

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-02-05	2009	3	39

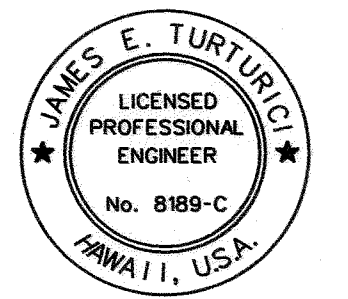
GENERAL NOTES

1. The scope of work for this project includes demolishing existing highway facilities; excavating; cold planing existing pavement; constructing sidewalks, curbs & gutters; constructing new asphalt pavement section; installing new curb ramps; adjusting utility manholes, cleanouts, water valves, etc. to grade; removing and installing pavement markings and traffic signs; relocating a detector check valve; and modifying existing traffic signal.
2. The Contractor is reminded of the requirements of Subsection 105.61-Subcontracts.
3. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 104.11 - Utilities and Services; Subsection 107.12 - Protection of Persons and Property; and Section 645 - Work Zone Traffic Control.
4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data, but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall tone for the exact locations and depths of all underground facilities, either shown on or omitted from the plans, in areas where work, such as the placement of sign posts, traffic signal conduits, etc. may affect these properties. Toning shall be considered incidental to the various contract items and will not be paid for separately. The Contractor shall be held liable for any damages incurred to the existing facilities and/or Improvements as a result of his operations.
6. Lane closures of existing Kuhio Hwy. lanes will only be allowed at night as follows:
- | | | | |
|----------------------|----------------|---|----------------|
| Sunday | 10:00 P.M. | - | 12:00 Midnight |
| Monday thru Thursday | 12:00 Midnight | - | 5:30 A.M. |
| | 10:00 P.M. | - | 12:00 Midnight |
| Friday (Morning) | 12:00 Midnight | - | 5:30 A.M. |
- The Contractor shall not do work on Friday nights and Saturdays or as specified by the Engineer. Sunday's work will be part of Monday's working day.
7. During night work, only one lane of traffic shall be closed.
8. All lanes of traffic shall be kept open during daytime work. Daytime work shall be conducted between the hours of 8:30 a.m. and 3:30 p.m. only.
9. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction operations.

10. The Contractor shall obtain a Community Noise permit from the State Department of Health, Environmental Health Services; Telephone No. 241-3323. This shall be considered incidental to the various contract items and will not be paid for separately.
11. The Contractor shall indemnify and be solely responsible for the protection of adjacent properties, utilities and existing structures from damages due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
12. Existing drainage system will be functional at all times during construction. The Contractor shall furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items and will not be paid for separately.
13. Smooth riding connections shall be constructed at all limits of project, including the beginning and end of project, connecting approaches, side streets, walkways and driveways as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to Contract Item No. 401.0400 - Hot Mix Asphalt Pavement, Mix No. IV and will not be paid for separately.
14. The Contractor shall clean and remove any accumulation of aggregates along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to the various contract items and will not be paid for separately.
15. Removal and disposal of existing curb and gutter, curb, sidewalk and asphalt concrete pavement, curb, sidewalk and any debris shall be considered incidental to their respective bid items.
16. All saw cutting work shall be considered incidental to Contract Item No. 401.0400 - Hot Mix Asphalt Pavement, Mix No. IV and will not be paid for separately.
17. Prior to placement of new aggregate subbase course, the existing subbase shall be compacted to a relative compaction greater than or equal to 95%.
18. Concrete sidewalk shall be reinforced with 6x6 W1.4xW1.4 welded wire fabric.
19. Dressing of sidewalk shall consist of clearing and grubbing, grading, reshaping and compacting with suitable material the area adjacent to the improvement as shown on the plans and/or as directed by the Engineer and shall be considered incidental to Contract Item No. 634.1000 - Portland Cement Concrete Sidewalk.
20. All curbing angle points within the curb ramps shall be rounded with R=6".

21. The Contractor shall provide and maintain for access to and from all existing driveways, sidewalks and ADA access routes complying with ADAAG Section 4.3, and side streets and cross streets at all times. This work shall be considered incidental to the various contract items and will not be paid for separately.
22. The Contractor shall provide and maintain a temporary pedestrian-safe and easily accessible route or detour with barricades in or near the work zone. This temporary route or detour shall be paved at least an inch of Hot Mix Asphalt Pavement, Mix No V or steel and/or wood planks and shall be American With Disabilities Act (ADA) compliant. (This is only applicable if existing surface is dirt and/or if existing surface is non-ADA compliant). This work shall be incidental to various contract items and will not be paid for separately.
23. Provide smooth transition where new sidewalk construction meets the existing grade or sidewalk. Transition shall not be steeper than 2% cross and longitudinal slopes and not less 6.0 feet long or as specified on the plans. This work shall be considered incidental to Contract Item No. 634.1000 - Portland Cement Concrete Sidewalks and will not be paid for separately.
24. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designed 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 Kauai District Office at telephone no. 241-3000.
25. 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.
26. All cold plane material is the property of the State and shall be transported to the Lihue Airport. Obtain required permits and all other documents required by the Lihue Airport. Contact Bernard Machado at the airport to coordinate delivery time and location; telephone number 651-6192. This work is incidental to Contract Item No. 415.1000 - Cold Planing.
27. Any work that disrupts, damages or destroys existing traffic loop detectors shall be followed with re-establishment of the traffic loops before reopening the lanes to traffic. The Contractor may use temporary pole mounted presence detectors to replace any loops taken out of service. The cost for temporary detector shall be considered incidental to pavement work.

REVIEWED BY	DATE
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ORIGINAL PLAN	
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Signature
THIS WORK WAS PREPARED BY
ME OR UNDER MY DIRECT SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

Kuhio Highway Intersection Improvements

Eha Street

Project No. 56A-02-05

Date: April 2009

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-02-05	2009	4	39

LEGEND

	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		New Sewer Manhole
	New Electrical Line		Existing 6" Gas Line
	Existing Joint Pole		New 6" Gas Line
	Existing Power Pole		Existing Gas Valve Box
	Existing Electric Manhole		Adjusted Gas Valve Box
	Adjusted Elec. MH Frame/Cover		New Gas Valve Box
	New Electric Manhole		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 Sandwich Isles Communication Line		Existing Grated Drop Inlet
	Existing 12" Water Line		Existing Catch Basin
	New 12" Water Line		Existing Traffic Sign
	Existing Water Manhole		Existing Highway Lighting Standard
	Adjusted Water MH Frame/Cover		Existing Highway Lighting Pullbox
	New Water Manhole		Existing Highway Lighting Pullbox
	Existing Water Air Valve		Existing Traffic Signal Pole
	Adjusted Water Air Valve		New Traffic Signal Pole
	New Water Air Valve		Existing Traffic Signal Pullbox
	Existing Water Valve Box		Adjusted Traffic Signal Pullbox
	Adjusted Water Valve Box		New Traffic Signal Pullbox
	New Water Valve Box		Existing Metal Guardrail
	Existing Water Meter		New Metal Guardrail
	Adjusted Water Meter		
	New Water Meter		
	Existing Fire Hydrant		
	New Fire Hydrant		

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES & LEGEND

Kuhio Highway Intersection Improvements

Eha Street

Project No. 56A-02-05

Date: April 2009

SHEET No. 2 OF 2 SHEETS

WATER POLLUTION AND EROSION CONTROL NOTES:

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-02-05	2009	5	39

A. GENERAL:

- See Section 209 - Water Pollution and Erosion Control. 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.
- Effective October 1, 2008, follow the guidelines in the "Construction Best Management Practices Field Manual", dated January 2008 in developing, installing and maintaining the Best Management Practices (BMP) for the project.
- Follow the guidelines in the Honolulu's City & County "Rules Relating to Soil Erosion Standards and Guidelines" along with applicable Soil Erosion Guidelines for projects on Maui, Molokai, Kauai, and Hawaii.
- The Engineer may assess liquidated damages of up to \$27,500 for non-compliance of each BMP requirement and each requirement stated in Section 209, for every day of non-compliance. There is no maximum limit on the amount assessed per day.
- The Engineer will deduct the cost from the progress payment for all citations received by the Department for non-compliance, or the Contractor shall reimburse the State for the full amount of the outstanding cost incurred by the State.
- For projects that require an NPDES Permit from the Department of Health, install a rain gage prior to any field work including the installation of any site-specific best management practices. The rain gage shall have a tolerance of at least 0.05 inches of rainfall, and have an opening of at least one-inch in diameter. Install the rain gage on the project site in an area that will not deter rainfall from entering the gage opening. The rain gage installation shall be stable and plumbed. Do not begin field work until the rain gage is installed and site-specific best management practices are in-place.

B. WASTE DISPOSAL:

- Waste Materials
Collect and store all waste materials in a securely lidded metal dumpster. The dumpster shall meet all local and State solid waste management regulations. Deposit all trash and construction debris from the site in the dumpster. Empty the dumpster a minimum of twice per week or as often as is deemed necessary. Do not bury construction waste materials onsite. The Contractor's supervisory personnel shall be instructed regarding the correct procedure for waste disposal. Post notices stating these practices in the office trailer and the Contractor shall be responsible for seeing that these procedures are followed.
- Hazardous Waste
Dispose all hazardous waste materials in the manner specified by local or State regulations and by the manufacturer. The Contractor's site personnel shall be instructed in these practices and shall be responsible for seeing that these practices are followed.
- Sanitary Waste
Collect all sanitary waste from the portable units a minimum of once per week, or as required.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- Inspect all control measures at least once each week and within 24 hours of any rainfall event of 0.5 inches or greater within a 24 hour period.
- Maintain all measures in good working order. If repair is necessary, it shall be initiated within 24 hours after the inspection.
- Remove built-up sediment from silt fence when it has reached one-third the height of the fence.
- Inspect silt screen or fence 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. Inspect and verify the bottom of the silt screen is buried a minimum of 6 inches below the existing ground.

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

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

1. Materials Pollution Prevention Plan

- 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.

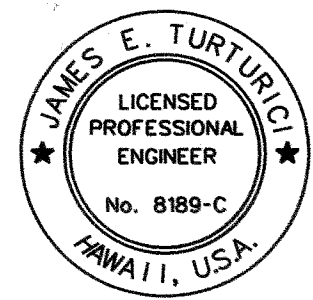
Concrete
Detergents
Paints (enamel and latex)
Metal Studs
Tar

Fertilizers
Petroleum Based Products
Cleaning Solvents
Wood
Masonry Block
- Use Material Management Practices to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. Make an effort to store only enough product as is required to do the job.
- Store all materials stored onsite in a neat, orderly manner in their appropriate containers and if possible under a roof or other enclosure.
- Keep products in their original containers with the original manufacturer's label.
- Whenever possible, use a product up completely before disposing of the container.
- Follow manufacturer's recommendations for proper use and disposal.
- Conduct a daily inspection to ensure proper use and disposal of materials onsite.

2. Hazardous Material Pollution Prevention Plan

- Keep products in original containers unless they are not resealable.
- Retain original labels and material safety data sheets (MSDS).
- Dispose of surplus products according to manufacturers' instructions and local and State regulations.

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 <i>James E. Turturici</i> Signature (License Expiration Date 4/10) THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION WATER POLLUTION & EROSION CONTROL NOTES Kuhio Highway Intersection Improvements Eha Street Project No. 56A-02-05 Date: April 2009
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WATER POLLUTION AND EROSION CONTROL NOTES: -Cont.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES: -Cont.

3. Onsite and Offsite Product Specific Plan

The following product specific practices shall be followed onsite:

a. Petroleum Based Products:

Monitor all onsite vehicles for leaks and perform regular preventive maintenance to reduce the chance of leakage. Store petroleum products in tightly sealed containers which are clearly labeled. Apply asphalt substances used onsite according to the manufacturer's recommendation.

b. Fertilizers:

Apply fertilizers used only in the minimum amounts recommended by the manufacturer. Once applied, work fertilizer into the soil to limit exposure to storm water. Storage shall be in a covered shed. Transfer the contents of any partially used bags of fertilizer to a sealable plastic bin to avoid spills.

c. Paints:

Seal and store all containers when not required for use. Do not discharge excess paint to the highway drainage system. Dispose properly according to manufacturers' instructions or State and local regulations.

d. Concrete Trucks:

Wash out or discharge concrete truck drum wash water only at a designated site. Do not discharge water in the highway drainage system or waters of the United States. Contact Drinking Water Branch, Department of Health at 586-4258 to receive permission to designate a disposal site. Clean disposal site as required or as requested by the Owner's representative.

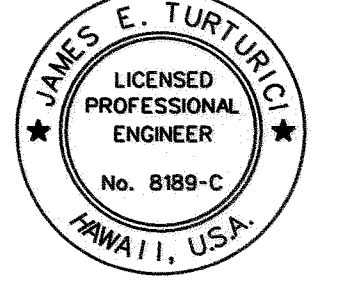

4. Spill Control Plan

- Post a spill prevention plan to include measures to prevent and clean up each spill.
- The Contractor shall be the spill prevention and cleanup coordinator. 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. Post the names of responsible spill personnel in the material storage area and in the office trailer onsite.
- Clearly post manufacturers' recommended methods for spill cleanup. Make site personnel aware of the procedures and the location of the information and cleanup supplies.
- Keep materials and equipment necessary for spill cleanup in the material storage area onsite.
- Clean up all spills immediately after discovery.
- Keep the spill area well ventilated. Personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Report spills of toxic hazardous material to the appropriate State or local government agency, regardless of the size.

E. PERMIT REQUIREMENTS:

- If a National Pollutant Discharge Elimination System (NPDES) Permit is required for Construction Activities of one acre or more, submit to the Engineer six sets of the Water Pollution and Erosion Control Submittals as detailed in Subsection 209.03 of the specifications.
- If an NPDES Permit for Construction Dewatering is required, the Contractor shall be responsible to obtain the Permit from the Department of Health, Clean Water Branch.
- Comply with all applicable State and Federal Permit conditions.

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Handwritten Sign	

  <small>Signed License Expiration Date: 4/1/10 THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION</small>	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION WATER POLLUTION & EROSION CONTROL NOTES Kuhio Highway Intersection Improvements Eha Street Project No. 56A-02-05 Date: April 2009

WATER NOTES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
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1. Unless otherwise specified, all materials and construction of water facilities and appurtenances shall be in accordance with the "Water System Standards", 2002, as adopted by The Department of Water, County of Kauai, including all subsequent amendments and additions.

2. The Contractor shall arrange a pre-construction conference at least 10 days before construction and shall notify the Department of Water at least 3 working days prior to the start of construction.

3. The Contractor shall submit the name and telephone number of its authorized superintendent on the job and the names and telephone numbers of at least three (3) persons to contact in case of emergency during non-working hours.

4. The Contractor shall notify the Department of Water at least 24 hours prior to any trenching, pipe laying, backfilling, testing or chlorination to insure that inspectional services will be available.

5. All materials (pipe, pipe lubricants, paints, sealants, form oil, concrete admixtures, etc.) in direct contact with the potable water shall have National Sanitation Foundation (NSF) approvals. The Contractor shall submit these approvals to the Department of Water for review and approval prior to its application.

6. The location of existing water mains and appurtenances shown on the plans are approximate only. The Contractor shall verify the exact locations in the field. Excavation around any existing water main shall be done by hand.

7. The Contractor shall provide unobstructed access to existing fire hydrants, valves and water meters at all times.

8. The Contractor shall secure all excavations in accordance with OSHA regulations.

9. There shall be no physical connection between a public or private potable water system and a non-potable water system, sewer, or appurtenance thereto which could permit the passage of any sewage or polluted water into the potable water supply.

10. Trench excavation, backfilling in lifts, and repaving shall conform to the "Hawaii Standard Specifications For Road and Bridge Construction, 2005" or amended.

11. Warning tape shall be in accordance with Division 200, Section 212.08 of the "Water System Standards" the warning tape shall be four mil thick, non-metallic, acid and alkali resistant polyethylene and 6-inches wide with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Tape color shall be "safety precaution blue" and shall bear a continuous printed inscription "Caution Water Line Buried Below". Inscription shall be 2-inches high, black text.
12. All fire hydrants shall receive a minimum SSPC SP3 surface preparation and coated in accordance with Division 200, Section 206.01 of the "Water System Standards".

13. Unless otherwise directed, prior to the connection of any pipeline to the existing main, the pipeline installed shall be cleaned, pressure tested, chlorinated, flushed, and sampled in accordance with Division 300, Sections 302.27 to 302.29 of the "Water System Standards".

14. Water samples shall be analyzed by the MF Method on M-Endo Agar. In addition to the test for coliforms, a separate test for Heterotrophic Plate Count (HPC) shall be conducted. The HPC count shall be less than 500 CFU/ML.

15. Polyurethane foam "pigs" shall be "pushed" through the length of the installed pipeline using pressurized water.

16. All connections shall be scheduled in coordination with the Department of Water.

A. An advance deposit is required for operating valves, flushing lines and notifying consumers affected by a water shutdown during connections. The Contractor will be charged the actual cost. (Deposits and fees waived for Department of Water contracts).

B. The Contractor shall place the deposit prior to scheduling the connection date.

C. Connections shall be scheduled on Tuesdays through Thursdays. No connections shall be scheduled on Mondays, Fridays, weekends, and holidays.

D. All materials shall be on hand and approved by the Engineer prior to scheduling the connection date.

E. Pumps used to de-water the connection area shall be operated in the presence of the Engineer prior to scheduling the connection date.

F. All connections shall be performed in the presence of the Engineer.

17. In order to prevent damage to the polyethylene encasement from excessive handling, the polywrap shall be installed around the barrel of the ductile iron pipe at its final location along the trenchline. The polyethylene encased pipe shall be lifted using a fabric type sling or a suitably padded cable or chain to prevent damage to the polyethylene.

18. The Contractor shall take all necessary compaction tests while the waterline trench is being backfilled and while the subbase/basecourse is being placed. If the test results indicate that additional compaction is required, the corrective work shall be completed before any additional trench excavation or placing of subbase/basecourse is allowed.
19. The Contractor shall retain the services of a registered Geotechnical Engineer for quality control. The compaction test results shall be certified by the Geotechnical Engineer and submitted to the Department of Water, State Highways Division (for work done within State R/W) and the Department of Public Works (for work done within County R/W). The Geotechnical Engineer shall certify that the compaction results meet the requirements of the current " Standard Specifications For Road and Bridge Construction".

20. The Contractor shall connect all existing consumer piping to the new service laterals. The Department of Water will transfer the existing water meters only.

21. All fittings shall be mechanical joint (MJ) at each end unless otherwise noted.

22. The Contractor shall obtain all applicable Department of Health permits prior to the start of construction. Permits include, but are not limited to, National Pollutant Discharge Elimination System (NPDES) permits for storm water, hydrostatic test, dewatering, and for construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area.

23. The Contractor shall be responsible for the proper disposal of storm water discharges and effluent associated with construction activities including hydrotesting and disinfection operations, to safeguard public health and safety in accordance with applicable Department of Health requirements. All permits and licenses for storm water and construction water disposal, including all application, charges, fees, and taxes, are the responsibility of the Contractor.

24. All work shown on this sheet shall be paid for under Item 624.1000 - WATER SYSTEM.

ORIGINAL PLAN	SURVEY PLANNED BY	DATE
NOTE BOOK	DESIGNED BY	
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APPROVED:

for

Manager & Chief Engineer
Dept. of Water, County of Kauai

4/17/09
Date

JAMES E. TURTURICI

LICENSED PROFESSIONAL ENGINEER

No. 8189-C

HAWAII, U.S.A.

Signature

(License Expiration Date: 4/30)

THIS WORK WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

WATER NOTES

Kuhio Highway Intersection Improvements

Eha Street

Project No. 56A-02-05

Date: April 2009

SHEET No. 1 OF 1 SHEETS

Wastewater System Notes

1. The effluent system shall conform to all requirements of the "Guidelines For The Treatment and Reuse of Reclaimed Water" by the Department of Health, State of Hawaii, dated May 15, 2002.
2. All new buried transmission piping in the reclaimed water system, be colored purple, suggested color Pantone 512 or equal, and embossed or be integrally stamped/marked "Reclaimed Water - Do Not Drink", or be installed with a purple identification tape, or a purple polyethylene wrap, suggested color index 77742 Violet #16.
3. Valve boxes shall be the standard concrete or fiberglass box conforming with "Water System Standards" Volume 1, State of Hawaii, 1985, and as amended. All valve covers on reclaimed water lines shall contain "Reclaimed Water" inscriptions on the top surface.
4. All sewer lines and appurtenances shall conform to the "Hawaii Standard Specifications For Road and Bridge Construction, 2005", and as amended; and "Standard Details for Public Works Construction, dated September 1984", and as amended, (hereinafter standard details).
5. All sewer lines and appurtenances shall follow the "Sewer Design Standards" of The County of Kauai, dated June 1973, and as amended (hereinafter sewer standards).
6. The County engineer or his duly authorized representative has the right to stop construction should any work be found contrary to the approved plans and specifications, or detrimental to public health, safety and interest.
7. All existing utilities, whether or not shown on the plans, if damaged during construction, shall be repaired by the contractor and the contractor shall pay all expenses.
8. Should the contractor excavate beyond the trench payment width, as specified in the standard details, and such action results in a greater load to the pipe, the contractor shall provide, at the contractor's expense, a higher class of bedding material approved by the engineer, that will withstand the added load.
9. Where the clearance between a sewer or effluent line and a new or existing water line is 18 inches or less, the sewer line shall be concrete jacketed in accordance with the sewer standards.
10. All backfill for effluent line trenches shall be compacted in eight (8) inch lifts to a minimum of 95% of its maximum density.
11. Prior to installation of flow meters and final acceptance, all effluent lines installed shall be flushed with reuse water and accumulated construction debris and other foreign materials shall be removed at contractor's expense.
12. The Contractor shall maintain a "job site copy" of the plans at the project site which will record any changes made in the field. "As-built" drawings shall be submitted as a condition for final acceptance of the project.
13. The wastewater treatment plant, pump stations and other operating functions of the sewer system must be in operation at all times. Construction work shall be coordinated with the County of Kauai, Department of Public Works to minimize interruptions in services, and to schedule power shut downs and generator operations. overtime costs, if required by county employees to accommodate construction work, shall be chargeable to the contractor.
14. The Contractor shall notify the Division of Wastewater Management seven (7) days prior to commencement of sewer work. In the event that any changes in the alignment or grade for the proposed sewers are required due to unforeseen conflict with underground utilities, the contractor shall immediately notify the engineer and provide the engineer the necessary data in order that the engineer will be able to determine what changes in alignment or grade are required.

Wastewater System Notes (con't)

15. The underground pipes, cables or duct lines known to exist by the engineer from his research of records are indicated on the plans. The Contractor shall verify the location and depth of the facilities and exercise proper care in excavating the area.
16. The Contractor shall verify the location and invert of all existing utilities whether shown or not shown as required.
17. The Contractor shall be responsible to maintain existing sewage flow conditions until final connection is made. the contractor shall provide for all necessary by-passes, pumps, generators, etc. to insure a continuous uninterrupted flow of sewage at all times. This work shall be considered incidental to pipe and structure installation.
18. The Contractor shall be responsible and pay for all damages and costs levied by the State Department of Health (DOH) for any sewage spills caused as a result of construction activities. The Contractor shall notify the DOH, utilize appropriate sampling and analyzing procedures and any remediation action required by DOH. The Contractor shall also be responsible for any material cost and overtime labor cost generated by the county as a result of the spill.
19. Crushed rock cradle shall be required for all sewer line, and other construction as indicated on the construction plans except in areas of unsuitable soils. The Engineer shall utilize every effort to determine the ground conditions during design, however if unanticipated ground conditions occur during construction the contractor shall notify the engineer immediately to rectify the situation.
20. Construction and installation of sewer lines and appurtenances shall be performed in accordance with the requirements of the "Standard Specification for Public Works Construction, Department of Public Works, County of Kauai", dated September 1986, and as amended; and the "Standard Details for Public Works Construction, Department of Public Works, County of Kauai", dated September 1984, and as amended.
21. Sewer pipe material shall be as indicated on the construction drawings.
22. Before construction commences, the contractor shall schedule and document a pre-construction meeting with all agencies with utilities which may be affected by the work.
23. The Engineer will expend every effort to identify and locate existing utilities in the construction area; and the contractor shall verify all existing utilities by hand exploration or other means which will not damage the existing utilities, and through direct contact with the utility companies, land owners, lessees, etc. The Contractor shall maintain a log of its personal contact with the aforementioned and submit a copy to the engineer prior to start of construction.
23. The sewer system must be in operation at all times. Construction work shall be coordinated with the County of Kauai, Department of Public Works to minimize interruptions in services, and to schedule power shut downs and generator operations, overtime costs, if required shall be chargeable to the contractor.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-02-05	2009	8	39

Wastewater System Notes (con't)

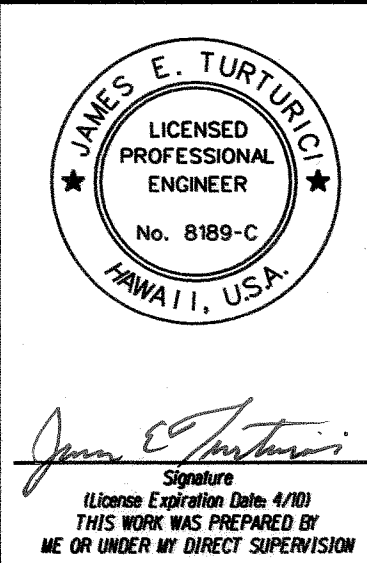
25. Utility lines running parallel to sewer or sewer effluent lines shall maintain a minimum horizontal separation of 24 inches measured for the outside face and vertical tangent of the pipe diameter. Utility lines crossing the sewer line shall maintain minimum vertical separation of 24 inches. For utility line other than water lines, the crossing conduit shall be identified with a plastic tape marker installed parallel to the utility conduit and be no less than 18 inches above the utility line and extend 4 feet beyond the sewer line on each side. (or some simile)
26. Trench excavation, backfilling in lifts, and repaving shall conform to the "Hawaii Standard Specifications for Road and Bridge Construction, 2005" or amended.
27. Warning tape shall be in accordance with Division 200, Section 212.08 of the "Water System Standards" the warning tape shall be four mil thick, non-metallic, acid and alkali resistant polyethylene and 6-inches wide with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Tape color shall be "safety precaution blue" and shall bear a continuous printed inscription "Caution Water Line Buried Below". Inscription shall be 2-inches high, black text.
28. All work shown on this sheet shall be paid for under Item 625.1000 - Sewer System.

DESIGNED BY	DATE
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
1/10/2009	

APPROVED:

James E. Turturici
Chief, County of Kauai
Division of Wastewater Management

4/17/2009
Date



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WASTEWATER NOTES

Kuhio Highway Intersection Improvements

Eha Street

Project No. 56A-02-05

Date: April 2009