

STANDARD PLANS SUMMARY

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|---------------------|-------|--------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | HWY-0-06-03M | 2004 | 2 | 51 |

| STANDARD PLAN NO. | TITLE | DATE |
|-------------------|--|-----------|
| B-01 | Notes and Miscellaneous Details | 07/01/86 |
| B-02 | | |
| B-03 | Typical Structure Excavation and Backfill Pay Limits | 07/01/86 |
| B-04 | | |
| B-05 | | |
| B-06 | Concrete Box Girder | 07/01/86 |
| B-07 | Concrete Box Girder | 07/01/86 |
| B-08 | Concrete Box Girder | 07/01/86 |
| B-09 | | |
| B-10 | | |
| B-11 | | |
| B-12 | Prestressed Concrete Piles | r07/16/90 |
| B-13 | Prestressed Concrete Piles | r07/16/90 |
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| D-01 | Chain Link Fence With Toprail | r03/06/87 |
| D-02 | Chain Link Fence Without Toprail | r07/26/90 |
| D-03 | Wire Fence With Metal Posts | 07/01/86 |
| D-04 | Typical Details of Curbs and/or Gutters | 07/01/86 |
| D-05 | Typical Details of Reinforced Concrete Drop Driveway | 07/01/86 |
| D-06 | Centerline and Reference Survey Monument | 07/01/86 |
| D-07 | Street Survey Monument | 07/01/86 |
| D-08 | Landscaping Shrub and Tree Planting | 07/01/86 |
| D-09 | Field Office | 07/01/86 |
| D-10 | Field Office | 07/01/86 |
| D-11 | Project Site Laboratory | 07/01/86 |
| D-12 | Project Site Laboratory | 07/01/86 |
| D-13 | Field Office & Project Site Laboratory | 07/01/86 |
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| H-01 | Type A, B, C and D Catch Basin | 07/01/86 |
| H-02 | Type A1, B1, C1 and D1 Catch Basin | 07/01/86 |
| H-03 | Type A2, B2, C2 and D2 Catch Basin | 07/01/86 |
| H-04 | Typical Reinforcing Details for Catch Basins | 07/01/86 |
| H-05 | Type A, B and C Storm Drain Manhole | 07/01/86 |
| H-06 | Type D and E Storm Drain Manhole | 07/01/86 |
| H-07 | Type F Storm Drain Manhole | 07/01/86 |
| H-08 | Catch Basin and Manhole Casting | 07/01/86 |
| H-09 | Type A-9 and A-9P Frames and Grates | 07/01/86 |
| H-10 | Type A-9B Frames and Grates | 07/01/86 |
| H-11 | Type 61614 and 61214 Grated Drop Inlet | 07/01/86 |
| H-12 | Type 61616 Grated Drop Inlet | 07/01/86 |
| H-13 | 61214, 61614 & 61616 Steel Frames and Grates | 07/01/86 |
| H-14 | 61214B Steel Frame and Grates | 07/01/86 |
| H-15 | 61614B Steel Frame and Grates | 07/01/86 |
| H-16 | Concrete and Cement Rubble Masonry Structures | r10/16/90 |
| H-17 | Inlet Structures | r10/16/90 |
| H-18 | Flared End Section for Culverts | 07/01/86 |
| H-19 | Outlet Structures | r02/15/91 |
| H-20 | Concrete Spillway Inlet | 07/01/86 |
| H-21 | 18" Slotted C.M.P. Drain | 07/01/86 |
| H-22 | C.M.P. Coupling Details Standard Joint | r10/16/90 |
| H-23 | Hat Shaped Coupling Band | r10/16/90 |
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| STANDARD PLAN NO. | TITLE | DATE |
|-------------------|--|-----------|
| TE-01 | Miscellaneous Sign Details | 07/01/86 |
| TE-02 | Galvanized Flanged Channel Sign Post Mounting | 07/01/86 |
| TE-03 | Galvanized Square Tube Sign Post Mounting | 07/01/86 |
| TE-04 | Regulatory Signs | r09/01/87 |
| TE-05 | Warning Signs | 07/01/86 |
| TE-06 | Miscellaneous Signs | r11/03/89 |
| TE-07 | Reserved | 07/01/86 |
| TE-08 | Construction Signs | r09/01/87 |
| TE-09 | Miscellaneous Intersection Signs | r03/06/87 |
| TE-10 | Reserved | 07/01/86 |
| TE-11 | Bike Route Sign and Supplementary Plates | 07/01/86 |
| TE-12 | State Route Marker and Auxiliary Markers | 07/01/86 |
| TE-13 | Interstate Route Marker | 07/01/86 |
| TE-14 | State Route Marker and Border Detail for Guide Signs | 07/01/86 |
| TE-15 | Route Marker Assemblies | 07/01/86 |
| TE-16 | Miscellaneous Reflector Markers | 07/01/86 |
| TE-17 | Type II Object Markers | 07/01/86 |
| TE-18 | Mileposts | 07/01/86 |
| TE-19 | Reserved | 07/01/86 |
| TE-20 | Overhead Sign Supports | 07/01/86 |
| TE-21 | Overhead Sign Support, Box Truss Type, Aluminum | 07/01/86 |
| TE-22 | Foundation Details and Schedules | 07/01/86 |
| TE-23 | Supports for Ground Mounted Guide Sign | r11/03/89 |
| TE-24 | Breakaway Sign Supports for Ground Mounted Guide Signs | 07/01/86 |
| TE-25 | Laminated Aluminum Sign Panels (Overhead) | 07/01/86 |
| TE-26 | Laminated Aluminum Sign Panels (Ground Mounted) | 07/01/86 |
| TE-27 | Solid Aluminum Extruded Sign Panel and Accessory Details | 07/01/86 |
| TE-28 | Guide Signs Luminaire Mountings | 07/01/86 |
| TE-29 | Reserved | 07/01/86 |
| TE-30 | Raised Pavement Markers and Striping | r05/09/90 |
| TE-31 | Miscellaneous Pavement Markings | r05/09/90 |
| TE-32 | Miscellaneous Pavement Markings | r05/09/90 |
| TE-33 | Miscellaneous Pavement Markings | r11/03/89 |
| TE-34 | Reserved | 07/01/86 |
| TE-35 | Pavement Alphabets, Numbers & Symbols | 07/01/86 |
| TE-36 | Pavement Alphabets, Numbers & Symbols | 07/01/86 |
| TE-37 | Reserved | 07/01/86 |
| TE-38 | Traffic Signal System, Miscellaneous Details | r11/03/89 |
| TE-39 | Traffic Signal System, Miscellaneous Details | 07/01/86 |
| TE-40 | Loop Detectors | r11/03/89 |
| TE-41 | Pullboxes | 07/01/86 |
| TE-42 | Type III Traffic Signal Standard | 07/01/86 |
| TE-43 | Concrete Pullbox (2' x 3') | 07/01/86 |
| TE-44 | Reserved | 07/01/86 |

| STANDARD PLAN NO. | TITLE | DATE |
|-------------------|---|-----------|
| TE-45 | Reserved | 07/01/86 |
| TE-46 | Reserved | 07/01/86 |
| TE-47 | Reserved | 07/01/86 |
| TE-48 | Reserved | 07/01/86 |
| TE-49 | Reserved | 07/01/86 |
| TE-50 | Metal Guardrail | r03/06/87 |
| TE-51 | Metal Guardrail | r09/01/87 |
| TE-52 | Metal Guardrail with Rubrail | r11/03/89 |
| TE-53 | Metal Guardrail with Rubrail at Obstruction | r09/01/87 |
| TE-54 | Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation) | r11/03/89 |
| TE-55 | Metal Guardrail Connection to Concrete Barrier | r11/03/89 |
| TE-56 | Concrete Barrier Transition | 07/01/86 |
| TE-57 | Guardrail Type 3, Thrie Beam | r11/03/89 |
| TE-57A | Guardrail Type 3, Modified Thrie Beam | 11/03/89 |
| TE-58 | Approach End Flare, One & Two Way Roadway | 07/01/86 |
| TE-59 | Trailing End Flare, One & Two Way Roadway | r11/03/89 |
| TE-60 | Anchor Block Details | 07/01/86 |
| TE-61 | Breakaway Cable Terminal (BCT) | r11/03/89 |
| TE-62 | Breakaway Cable Terminal (BCT) | r09/01/87 |
| TE-63 | Guardrail Type 4 (Rigid Barrier) | r09/01/87 |
| TE-64 | Portable Concrete Barrier | r11/03/89 |
| TE-65 | Guardrail Type 4, Miscellaneous | r09/01/87 |
| TE-66 | Barricades | 07/01/86 |
| TE-67 | Delineation & Pavement Markings at Bridges | 07/01/86 |
| TE-68 | Wheelchair Ramps | r07/18/94 |
| TE-69 | Wheelchair Ramps | r07/18/94 |
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NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A " ● " NEXT TO THE STANDARD PLAN NO. (FOR EXAMPLE: D-07 ●)

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| 07/18/94 | REVISED TE-68 & TE-69 |
| 02/15/91 | REVISED H-19 |
| 10/16/90 | REVISED H-16, H-17, H-22 & H-23 |
| 07/26/90 | REVISED D-02 |
| 07/16/90 | REVISED B-12, B-13 |
| 05/09/90 | REVISED TE-30, TE-31 & TE-32 |
| 11/03/89 | REVISED TE-06, TE-23, TE-30, TE-31, TE-32, TE-33, TE-38, TE-40, TE-52, TE-54, TE-55, TE-57, TE-59, TE-61, TE-64, TE-68 & TE-69, ADDED TE-57A |
| 09/01/87 | REVISED TE-04, TE-06, TE-08, TE-32, TE-51, TE-53, TE-54, TE-55, TE-57, TE-59, TE-62, TE-63, TE-65 & TE-69 |
| 03/06/87 | REVISED D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64 |

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| DATE | REVISION |
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD PLANS SUMMARY
HALAWA HEIGHTS ROAD REHABILITATION
Kikania Street to Fernridge Place and
Kahuapaani Interchange, Moanalua Freeway, H201
Project No. HWY-0-06-03M
Date: April, 2004

SHEET No. 1 OF 1 SHEETS

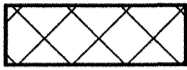
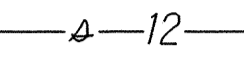
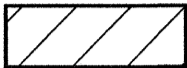
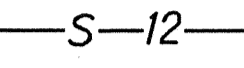
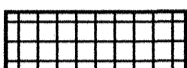
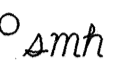
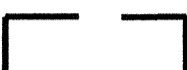

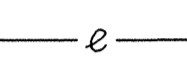

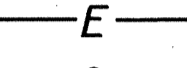


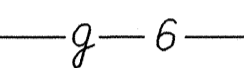

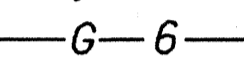
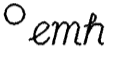
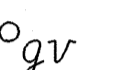



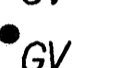
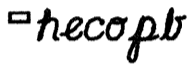
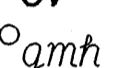
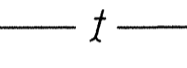

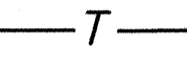
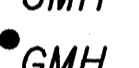
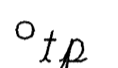
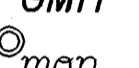
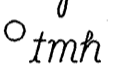
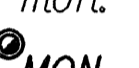

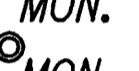


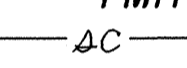
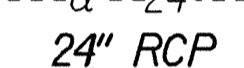
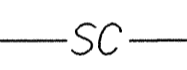
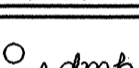
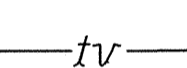
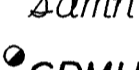
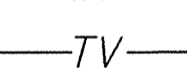

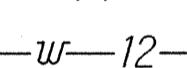

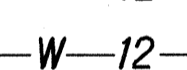
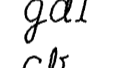
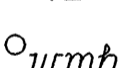
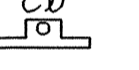
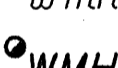
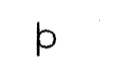
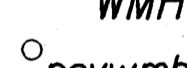

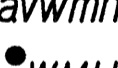
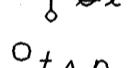

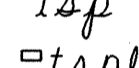
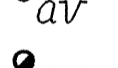
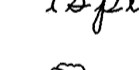



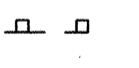
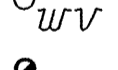


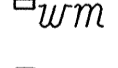


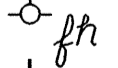
ORIGINAL PLAN
DRAWN BY
DESIGNED BY
CHECKED BY
DATE
003
02/15/91

GENERAL NOTES

1. The project includes cold planing and resurfacing existing pavement; reconstructing weakened pavement areas; removing existing concrete curb and guardrail; constructing new concrete curb and sidewalk; upgrading drainage facilities, bridge railings and end posts; and installing new guardrail, crosswalks, loop detectors, pavement marking, signing and striping.
2. 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.
3. 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.
4. 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.
5. The exact locations and limits or areas to be reconstructed and cold planed shall be determined in the field by the Engineer.
6. 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.
7. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
8. The Contractor shall remove and dispose of all existing raised pavement markers and traffic tapes 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.
9. Smooth riding connections shall be constructed at all limits of resurfacing, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
10. 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.
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 side streets at all times.
13. All saw cutting work shall be considered incidental to Excavation for Reconstruction of Weakened Pavement Areas.
14. 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 Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Right-Of-Way Branch at telephone no. 692-7332

15. All Cold planed and excess materials not used for this project shall become the property of the Contractor. If disposed of, it shall be in accordance with the Environmental Protection Agency's policies and guidelines. This work shall be considered incidental to the various contract items and will not be paid for separately.
16. The Contractor shall coordinate with property owners about trimming existing tree and/or shrubberies fronting their properties. This work shall not be paid for separately but shall be considered incidental to Contract Item No. 401.0400 - Asphalt Concrete.
17. Removal and disposal of existing curb, sidewalk and any debris shall be considered incidental to the various contract items and will not be paid for separately.
18. Provide smooth transition where new sidewalk construction meets the existing grade or sidewalk.
19. The Contractor shall notify an Operation Officer of Camp Smith at 477-8742, 10 working days prior to any work leading to the entry gate to Camp Smith. The Contractor shall also coordinate any work with the Operation Officer of moving and/or relocating of traffic cones and barriers.
20. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid separately.

LEGEND

| | | | |
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|  | Reconstruction Areas |  | Existing Sewer Line |
|  | Leveling Areas |  | New 12" Sewer Line |
|  | Cold Planing Areas |  | Existing Sewer Manhole |
|  | Resurfacing Limits |  | Adjusted Sewer MH Frame/Cover |
|  | Existing Electrical Line |  | Existing Navy Sewer MH Frame/Cover |
|  | New Electrical Line |  | New Sewer Manhole |
|  | Existing Joint Pole |  | Existing 6" Gas Line |
|  | Existing Power Pole |  | New 6" Gas Line |
|  | Existing Electric Manhole |  | Existing Gas Valve Box |
|  | Adjusted Elec. MH Frame/Cover |  | Adjusted Gas Valve Box |
|  | New Electric Manhole |  | New Gas Valve Box |
|  | Existing Electric Pullbox |  | Existing Gas Manhole |
|  | Existing Telephone Line |  | Adjusted Gas MH Frame/Cover |
|  | New Telephone Line |  | New Gas Manhole |
|  | Existing Telephone Pole |  | Existing Monument |
|  | Existing Telephone Manhole |  | Adjusted Monument |
|  | Adjusted Tele. MH Frame/Cover |  | New Monument |
|  | New Telephone Manhole |  | Existing 24" Drain Line |
|  | Existing Signal Corps Line |  | New 24 " RCP Drain Line |
|  | New Signal Corps Line |  | Existing Storm Drain Manhole |
|  | Existing TV Cable |  | Adjusted Storm Drain MH Frame/Cover |
|  | New TV Cable |  | New Storm Drain Manhole |
|  | Existing 12" Water Line |  | Existing Grated Drop Inlet |
|  | New 12" Water Line |  | Existing Catch Basin |
|  | Existing Water Manhole |  | Existing Traffic Sign |
|  | Adjusted Water MH Frame/Cover |  | Existing Highway Lighting Standard |
|  | Existing Navy Water MH Frame/Cover |  | Existing Traffic Signal Pole |
|  | New Water Manhole |  | Existing Traffic Signal Pullbox |
|  | Existing Water Air Valve |  | Existing Tree |
|  | Adjusted Water Air Valve |  | Existing Single Metal Guardrail |
|  | New Water Air Valve |  | New Single Metal Guardrail |
|  | Existing Water Valve Box |  | Existing Fence |
|  | Adjusted Water Valve Box | | |
|  | New Water Valve Box | | |
|  | Existing Water Meter | | |
|  | Adjusted Water Meter | | |
|  | New Water Meter | | |
|  | Existing Fire Hydrant | | |
|  | New Fire Hydrant | | |

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| ORIGINAL PLAN | DATE |
| NOTED | 12/23/04 |
| DRAWN BY | |
| DESIGNED BY | |
| CHECKED BY | |
| IN CHARGE | |

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| 6/14/04 | Added General Note No. 20. per Addendum No. 1. |
| DATE | REVISION |
| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION | |
| GENERAL NOTES AND LEGEND | |
| HALAWA HEIGHTS ROAD REHABILITATION Kikania Street to Fernridge Place and Kahuapaani Interchange, Moanalua Freeway, H201 Project No. HWY-0-06-03M Date: April, 2004 | |
| SHEET No. 1 OF 1 SHEETS | |

HAWAIIAN ELECTRIC COMPANY NOTES

- 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 exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under any overhead lines.
- The Contractor shall comply with the State of Hawaii's Occupational Safety and Health Law (DOSH).
- For verification of underground lines or for assistance in supporting and protecting these lines, the Contractor shall call HECO's 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 Dept., Customer & System Superintendent, at 543-4223, a minimum of two (2) weeks in advance,
- Any work required to relocate HECO facilities shall be done by HECO and the Contractor shall be responsible for all coordination, and for possible costs if applicable.
- Should it become necessary to temporarily relocate any of HECO facilities to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations, these temporary relocations will be done by HECO, or by the Contractor under HECO's supervision, with all costs borne by the Contractor.
- Any unforeseen conflict that would result in the redesign or relocation (either temporary or permanent) of HECO's electrical facilities may be cause for lengthy delays. To avoid such delays, the Contractor must notify HECO of the conflict a minimum of 30 days prior to the start of construction.
- Any damage to HECO's facilities will be reported immediately to HECO's Trouble Dispatcher at 548-7961.
- All HECO overhead and underground facilities shall be protected at all times by the Contractor during construction. Costs for damages to HECO facilities shall be borne by the Contractor. This repair work shall be done by HECO, or by the Contractor under HECO's supervision.
- 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.
- The Contractor shall indemnify, defend and hold harmless HECO from and against all losses, damages, claims and actions, including but not limited to reasonable attorney's fees and costs based upon or arising out of damage to property or injuries to persons, or other tortious acts caused or contributed to by Contractor or anyone acting under its direction or control or on its behalf; provided Contractor's indemnity shall not be applicable to any liability based upon the sole negligence of HECO.

BOARD OF WATER SUPPLY NOTES

- 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 of 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.
- 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", VOLUME1, DATED 1985, THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, DATED 1985, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, and all subsequent amendments and additions.
- 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 systems, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply. Compliance with the American Disability Act (ADA) requirements, shall not be the responsibility of the Board of Water Supply.
- 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.
- 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 measure necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
- Any adjustments to the existing water system required during construction shall meet BWS Standards, whether shown on the plans or not, shall be done by the contractor at no cost to the board.

NAVY SEWER NOTES

- The Contractor shall be responsible for any damage to the Navy wastewater system. Any repairs performed by the Contractor shall be inspected and approved by an inspector from the Navy PWC Wastewater Division prior to backfilling.
- The Contractor shall reimburse the Navy PWC for any emergency response effort that may be required by Navy personnel to mitigate sewage overflow spills resulting from the contract work.
- Precautions shall be taken to ensure that construction material/debris such as subgrade/base course material does not enter the sewer collection system. The Contractor shall promptly remove and dispose of such deleterious material from the wastewater collection system should this occur; such material shall not be flushed sown the collection system.
- Upon completion of the project, the Contractor shall provide the Navy PWC Wastewater Division with a copy of "As-Built" drawings that depict all modifications to the Navy wastewater system.

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VERIZON HAWAII GENERAL CONSTRUCTION/DESIGN NOTES

- 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 Verizon Hawaii facilities. The Contractor shall verify their locations and shall be liable for any damages to Verizon Hawaii facilities. Any damages shall be reported immediately to Verizon Hawaii's Repair Station at 611 (24 hours) or to the excavation permit section at 840-1444 (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.
- The Contractor shall take necessary precaution not to damage existing cables or ducts. A Verizon Hawaii 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 Verizon Hawaii facilities. Temporary cable and duct supports shall be provided wherever necessary.
- All applicable construction work shall be done in accordance with the "Verizon Hawaii Standard Specifications for Placing Underground Telephone Systems" dated March 1999. All subsequent amendments and additions and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.
- 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 excavation in the area. Wherever connections of new utilities to existing utilities are hown 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.

7/12/04 Added New Sheet.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY NOTES

HALAWA HEIGHTS ROAD REHABILITATION

Kikania Street to Fernridge Place and
Kahuapaani Interchange, Moanalua Freeway, H201

Project No. HWY-0-06-03M

Date: April, 2004

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| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| PLAN | DRAWN BY | 7/12/04 |
| NOTE BOOK | TRACED BY | |
| dd33stew | QUANTITIES BY | |
| Nmmsdgn02 | CHECKED BY | |

WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:

1. The Contractor is reminded of the requirements of Section 209 - Water Pollution 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.
2. 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.
3. 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.
4. 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.
5. 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:

1. 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.

2. 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.

3. 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:

1. All control measures shall be inspected at least once each week and following any rainfall event of 0.5 inches or greater.
2. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
3. Built-up sediment shall be removed from silt fence when it has reached one-third the height of the fence.
4. 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.
5. Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.

6. A maintenance inspection report shall be made promptly after each inspection by the Contractor.
7. 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.
8. 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.

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.

3. Onsite and Offsite Product Specific Plan

- a. The following product specific practices shall be followed onsite:

1) 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.

2) 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.

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| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION |
| WATER POLLUTION & EROSION CONTROL NOTES |
| HALAWA HEIGHTS ROAD REHABILITATION |
| Kikania Street to Fernridge Place and Kahuapaani Interchange, Moanalua Freeway, H201 |
| Project No. HWY-0-06-03M |
| Date: May 24, 2004 |
| SHEET No. 1 OF 2 SHEETS |

WATER POLLUTION AND EROSION CONTROL NOTES: -Cont.

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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- a. The following product specific practices shall be followed onsite: -Cont.
- 3) **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.
- 4) **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.
- b. **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. Dump trucks hauling material from the construction site shall be covered with a tarpaulin.
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 four sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.04 of the specifications.
2. 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

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| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION |
| WATER POLLUTION & EROSION CONTROL NOTES |
| HALAWA HEIGHTS ROAD REHABILITATION |
| Kikania Street to Fernridge Place and Kahuapaani Interchange, Moanalua Freeway, H201 |
| Project No. HWY-0-06-03M |
| Date: May 24, 2004 |
| SHEET No. 2 OF 2 SHEETS |