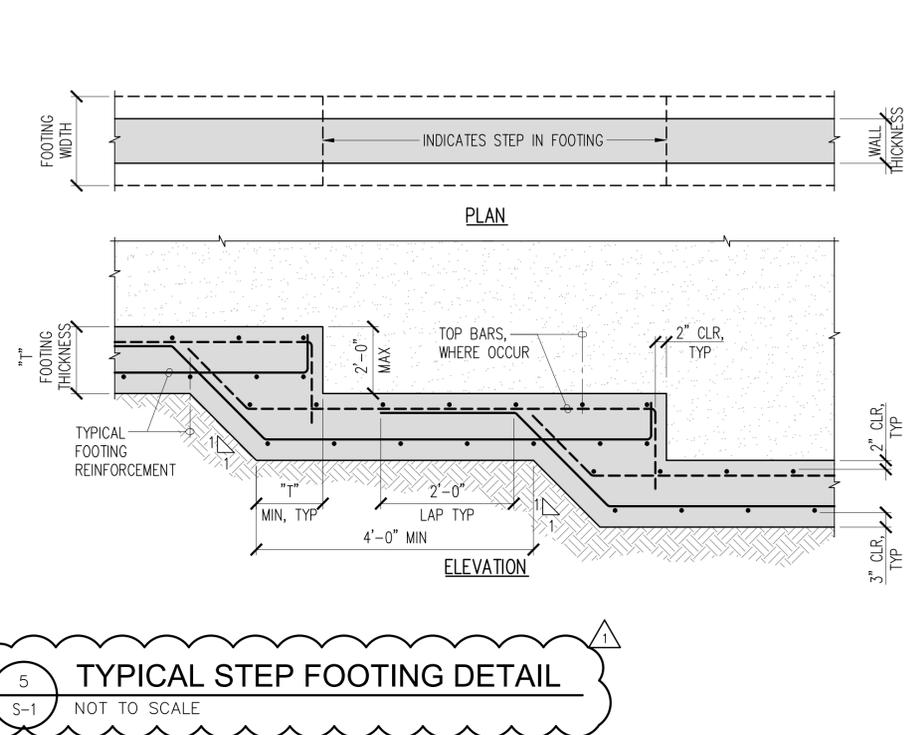
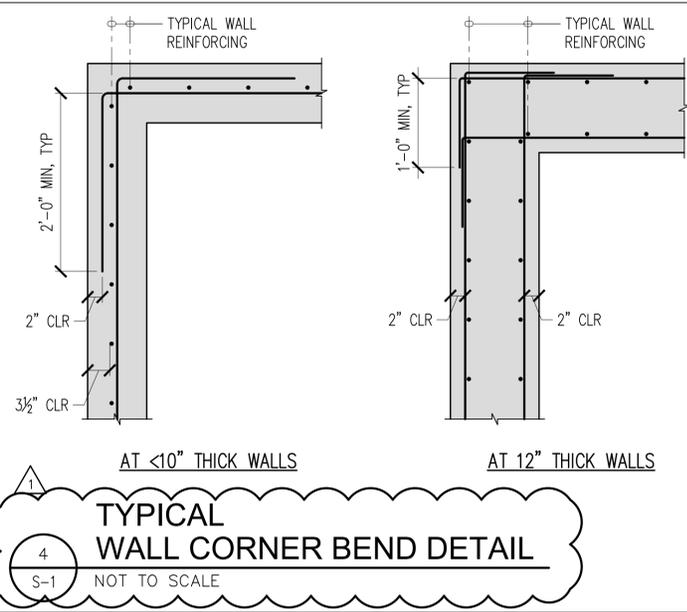
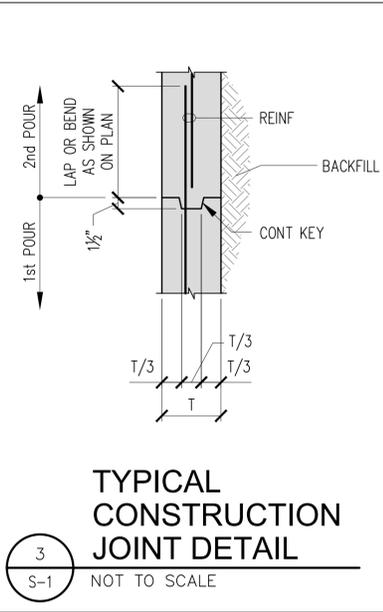
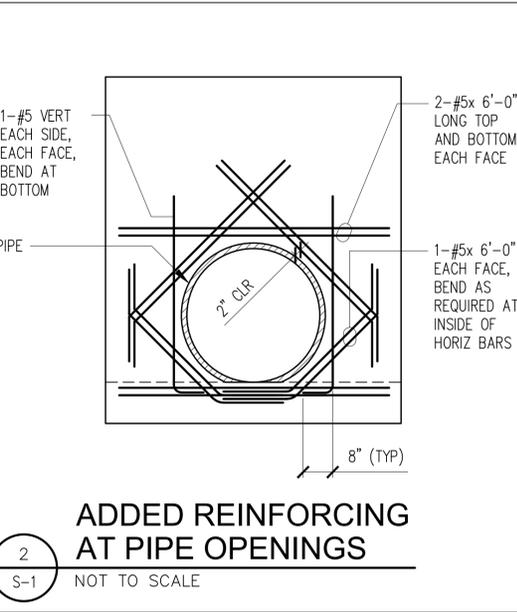
- A. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION, 14th EDITION.
- B. STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED.
- C. STEEL TUBES (HSS) SHALL CONFORM TO ASTM A500, GRADE B
- D. PLATES AND BARS SHALL CONFORM TO ASTM A36.
- E. WELDS AND WELDING PROCEDURES SHALL CONFORM TO THE STRUCTURAL WELDING CODE AWS D1.1 OF THE AMERICAN WELDING SOCIETY.
- F. WELDING SHALL BE PERFORMED BY WELDERS PREQUALIFIED FOR WELDING PROCEDURES TO BE USED.
- G. WELDING ELECTRODES SHALL BE E70XX.
- H. ALL ANCHOR BOLTS, PLATES, AND OTHER ITEMS TO BE CAST IN CONCRETE SHALL BE HOT-DIP GALVANIZED ACCORDING TO ASTM A153 UNLESS OTHERWISE NOTED.
- I. BOLTS SHALL CONFORM TO ASTM A307, GRADE A UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED ACCORDING TO ASTM A153.
- K. ALL STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION ACCORDING TO ASTM A123.

BAR SIZE	CONCRETE STRENGTH = 3,000 PSI					CONCRETE STRENGTH = 4,000 PSI				
	LAP SPLICE		DEVELOPMENT			LAP SPLICE		DEVELOPMENT		
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	STANDARD HOOK	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	WITH STANDARD HOOK
#3	28"	22"	22"	18"	10"	26"	20"	20"	16"	8"
#4	38"	30"	30"	22"	12"	34"	26"	26"	20"	10"
#5	48"	36"	36"	28"	14"	42"	32"	32"	24"	12"
#6	56"	44"	44"	34"	18"	50"	38"	38"	30"	16"
#7	82"	64"	64"	48"	20"	72"	54"	54"	42"	18"
#8	94"	72"	72"	56"	22"	82"	62"	62"	48"	20"
#9	106"	82"	82"	62"	26"	92"	70"	70"	54"	22"
#10	118"	92"	92"	70"	28"	102"	80"	80"	62"	26"
#11	132"	102"	102"	78"	32"	114"	88"	88"	68"	28"

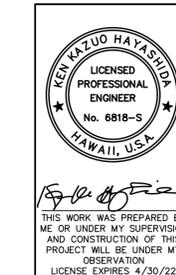


- NOTES:
- LENGTHS ARE FOR CONCRETE WITH REBAR SPACED AT 6 BAR DIAMETERS MINIMUM. INCREASE LENGTH BY 25% FOR BARS SPACED LESS THAN 6 BAR DIAMETERS.
  - "TOP BARS" ARE HORIZONTAL BARS WITH 12" OR MORE OF CONCRETE CAST BELOW.
  - D = 6db FOR #8 AND SMALLER.
  - 8db FOR #9 TO #11.

**1 TYPICAL REBAR SPLICE AND DEVELOPMENT LENGTH SCHEDULE**  
S-1 NOT TO SCALE

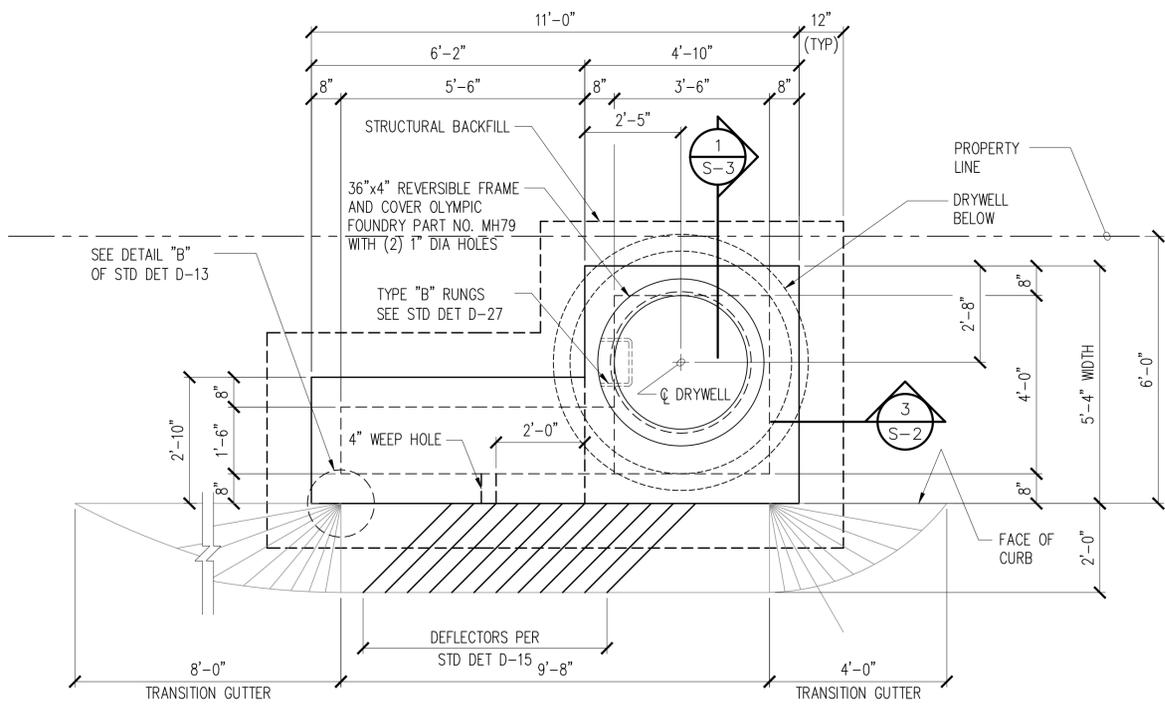


01/22/21	ADDENDUM NO.9	JF	
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS LA'I'OPUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<b>GENERAL NOTES AND TYPICAL DETAILS</b>			
Approved: _____			
COUNTY ENGINEER, DPW, COUNTY OF HAWAII		DATE _____	
<b>AKINAKA &amp; ASSOCIATES, LTD.</b> CONSULTING ENGINEERS			

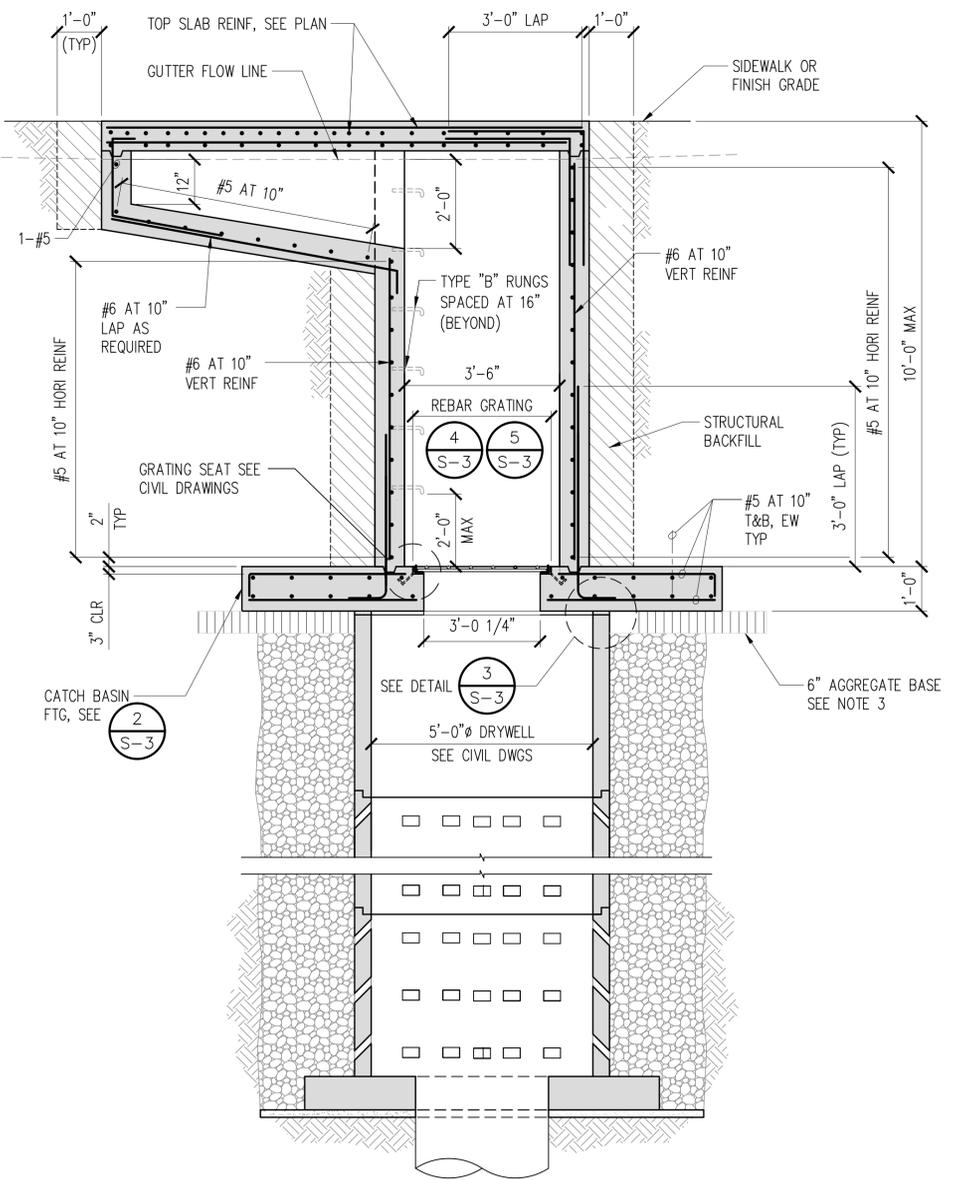


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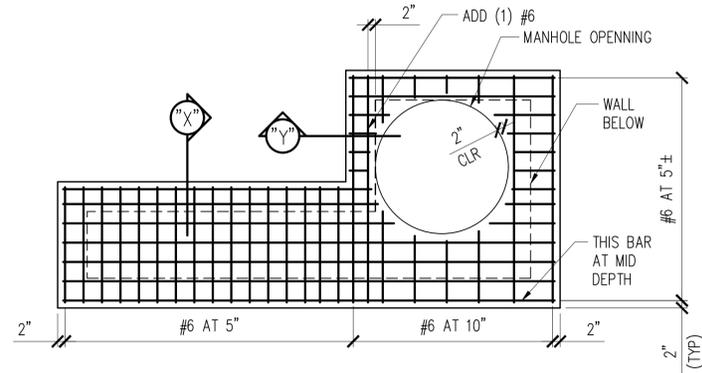
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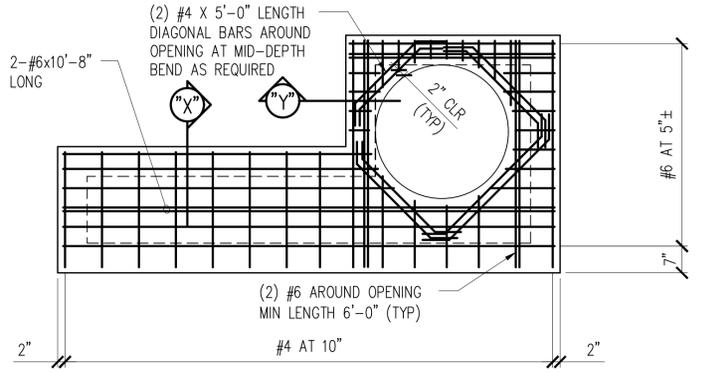
**1 PLAN - CATCH BASIN (MODIFIED TYPE A)**  
 SCALE: 1/2" = 1'-0"



**3 SECTION**  
 SCALE: 1/2" = 1'-0"

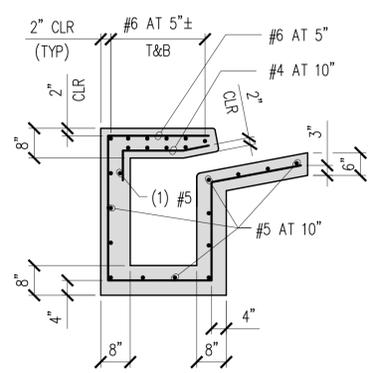


TOP REINFORCEMENT LAYOUT

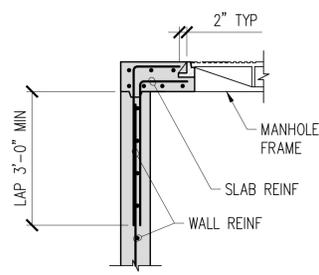


BOTTOM REINFORCEMENT LAYOUT

**2 TOP SLAB REINFORCEMENT LAYOUT**  
 SCALE: 1/2" = 1'-0"

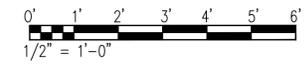


SECTION X-Y



SECTION M-N

- NOTES:
- REFERENCE CIVIL DRAWINGS FOR THE ELEVATION OF CATCH BASINS, AND LOCATIONS, NUMBER AND SIZE OF PIPES. OPENING OF OUTLET PIPE SHALL BE ROUNDED WITH MINIMUM RADIUS OF 0.15 TIMES PIPE DIAMETER.
  - PROVIDE 2 CUBIC FEET OF CRUSHED ROCK, ASTM SIZE #9 ROCK SAND AT WEEP HOLE.
  - CATCH BASIN FOOTING BASE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE DENSITY BEFORE CASTING FOOTING.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION  
 LICENSE EXPIRES 4/30/22

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

DEPARTMENT OF HAWAIIAN HOME LANDS  
 LA'IOPIUA VILLAGE 4 SUBDIVISION  
 PHASE 2 - HEMA  
 TAX MAP KEY: (3) 7-4-21:12 (PORTION)  
 KAILUA-KONA, NORTH KONA, HAWAII

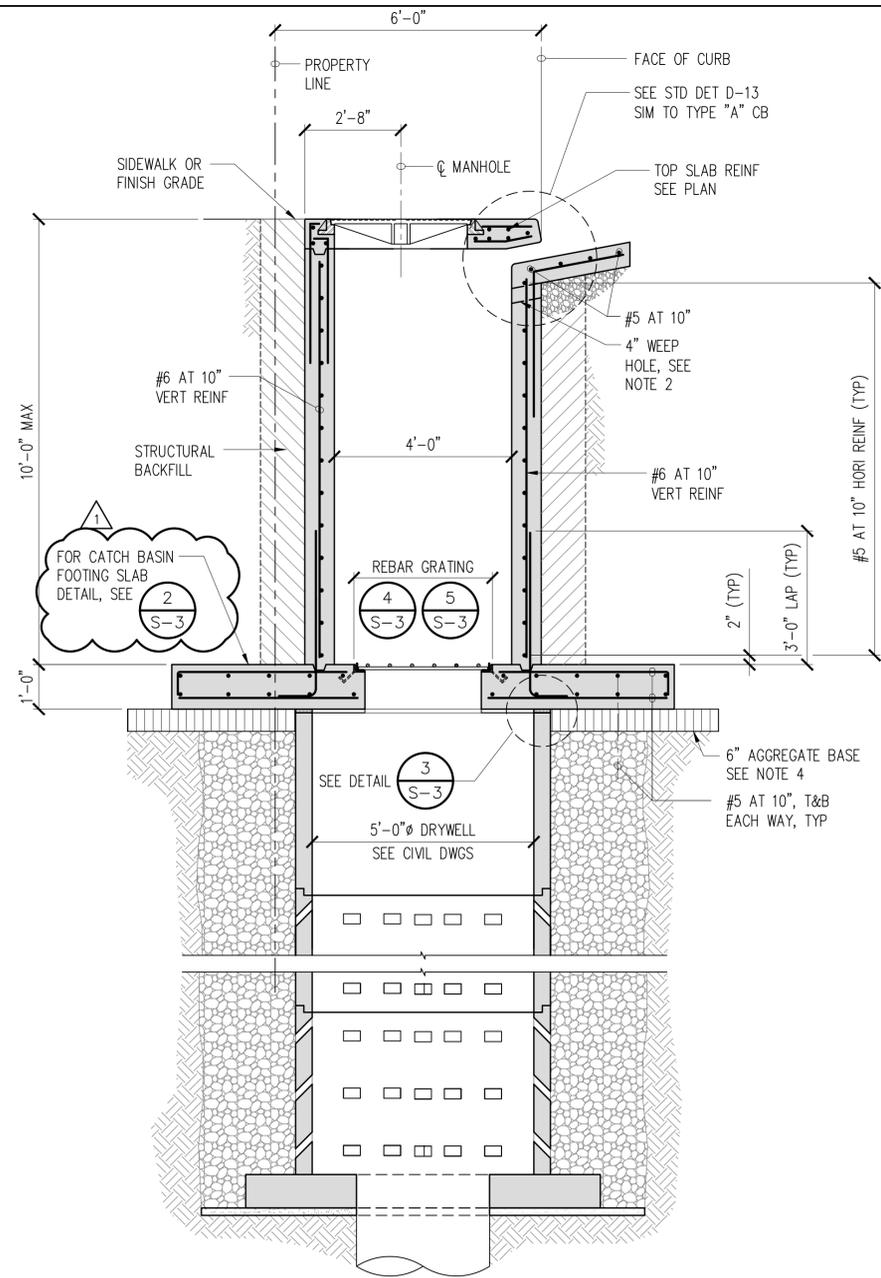
**MODIFIED TYPE "A" CATCH BASIN**

Approved: \_\_\_\_\_  
 COUNTY ENGINEER, DPW, COUNTY OF HAWAII DATE \_\_\_\_\_

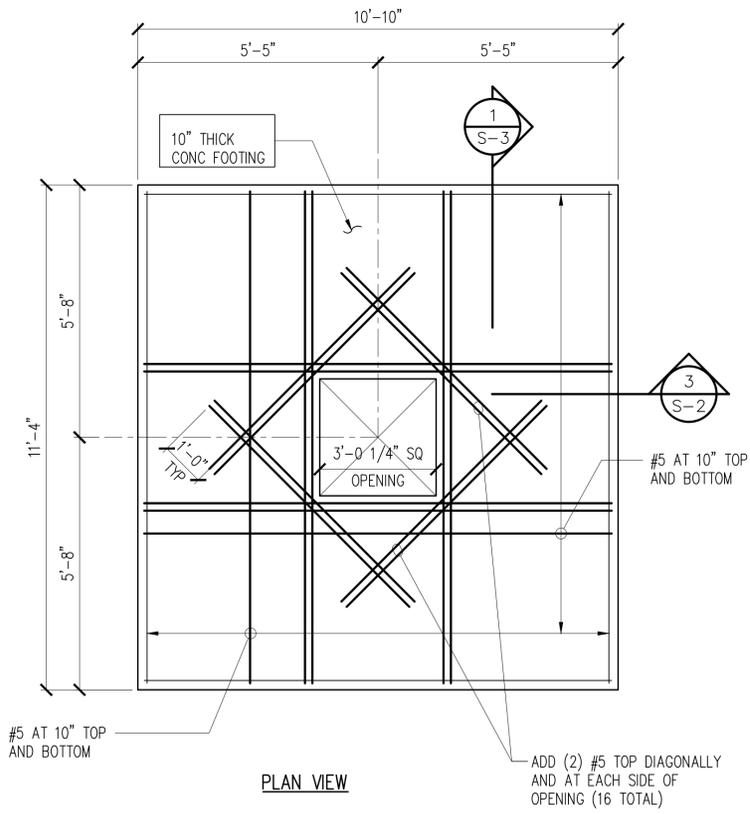
AKINAKA & ASSOCIATES, LTD.  
 CONSULTING ENGINEERS

FILE	POCKET	FOLDER	NO.

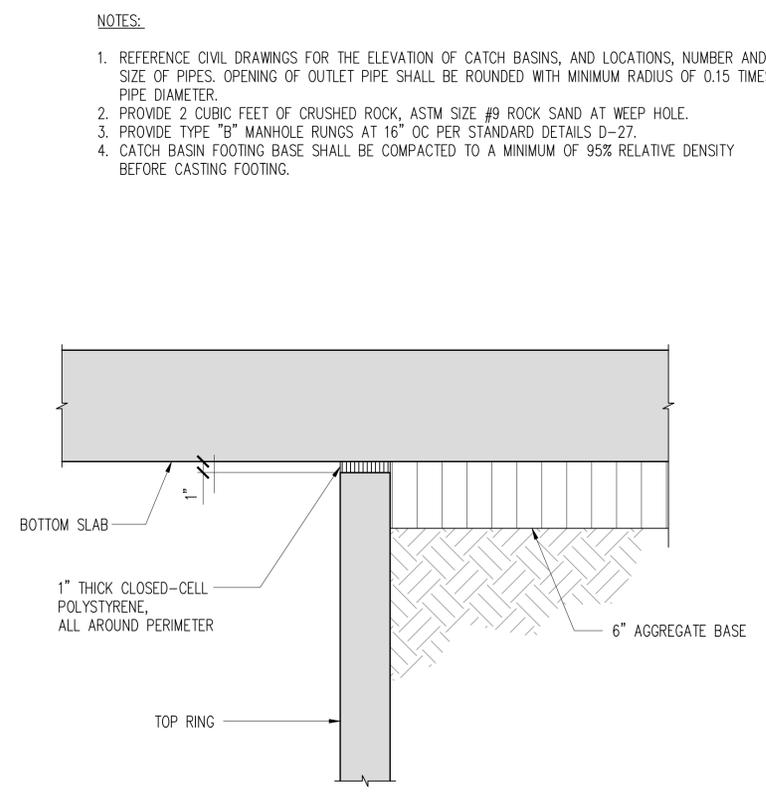
P:\1551-1600\1597.04 DHHL - Laiohua Villages 4 Retaining Wall\Drawings\Structural\AutoCAD\_format\2021-01-15\_1597-04\1597\_S-3.dwg  
 Last Save by: JCAO  
 Last Saved: 1/29/2021  
 Plotted on: 1/29/2021



1 SECTION  
S-3 SCALE: 1/2" = 1'-0"

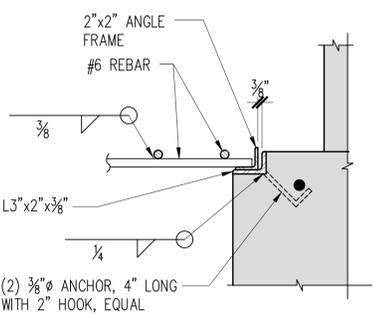


2 PLAN - CATCH BASIN FOOTING  
S-3 SCALE: 1/2" = 1'-0"



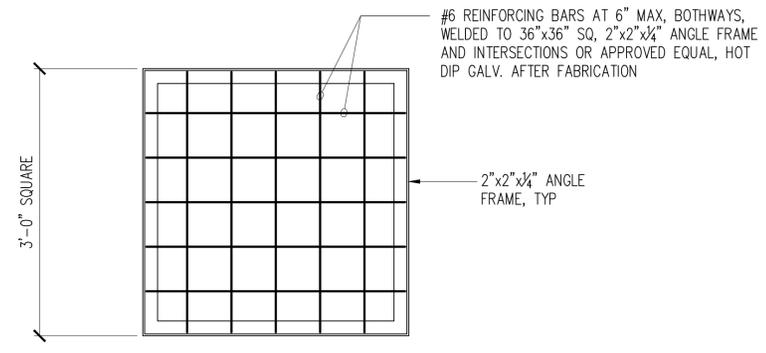
3 DETAIL  
S-3 NOT TO SCALE

- NOTES:
1. REFERENCE CIVIL DRAWINGS FOR THE ELEVATION OF CATCH BASINS, AND LOCATIONS, NUMBER AND SIZE OF PIPES. OPENING OF OUTLET PIPE SHALL BE ROUNDED WITH MINIMUM RADIUS OF 0.15 TIMES PIPE DIAMETER.
  2. PROVIDE 2 CUBIC FEET OF CRUSHED ROCK, ASTM SIZE #9 ROCK SAND AT WEEP HOLE.
  3. PROVIDE TYPE "B" MANHOLE RUNGS AT 16" OC PER STANDARD DETAILS D-27.
  4. CATCH BASIN FOOTING BASE SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE DENSITY BEFORE CASTING FOOTING.

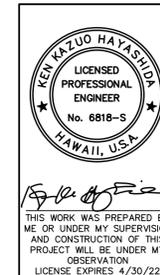
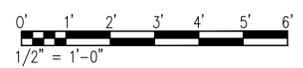


5 REBAR GRATING SEAT DETAIL  
S-3 NOT TO SCALE

- NOTES:
1. GRATING SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
  2. ALL STEEL SHALL BE STRUCTURAL GRADE (ASTM A36 MIN.)
  3. ALL WELDS 3/8" UNLESS OTHERWISE NOTED.
  4. ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT EDITION OF REINFORCED STEEL WELDING CODE AWS D1.4.



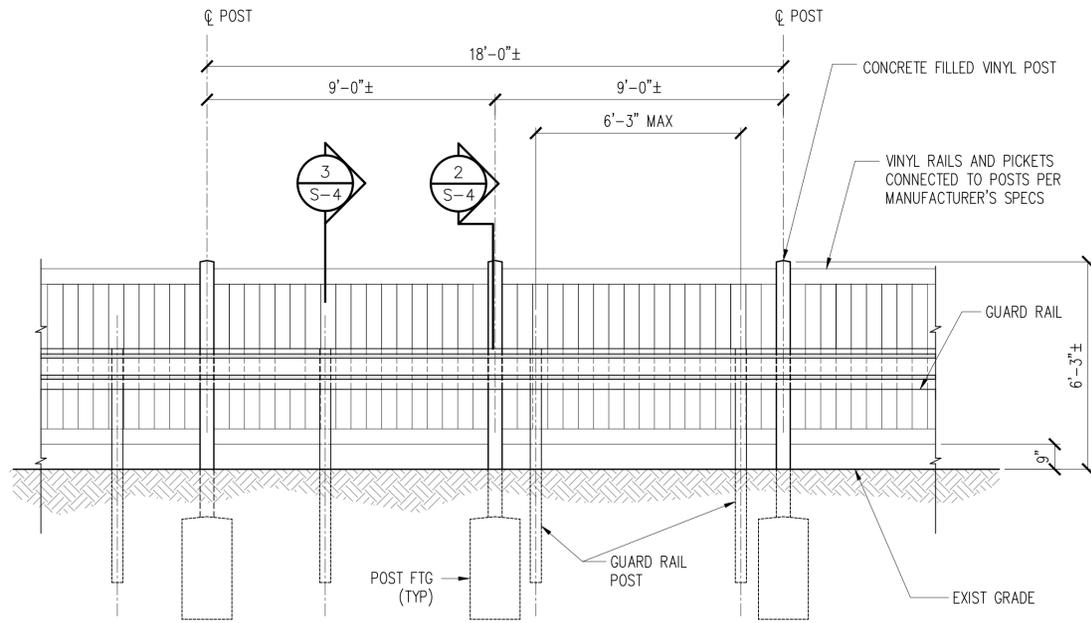
4 DRYWELL REBAR GRATING DETAIL  
S-3 NOT TO SCALE



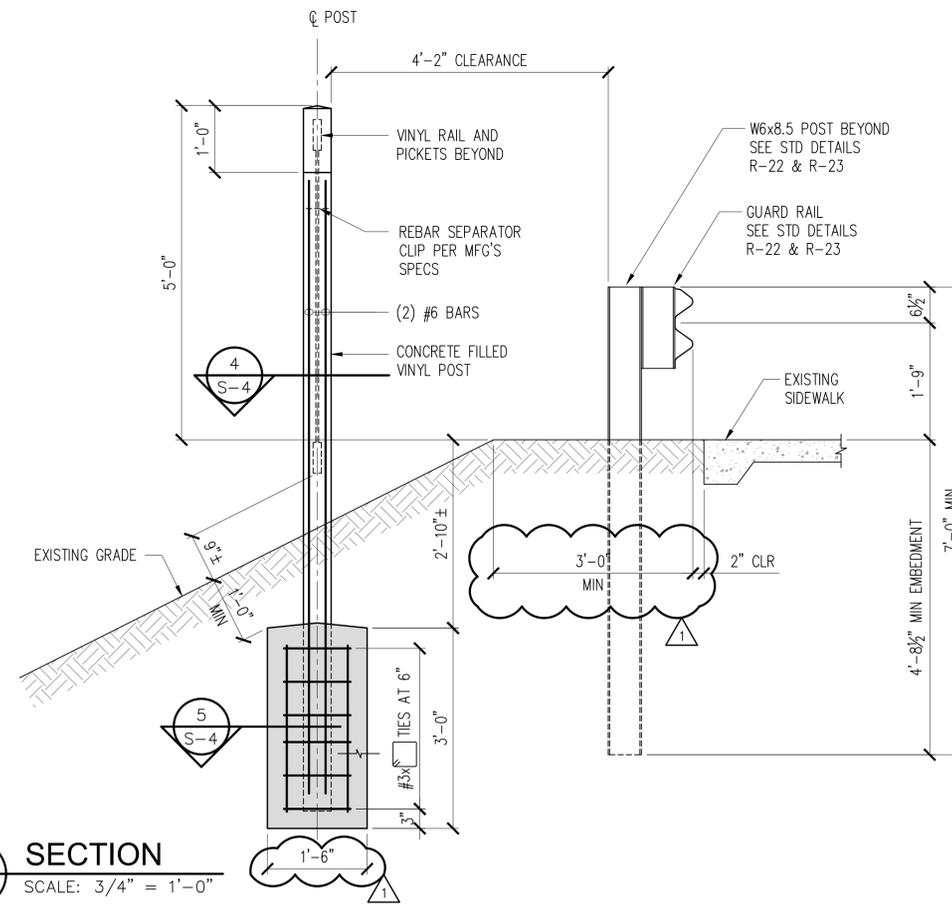
01/22/21	ADDENDUM NO.9	JF	
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII			
<b>MODIFIED TYPE "A" CATCH BASIN DETAILS</b>			
Approved: _____			
COUNTY ENGINEER, DPW, COUNTY OF HAWAII DATE _____			
AKINAKA & ASSOCIATES, LTD. CONSULTING ENGINEERS			

FILE	POCKET	FOLDER	NO.
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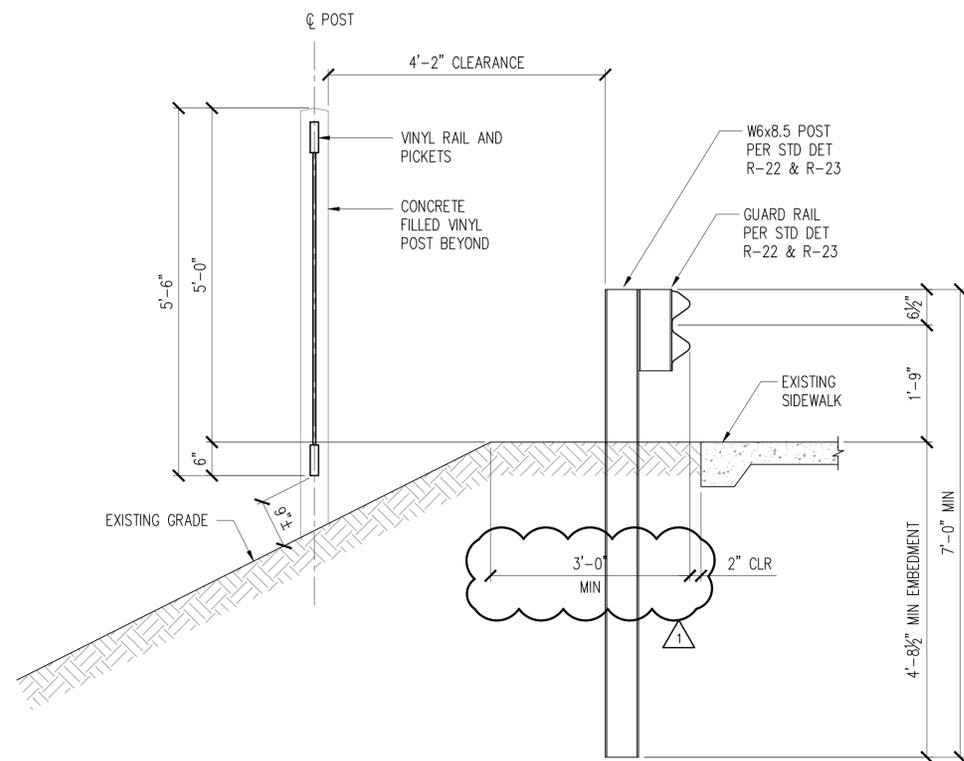
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 Villages 4 Retaining  
 Wall\Drawings\Structural\AutoCAD\_format\2021-01-15\_1597-04\1597\_S-4.dwg  
 Last Save by: JCAO  
 Last Saved: 1/29/2021  
 Plotted on: 1/29/2021



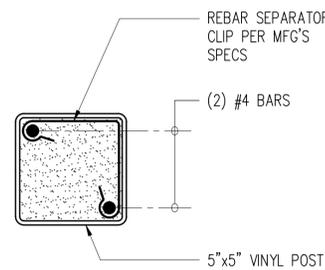
**1 ELEVATION - PRIVACY FENCE**  
 S-4 SCALE: 3/8" = 1'-0"



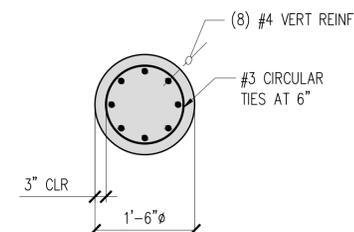
**2 SECTION**  
 S-4 SCALE: 3/4" = 1'-0"



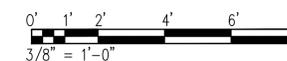
**3 SECTION**  
 S-4 SCALE: 3/4" = 1'-0"



**4 SECTION**  
 S-4 NOT TO SCALE



**5 SECTION**  
 S-4 SCALE: 3/4" = 1'-0"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION  
 LICENSE EXPIRES 4/30/22

1	01/22/21	ADDENDUM NO.9	JF	
	REVISION DATE	DESCRIPTION	MADE BY	APPROVED

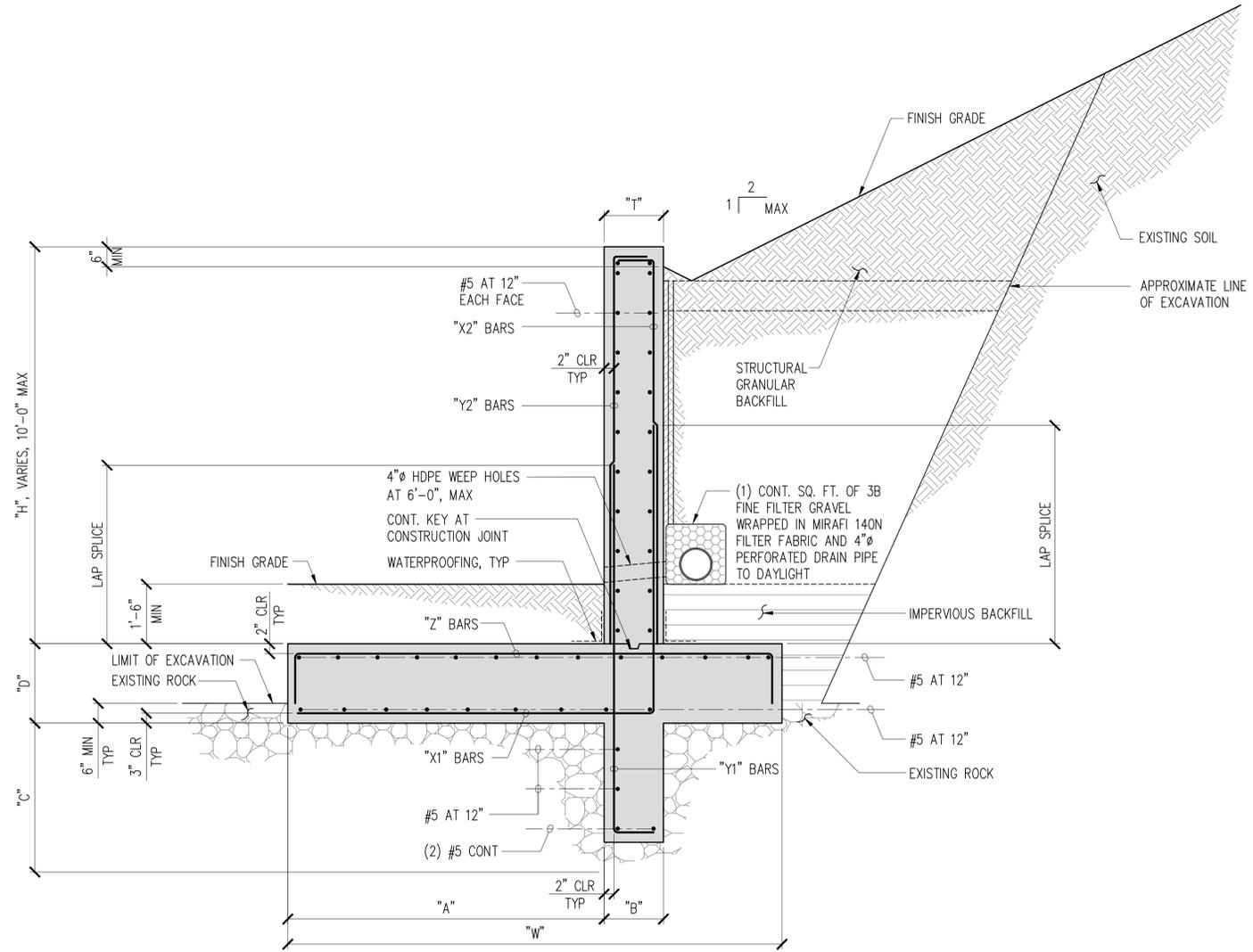
DEPARTMENT OF HAWAIIAN HOME LANDS  
 LA'I'OPUA VILLAGE 4 SUBDIVISION  
 PHASE 2 - HEMA  
 TAX MAP KEY: (3) 7-4-21:12 (PORTION)  
 KAILUA-KONA, NORTH KONA, HAWAII

**PRIVACY FENCE**

Approved: \_\_\_\_\_  
 COUNTY ENGINEER, DPW, COUNTY OF HAWAII DATE \_\_\_\_\_  
**AKINAKA & ASSOCIATES, LTD.**  
 CONSULTING ENGINEERS

FILE	POCKET	FOLDER	NO.
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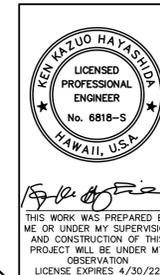
- NOTES:
1. REFERENCE CIVIL DRAWINGS FOR LOCATIONS AND HEIGHTS OF RETAINING WALLS.
  2. FOUNDATION OF RETAINING WALLS SHALL BE EMBEDDED A MINIMUM OF 6" INTO THE EXISTING INTACT BASALT ROCK. BOTTOM OF FOUNDATION EXCAVATION SHALL BE CLEANED OUT OF ALL LOOSE MATERIAL PRIOR TO PLACEMENT OF REINFORCEMENT OR CONCRETE.



RETAINING WALL SCHEDULE											
HEIGHT "H"	"T"	"D"	"W"	"A"	"B"	"C"	"X1" BARS	"X2" BARS	"Y1" BARS	"Y2" BARS	"Z" BARS
≤ 10'-0"	1'-0"	1'-6"	15'-0"	10'-6"	1'-0"	3'-0"	#7 AT 6"	#7 AT 6"	#5 AT 12"	#5 AT 12"	#5 AT 12"
≤ 8'-0"	1'-0"	1'-4"	12'-0"	8'-0"	1'-0"	3'-0"	#5 AT 6"	#5 AT 6"	#5 AT 12"	#5 AT 12"	#5 AT 12"
≤ 6'-0"	1'-0"	1'-2"	9'-0"	5'-0"	1'-0"	2'-0"	#5 AT 12"				
≤ 4'-0"	1'-0"	1'-2"	7'-6"	3'-6"	1'-0"	1'-0"	#4 AT 12"				

P:\1551-1600\1597.04 DHHL - Laiohua Villages 4 Retaining Wall\Drawings\Structural\AutoCAD\_format\2021-01-15\_1597-04\1597\_S-5.dwg  
 Last Save by: JCAO  
 Last Saved: 1/29/2021  
 Plotted on: 1/29/2021

1 RETAINING WALL SECTION WITH IN-SITU SOIL BEHIND EXCAVATION  
 S-5 SCALE: NTS



1	01/22/21	ADDENDUM NO.9	JF
REVISION DATE	DESCRIPTION	MADE BY	APPROVED

DEPARTMENT OF HAWAIIAN HOME LANDS  
 LA'IOPIUA VILLAGE 4 SUBDIVISION  
 PHASE 2 - HEMA  
 TAX MAP KEY: (3) 7-4-21:12 (PORTION)  
 KAILUA-KONA, NORTH KONA, HAWAII

**RETAINING WALL (ALTERNATIVE ONE)**

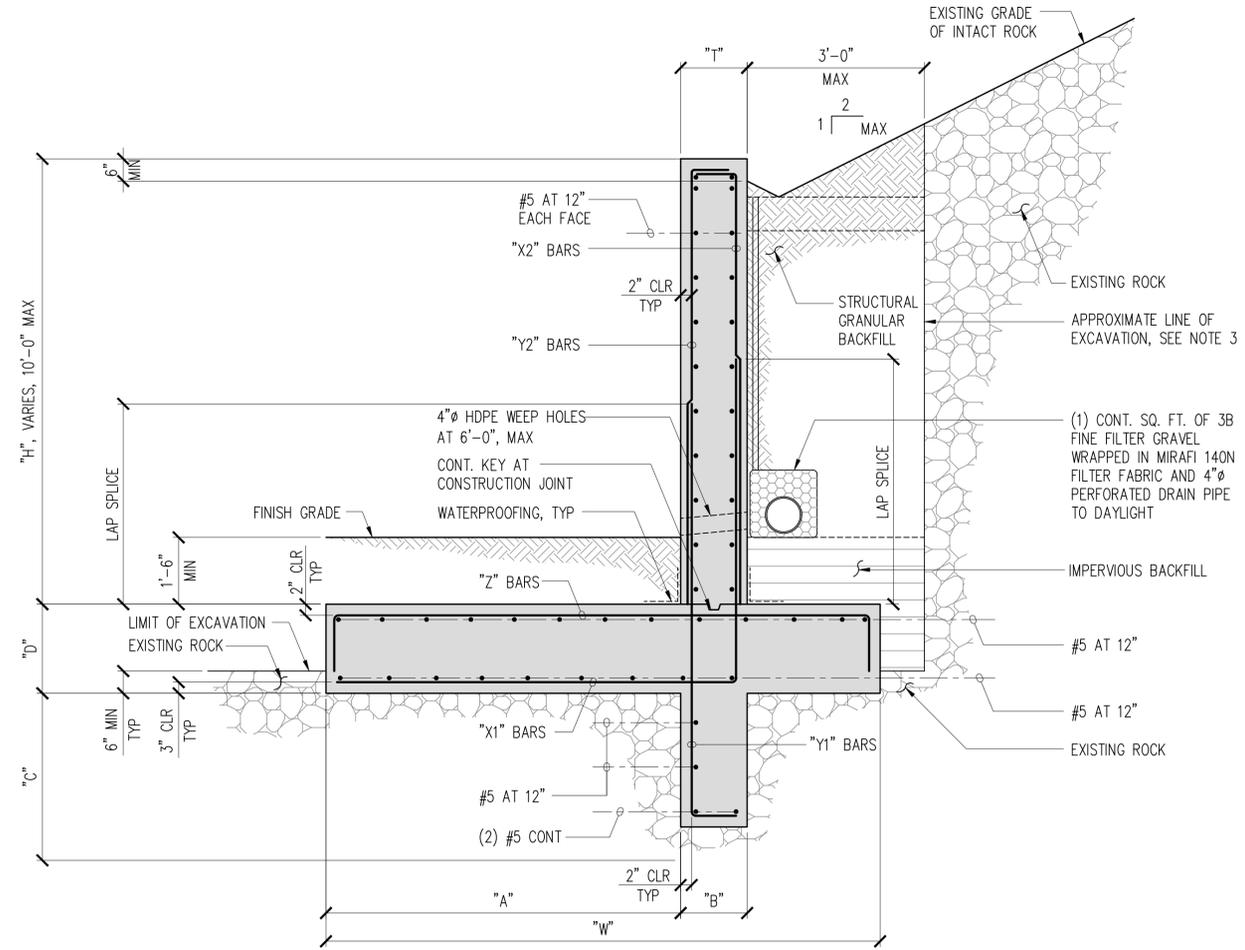
Approved: \_\_\_\_\_

COUNTY ENGINEER, DPW, COUNTY OF HAWAII DATE \_\_\_\_\_

**AKINAKA & ASSOCIATES, LTD.**  
 CONSULTING ENGINEERS

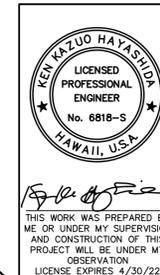
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 Last Save by: JCAO  
 Last Saved: 1/29/2021  
 Plotted on: 1/29/2021

- NOTES:
1. REFERENCE CIVIL DRAWINGS FOR LOCATIONS AND HEIGHTS OF RETAINING WALLS.
  2. FOUNDATION OF RETAINING WALLS SHALL BE EMBEDDED A MINIMUM OF 6" INTO THE EXISTING INTACT BASALT ROCK. BOTTOM OF FOUNDATION EXCAVATION SHALL BE CLEANED OUT OF ALL LOOSE MATERIAL PRIOR TO PLACEMENT OF REINFORCEMENT OR CONCRETE.
  3. EXCAVATION FOR THE WALL SHALL RESULT IN A VERTICAL OR NEAR-VERTICAL INTACT ROCK FACE. THE EXCAVATION WORK SHALL BE OBSERVED AND APPROVED BY A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF HAWAII.



RETAINING WALL SCHEDULE												
HEIGHT "H"	"T"	"D"	"W"	"A"	"B"	"C"	"X1" BARS	"X2" BARS	"Y1" BARS	"Y2" BARS	"Z" BARS	
≤ 10'-0"	1'-0"	1'-6"	10'-0"	6'-0"	1'-0"	2'-0"	#5 AT 8"	#5 AT 8"	#5 AT 12"	#5 AT 12"	#5 AT 12"	
≤ 8'-0"	1'-0"	1'-4"	8'-0"	4'-0"	1'-0"	1'-6"	#5 AT 10"	#5 AT 10"	#5 AT 12"	#5 AT 12"	#5 AT 12"	
≤ 6'-0"	1'-0"	1'-2"	6'-0"	3'-0"	1'-0"	1'-0"	#5 AT 12"					
≤ 4'-0"	1'-0"	1'-2"	5'-0"	2'-0"	1'-0"	1'-0"	#4 AT 12"					

1 RETAINING WALL SECTION WITH INTACT ROCK FACE AT EXCAVATION  
 S-6 SCALE: NTS



1	01/22/21	ADDENDUM NO.9	JF	
	REVISION DATE	DESCRIPTION	MADE BY	APPROVED
DEPARTMENT OF HAWAIIAN HOME LANDS LA'IOPIUA VILLAGE 4 SUBDIVISION PHASE 2 - HEMA TAX MAP KEY: (3) 7-4-21:12 (PORTION) KAILUA-KONA, NORTH KONA, HAWAII				
<b>RETAINING WALL (ALTERNATIVE TWO)</b>				
Approved: _____				
COUNTY ENGINEER, DPW, COUNTY OF HAWAII DATE _____				
<b>AKINAKA &amp; ASSOCIATES, LTD.</b> CONSULTING ENGINEERS				

FILE	POCKET	FOLDER	NO.
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