

GENERAL NOTES

1. The scope of work for this project consists of widening the existing roadway; resurfacing; landscaping; highway lighting system; traffic signal system; drainage improvements; signing; guardrails, and pavement markings.
2. The contractor is reminded of the requirements of subsection 108.01 - Subletting of Contract, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this subsection may be grounds for rejection of bid.
3. The Contractor's attention is directed to the following sections of the Special Provisions: Subsection 107.13 - Public Convenience and Safety; Subsection 107.21 - Contractor's Responsibility for Utility Property and Services; and Section 645 - Traffic Control.
4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
6. The exact pavement locations and limits or areas to be resurfaced or reconstructed shall be determined in the field by the Engineer.
7. The Contractor shall notify in writing, the Oahu Transit Services, Inc. Roads Supervision Office, 811 Middle St. Hon., HI 96819 (Ph.*: 848-4571) seven (7) days prior to any paving operations.
8. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
9. The Contractor shall remove and dispose of all existing raised pavement markers prior to the overlaying of asphalt concrete. This work shall be considered incidental to asphalt concrete pavement, mix no. IV and will not be paid for separately.
10. Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, connection approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
11. Existing drainage system will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to various contract items.
12. The Contractor shall provide for access to and from all existing streets at all times.
13. All saw cutting work shall be considered incidental to asphalt concrete pavement, mix no. IV and will not be paid for separately. Removal of slurry generated by all saw cutting work shall be incidental to the contract items and will not be paid for separately.
14. Prime coat/tack coat shall be incidental to asphalt concrete pavement, mix no. IV and will not be paid for separately.

15. Contractor's attention is directed to Section 401.03 of the special provisions. All longitudinal and transverse tapers within the traveled way shall be removed prior to commencing and continuing of paving operations.
16. The Contractor shall not do operations involving traffic lane closures or slowdown of traffic during the following peak hours :
- Morning peak hours - 6:30 A.M. to 8:30 A.M.
Afternoon peak hours - 3:00 P.M. to 6:00 P.M.
17. The Contractor may use Figures 1 through 7 in Section 645 of the Special Provisions, if necessary, in addition to the Traffic Control Plans on Plan sheet numbers 42 through 47.

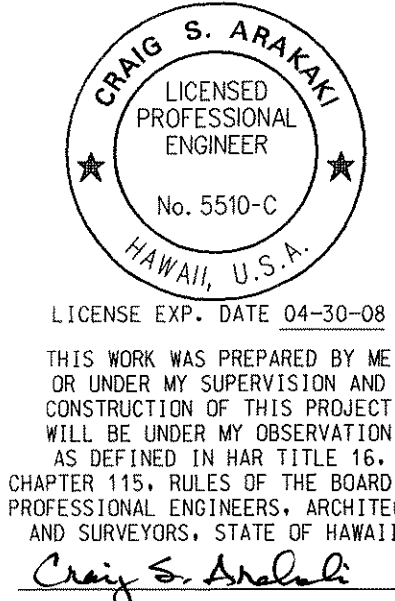
LEGEND

- Property Line
- Denotes No Access Permitted
- Limits of Grading (LOG)
- Baseline
- Existing Electrical Overhead Line
- Existing Utility Pole
- Existing Electrical Manhole
- Existing Telephone Line
- Existing Telephone Pole
- Existing Telephone Manhole
- Existing Signal Corps Line
- Existing TV Cable
- Existing 12" Water Line
- Existing Water Manhole
- Existing Water Air Valve
- Existing Water Valve Box
- Existing Water Meter
- Existing Sewer Line and Size
- Existing Sewer Manhole
- Existing Gas Line and Size
- Existing Gas Valve Box
- Existing Monument

- Existing 24" Drain Line
- New 24" Drain Line
- Existing Storm Drain Manhole
- New Storm Drain Manhole
- Existing Grated Drop Inlet
- New Grated Drop Inlet
- Existing Catch Basin
- New Catch Basin
- Exist. Sprinkler Head
- Existing Traffic Sign
- Existing Street Light Box
- Existing Highway Lighting Standard
- Finish Pavement Elevation
- Finish Top of Curb & Bottom of Curb Elev.
- Existing Pavement Elevation

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-1(258)	2006	3	89

DESIGNED BY	DATE
DRAWN BY	
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NOTED BY	
QUANTITIES BY	
CHECKED BY	



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES

INTERSTATE ROUTE H-1
Kinohi Street Off-Ramp Improvements
Vicinity Of Queen's Medical Center
Federal Aid Project No. TC-HI-1(258)

Scale: As Shown Date: Dec. 2006

SHEET No. 1 OF 9 SHEETS

NOTES FOR CONSTRUCTION
WITHIN STATE RIGHT-OF-WAY

1. The Contractor shall obtain a permit to perform work upon State highways from the Oahu District Engineer, State Highways, at 727 Kakoi Street, prior to commencement of work within State highway right-of-way.
2. Construction and restoration of all existing highway facilities within the State's right-of-way, including the Legal Relations and Responsibility to the Public, shall be in accordance with the current Standard Specifications for Road, Bridge and Public Works Construction, and the specifications for Installation of Miscellaneous Improvements within State Highways, of the State Highways Division.
3. Work may be performed only between the hours of 8:30 a.m. and 3:00 p.m., Monday through Friday, except holidays, unless otherwise permitted by the District Engineer.

During work hours, only one lane of traffic shall be closed, unless otherwise approved in writing by the District Engineer.

At certain locations, "No Lane Closure" will be allowed during the "Back to School Jam", Thanksgiving weekend, Christmas/New Year period and at other times as directed by the Highways Division.

4. The Contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities, and shall take all necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" adopted by the Director of Transportation, and the current U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices, Part VI - Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations".

Lane closures shall conform to the traffic control plan incorporated into these construction plans and must be approved by the Division prior to the issuance of the permit.

5. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way, except at locations designated in writing and approved by the District Engineer.
6. Compaction tests shall be taken in accordance with the specifications for installation of miscellaneous improvements within State highways, as follows:
- A. Subbase: one (1) compaction test per lift per 1,000 square feet of roadway.
- B. Base course: one (1) compaction test per lift per 1,000 square feet of roadway.
- C. One (1) compaction test per 300 lineal feet of trench.
- D. A copy of the test results shall be submitted to the District Engineer.
7. Prior to commencing trench excavation work, the Contractor shall take a profile along the centerline of the proposed utility trench. this information shall be used in the verification of restoring the roadway to its original condition. A copy of the profile shall be submitted to the District Engineer.
8. The Contractor shall provide an adequate and safe non-skid bridging material, including shoring, over trenches in pavement areas. The bridging shall be able to support all types of vehicular traffic.
9. Unless otherwise noted, no trench shall be opened more than 300 feet in advance of installed and tested pipeline and/or duct line.

10. Existing drainage systems shall be functional at all times.
11. The Contractor shall exercise care to minimize damages to existing highway improvements. All damages shall be repaired by the Contractor, at his expense, to the satisfaction of the District Engineer.
12. Approval of permit construction plans shall be valid for a period of one (1) year from the date of notification of approval to the applicant. In the event construction does not commence within this one-year period, the applicant will be required to resubmit the construction plans for the Division's review and reapproval.
13. All regulatory, guide and construction signs and barricades shall have a high-intensity reflective background.
14. The Contractor shall inform the State Highways permit office (831-6712) at least two (2) days prior to closing any lanes.
15. Driveways shall be kept open unless the owners of the property using these rights-of-way are otherwise provided for satisfactorily.
16. Where pedestrian walkways exist, they shall be maintained in a safe and passable condition or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided. All walkways shall conform to the ADA requirements.
17. The Contractor shall reference, to the satisfaction of the District Engineer, all existing traffic signs, posts and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts and pavement markings disturbed by his activities, at his expense, unless directed otherwise by the District Engineer or his representative.
18. The Contractor shall exercise care when performing work in or adjacent to the state highway right-of-way. Damages to the existing facilities shall be immediately reported to the respective utility companies, and/or City or State agencies. The repair work shall be done at the Contractor's expense.
19. The Contractor shall notify the State Highway's highway lighting supervisor (837-8056) three (3) working days prior to commencing work.
20. The Contractor shall notify the City Department of Transportation Services, traffic signal engineer (523-4589), three (3) days prior to any signalization intersection work.
20. Traffic signals shall be kept operational during construction. temporary operational microwave or other approved detection devices shall be installed three (3) working days prior to any signalization intersection excavation work. All work shall be done in accordance to the requirements of the Department of Transportation Services, City and County of Honolulu, and paid for by the Contractor.
21. The Contractor shall notify Oahu Transit Services, Inc. (OTS), Ed Sniffen at 848-4571, or Lowell Tom at 848-1578, two weeks prior to commencing any work. The Contractor shall inform OTS of the location and scope of work, proposed closure of any street or traffic lanes and the need to relocate any bus stop.
22. The permit to perform work upon State highways may be revoked because of default in any of the following, but not limited to, conditions:
- A. Work performed before or after permitted hours.
- B. Failure to maintain roadway surfaces in a smooth and safe condition.
- C. Failure to clean up construction debris generated from project work.
- D. Failure to provide proper traffic control.
- E. Failure to replace damaged pavement markings and signs.

23. The Contractor shall notify the State Highways permit office (831-6712) at least two days prior to performing any trench restoration work. This work shall include any backfilling and compacting of trench material; any placing and compacting of base course material; and any paving operations. Any trench restoration work performed by the Contractor that is not witnessed by a State representative will be required to be removed and restored with a State representative present. All restoration work will be at the Contractor's expense.
24. Temporary cold mix trench patches will be permitted in any given area for a maximum duration of two weeks, and shall be a minimum of 2 inches thick. All temporary patches shall be placed over properly and placed and compacted backfill and base course layers. Contractor shall be responsible for maintaining all temporary patches and to make repairs to unsatisfactory patches within 24 hours.
25. The Contractor will make every effort to minimize the use and the duration of use of steel plates. All steel plates shall have a non-skid surface. The State may require the backfilling and patches of trenches due to the excessive usage of steel plates.
26. Plastic marking tape. Provide plastic marking tape that is acid and alkali resistant polyethylene film 6 inches wide with minimum thickness of 0.004 inch. Provide tape with minimum strength of 1750 PSI lengthwise and 1500 PSI crosswise. Manufacture tape with integral wires, foil backing or other means to enable detection by a metal detector when tape is buried up to 3 feet deep. manufacture tape specifically for marking and locating underground utilities. Provide the metallic core of the tape encased in a protective jacket or provided with other means to protect it from corrosion. Conform to the following tape color and bear a continuous printed inscription describing the specific utility.

Red: Electric

Yellow: Gas, oil & dangerous materials

Orange: Telephone, telegraph, television, police & fire communications

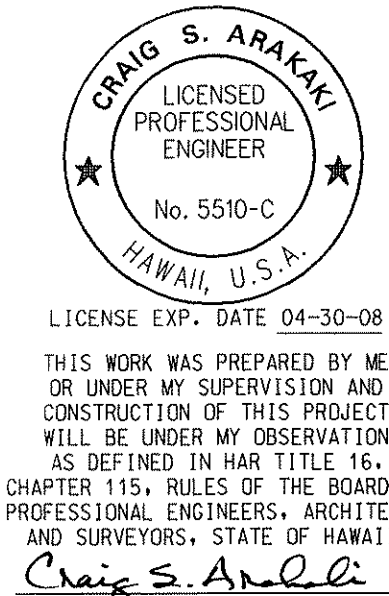
Blue: Water systems

Green: Sewer systems

27. The Contractor shall place an advertisement in the newspaper for the temporary road closure. The "notice to motorists" shall be placed in the Honolulu Star Bulletin and Honolulu Advertiser for three consecutive days within one week before the temporary lane closures. The "notice to motorists" shall be in accordance with the current Hawaii Standard Specifications for Road, Bridge and Public Works Construction, Subsection 104.04(c) - Advertisement and Subsection 107.13 -Public Convenience and Safety.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-(258)	2006	4	89

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ORIGINAL PLAN	
NOTE BOOK	
No.	



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES	
<u>INTERSTATE ROUTE H-1</u> <u>Kinau Street Off-Ramp Improvements</u> <u>Vicinity Of Queen's Medical Center</u> <u>Federal-Aid Project No.TC-HI-(258)</u>	
Scale: As Shown	Date: Dec. 2006
SHEET No. 2 OF 9 SHEETS	

CONSTRUCTION NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-K(258)	2006	5	89

1. All applicable construction work shall be done in accordance w/ the Standard Specifications for Public Works Construction, September 1986, and Standard Details for Public Works Construction, September 1984, SS Amended, of the Department of Public Works, City and County of Honolulu and the Counties of Kauai, Maui, and Hawaii.
2. The underground pipes, cables or ductlines known to exist by The Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, The Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for new lines.
3. No Contractor shall perform any construction operation so as to cause falling rocks, soil or debris in any form to fall, slide or flow into existing City Drainage Systems, or adjoining properties, Streets or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
4. The Contractor shall be responsible for conformance with the Applicable Provisions of the Water Quality and Water Pollution Control Standards Contained in Hawaii Administrative Rules, Title 11, Chapter 54, "Water Quality Standards," and Title 11, Chapter 55, "Water Pollution Control," as well as Chapter 14 of the Revised Ordinances of Honolulu, as Amended. Best Management Practices Shall be Employed at all times during construction.
5. The Contractor shall notify The Civil Engineering Branch, Department of Planning and Permitting at 768-8084 to arrange for inspectional services and submit ~~four (4)~~ ^{two (2)} sets of approved construction plans seven (7) days prior to commencement of construction work.
6. Confined space

For entry by City Personnel, including inspectors, into a Permit Required Confined Space as Defined In 29 Cfr Part 1910.146(B) the Contractor shall be responsible for providing:

- I. All safety equipment required by the Confined Space Regulations Applicable to all Parties other than the construction industry, to Include, but not limited to the following:
 - A. Full body harnesses for up to two personnel.
 - B. Lifeline and associated clips.
 - C. Ingress/Egress and fall protection equipment.
 - D. Two-way radios (Walkie-talkies) if out of line-of-sight.
 - E. Emergency (Escape) respirator (10 minute duration).
 - F. Cellular telephone to call for Emergency Assistance.
 - G. Continuous gas detector (Calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (Capable of monitoring at a distance at least 20 feet away).
 - H. Personal multi-gas detector to be carried by inspector.
- II. Continuous forced air ventilation adequate to provide safe entry conditions.
- III. One attendant/rescue personnel Topside (Two, if conditions warrant it).

7. Pursuant to chapter 6e, Hrs, in the event any artifacts or Human Remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify the Honolulu Police Department, State Department of Land and Natural Resources-Historic Preservation Division (692-8015). In addition, for Non-city projects, the Contractor shall inform The Civil Engineering Branch, Department of Planning & Permitting (768-8084); and for City Projects, Notify the Responsible City Agency.
8. For projects abutting State Highway's Rights-of-way, the owner or his authorized representative shall notify the State Department of Transportation, Highways Division, Oahu District, Drainage Discharge Unit at 831-6793 for an Assessment of State Highways Permit Requirements.
9. For bench mark, see sheet 12.

10. Construction activities will not be permitted in City Streets during weekends and holidays without prior approval from the Director, Department of Transportation Services.
11. Utility lines should be designed w/ Flexible Joints, particularly where lines are connected to structures.
12. The Contractor shall obtain and pay for all permits and licenses required. The Contractor shall conduct all tests as required by The Engineer and be responsible for all expenses incurred in conducting these tests.
13. The Contractor shall be responsible for verifying the locations and inverts of all existing utilities and drainage systems, whether shown on the plans or not, prior to commencement of construction.
14. The Contractor shall verify and check all dimensions and details shown on the drawings prior to the start of construction. The Contractor shall Immediately notify The Engineer of any discrepancy of conflict found in the field prior to or during the course of construction and shall not proceed with construction until The Engineer resolves the said discrepancy or conflict.
15. For details not delineated by these plans, the Contractor shall refer to the "Standard Details for Public Works Construction" or the "Water System Standards", dated 2002, whichever is applicable.
16. Unless otherwise noted, all existing pavement, utility lines and other improvements damaged or undermined as a result of the Contractor's operations shall be reconstructed or replaced by the Contractor at his own expense to match existing conditions.
17. All visible utility structures have been located in the field. However, connections to underground utility lines as shown are unverified and compiled from existing data. Underground utilities shown hereon are for information only, having been obtained from the best available sources. No guarantee is made on the accuracy or completeness of said information. The Contractor shall be responsible for and pay for all damaged utilities.
18. The Contractor shall observe and comply with all Federal, State and Local Laws Required for the protection of Public Health, Safety and Environmental Quality.
19. The Contractor shall observe and comply with the Administrative Rules of the Department of Health Regarding Noise Control for Oahu.
20. Utilities shall be installed Pursuant to the Provisions of Ordinance Nos. 2875 & 3357 (Underground Utilities).

GRADING NOTES:

1. All grading work shall be done in accordance with Chapter 14, Articles 13, 14, 15 And 16, as related to Grading, Soil Erosion and Sediment Control of the Revised Ordinances of Honolulu, 1990, as amended, and Soils Report Titled, "Soils Investigation Kinau Lusitana Road Improvements," by Ernest K. Hirata & Associates, Inc., dated August 12, 2003.
2. No Contractor shall perform any Grading so as to cause falling rocks, Soil or Debris in any form to fall, slide or flow onto adjoining properties, streets or natural watercourses. Should such violations occur, the Contractor may be cited and the Contractor shall immediately make all remedial actions necessary.
3. The Contractor, at his own wxpense, shall keep the project area and surrounding area free from Dust Nuisance. The work shall be in conformance with the Air Pollution Control Standards Contained in the Hawaii Administrative Rules, Title 11, Chapter 60.1, "Air Pollution Control".

4. The underground pipes, cables or ductlines known to exist by The Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
5. Adequate provisions shall be made to prevent surface waters from damaging the cut face of an excavation or the sloped surfaces of a fill. Furthermore, adequate provisions shall be made to prevent sediment-laden runoff from leaving the site.
6. All slopes and exposed areas shall be sodded or planted as soon as final grades have been established. Planting shall not be delayed until all Grading work has been completed. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed shall be planted.
7. Fills on slopes steeper than 5:1 shall be keyed.
8. The City shall be informed of the location of the borrow/disposal site for the project when the application for a grading permit is made. The borrow/disposal site must also fulfill the requirements of the grading ordinance.
9. No Grading work shall be done on Saturdays, Sundays and Holidays at any time without prior notice to the Director, D.P.P, provided such grading work is also in conformance with The Community Noise Control Standards Contained in the Hawaii Administrative Rules, Title 11, Chapter 46, "Community Noise Control".
10. The limits of the area to be graded shall be flagged before the commencement of the grading work.
11. All Grading operations shall be performed in conformance with the Applicable Provisions of the Water Quality and Water Pollution Control Standards Contained in Hawaii Administrative Rules, Title 11, Chapter 54 "Water Quality Standards" and Title 11, Chapter 55, "Water Pollution Control" and if applicable, the NPDES permit for the project.
12. Where applicable and feasible, the measures to control Erosion and other Pollutants shall be in place before any earth moving phase of the Grading is initiated.
13. Temporary Erosion Controls shall not be removed before permanent Erosion Controls are in-place and established.
14. Temporary Erosion Control Procedures shall be submitted for approval prior to application for Grading permit.
15. If the Grading work involves contaminated soil, all Grading work shall be done in conformance with applicable State and Federal Requirements.
16. Building Permits for retaining walls shall be obtained prior to commencement of Grading work on site.

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GENERAL PLAN	
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RE-APPROVAL

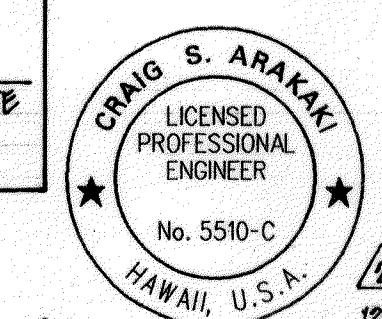
M. J. [Signature] 5/14/10
CHIEF, CIVIL ENGINEERING BRANCH, DPP WIT DATE

M. J. [Signature] 5/18/10
DIRECTOR, DEPARTMENT OF PLANNING & PERMITTING DATE
CITY AND COUNTY OF HONOLULU
(FOR CONSTRUCTION WITHIN CITY ROW)

Approved By:

M. J. [Signature] 6/8/07
Chief, Civil Engineering Branch, DPP WIT Date

M. J. [Signature] 6/25/07
Director, Department of Planning & Permitting Date
City and County of Honolulu
(For Construction Within City ROW)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAWAII TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Craig S. Arakaki

REV.	DATE	BRIEF	BY	TRD	NWB	QDB	BWS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES

INTERSTATE ROUTE H-1
Kinau Street Off-Ramp Improvements
Vicinity Of Queen's Medical Center
Federal-Aid Project No. TC-HI-K(258)

Scale: As Shown Date: Dec. 2006

SHEET No. 3 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-1(258)	2006	C.O.6	89

ADJUSTMENT TO EXISTING UTILITIES NOTE:

1. Adjust all utility valve box frames & covers, water meter boxes, manhole frames & covers, street tonument covers, etc., to new finish grade. Coordinate with private companies and City agencies for work on each respective utility.

17. The Contractor shall notify The Civil Engineering Branch, Department of Planning and Permitting at 768-8084 to arrange for inspectional services and submit four (4) sets of approved construction plans seven (7) days prior to commencement of construction work. For City projects, the Contractor shall coordinate inspectional services with the responsible City Agency.
18. Pursuant to Chapter 6e, Hrs, in The Event any artifacts or Humans remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify The Honolulu Police Department and The State Department of Land and Natural Resources- Historic Preservation Division (692-8015). In Addition, for Non-City Projects, The Contractor shall inform The Civil Engineering Branch, D.P.P. (768-8084); and for City Projects, Notify The Responsible City Agency.
19. For all projects, which will disturb one (1) acre or more of land, the Conctractor shall not start construction until a Notice of General Permit Coverage (NGPC) is received from the Department of Health, State of Hawaii, and has satisfied any other appliclicable requirements of NPDES permit program. Also, for non-City and other non-government agency projects, the Contractor shall provide a written copy of the NGPC to the Permitting and Inspection Section, Civil Engineering Branch, D.P.P., at least seven (7) calendar days before the start of the construction. For city or other governmental agency per their requirements.
20. All grading and construction work shall implement measures to ensure that the discharge of pollutants from the construcion site will be reduced to the maximum extend practicable and will not cause or contribute to an exceedance of water quality standards
21. Non-compliance to any of the above requirements shall mean immediate suspension of all work, and remedial work shall commence immediately. all costs incurred shall be billed to the violator. Furthermore, violators shall be subjected to Administrative, Civil and/or Criminal Penalties.
22. For bench mark, see sheet 12.

The following notes were extracted from the soils report prepared by Ernest K. Hirata & Associates, Inc., titled "Soils Investigation Kinau-Lusitana Road Improvements," dated August 12, 2003.

Site Grading

23. The project site shall be cleared of all vegetation, concrete, and asphaltic concrete pavements and other deleterious material.
24. The preparation of subgrades prior to fill placement shall conform to the Standard Specifications of Road, Bridge, and Public Works Construction.
25. Onsite soils may be used as backfill and in compacted fills, provided all rock fragments larger than 3 inches in maximum dimension are removed.
26. Site grading shall conform to the Standard Specifications for Road, Bridge, and Public Work Construction.

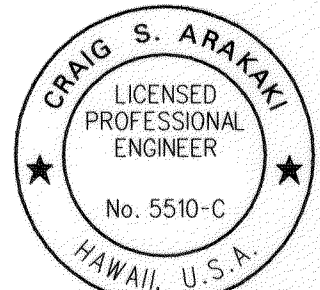
HAWAIIAN TELCOM GENERAL NOTES

1. The location of Hawaiian Telcom's existing facilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity of Hawaiian Telcom's Facilities. The Contractor shall verify their locations and shall be liable for any damages to Hawaiian Telcom's facilities. Any damages shall be reported immediately to Hawaiian Telcom's Repair Section at #611 (24 Hours) or to The Excavation Permit Section at 840-1444 (normal working hours, Monday through Friday, except holidays).
2. For underground cable locating and marking, five working days advance notice is required. Three working days advance notice is required for any inspection by a designated representative.

3. The Contractor shall take necessary precaution not to damage any existing cables or conduits. Any work involving existing Hawaiian Telcom, Inc.'s cables or conduits shall be done in the presence of a Hawaiian Telcom's Inspector or Designated Representative.
4. The Contractor shall obtain an excavation permit and toning request from Hawaiian Telcom's Excavation Permit Section, located at 3239 Ualena Street, third floor, two weeks prior to the start of construction. Hours of business is 7:00 AM To 11:00 a.m. and 12:00 Noon To 3:30 p.m Monday through Friday, except holidays.
5. The Contractor shall notify Hawaiian Telcom's Inspector or Designated Representative a minimum of 72 hours prior to excavation, bracing or
6. When excavation is adjacent to or beneath Hawaiian Telcom's existing structures or facilities, the Contractor shall:
- (A) Sheet and/or brace the excavation to prevent slides, cave-ins or settlements to ensure no movement to Hawaiian Telcom's structures or facilities.
- (B) Protect existing structures and/or facilities with beams, struts or underpinning while excavating beneath them to ensure no movement to Hawaiian Telcom's structures or facilities.

CONSTRUCTION NOTES FOR GAS FACILITIES

1. The Gas Company gas pipeline in the project area plastic coated and cathodically protected. The Contractor shall be extremely careful when working near these gas pipelines.
2. Written clearances must be obtained from The Gas Company, maps and Records Department, 515 Kamakee Street, at least five (5) working days prior to starting excavation near these gas pipeline. Hawaii one call center
3. Since gas line locations on field maps are approximate, the Contractor, after obtaining written clearance, shall call USA North a minimum of five (5) two (2) working days before starting excavation to arrange for field location of the existing gas pipeline. The telephone number is 1-800-227-2600. 811 or 1-866-423-7287.
4. The Contractor shall excavate and backfill around gas pipeline in the presence of a representative of The Gas Company. all bacfill within six inches of any gas pipeline shall be select cushion material approved by The Gas Company.
5. For relocation of any gas pipeline, the Contractor shall notify The Gas Company five (5) working days before starting work. The telephone number ss 594-5574. The Contractor shall provide the necessary excavation and backfill, obtain traffic permits, and restore pavement, sidewalks, and other facilities. Any relocation of gas facilities shall be by The Gas Company and paid for by the Contractor.
6. The Contractor shall notify The Gas Company immediately after any damage has been caused to existing gas pipelines, coatings, or its cathodic protection devices. The telephone number is 535-5933 24 hours a day. The Contractor shall be liable for any damage to The Gas Company facilities. Repair work on such damage shall be done by The Gas Company with payment for this work to be done by the Contractor.
7. Minimum vertical and horizontal clearance between the Gas pipeline and other pipeline, conduits, ductline, or other facilities shall be 12 inches. adequate support and protection for Gas pipeline exposed in the trench shall be provided by the Contractor and approved by The Gas Company.
8. The Contractor shall work in the expeditious manner in order to keep the uncovered Gas pipeline exposed for as short a period of time as possible.



LICENSE EXP. DATE 04-30-12
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAW TITILE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.
Craig S. Arakaki

7/17/09	2	Reapproved Due to Time Lapse, Update Stamp
DATE	REVISION	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
<u>CONSTRUCTION NOTES</u>		
<u>INTERSTATE ROUTE H-1</u> <u>Kinau Street Off-Ramp Improvements</u> <u>Vicinity Of Queen's Medical Center</u> <u>Federal-Aid Project No. TC-HI-1(258)</u>		
Scale: As Shown		Date: Dec. 2006
SHEET No. 4 OF 9 SHEETS		

SIGNS & MARKINGS NOTES

1. All traffic sign and pavement marking installations shall be done in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," 1988 Edition, as amended, the latest specifications from the Traffic Review Branch, Department of Planning and Permitting, and as shown on the plans.
2. Contractor shall notify and coordinate work with the Civil Engineering Branch, Department of Planning and Permitting, one (1) week in advance of commencing work at 523-4881. 760-0004.
3. Contractor shall submit material brochures for all signs and paint materials to the Civil Engineering Branch, Department of Planning and Permitting.
4. The signing and/or striping Contractor shall keep one (1) set of approved plans at the project site at all times during construction work.
5. Contractor shall paint temporary guidelines and outline of arrows, legends, and crosswalks with a two inch (2") wide brushed line on the day the roadway is opened to traffic. These markings must be approved by the inspector from the Civil Engineering Branch, Department of Planning and Permitting.
6. Contractor shall notify the Civil Engineering Branch, Department of Planning and Permitting at 523-4881, three (3) days in advance of the final inspection. 768-8084.
7. Contractor shall meet with the inspector from the Civil Engineering Branch, Department of Planning and Permitting, during the final inspection. 760-0004.
8. Within ten (10) days following notification of award of contract, the Contractor shall submit to the Department of Planning and Permitting (Phone: 523-4881) for approval, a list of any signing and pavement marking material which he proposes to install. The list shall be complete as to the name of manufacturer, catalog number, and shall be supplemented with material brochures.
9. Upon final inspection of the project, the Contractor shall submit a letter of certification for all traffic signing and pavement marking materials installed.
10. Signs shall be attached to bracket with 5/16" zinc plated steel bolts, nuts and washers. Signs 48" wide or larger than 10 sq. ft. In area shall be mounted on two 2" galv. pipe post. The sign shall be installed with at least one (1) foot clearance from the sign edge to the curb face.
11. All traffic signs shall be reflectorized.
12. Raised pavement markers shall be installed in accordance with the Department of Planning and Permitting standards.
13. Pavement word and symbol markings shall be in accordance with the Department of Planning and Permitting standards.
14. The Contractor shall use thermoplastic material, approved by the Civil Engineering Branch, Department of Planning and Permitting, for all crosswalks, stop bars, pavement arrows, center lines, lane lines, arc lines, channelized traffic islands and legends.

15. Location of "STOP" sign:
- A. Install "STOP" sign at curb tangent point.
 - B. Install "STOP" sign on metal street light standard if a standard is located within ten (10) feet of curb return.
 - C. Install "STOP" sign in front of utility pole if a pole is located within ten (10) feet of curb return.

TRAFFIC NOTES FOR WORK ON CITY & COUNTY STREETS:

1. A permit shall be obtained from the Department of Transportation Services before work on any portion of a public street or highway may begin. Construction traffic control plans approved by the Department of Transportation Services and/or the Department of Planning and Permitting must be provided when applying for the permit.
2. The Contractor shall provide, install, and maintain all necessary signs and other protective facilities, which shall conform with the "Hawaii Administration Rules Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" adopted by the Director of Transportation, and the current U.S. Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Street and Highways, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations."
3. Work on any City street area may be performed only between the hours of 8:30 a.m. to 3:30 p.m., Monday through Friday, unless otherwise permitted by the Department of Transportation Services.
4. During working hours, the Contractor shall provide for through traffic. During non-working hours, all trenches shall be covered with a safe non-skid bridging material and all lanes shall be open to traffic.
5. As required by the Department of Transportation Services, the Contractor shall provide off-duty police officers to control the flow of traffic.
6. Driveways shall be kept open unless the owners of the property using these rights-of-way are otherwise provided for satisfactory.
7. Where pedestrian walkways exist, they shall be maintained in passable condition or other facilities for pedestrians shall be provided. Passage between walkways at intersections shall likewise be provided.
8. The Contractor shall reference to the approval of the Department of Transportation Services and the Department of Planning and Permitting, all existing traffic signs, posts and pavement markings prior to the commencement of construction. The Contractor shall replace or repair all traffic signs, posts and pavement markings disturbed by his activities.
9. The Contractor shall notify the Civil Engineering Branch, Department of Planning and Permitting, at 523-4881 to arrange for 760-0004 one (1) inspectional services and submit four (4) sets of approved work prior to any construction plans seven (7) days prior to commencement of work to be done on signs, posts and pavement markings.
10. No material and/or equipment shall be stockpiled or otherwise stored within Street rights-of-way except at locations designated in writing and approved by the Department of Transportation Services.
11. The State Department of Transportation shall ensure that the Contractor install the construction Traffic Control Devices in accordance with the "Manual on Uniform Traffic Control Devices" and the Hawaii Administration Rules as Specified in Traffic Note #2.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-K(258)	2006	7	89

PUBLIC TRANSIT DIVISION (DTS) NOTE:

1. The Contractor shall notify Oahu Transit Services, Inc. (OTS-The Bus Contractor), Ed Sniffon (848-4571) or Lowell Tom (848-4578), two weeks prior to construction, informing them of location, scope of work, proposed closure of any street or traffic lanes, and the need to relocate any bus stops.

MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION NOTES:

1. The Contractor shall notify the Joint Pole Committee two (2) weeks in advance of any relocation of utility pole(s) that may be necessary.
2. The Contractor shall notify the Mechanical/Electrical Design and Engineering Division, Department of Design and Construction, three (3) working days prior to commencing work on the street lighting system (phone: 523-4067, 760-0431).
3. The street lighting system shall be kept operational during construction. Any relocation required shall be approved by the Mechanical/Electrical Design and Engineering Division, Department of Design and Construction, and paid for by the Contractor.
4. The Contractor shall be responsible for any damages to existing street lighting facilities. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the City and County of Honolulu.
5. The Contractor shall be responsible for any damages to the City's existing communications fiber optic cable system. Any and all damages to these facilities shall be repaired by the Contractor at his cost in accordance with the requirements of the City and County of Honolulu.

PUBLIC TRANSIT DIVISION (DTS) NOTE:

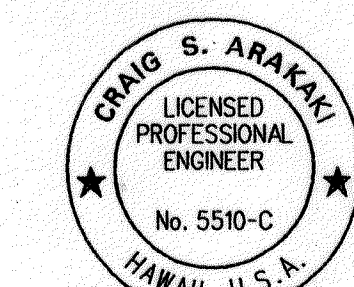
This project will affect bus routes, bus stops and para-transit operations, therefore, the contractor shall notify the Department of Transportation Services, Public Transit Division at 760-8396 and Oahu Transit Services, Inc. (bus operations: 840-9570 or 840-6016 and para-transit operations: 954-5041 or 954-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two weeks prior to construction.

DATE	DATE
DESIGNED BY	DESIGNED BY
TRACED BY	TRACED BY
NOTE BOOK	NOTE BOOK
CHECKED BY	CHECKED BY
NO.	NO.

RE-APPROVAL	
CHIEF, TRAFFIC REVIEW BRANCH, DPP	DATE

REV	DATE	BRIEF	BY	TRB	HNB	CEB	BNS
1	7/1/04	RE-APPROVAL DUE TO TIME LAPS, UPDATE STAMP	ECI				

Approved By:	
CHIEF, Traffic Review Branch, DPP	DATE



LICENSE EXP. DATE 04-30-08
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAWAII TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES	
INTERSTATE ROUTE H-1 Kinohi Street Off-Ramp Improvements Vicinity Of Queen's Medical Center Federal-Aid Project No. TC-HI-K(258)	
Scale: As Shown	Date: Dec. 2006
SHEET No. 5 OF 9 SHEETS	

WATER NOTES:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-(258)	2006	8	89

- Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "Water System Standards", dated 2002, the "Water System External Corrosion Control Standards", Volume 3, dated 1991, and all subsequent amendments and additions.
- Test pressure shall be 200 psi. During the 30-minute pressure test, the pressure shall not drop more than 10 psi.
- The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (For connection only.)
- The Contractor shall notify BWS Capital Projects Division, Construction Section in writing and submit five (5) sets of approved construction plans one week prior to commencing work on the water system.
- All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply.
- Water commitment shall be cancelled if the approved construction plans are allowed to lapse.
- The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees and bends wherever there is a possibility of water line movement due to the removal of the Supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measures necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
- The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and shall pay for the all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
- The Contractor shall furnish and install polyethylene wrap, 3 feet minimum at all taps (For DI pipe and copper lateral combination only) and plastic pipe (PE tubing) 3 feet long after meters for all service lateral connections.
- Prior to installation, the Contractor shall submit for approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 2002.
- Polygon shape for mechanical joint glands as described in AWWA Standard C1. C111 shall be "straight-sided" or an approved equal on a job to job basis.
- Re-approval shall be required if this project is not under construction within a period of two years.
- The Contractor/Developer shall obtain a NPDES permit prior to chlorination and/or de-watering. A copy of the permit shall be submitted to the Board of Water Supply, Capital Projects Division, Construction Section.
- At the electrical/signal duct line water crossings, adjust all electrical/signal duct line elevations to maintain 6" vertical clear separation from all water lines (12" clear for all electrical/signal duct line structures larger than 16") at no cost to the BWS.
- Maintain 3'-0" min. horizontal clear separation between all water line systems and nearest electrical/signal duct lines paralleling the water system at no cost the BWS.

- Maintain 3'-0" min. horizontal clear separation between Street Light/Traffic Signal, Standards (Including any modular units) and the nearest water line system. Contractor shall field verify for any conflicts at each Street Light/Traffic Signal Standard Location. where conflicts occur, the Contractor shall coordinate with the project Engineer to revise the Street Light/Traffic Signal Standard to provide the required clearances at no cost to the Board of Water Supply.
- Contractor shall cut and plug all existing unused laterals at the main, whether or not shown on the plans. Meter and valve boxes to be or already abandoned shall be demolished or removed and properly disposed of. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.
- All ductile iron pipe, fittings and valves shall be wrapped with two layers of 8 mil. (min.) polyethylene wrap.
- Cleaning shall be by the use of "Pigs" introduced into the pipeline and run completely through all installed pipelines and all branch lines for fire hydrants. "Pigging" of service laterals is not required. bare foam "Pigs" shall be used to swab piping clean as each length of the pipeline is installed. Each "Pig" shall consist of a cylindrical piece of polyurethane foam with a density of 3-7 pounds per cubic foot and a vinyl-coated nose. outside diameter of the "Pig" shall be equal to 1-1/4 To 1-1/2 times the inside diameter of the pipe being installed. The length of the "Pig" shall be 1-1/2 to 2 times its diameter. Prior to use, the "Pig" shall be submerged in a chlorine solution of 1 oz. Of 5% chlorine bleach in 5 gallons of water. "Pigging" of the pipeline shall be considered incidental to the installation of the new pipeline.
- Ball corp and ball stop shall be used in lieu of a corporation stop and stopcock, respectively.
- All waterline construction requiring shutdown connection shall be scheduled for normal working hours at Six (6) hours maximum downtime.
- Pipe cushion shall be of high resistivity material. The Contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 OHM-CM. Remainder of the backfill material shall be as specified in volume 1 of the water system standards. Pipe Cushion and Backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenyls (PCB).
- The Contractor shall follow the following revised chlorination and water sampling procedures:
 - The following chlorination and water sample collection procedure shall apply to all water pipeline projects:

Step 1: Chlorinate main by filling with water and introducing chlorine in sufficient quantity to obtain a minimum chlorine concentration of 50 parts per million. Leave chlorinated water in main overnight.

Step 2: Flush main with fresh water until all chlorine has been flushed out as evidenced by the Ortho-Tolidine Test, then collect a water sample while continuing to flush the main.

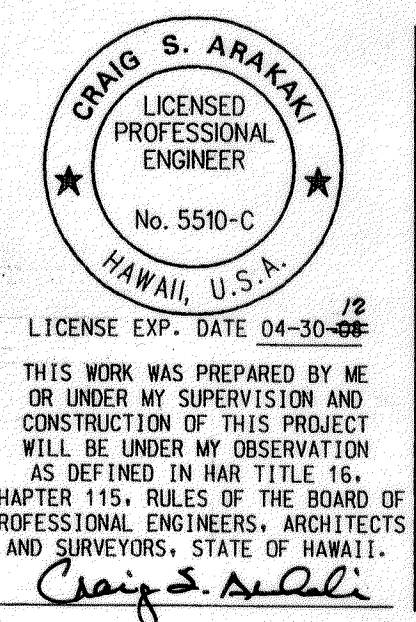
Step 3: Repeat steps 1 and 2. after collecting the second water sample, stop flushing and allow the water to stand in the main overnight.

Step 4: Thoroughly flush the main with the fresh water until all water that had been standing in the main overnight has been flushed out. Stop flushing and let the water stand in the main for one hour. Collect a water sample.

- The main is deemed acceptable and certified when (1) two consecutive water samples, collected 24 hours apart under steps 1 and 2, show no total and fecal conform and less than 200 Colony Forming Units (CFU) of total bacteria and (2) the sample of water held in the main for one hour, collected under step 4, also shows no total and Fecal Coliform and less than 200 CFU of total bacteria.
 - Chlorination, flushing, sampling and testing will be extended should unsatisfactory results be encountered. Any sample that shows positive coliform presence or total bacteria greater than 200 CFU is unsatisfactory.
 - Steps 1 and 2 be repeated before collecting the one hour hold sample specified in Step 4. Repeating steps 1 and 2 is recommended in the event samples show the presence of coliforms and/or increasing total bacterial results from one sample to the next.
 - Water samples that show the presence of a typical colonies, debris or results inconsistent with existing water are subject to reconfirmation. BWS reserves the right to request and test additional water samples in the interest of safeguarding public health and safety.
- The Contractor shall coordinate the securing of the existing water system with the BWS prior to excavating behind or removing any existing thrust blocks, structural struts or reaction beams, or any fittings such as tees, plugs, caps, bends, offsets and valves or any other pipeline appurtenances. The Contractor shall be responsible for all associated damages resulting from failure to adequately secure the existing system.
 - Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "Caution Water Line Buried Below".
 - Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the Building Department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment will effective when the project receives an approved building permit from the Building Department. All water commitment will be canceled in the event the building permit is canceled.
 - The Contractor shall verify all existing service lateral locations whether shown or not shown on plans prior to commencing with any of the work and shall not assume that where no services are shown, none exist.
 - The Contractor shall adjust all manhole frames/valve boxes/meter boxes within the resurfaced area. The Contractor shall be responsible for "Referencing" these manholes/valve boxes/meter boxes to facilitate the adjustments.
 - Maintain 3'-0" minimum cover for all existing waterlines (18" minimum for service laterals) from new finish grade. The Contractor shall probe the waterline and service laterals and submit the probing data to BWS Maintenance Unit-Engineering, construction section. any adjustments to the existing water system to meet the minimum cover and the requirements of the BWS standards, whether shown on plans or not, shall be done by the contractor at no cost to BWS.
 - Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.
 - Two-way blue reflective hydrant markers Type "DB" shall be Installed at all new fire hydrant installations. Contractor shall verify the exact locations of hydrant markers with nearest Honolulu Fire Department Battalion Chief.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

REV. DATE	9/16/06	RE-APPROVAL DUE TO TIME Lapse, UPDATE STAMP	ECI	TRB	HNB	QEB	BNS
Approved By: Robert Chun 7/5/06 Chief, Capital Projects Division, BWS Date							



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES	
INTERSTATE ROUTE H-1 Kinoh Street Off-Ramp Improvements Vicinity Of Queen's Medical Center Federal-Aid Project No. TC-HI-(258)	
Scale: As Shown	Date: June 19, 2006
SHEET No. 5 OF 9 SHEETS	

SEWER NOTES:

- All sewer construction shall be performed in accordance with the City & County Standard Specifications for Public Works Construction, dated September 1986, the Department of Public Works Standard Details, September 1984, as Revised, the current City practices and the Revised Ordinances of Honolulu, 1990, as amended, and the Design Standards of the Department of Wastewater Management, Volume 1, July 1993.
- The Contractor shall notify the Inspection Section, Wastewater Branch, D.D.C., at ~~527-5855 or 523-4345~~ ^{760-0700 or 760-0770} to arrange for inspection services and submit four (4) sets of approved construction plans seven (7) days prior to commencement of sewer work. The Contractor shall pay for all inspection costs.
- The underground pipes, cables or ductlines known to exist by the Engineer from his research of records are indicated on the plans. The Contractor shall verify the location and depth of the utilities, including and affecting sewer lines, in the presence of the Wastewater Inspector, and exercise proper care in excavation the area. The Contractor shall be responsible and shall pay for all damaged utilities.
- The Contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.
- The Contractor shall be responsible for any sewage spills caused during construction. The Contractor shall notify the State Department of Health and utilize appropriate sampling and analyzing procedures. The Contractor shall be responsible for all public notifications and press releases.
- The Contractor shall install "Rain Stopper" manhole inserts in all sewer manholes with Type "SA" frame and cover.
- For entry by City personnel, including inspectors, into a permit required confined space as defined in 29 CFR Part 1910.146(B) the Contractor shall be responsible for providing:
 - All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to the following:
 - Full body harnesses for two personnel.
 - Lifeline and associated clips.
 - Ingress/egress and fall protection equipment.
 - Two-way radios (walkie-talkies) if out of line-of-sight.
 - Emergency (escape) respirator (10 minute duration).
 - Cellular telephone or call for emergency assistance.
 - Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (capable of monitoring at a distance at least 20 feet away).
 - Personal multi-gas detector to be carried by inspector.
 - Continuous forced air ventilation adequate to provide safe entry conditions.
 - One attendant/rescue personnel topside (two, if conditions warrant it).
- For sewer manhole (SMH) adjustments upward less than 3", see Standard Detail S-25. For SMH adjustments upwards greater than 3" or for any adjustments downward, reconstruct SMH top from below the cone section.

HAWAIIAN ELECTRIC COMPANY NOTES:

- LOCATION OF HECO FACILITIES
The location of HECO's overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall verify in the field the locations of the facilities and shall exercise proper care in excavating and working in the area. Wherever connections of new utilities to existing utilities and utility crossings are shown, the Contractor shall expose the existing lines at the proposed connections and crossings to verify the depths prior to excavation for the new lines. The Contractor shall be responsible for any damages to HECO's facilities whether shown or not shown on the plans.
- COMPLIANCE WITH HAWAII OCCUPATIONAL SAFETY AND HEALTH LAWS
The contractor shall comply with the State of Hawaii's Occupational Safety and Health laws and regulations, including without limitation, those related to working on or near exposed or energized electrical lines and equipment.

- EXCAVATION PERMIT
The Contractor shall obtain an excavation permit from HECO's technical division (543-5654) located at 820 Ward Avenue, 4th Floor, two weeks prior to starting construction. Please refer to our request number at that time.
- CAUTION!!! ELECTRICAL HAZARD!!!
Existing HECO overhead and underground lines are energized and will remain energized during construction unless prior special arrangements have been made with HECO. Only HECO personnel are to handle these energized lines and erect temporary guards to protect these lines from damage. The Contractor shall work cautiously at all times to avoid accidents and damage to existing HECO facilities, which can result in electrocution.
- OVERHEAD LINES
State law (OSHA 1910.269 (k) (2b)) requires that a worker and the longest object he or she may contact cannot come closer than a minimum radial clearance of 10 feet when working close to or under any overhead lines rated 50kv and below. For each additional 10kv above 50kv, an additional 4 inches shall be added to the 10-foot clearance requirement. The preceding information on line clearance requirements is provided as a convenience and it is the Contractor's responsibility to be informed of and comply with any revisions or amendments to the law.
Should the Contractor anticipate that his work will result in the need to encroach within the minimum required clearance at any time, the Contractor shall notify HECO at least four (4) weeks prior to the planned encroachment so that, if feasible, the necessary protections (e.g. relocate or de-energize HECO lines) can be put in place. HECO maybe able to blanket its distribution (12kv and below) lines to provide a visual aid in preventing accidental contact. HECO's cost of safeguarding or identifying its lines will be charged to the Contractor.
Contact HECO's Customer Installations Department at 543-7846 for assistance in identifying and safeguarding overhead power lines.
Refer to Section X of HECO's Electric Service Installation Manual for additional guidelines when working around HECO's facilities. A copy may be obtained from HECO's Customer Installation Department.
- POLE BRACING
A minimum clearance of 10 feet must be maintained when excavating around utility poles and/or their anchor system to prevent weakening or pole support failure. Should work require excavating within 10 feet of a pole and /or its anchor system, the Contractor shall protect, support, secure, and take all other precautions to prevent damage to or leaning of these poles. The Contractor is responsible for all associated costs to brace, repair, or straighten poles. All means of structural support for the pole proposed by the Contractor shall first be reviewed by HECO before implementation. For pole bracing instructions, the Contractor shall call HECO Construction and Maintenance Department, Customer and System Superintendent at 543-4223 a minimum of two (2) weeks in advance. ⁷⁶¹⁰ *The cost of HECO's review assistance in providing proper support and protection of its poles will be charged to the Contractor.*
- UNDERGROUND LINES
The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. HECO's existing electrical cables are energized and will remain energized during construction. Only HECO personnel are to break into existing HECO facilities, handle these cables, and erect temporary guards to protect these cables from damage. The cost of HECO's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. Special precautions are required when excavating near HECO's 138kv underground lines (see HECO Instructions to Consultants/Contractors on "Excavation Near HECO's Underground 138kv Lines" for detailed requirements).
For verification of underground lines, the Contractor shall call ~~HECO's~~ ⁷⁶¹⁰ *the Hawaii One call Center at 822-123-7287* ~~Underground Division at 543-7049 a minimum of 72 hours in advance.~~
For assistance in providing proper support and protection of these lines, the Contractor shall call HECO's Construction and Maintenance Department, Customer and System Superintendent, at 543-4223, a minimum of two (2) weeks in advance. ⁷⁶¹⁰
- UNDERGROUND FUEL PIPELINES
The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of HECO's underground fuel oil pipelines (see HECO Instructions to Consultants/Contractors on "Excavation Near HECO's Underground Fuel Lines" for detailed requirements).

- EXCAVATIONS
When trench excavation is adjacent to or beneath HECO'S existing structures or facilities, the contractor is responsible for:
 - Sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure and to prevent possible slides, cave-ins, and settlements.
 - Properly supporting existing structures or facilities with beams, struts, or under-pinnings to fully protect it from damage.
 - Backfilling with proper backfill material including special thermal backfill where existing (refer to engineering department for thermal backfill specifications).
 - ⁷⁶¹⁰ *Arranging for HECO standby personnel to observe work at contractor's cost.*
- RELOCATION OF HECO FACILITIES
Any work required to relocate or modify HECO facilities shall be done by HECO, or by the Contractor under HECO's supervision. The Contractor shall be responsible for all coordination, and shall provide necessary support for HECO's work, which may include, but not limited to, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalks, and other facilities.
All costs associated with any relocation or modification (either temporary or permanent) for the convenience of the Contractor, or to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations shall be borne by the Contractor.
- CONFLICTS
Any redesign or relocation of HECO's facilities not shown on the plans may be cause for lengthy delays. The Contractor acknowledges that HECO is not responsible for any delay or damage that may arise as a result of any conflicts discovered or identified with respect to the location or construction of HECO's electric facilities in the field, regardless of whether the Contractor has met the requested minimum advance notices. In order to minimize any delay or impact arising from such conflicts, HECO should be notified immediately upon discovery or identification of such conflict.
- DAMAGE TO HECO FACILITIES
The Contractor shall be responsible for the protection of all HECO surface and subsurface utilities and shall be responsible for any damages to HECO's facilities as a result of his operations. The Contractor shall immediately report such damages to HECO's trouble dispatcher at 548-7961. Repair work shall be done by HECO or by the Contractor under HECO's supervision. Costs for damages to HECO's facilities shall be borne by the Contractor.
In case of damage or suspected damage to HECO's fuel pipeline, the Contractor shall immediately notify HECO's Honolulu Power Plant Shift Supervisor at 533-2102 (a 24-hour number) so HECO personnel can secure the damaged section and report any oil spills to the proper authorities. All costs associated with the damage, repair, and oil spill cleanup shall be borne by the Contractor.
- HECO STAND-BY PERSONNEL
The Contractor may request HECO to provide an inspector to stand-by during construction near HECO's facilities. The cost of such inspection will be charged to the Contractor.
The Contractor shall call the HECO Construction and ⁷⁶¹⁰ *Maintenance Department, Customer & System Superintendent at 543-4223* a minimum of 5 working days in advance to arrange for HECO stand-by purposes.

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
INCHES BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
NO.	_____

REVISION	DATE	REVISION	DATE	REVISION	DATE	REVISION	DATE	REVISION	DATE
1	4/21/10	2	4/21/10	3	4/21/10	4	4/21/10	5	4/21/10

APPROVAL

Dennis M. Nishimura 4/21/10

CHIEF, WASTEWATER BRANCH, DPP

DATE

CRAIG S. ARAKI

LICENSED PROFESSIONAL ENGINEER

No. 5510-C

HAWAII, U.S.A.

LICENSE EXP. DATE 04-30-12

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAWAII TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Craig S. Araki

Approved By:

Dennis M. Nishimura 6/29/06

Chief, Wastewater Branch, DPP

Date

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

CONSTRUCTION NOTES

INTERSTATE ROUTE H-1

Kinohi Street Off-Ramp Improvements

Vicinity Of Queen's Medical Center

Federal-Aid Project No. TC-HI-K(258)

Scale: As Shown Date: June 19, 2006

SHEET No. 7 OF 9 SHEETS

WATER POLLUTION AND EROSION CONTROL NOTES:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-1(258)	2006	10	89

A. GENERAL:

- The Contractor is reminded of the requirements of Section 209 - Temporary Water Pollution, Dust, and Erosion Control, in the Special Provisions. Section 209 describes but is not limited to: submittal requirements; scheduling of a water pollution and erosion control conference with the Engineer; construction requirements; method of measurement; and basis of payment.
- The Contractor shall follow the guidelines in the "Best Management Practices Manual for Construction Sites in Honolulu", dated May 1999 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
- The Contractor shall follow the guidelines in the City & County of Honolulu's "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
- For projects that require an NPDES Permit from the Department of Health, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall, and have an opening of at least one-inch in diameter. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in place.

B. WASTE DISPOSAL:

- Waste Materials
All waste materials shall be collected and stored in a securely lidded metal dumpster. The dumpster shall meet all local and State solid waste management regulations. All trash and construction debris from the site shall be deposited in the dumpster. The dumpster shall be emptied a minimum of twice per week or as often as is deemed necessary. No construction waste materials shall be buried onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
- Hazardous Waste
All hazardous waste materials shall be disposed of in the manner specified by local or State regulations or by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
- Sanitary Waste
All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- All control measures shall be inspected at least once each week and within 24 hours of any rainfall event of 0.5 inches or greater within a 24 hour period.
- All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
- Silt screen or fence shall be inspected for depth of sediment, tears, to verify that the fabric is securely attached to the fence posts or concrete slab and to verify that the fence posts are firmly in the ground. The bottom of the silt screen shall be inspected and verified that it is buried a minimum of 6 inches below the existing ground.

- Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
- A maintenance inspection report shall be made promptly after each inspection by the Contractor and a copy shall be submitted to the Engineer no later than one week from the date of the inspection.
- Provide a stabilized construction entrance to reduce vehicle tracking of sediments. Include stabilized construction entrance in the Water Pollution, Dust, and Erosion Control submittals. Minimum length should be 50 feet. Minimum width should be 30 feet. Minimum depth should be 6 inches and underlain with geo-textile fabric. The paved street adjacent to the site entrance shall be cleaned daily or as required to remove any excess mud, cold planed materials, dirt or rock tracked from the site. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
- Include designated concrete washout area(s) in the Water Pollution, Dust, and Erosion Control submittals.
- The Contractor shall submit the name of a specific individual designated responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- Personnel selected for the inspection and maintenance responsibilities shall receive training from the Contractor. They shall be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.
- The Contractor shall contain, remove, and dispose slurry generated from saw cutting of pavement in accordance with approved BMP practices. Payment for confinement, removal, and disposal of slurry shall be considered incidental to the various contract items.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan

- A. Applicable materials or substances listed below are expected to be present onsite during construction. Other materials and substances not listed below shall be added to the inventory.

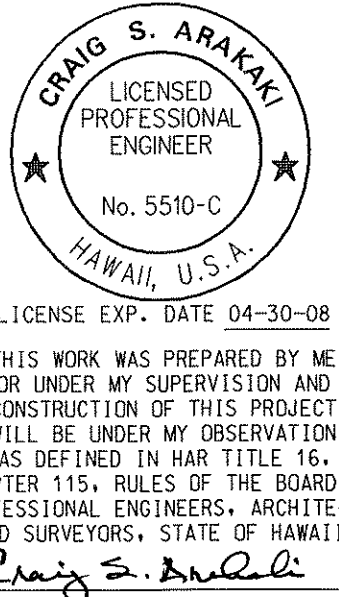
Concrete	Fertilizers
Detergents	Petroleum Based Products
Paints (enamel and latex)	Cleaning Solvents
Metal Studs	Wood
Tar	Masonry Block

- B. Material management practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. An effort shall be made to store only enough product as is required to do the job.
- C. All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- D. Products shall be kept in their original containers with the original manufacturer's label.
- E. Substances shall not be mixed with one another unless recommended by the manufacturer.
- F. Whenever possible, a product shall be used up completely before disposing of the container.
- G. Manufacturer's recommendations for proper use and disposal shall be followed.
- H. The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

- A. Products shall be kept in original containers unless they are not resealable.
- B. Original labels and material safety data sheets (MSDS) shall be retained.
- C. Surplus products shall be disposed of according to manufacturers' instructions or local and State recommended methods.

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NOTE BOOK	
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES	
INTERSTATE ROUTE H-1 Kīnaʻu Street Off-Ramp Improvements Vicinity Of Queen's Medical Center Federal-Aid Project No. TC-HI-1(258)	
Scale: As Shown	Date: Dec. 2006
SHEET No. 8 OF 9 SHEETS	

WATER POLLUTION AND EROSION CONTROL NOTES (CONT.)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-1(258)	2006	11	89

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES: (CONTINUED)

3. Onsite and Offsite Product Specific Plan

The following product specific practices shall be followed onsite:

- a. Petroleum Based Products:
All onsite vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used onsite shall be applied according to the manufacturer's recommendation.
- b. Fertilizers:
Fertilizers used shall be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer shall be worked into the soil to limit exposure to storm water. Storage shall be in a covered shed. The contents of any partially used bags of fertilizer shall be transferred to a sealable plastic bin to avoid spills.
- c. Paints:
All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the highway drainage system but shall be properly disposed of according to manufacturers' instructions or State and local regulations.
- d. Concrete Trucks:
Concrete trucks shall be allowed to wash out or discharge drum wash water only at a designated site. Water shall not be discharged in the highway drainage system or waters of the United States. The Contractor shall contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. The Contractor shall clean disposal site as required or as requested by the Owner's representative.

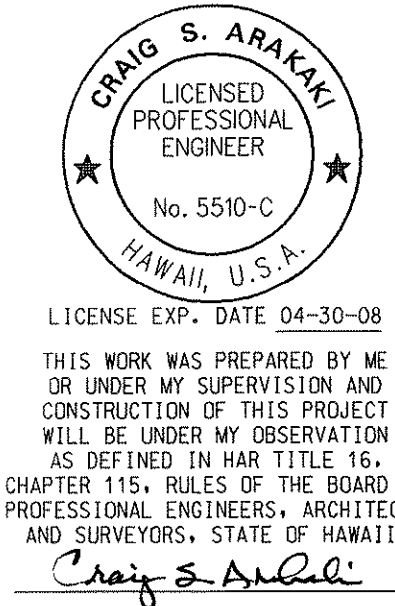
4. Spill Control Plan

- a. A spill prevention plan shall be posted to include measures to prevent and clean up each spill.
- b. The Contractor shall be the spill prevention and cleanup coordinator. The Contractor shall designate at least three site personnel who shall receive spill prevention and cleanup training. These individuals shall each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel shall be posted in the material storage area and in the office trailer onsite.
- c. Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel shall be made aware of the procedures and the location of the information and cleanup supplies.
- d. Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite.
- e. All spills shall be cleaned up immediately after discovery.
- f. The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- g. Spills of toxic hazardous material shall be reported to the appropriate State or local government agency, regardless of the size.

E. PERMIT REQUIREMENTS:

1. If a National Pollutant Discharge Elimination System (NPDES) permit is required for construction activities of one acre or more, the Contractor shall submit to the Engineer six sets of the water pollution and erosion control submittals as detailed in Subsection 209.03 of the specifications.
2. If an NPDES permit for construction dewatering is required, the Contractor shall be responsible to obtain the permit from the Department of Health, Clean Water Branch.
3. The Contractor shall comply with all applicable State and Federal permit conditions. Permits may include but are not limited to the following:
- a. NPDES Permit for Construction Activities
- b. NPDES Permit for Hydrotesting Waters

ORIGINAL PLAN	REVIEW PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES

INTERSTATE ROUTE H-1
Kinohi Street Off-Ramp Improvements
Vicinity Of Queen's Medical Center
Federal-Aid Project No. TC-HI-1(258)

Scale: As Shown Date: Dec. 2006

SHEET No. 9 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-1(258)	2006	C.O.11S-1	89

NOTES FOR EXCAVATION NEAR HECO'S 138KV UNDERGROUND LINES:

HECO's 138kV High Pressure Fluid Filled (HPFF) underground cables are installed in specially coated, cathodically protected steel pipes and are surrounded by a special low strength (approx. 100 psi) Fluidized Thermal Backfill (FTB). FTB is a backfill engineered to meet specific thermal resistivity, thermal stability, strength, and formability requirements as well as provide construction advantages. FTB is a concrete-like backfill consisting of a coarse and/or medium stone aggregate, sand, and a small amount of cement for strength. The and proportions are selected to minimize thermal resistivity, maximize flowability without segregation of the components. FTB will flow readily to fill all the voids yet harden quickly to a uniform density. It provides mechanical protection for the cable system and support for underground and surface facilities. FTB is supplied as a ready-mix in concrete trucks and may be installed by pouring or pumping.

The following precautions must be taken when excavating near HECO's 138 kV underground lines:

- The Contractor shall call the Hawaii One Call Center at 866-423-7287 for field verification of HECO's underground lines a minimum of 5 working days prior to excavation.
- The Contractor is responsible for properly supporting and protecting the 138kV cable pipes and FTB ductbank at all times. When trench excavation is adjacent to or beneath HECO's existing 138kV cable pipes, the Contractor is responsible for:
 - Sheeting and bracing the excavation to prevent slides, cave-ins and settlements.
 - Supporting and protecting existing structures or facilities with beams, struts, or underpinnings.
- A HECO stand-by inspector must be on-site anytime the excavation is near the FTB surrounding the 138kV cable pipes. The cost of such inspection will be charged to the Contractor.
- Once the Contractor reaches the FTB surrounding the 138kV cable pipes, the Contractor shall use only hand tools to further excavate and remove the FTB.
- The Contractor shall take great care when excavating the FTB and nearing the 138kV cable pipes to prevent damage to the protective coating on the cable pipes. Only HECO personnel are to handle these cable pipes and erect temporary guards to protect these cable pipes from damage. The cost of HECO's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. The Contractor shall exercise due care and precautions to avoid disturbing any energized cables and temporary guards and shall work cautiously at all times to avoid accidents.
- The Contractor shall be responsible for any damages to HECO'S facilities and all costs associated with the damage and repair as a result of his operations. Repair work shall be done by HECO or by the Contractor under HECO's supervision.
- If the coating is damaged in any way, it is imperative that the HECO'S stand-by inspector on-site be notified as soon as possible such that the coating may be repaired before backfilling. Even a nick or pinhole puncture in the protective coating can jeopardize the integrity and reliable operation of the underground cable system.

- The 138kV lines will remain energized at all times. However, in the event that the 138kV lines are damaged, depending on the extent of the damage, the 138kV line may be instantaneously de-energized as a result of sophisticated relay protection equipment operating, or it may need to be manually de-energized by following a system operational protocol.
- If any portion of the FTB is removed during excavation, the FTB must be replaced per HECO specifications. The base design mix ID# for FTB is XX67N015 per the Ameron Hawaii concrete mix submittal number 2388 Dated 4/25/02.

Please Note: Do not use any other additives such as air entraining agent, water entraining agent, water reducing agent, etc., in the above mixture.

- Please contact the Hawaii One Call Center at 866-423-7287 at least 5 working days prior to any trenching and/or backfilling near the existing HECO 138kV underground transmission lines.
- In case of damage or suspected damage, please immediately contact: HECO trouble dispatcher at Ph: 548-7961 (this phone number is manned 24-hours a day).
- The Contractor shall be responsible for all grading work near HECO'S existing underground lines and shall closely monitor such work during construction and take all action to prevent any material weakening of existing underground lines.
- The Contractor shall locate and mark out the edges of HECO'S 138kv duct bank and shall maintain a 6 foot clear zone from the edge of HECO'S 138kV duct bank.
- The Contractor shall notify the HECO engineer at 543-7785 no less than 3 days prior to commencing any proposed grading within 6 feet of the edge of HECO'S 138kV duct bank or any fill of more than 5 feet over HECO'S 138kV duct bank, and shall inform HECO of the schedule for the proposed work to provide HECO the opportunity, at its election, to have a representative on site to observe the grading work in progress.
- Should it appear that support for any HECO facilities have been compromised during grading, the Contractor shall notify HECO immediately and HECO shall have the authority to stop the grading work until an agreeable solution is identified.
- All remedial work proposed by the Contractor is subject to prior review and consideration by the HECO Engineer. The Contractor shall be fully responsible to take all corrective actions to stabilize the affected underground lines.

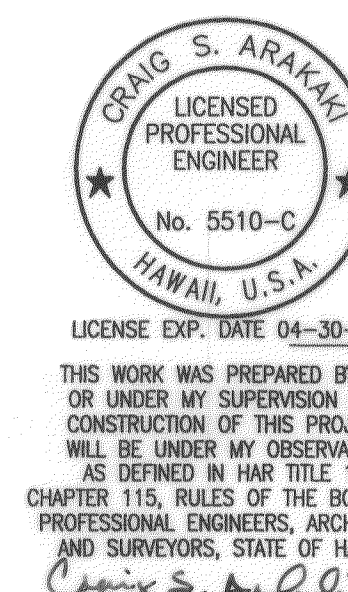
GENERAL NOTES FOR TRAFFIC CONTROL PLAN

- The permittee shall make minor adjustments at intersections, driveways, birdges, structures, etc., to fit field conditions.
- Cones or delineators shall be extended to a point where they are visible to approaching traffic.
- Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.

- Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
- When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the traffic control plans.
- All traffic lanes shall be minimum of ten (10) feet wide.
- All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
- Lane closure shall be limited only to the extent of accomplishing each day's work. As soon as each day's work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation. Existing faded or obliterated pavement markings that are necessary for safe traffic flow in the construction area shall be replaced with temporary or permanent markings before opening the roadway to public traffic each day.
- Permanent pavement markings and traffic signs shall be replaced upon completion of each phase of work.
- Cones and delineators shall be spaced at a maximum distance of 20 feet apart. A minimum of six channelizing devices shall be used for each taper length.
- Driveways shall be kept open unless the owners of the property using the right-of-way are otherwise provided for satisfactorily. Further, the permittee shall control traffic going in and out of driveways.
- Buffer and taper areas on approach to any work site shall be kept clear of vehicles and equipment.
- A high level warning device (flag tree) shall be installed on approach to all work areas.
- "No Parking" signs shall be posted within any work area and for the buffer and taper areas approaching the work area.
- Traffic control plans are approved for work on any city street area only between the hours of 8:30 a.m. and 3:30 p.m.
- All work zone traffic control devices shall comply with the "Statewide Guideline for Work Zone Traffic Control Devices," dated September 13, 2000.

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ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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1/21/11	5	Added Sheet
DATE	REVISION	
CITY AND COUNTY DEPARTMENT OF TRANSPORTATION SERVICES HONOLULU, HAWAII		
<u>CONSTRUCTION NOTES</u>		
<u>INTERSTATE ROUTE H-1</u>		
<u>Kinohi Street Off-Ramp Improvements</u>		
<u>Vicinity of Queen's Medical Center</u>		
<u>Federal-Aid Project No. TC-HI-1(258)</u>		
Scale: As Shown	Date: Dec. 2006	
SHEET No. 9 OF 9 SHEETS		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-HI-1(258)	2006	C.O.11S-2	89

HAWAIIAN TELCOM GENERAL CONSTRUCTION/DESIGN NOTES

1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.
2. The Contractor shall obtain an excavation permit and toning request from Hawaiian Telcom's excavation permit section, located at 1177 Bishop Street, two weeks prior to the start of construction. Hours of business are 8:00 a.m. to 11:00 a.m. and 12:00 p.m. to 3:00 p.m. Monday through Friday, except holidays.
3. Prior to the excavation of the ductline, the Contractor shall request Hawaiian Telcom to locate existing ductline wherever required. For underground cable locating and marking, five (5) working days advance notice is required. three (3) working days advance notice is required for any inspection by a designated representative.
4. The locations of existing utilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity of Hawaiian Telcom facilities. The Contractor shall verify their locations and shall be liable for any damages to Hawaiian Telcom facilities. Any damages shall be reported immediately to Hawaiian Telcom's repair section at #611 (24 hours) or to the excavation permit section at 546-7746 (normal working hours, Monday through Friday, except holidays). As a result of his operations, adjustments to the new ductline alignment, if required, shall be made to provide the required clearances.
5. The Contractor shall take necessary precaution not to damage existing cables or ducts. A Hawaiian Telcom inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contain Hawaiian Telcom facilities. Temporary cable and duct supports shall be provided wherever necessary.
6. The Contractor shall notify Hawaiian Telcom's inspector or designated representative a minimum of 72 hours prior to excavation, bracing, or backfilling of Hawaiian Telcom's structures or facilities.
7. All applicable construction work shall be done in accordance with the "Hawaiian Telcom Standard Specifications for Placing Telephone Systems" Dated January 2007, all subsequent amendments and additions, and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.
8. When excavation is adjacent to or beneath Hawaiian Telcom's existing structures or facilities, the contractor shall:
 - a) Sheet and/or brace the excavation to prevent slides, cave-ins, or settlements to ensure no movement to Hawaiian Telcom's structures or facilities.
 - b) Protect existing structures and/or facilities with beams, struts, or underpinning while excavating beneath them to ensure no movement to Hawaiian Telcom's structures or facilities.
9. The Contractor shall brace all poles or light standards near the new ductline, manhole, or handhole during his operations.
10. The Contractor shall saw-out A.C. pavement and concrete gutter wherever new manholes, handholes, or ductlines are to be placed and shall restore to existing condition or better.

11. The Contractor shall comply with the policy adopted by the Department of Planning and Permitting, City and County of Honolulu, concerning the replacement of concrete sidewalks after excavation work.
12. The underground pipes, cables, or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing fines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
13. Wherever connections to existing utilities are shown on the plans, the Contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths.
14. The Contractor, at his own expense, shall keep the project and surrounding area free from dust nuisance. The cost for supplementary measures, which will be required by the city and county, shall be borne by the Contractor.
15. The Contractor shall pump all manholes dry during final inspection.
16. The Contractor shall notify Hawaiian Telcom inspector 24 hours prior to the pouring of concrete or backfilling.
17. When connecting to manhole walls, all existing reinforcing bars shall be left intact. Ducts shall be adjusted in the field in order to clear reinforcing.
18. The Contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points necessary to lay out the work correctly. The new ductline shall be adjusted by the Contractor to suit the existing conditions and the details as described in the plans.
19. Minimum concrete strength shall be:

For ductline 2500 psi at 28 days

For manhole 3000 psi at 28 days or as specified in design notes.
20. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 25 feet. All 90 degree C-bends at a pole or at the building floor slab penetration, shall have a bend radius of ten times the diameter of the duct or greater.
21. After ductline has been completed, a mandrel with a square front not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.
22. All ducts and conduits shall have an 1800# polyester mule-tape (NEPTCO, WP 1800p, Hawaiian Telcom material Code No. 571154) installed throughout its entire length. All ducts shall be capped to prevent entry of foreign material during construction and at the completion of installation.

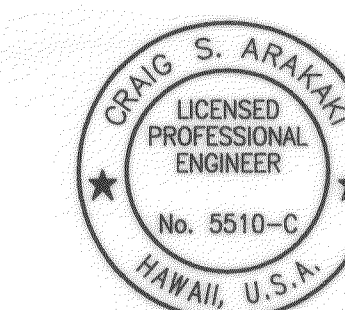
OCEANIC TIME WARNER CABLE

Notes:

Oceanic Time Warner cable has coax and fiber cables underground and aerial within the project site. The one call center should be called at (866) 423-7287 to tone and mark all catv underground cables within the project site. The Contractor will be responsible for any damages to the catv facilities.

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DATE	1/21/11
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LICENSE EXP. DATE 04-30-12
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN H.A.R. TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.
Craig S. Arakaki

1/21/11 5 Added Sheet
DATE REVISION

CITY AND COUNTY
DEPARTMENT OF TRANSPORTATION SERVICES
HONOLULU, HAWAII

CONSTRUCTION NOTES

INTERSTATE ROUTE H-1
Kinohi Street Off-Ramp Improvements
Vicinity of Queen's Medical Center
Federal-Aid Project No. TC-HI-1(258)

Scale: As Shown Date: Dec. 2006

SHEET No. 9 OF 9 SHEETS

C.O. 11 S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-H1-1(258)	2006	C.O.11S-3	89

DEPT. OF PARKS AND RECREATION (DPR) NOTES:
FOR WORK AFFECTING TREES)

1. The Contractor shall not store or park equipment, vehicles and/or materials under the driplines of existing trees or within the park outside of the designated project limits. Driving vehicles over trees roots is not permitted.
2. The Contractor shall be required to field verify and operate the existing irrigation, water and electrical system to become familiar with the respective system not affected by this project but within the project limits prior to the start of construction and demolition. The Contractor shall not be responsible for damages on the existing system prior to start of demolition and construction. The Contractor shall coordinate operation of the various system with the Division of Road Maintenance. However, upon commencement of the project the Contractor shall be responsible to protect, maintain and repair the portion of the existing system within the project limits for the duration of the contract.
3. The existing irrigation system shall be repaired and/or relocated as shown and/or as noted on the plans and in accordance with the standard specifications for irrigation and water system of the Department of Parks and Recreation, City and County of Honolulu.
4. Existing sprinkler heads and quick connect valves may be buried. The location of existing water and sprinkler lines, heads and valves as shown are approximate only. The Contractor shall locate, expose, and verify these existing facilities prior to commencing with work.
5. All plant materials will be inspected and approved by dpr prior to delivery and being planted at the job site.
6. All tree relocation and tree pruning (top and root) shall be done under the direct supervision of an arborist certified by the international society of aboriculture. Extensive root pruning may require crown reduction pruning. All work shall be done under the observation of the Urban Forestry Division. Department of Park and Recreation. The Contractor shall notify Mr. Stan Oka, urban forestry administrator, Phone No. 971-7151, seven days prior to start of work.
7. Maintenance of affected trees and grassing shall be for a minimum of 90 calendar days after establishment of landscaping.
8. All affected trees shall be guaranteed for one year. The Contractor shall replace with the same size and species if any tree fails to survive by the end of the year.

TREE PROTECTION NOTES:

1. The Contractor shall retain the services of a certified arborist. The Arborist shall prepare a Tree Assessment Report and submit to the Division of Urban Forestry prior to any tree work.
2. The Contractor shall be careful when doing work near existing tree roots or tree canopies that are encountered during demolition, trenching, etc. The Contractor is required to perform root cutting and trimming of trees under the continuous observation of an arborist certified by the International Society of Arboriculture.
3. The Arborist shall be on-site at all times during tree work. All tree maintenance operations shall be under the direct supervision of a certified arborist. The Arborist is required to be at the worksite at all times when work on or near trees is underway. Contractor shall notify the Division of Urban Forestry at Phone No. 971-7151 seven days prior to performing any work involving or affecting any tree.
4. Prior to start of construction, the Contractor shall Type II barricades with flashers along the perimeter of the canopy of any trees that could be affected by construction activities.
5. The Contractor shall be responsible for the maintenance of trees under his control and trees that are root pruned and/or top trimmed, until the final inspection date of the project or 90 consecutive calendar days whichever is the longer period of time for maintenance. Maintenance shall include any tree with like kind and size which fails to survive within one year after the final inspection date due to improper maintenance, root pruning and/or tip trimming.
6. No materials, equipment, dumping of waste debris, or vehicles shall be staged/stockpiled, parked, stored, or permitted to operate within the drip line of the trees. driving vehicles over the tree surface roots are not permitted.
7. The Contractor shall be required to maintain the existing trees within the limits of the project. Maintenance shall include, but not be limited to irrigating to sustain good health, protecting root system from damage, filling depressions with topsoil, grass restoration, spreading fertilizer, etc.
8. For trees that are in narrow planting strips, the entire planting strip within the drip line of the tree shall be enclosed.
9. If the Contractor's work is inside the drip line of a tree and involves operating vehicles and equipment that could cause soil compaction, erosion, and damage to the tree roots, plywood boards, steel plates, or heavy duty ground protection mats over an 8" mulch layer will be required by the Division of Urban Forestry.

May 10, 2011-11:14am
N:\GAD\UNO\2010\1026-ALAPAI\DOT\CO 11 S-1 TO CO 11 S-4 NOTES.dwg

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
No.		



1/21/11 5 Added Sheet
DATE REVISION

CITY AND COUNTY
DEPARTMENT OF TRANSPORTATION SERVICES
HONOLULU, HAWAII

CONSTRUCTION NOTES

INTERSTATE ROUTE H-1
Kinaiu Street Off-Ramp Improvements
Vicinity of Queen's Medical Center
Federal-Aid Project No. TC-H1-1(258)
Scale: As Shown Date: Dec. 2006

SHEET No. 9 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TC-H1-1(258)	2006	C.O.11S-4	89

WARNING

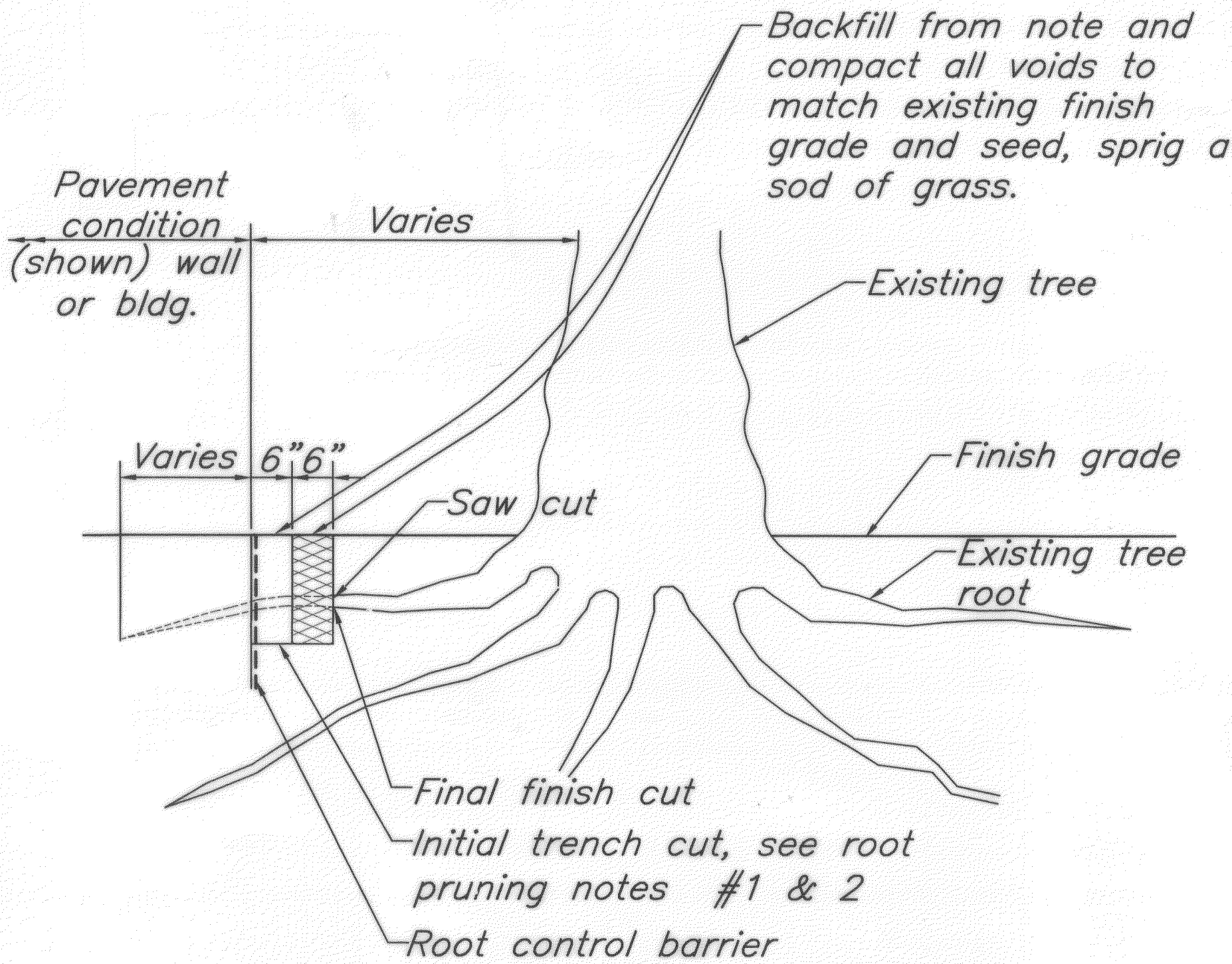
TREE PROTECTION ZONE

THIS BARICADE AND SIGN SHALL NOT BE REMOVED WITHOUT APPROVAL FROM THE DIVISION OF URBAN FORESTRY
PHONE: 971-7151

CITY AND COUNTY OF HONOLULU, DEPARTMENT OF PARKS AND RECREATION

- Notes:
- 1. Minimum size of sign: 8 1/2" x 11"
 - 2. Securely fasten to fence.
 - 3. Hang more than one sign for visibility purposes if needed.
 - 4. Sign to be made of weatherproof material.
 - 5. Avoid damaging tree roots during fence post installation.

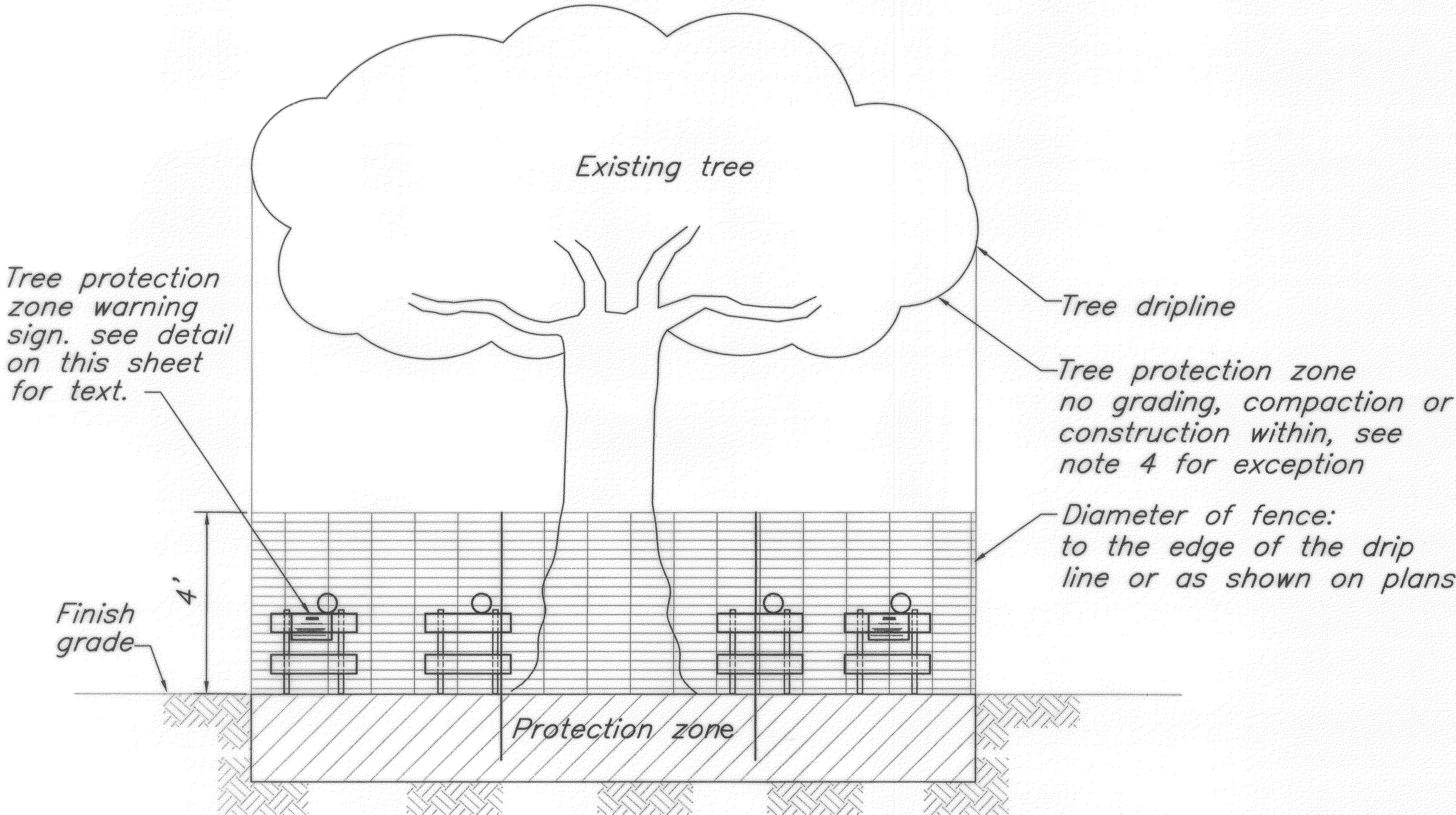
TREE PROTECTION WARNING SIGN
Not to scale



ROOT PRUNING DETAIL
Not to scale

ROOT PRUNING NOTES:

- 1. Make initial trench cuts 6" beyond the final finish cut when using a trencher.
- 2. Make initial trench cuts 12" beyond the final finish cuts and avoid ripping roots when using a backhoe.
- 3. When using backhoe equipment, use the front edge of the bucket to sever the tree roots to ensure a cleancut of the roots.
- 4. Hand excavate around roots to the size of desired root ball and then trim off protruding roots by hand saw or chain saw.
- 5. Fill voids created by root removal in paved, wall or building areas with accepted compacted base course.
- 6. The qualified arborist and UFD/DFR staff to determine the amount of the tree canopy pruning after root pruning.
- 7. Work to be done under the direct supervision of a qualified arborist.
- 8. Remove and dispose of pruned roots & branches.



TREE PROTECTION DETAIL
Not to scale

May 10, 2011-11:59am	DATE
N:\CAG\DWG\2010\1026-ALAPPA\DOT\CO 11 S-1 TO CO 11 S-4 NOTES.dwg	DATE
ORIGINAL	DESIGNED BY
PLAN	TRACED BY
NOTE BOOK	DESIGNED BY
QUANTITIES BY	CHECKED BY
No.	No.

GRANT S. ARAKAKI
LICENSED PROFESSIONAL ENGINEER
No. 5510-C
HAWAII, U.S.A.

LICENSE EXP. DATE 04-30-12

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN HAWAII TITLE 16, CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII.

Chris A. Arakaki

1/21/11

DATE

Added Sheet

REVISION

CITY AND COUNTY
DEPARTMENT OF TRANSPORTATION SERVICES
HONOLULU, HAWAII

CONSTRUCTION NOTES

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SHEET No. 9 OF 9 SHEETS