

GENERAL NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(18)	2003	3	98

1. The Project Scope of Work involves various safety improvements, including installation of a concrete median barrier, pavement reconstruction, resurfacing, shoulder reconstruction, sidewalk improvements, highway lighting and installation of signs, striping and pavement markings.

2. All construction work shall be done in accordance with the standards and specifications of the State Department of Transportation as amended.

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 (including bicycles and pedestrians).

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 make an independent check on the ground by probing and/or with the various utility companies and governmental agencies to verify the exact locations and depths of the existing utilities. The contractor shall exercise proper care in excavating in the area. Whenever 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 excavating for the new lines. 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 locations and limits or areas to be filled with leveling course, reconstructed and cold planed 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 and striping as required for the work. This work shall be considered incidental to striping and pavement marker work items and will not be paid for separately.

10. Smooth riding connections shall be constructed at all limits of pavement work, including the beginning and end of project, connecting approaches, side streets, ramps and driveways as shown on the plans and/or as directed by the Engineer.

11. Dressing of shoulder, sidewalk and bus turnout shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.

12. Existing drainage system shall be kept 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.

13. For traffic, bicycle, and pedestrian access, the contractor shall provide for access to and from all existing side streets at all times. Temporary pedestrian access routes shall be compliant with The Americans with Disabilities Act Accessibility Guidelines.

14. Driveways shall be kept open unless the Owners of the properties using these rights-of-way are otherwise provided for satisfactorily.

15. All saw cutting work shall be considered incidental to the various contract items.

16. Contractor shall notify owners of property adjustments two (2) weeks prior to construction.

17. Contractor shall dispose or deliver any removed material at no cost to the State.

18. Contractor shall exercise caution when cold planing over existing structures. See cold planing Note #2.

19. The Contractor shall take special measures to reduce dust from cold planing operations including but not limited to use of water misters on cold planing equipment and vacuum sweepers. Use of power brooms to sweep road is not allowed if dust nuisance is created.

20. The Contractor shall be held liable for any damages incurred to the existing utilities as a result of his operations. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company at the Contractor's expense.

21. Tack coat shall be incidental to the various Asphalt Concrete Pavement items.

22. The Contractor shall be held liable for any damages incurred to the existing landscaping and irrigation systems as a result of his operations.

23. After the project is completed, the Contractor shall restore grades and groundcover in the project limits to a condition equal or better than existing before such damage or injury was done.

24. All existing utilities, whether or not shown on the plans, shall be protected at all times by the Contractor during construction unless specified on the plans to be abandoned. Any damage to the existing utilities shall be repaired and paid for by the Contractor.

25. Unless relocation is called for on the plans, existing utilities shall remain in service and in place at all times. If relocation of the existing utilities is required for the Contractor's convenience, interruption of service shall be kept to a minimum and shall be done at the Contractor's expense with the approval of the affected utility company.

26. The Contractor shall field verify the operational status of all existing utilities to be removed. Any discrepancy shall be immediately brought to the attention of the Engineer.

27. The Contractor shall verify all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the Engineer.

28. Construction outside the State Department of Transportation (SDOT) right-of-way are subject to permission of the affected owner as verified by SDOT.

29. The Contractor shall stop excavation within the affected area and notify the Engineer upon uncovering any potential historical artifacts or items of archaeological significance.

30. The Contractor shall obtain all necessary permits (grading, road use, etc.) prior to the start of physical work.

31. The existing improvements on the premises and in adjacent area that are not to be removed, shall be preserved and protected. Any and all damages resulting from the Contractor's construction operations shall be replaced and repaired to original condition, to the satisfaction of the owner.

32. For benchmark see sheet No. 18-20

33. All catch basins shall be marked as directed by the State Inspector.

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NO.	_____



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *Greg H. Hiyakumoto* April 30, 2004
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
CONSTRUCTION NOTES – 1
FARRINGTON HIGHWAY SAFETY IMPROVEMENTS
NANAKULI TO MAKAHA
F.A.I. Proj. No. STP-093-1(18)
Scale: None Date: 04/23/03
SHEET No. 3 OF 98 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(18)	2003	4	98

GENERAL NOTES CONT.

34. All coordinates and azimuths are referred to Government Triangulation Station "Lahilahi" Δ . Elevations are referred to mean sea level (M.S.L.).
35. Elevations shown on these plans are referred to Mean Sea Level (MSL).
36. The Contractor shall adjust centerline and reference survey monuments to the finished pavement grade.
37. All steel plates will have a non-skid surface.
38. The Contractor shall coordinate any work involving electrical, telephone, cable television and water line facilities with Hawaiian Electric Company, Verizon, Oceanic Cable, Board of Water Supply, Department of Environmental Services, and The Gas Co., respectively. All coordination shall be considered incidental to Roadway excavation work.
39. The Contractor shall adjust utility boxes and manholes to match finish grades. The Contractor shall notify and coordinate with the affected user prior to making adjustments. Unless otherwise specified, all adjustments shall be considered incidental to the AC pavement, Bituminous Sidewalk or concrete sidewalk work, or appropriate.
40. The Contractor shall prioritize the completion of the Maili Median Barrier work. All work between Farrington Highway Station 182+80 to Station 234+69.35 (Maili Point Median Barrier) shall be substantially complete within 365 calendar days after the Notice to Proceed.

COLD PLANING NOTES

1. Prior to cold planing over an existing structure, the Contractor shall determine the actual depth of the existing asphalt concrete pavement. The Contractor shall take several cross section measurements throughout the structure. If the thickness of the existing pavement is less than the proposed resurfacing thickness, the Contractor shall remove the existing pavement to the level of the structure and resurface to the original thickness. This work shall be considered incidental to cold planing, and will not be paid for separately.
2. In cold planing the pavement over a structure, the Contractor shall exercise care not to damage any portion of the structure (especially the slab, joints, drain pipes or reinforcement). Any damage to the structure during the cold planing operations shall be repaired by the Contractor at his own expense. Repair work shall be as directed by the Engineer. The Contractor shall verify the existing pavement thickness by hand digging at various locations. This work shall be considered incidental to cold planing, and will not be paid for separately.
3. Exposure of existing aggregate base is expected when cold planing deeper than 4 inches. The Contractor shall pave over exposed existing aggregate base with the new asphalt base course and reopen lanes to traffic at the end of construction hours. Contractor shall compact the existing aggregate base in accordance with Section 301 Asphalt Base Course and apply Prime Coat in accordance with Section 408 Prime Coat, prior to laying the new Asphalt Base Course. This work shall be considered incidental to the new Asphalt Base Course, and will not be paid for separately.
4. The vertical pavement drop-off shall not exceed 3 inches. If a vertical pavement drop-off exists at the end of each day's cold planing and paving, the Contractor shall provide temporary transition tapers with maximum slopes of 48:1 for travel in the longitudinal direction and 6:1 for transverse movements. This work shall be considered incidental to Cold Planing.
5. The depth of cold planing shall be as shown on the plan sheets. The work shall be paid under the various Cold Planing items.

WATER POLLUTION AND EROSION CONTROL NOTES:

1. General:

The Contractor is reminded of the requirements of Section 209 – Water Pollution and Erosion Control, in the "Hawaii Standard Specifications for Road, Bridge and Public Works Construction," 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. No work shall commence without an approved BMP plan.

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 Engineer may assess liquidated damages of up to \$25,000 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.

2. Waste Disposal:

- A. 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.
- B. All hazardous and sanitary waste materials shall be disposed of in the manner specified by local or State regulation 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.
- C. Sanitary Waste: All sanitary waste shall be collected from the portable units a minimum of once per week, or as required.

3. Erosion and sediment control inspection and maintenance practices:

- A. All control measures shall be inspected at least once each week and following any rainfall event of 0.5 inches or greater. The Contractor shall provide a rain gauge and install at a location agreed to by the State.
- B. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- C. Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
- D. 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.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Signature: *Greg H. Hiyakunio* April 30, 2004
SIGNATURE DATE EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES – 2	
FARRINGTON HIGHWAY SAFETY IMPROVEMENTS NANAKULI TO MAKAHA F.A.I. Proj. No. STP-093-1(18)	
Scale: None	Date: 04/23/03
SHEET No. 4 OF 98 SHEETS	

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(18)	2003	5	98

WATER POLLUTION AND EROSION CONTROL NOTES CONT.:

- E. Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.
- F. The Contractor shall submit to the Engineer a maintenance inspection report promptly after each weekly inspection.
- G. The Contractor shall select a minimum of three personnel who shall be responsible for inspections, maintenance and repair activities and filling out the inspection and maintenance report.
- H. 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.
- I. All slopes and exposed areas shall be grassed as soon as final grades have been established. Grading to final grade shall be continuous, and any area within which work has been interrupted or delayed for more than 15 days shall be grassed in order to prevent dust, erosion and silt runoff. Areas with imported soils shall be grassed not more than 5 working days after final grades have been established.
- J. Temporary erosion controls shall not be removed before permanent erosion controls are in-place and established.
4. Good Housekeeping Best Management Practices:

A. Materials Pollution Prevention Plan:

- (1) 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 of the Construction Contractor's site-specific BMP plan.

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

- (2) 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.
- (3) 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.
- (4) Products shall be kept in their original containers with the original manufacturer's label.
- (5) Substances shall not be mixed with one another unless recommended by the manufacturer.
- (6) Whenever possible, a product shall be used up completely before disposing of the container.
- (7) Manufacturer's recommendations for proper use and disposal shall be followed.
- (8) The Contractor shall conduct a daily inspection to ensure proper use and disposal of materials onsite.

DATE	_____
SURVEY PLANNED BY	_____
DESIGNED BY	_____
TRACED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

WATER POLLUTION AND EROSION CONTROL NOTES CONT.:

B. Hazardous Material Pollution Prevention Plan

- (1) Products shall be kept in original containers unless they are not resealable.
- (2) Original labels and Material Safety Data Sheets (MSDS) shall be retained and made available to the Engineer upon request.
- (3) Surplus products shall be disposed of according to manufacturers' instructions or local and state recommended methods.

C. Onsite and Offsite Products Specific Plan

- (1) 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 drum wash water only at designated site. Water shall not be discharged in the highway drainage system or waters of the United States (i.e. streams, rivers, harbors). 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 at no cost to the owner or the State.
- (2) Offsite Vehicle Tracking: A stabilized construction entrance shall be provided to help reduce vehicle tracking of sediments. 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. Pollutants shall not be discharged to the drainage system. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.

D. Spill Control Plan

- (1) A spill prevention plan shall be posted and adjusted to include a description and cause of each spill, measures to prevent and clean up each spill.
- (2) 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.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE *Greg H. Hiyakumoto* April 30, 2004
EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES - 3	
FARRINGTON HIGHWAY SAFETY IMPROVEMENTS NANAKULI TO MAKAHA F.A.I. Proj. No. STP-093-1(18)	
Scale: None	Date: 04/23/03
SHEET No. 5 OF 98 SHEETS	

WATER POLLUTION AND EROSION CONTROL NOTES CONT.:

- (3) 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.
- (4) Materials and equipment necessary for spill cleanup shall be kept in the material storage area onsite.
- (5) All spills shall be cleaned up immediately after discovery.
- (6) The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- (7) Spills of toxic hazardous material shall be reported to the appropriate State or local government agency, regardless of the size.

5. Permit Requirements

- A. The Contractor is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for all construction activities of one acre or more for work occurring after March 10, 2003. The Contractor shall submit to the engineer four sets of the water pollution and erosion control submittals as detailed in Subsection 209.04 of the specifications. No work shall begin until the submittal has been reviewed and approved by the Engineer.
- B. The Contractor shall comply with all applicable State and Federal permit conditions.
6. The Contractor shall be responsible for conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control of Title 11, Administrative Rules of the State Department of Health.
7. The Contractor at his own expense shall keep the project area and surrounding areas free from dust nuisance. The work shall be in conformance with the Air and Water Pollution Control Standards and Regulations of the State Department of Health.

PAVING AROUND MANHOLES:

1. The Contractor shall place hot asphalt concrete around manholes and compact properly with a vibrating plate compactor.
2. If a plate compactor is not used, the Contractor shall use a pneumatic roller to roll the area around the manhole which is not rolled by the steel roller.
3. The Contractor shall fog seal or brush emulsion seal on the material placed as backfill on the area around the manhole that was not compacted by the roller. Black sand shall be used to blot out the area if the fog is too heavy.
4. The Contractor shall lower manholes and inlets prior to Cold Planing, backfill with hot mix, and re-adjust after final paving. This work shall be considered incidental to Manhole Adjustments.

FREE SERVICE FOR LOCATING UNDERGROUND UTILITIES

A free service is available to Contractors for locating underground utilities. Service is provided by Underground Service Alert North, at toll free telephone no. 1-800-227-2600. Call Underground Service Alert North at least two days prior to the start of any excavation work.

WATER NOTES

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the Standard Specifications for Road and Bridge Construction, dated 1994, as amended, of Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu, Board of Water Supply's "Water System Standards", dated 2002, and the "Water System External Corrosion Control Standards," Volume 3, dated 1991, and all subsequent amendments and additions.
2. All plans approved by the Board of Water Supply (BWS) 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 BWS.
3. The Contractor shall notify the BWS Maintenance Unit – Engineering, Construction Section, in writing, one week prior to commencing work on the water system.
4. 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 behind 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 methods.
5. The existence and location of underground utilities and structures as shown on the plans are from 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 all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
6. Re-approval shall be required if this project is not under construction within a period of two years.
7. Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.
8. 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.
9. At the electrical/signal ductline water crossings, adjust all electrical/signal ductline elevations to maintain 6" vertical clear separation from all waterlines (12" clear for all electrical/signal ductline structures larger than 16").
10. Maintain 3'-0" min. horizontal clear separation between all waterline systems and nearest electrical/signal ductlines paralleling the water system.
11. Maintain 3'-0" minimum cover for all existing waterlines (18" minimum for service laterals) from new finish grade.
12. Maintain 3'-0" min. horizontal clear separation between street light/traffic signal standards (including modular units) and the nearest water 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 Engineer to revise the street light/traffic signal standards to provide the required clearances at no cost to the Board of Water Supply.
13. New two-way blue reflective hydrant markers type DB shall be installed at all existing fire hydrant installations to replace existing or missing markers. Contractor shall verify the exact locations of hydrant markers with the nearest Honolulu Fire Department Battalion Chief.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(18)	2003	6	98

APPROVED:

Joseph W. Kneader
Principal Executive
Maintenance Unit, BWS

5/6/03
Date



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Greg H. Hiyakundo April 30, 2004
SIGNATURE EXPIRATION DATE
OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES - 4

FARRINGTON HIGHWAY SAFETY IMPROVEMENTS
NANAKULI TO MAKAHA
F.A.I. Proj. No. STP-093-1(18)

Scale: None Date: 04/23/03

SHEET No. 6 OF 98 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
	INCHES	

WATER NOTES (cont'd)

14. The State shall notify BWS Maintenance Unit – Engineering, Construction Section (527–5205 or 527–5206) sixty (60) days prior to construction at or near areas in conflict with the BWS project (01–86: Farrington Hwy, Part II, Phase A&B: 8–Inch, 12–Inch & 24–Inch Mains) to avoid delays and conflict during construction. The Contractor shall allow BWS's Contractor to install new water mains prior to any resurfacing work at areas in conflict. BWS shall not be liable for any delays due to Contractor's failure to coordinate the construction schedule for this project. (Tentative construction schedule: "under construction")

DRAINAGE NOTES

1. The Contractor shall verify the locations of all existing culverts and drainage facilities in the field. Any existing culverts and drainage facilities damaged during construction shall be repaired or replaced by the contractor at his own expense.
2. All drain lines shall have 3 feet minimum cover under paved areas and 2 foot cover in other areas.

ADJUSTMENT TO EXISTING UTILITIES NOTE

1. Adjust all utility valve box frames and covers, water meter boxes, manhole frames and covers, street monument covers, etc. to new finish grade. Coordinate with private companies and city agencies for work on each respective utility.
2. For sewer manhole adjustments upward less than 3" see City Standard Detail S–25. For sewer manhole adjustments upward greater than 3" or for any adjustments downward reconstruct sewer manhole top from below the cone section.

SEWER NOTES

1. All sewer construction shall be performed in accordance with the City's Standard Specifications, Sept. 1986, the Department of Public Works Standard Details, Sept. 1984, current City practices and Revised Ordinances of Honolulu, 1990 as amended, and the Design Standards of the Department of Wastewater Management Vol. 1, July 1993.
2. The Contractor shall notify the Inspection Section, Wastewater Branch, DDC, at 527–5842 or 523–4345 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.
3. The underground pipes, cables or ductlines known to exist by the Design Engineer from his research of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities, including and affecting sewer lines, in the presence of the Wastewater Inspector and exercise proper care in excavating the area. The Contractor shall be responsible and shall pay for all damaged utilities.

APPROVED:

George R. 7/2/03
for Director, Dept. of Planning and Permitting Date
(for Construction within City R/W Only)
and effect on City sewers

Dennis M. Nakamura 5/15/03
Chief, Wastewater Branch, DPP Date

Paul W. Kishner 5/6/03
Principal Executive Date
Maintenance Unit, BWS

SEWER NOTES (cont'd)

4. The Contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.
5. 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.
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:

1. 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 flammable (capable of monitoring at a distance at least 20–feet away).
- h. Personal multi-gas detector to be carried by the inspector.
2. Continuous forced air ventilation adequate to provide safe entry conditions.
3. One attendant/rescue personnel topside (two, if conditions warrant it)
7. At the electrical/signal ductline sewer crossings, adjust all electrical/signal ductline elevations to maintain 24 inches vertical clear separation from all sewer lines and laterals at no cost to the City.
8. Maintain 3'–0" minimum horizontal clear separation between all sewer lines systems and nearest electrical/signal ductlines, pullboxes/handholes, paralleling the sewer system at no cost to the City.
9. Maintain 5'–0" minimum horizontal clear separation between street light/traffic signal standards (including modular units), and the nearest sewer system. The Contractor shall field verify for any conflicts at each street light/traffic signal standard location. Where conflicts occur, the Contractor shall coordinate with the Engineer to revise the street light/traffic signal standard to provide the required clearances at no cost to the State or City.
10. For trenchless horizontal directional drilling method for installing ductlines, maintain a 3'–0" minimum horizontal and vertical clear separation from all sewer lines and laterals at no cost to the State or City.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(18)	2003	7	98



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Greg H. Hiyaundo April 30, 2004
SIGNATURE #1103 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES – 5

FARRINGTON HIGHWAY SAFETY IMPROVEMENTS
NANAKULI TO MAKAHA

F.A.I. Proj. No. STP-093-1(18)

Scale: None

Date: 04/23/03

SHEET No. 7 OF 98 SHEETS

CURB RAMP NOTES

- 1. A 2% maximum cross slope shall be maintained in the direction of pedestrian traffic.
- 2. Curb ramps shall be installed at 90° to the sidewalk or to the maximum extent feasible, in alterations.
- 3. Subject to field conditions, the Engineer shall determine the final locations of curb ramps.
- 4. The maximum slopes of adjoining gutters or road surface immediately fronting the curb ramp shall not exceed 5% for Type A, D and Truncated ramps. The counter slope may be exceeded when the change of grade does not exceed 13% (11% preferred) over a distance of 2 ft. Exceeding the 13% (11% preferred) change in grade will cause a person in a wheelchair to tip forward and/or fall backward.
- 5. All pullboxes shall be installed away from the curb ramp and within the sidewalk/unpaved area to the maximum extent feasible.
- 6. Where necessary, existing pullboxes, handholes, manholes, etc. shall be adjusted to match curb ramp grade. Adjustments shall not be paid for separately but shall be considered incidental to the various curb ramp items unless indicated otherwise.
- 7. Transitions from ramps to gutters and roadways shall be flush.
- 8. Curb ramps and sidewalks shall be constructed to eliminate ponding to the maximum extent feasible.
- 9. The pedestrian push button shall meet operational and reach requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG):
 - a) Forward Reach. The maximum height for forward reach shall be 48".
 - b) Side Reach. The maximum height for side reach shall be 54".
 - c) Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf.
- 10. There shall be a 30"x48" level ground surface (2% max. cross slope, both directions) for a forward or side approach, as appropriate, to a pedestrian push button.
- 11. Construction joints are required to join curb ramps with sidewalks.
- 12. Unless otherwise noted, new gutters are required.
- 13. All curb ramps shall be reinforced with 6x6 W1.4/W1.4 welded wire fabric.
- 14. Surface of sidewalks and curb ramps shall be firm, stable, and slip-resistant. This includes the surfaces of pullboxes, valve covers, manhole covers, etc.
- 15. Bed course material is required for curb ramps, sidewalks, and gutters.

CURB RAMP NOTES (Cont.)

- 16. If a curb ramp is not constructed according to the plans, the Contractor shall reconstruct the curb ramp at no cost to the State. Construction tolerance for Portland Cement Concrete shall be based on 1/4" inch per 10 ft. (0.2%). Remedial measures will not be accepted.
- 17. All sidewalks shall provide a minimum clear width of 3'-0" (excluding curb) for pedestrian circulation. If this cannot be met, a minimum 32-inch clear width is allowed for a distance of 24-inches.
- 18. Additional information is available from:
 - a) Americans with Disabilities Act Accessibility Guidelines (ADAAG), January 1998, The Access Board.
 - b) Accessible Rights-of-Way: A Design Guide, November 1999, The Access Board.
 - c) Designing Sidewalks and Trails for Access, Part 1, July 1999, FHWA.

SHOULDER RECONSTRUCTION NOTES

- 1. Plans shown represent approximate conditions and may not reflect all boxes and manholes. The contractor shall field verify the locations and amount of utility and manhole adjustments required. Costs for adjustment of utility boxes and manholes to match finish grade shall be considered incidental to the various items of work. Adjustments to utilities and boxes that are not indicated on the plans shall be made at no additional cost to the State.
- 2. Prior to making any adjustment to utility boxes and/or manholes, the contractor shall coordinate and obtain approval from the appropriate user.
- 3. Maximum longitudinal slope of walkway overlays shall be 5%.
- 4. Cross-slope of walkway overlays shall be 1.5% over a minimum unobstructed width of 3 feet.
- 5. Existing walkways shall be graded and adjusted to ramp down to a flush connection between the finish overlay grade and existing driveways, streets and drainage gaps. The maximum longitudinal slope along the ramp shall be 5%.
- 6. Overlays extending across driveways and roadways shall be adjusted to provide a 2.0 % maximum cross-slope for a width equal to the width of the adjoining walkway (minimum width shall be 3 feet).
- 7. A minimum unobstructed width of 3 feet shall be provided along all walkways that are being repaved or reconstructed.
- 8. Where Type 6 curbs are used, gaps shall be provide in the new curb in the same locations as existing gaps. The widths of gaps shall match existing widths. The faces at the ends of the curb shall have the same taper as the front face.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(18)	2003	8	98

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

SIGNATURE: *Greg H. Hiyaokoto* April 30, 2004
7/2003 EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
CONSTRUCTION NOTES - 6

FARRINGTON HIGHWAY SAFETY IMPROVEMENTS
NANAKULI TO MAKAHA
F.A.I. Proj. No. STP-093-1(18)
Scale: None Date: 04/23/03
SHEET No. 8 OF 98 SHEETS

SHOULDER RECONSTRUCTION NOTES

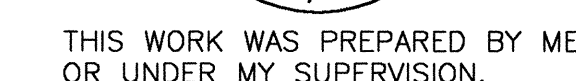
- STRIPING AND PAVEMENT MARKING NOTES

- RAISED PAVEMENT MARKER NOTES

- SIGNING NOTES

-
- The diagram illustrates the cross-section of a thermoplastic tape used for lane marking. It shows five horizontal black bars representing the tape, with a vertical dashed line indicating the center of the lane. A vertical line on the right side is labeled "Stop Line". A dimension line indicates the width of the tape is "12' 18 1/2\"". A label "Tape, Type III or Thermoplastic Extrusion (Typ.)" points to the tape. A dimension line at the bottom indicates the length of the tape is "10' Typical" and "Varies* 12\"". A dimension line on the right indicates the width of the lane is "Lane" and "Stop Line".
- Diagram illustrating the cross-section of a thermoplastic tape used for lane marking. The tape is shown as a series of horizontal black bars. The width of the tape is labeled as 12' 18 1/2". The length of the tape is labeled as 10' Typical, with a note indicating it varies for different applications: * 10 ft. for Farrington Highway, 4 ft. for Side Streets. The tape is applied to a road surface, with a dashed line indicating the lane center and a solid line indicating the stop line.

NOT TO SCALE



April 30, 2004
SIGNATURE 71563 EXPIRATION DATE
OF THE LICENSE

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
	DRAWN BY _____	" " _____
	TRACED BY _____	" " _____
	DESIGNED BY _____	" " _____
	QUANTITIES BY _____	" " _____
No. _____	CHECKED BY _____	" " _____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION NOTES - 7

FARRINGTON HIGHWAY SAFETY IMPROVEMENTS
NANAKULI TO MAKAHA
F.A.I. Proj. No. STP-093-1(18)

Scale: None Date: 04/23/03

SHEET No. 9 OF 98 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-093-1(18)	2003	10	98

AT&T AND SIGNAL CORPS NOTES

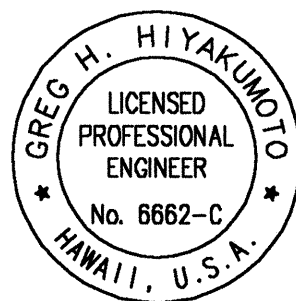
1. The Contractor should be particularly aware of an AT&T fiber optic ductline that runs along the Makai side of Farrington highway. During construction a designated AT&T personnel shall be present on-site to monitor the excavation and placement of the terrestrial cable. The Contractor shall be liable for any damages incurred to the AT&T fiber optic ductline caused by his operations while an on-site AT&T inspector is not present.
2. Two weeks prior to the start of construction, the Contractor shall contact the AT&T fiber optics facilities field office at 455-1010.
3. The location of existing signal corps underground facilities are approximate only. Extreme care shall be taken when working on or near the existing signal corps facilities. The Contractor shall repair damages to the underground facilities as a result of its operations at no cost to the state and paid for by the contractor.
4. Signal corps facilities that are in conflict with the proposed work shall be addressed as specified in the contract. Notify, in writing, AT&T hits, 3375 Koapaka Street; suite d-120, Honolulu, Hawaii 96819 (telephone 837-1400) and the Department of The Army, Director of Information Management Office, EMG, 30th Signal Battalion Fort Shafter, Hawaii 96858-5415 (telephone 438-3514, cell 295-0296 or 282-3857, fax 438-7580) at least two weeks before start of construction.
5. Work involving the protection and mitigation of existing AT&T and signal corps facilities shall be considered incidental to the various contract items.

CLEANING OF ROADWAY NOTES

1. All pavement (roadway and shoulders) areas shall be cleaned of sand, dirt and debris prior to start of construction and again at the end of construction and prior to the end of each construction day to the satisfaction of the Engineer.
2. The segment to be cleaned is between Kaena Point State Park and Piliokahe Gulch Bridge.
3. Contractor shall be responsible for offsite and proper disposal of all rubbish from the project. The cost for disposal shall be incidental to the various items of work.

NOTES FOR CONSTRUCTION WITHIN CITY RIGHT-OF-WAY

1. All applicable construction work shall be done in accordance with the Standard Specifications For Public Works Construction, September 1986 and Standard Details for Public Works Construction, September 1984, as amended, of the Department Of Public Works, City & County Of Honolulu and the Counties of Kauai, Maui and Hawaii.
2. 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.
3. 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.
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. In the event any artifacts or human remains are uncovered during the construction operations, the Contractor shall immediately suspend work and notify the Honolulu Police Department, the State Department of Land and Natural Resources-Historic Preservation Branch (692-8015). In addition, for non-city projects, the Contractor shall notify the Civil Engineering Branch, D.P.P. (523-4881); and for City projects, notify the responsible City agency.
6. For projects abutting State highways' right-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.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

SIGNATURE *Greg H. Hiyaikino* April 30, 2004
EXPIRATION DATE
OF THE LICENSE

APPROVED:

M. Fagan
Chief, Civil Engineering Branch, DPP *mt*

5/7/03
Date

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CONSTRUCTION NOTES - 8	
FARRINGTON HIGHWAY SAFETY IMPROVEMENTS NANAKULI TO MAKAHA F.A.I. Proj. No. STP-093-1(18)	
Scale: None	Date: 04/23/03
SHEET No. 10 OF 98 SHEETS	

DATE	_____
SURVEY PLOTTED BY	_____
DESIGNED BY	_____
TRACED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____