FED. ROAD DIST. NO.	STATE	FEDERAL – AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH–A311(6)R	2006	3	173

GENERAL NOTES

1. The project starts on Mokulele Highway at approximate station 170+00 and continues South on Mokulele Highway and ends at approximate station 258+50 where a transition connection is made back to the existing highway. Improvements consist of removal of existing pavement and construction of new divided highway, relocating power and telephone poles and underground utilities, constructing drainage improvements, installing traffic signal system conduits, signs and pavement markings and, landscaping adjusting pull boxes, and manhole frames and covers.
2. The Contractor is reminded of the requirements of Subsection 108.01 – Subletting of Contract, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Noncompliance with this Subsection may be grounds for rejection of bid.
3. The Contractor's attention is directed to the following Sections of the Special Provisions : Subsection 107.13 – Public Convenience and Safety; Subsection 107.21 – Contractor's Responsibility For Utility Property And Services; and Section 645 –Traffic Control.
4. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting construction.
5. 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.
6. 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.
7. Cold planed 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. Exact locations shall be determined in the field by the Engineer. Payment for this work approaches, side streets and driveways as shown on the plans shall be considered incidental to Asphalt Concrete Pavement, Mix IV.
8. Smooth riding connections shall be constructed at the beginning and end of the project and at all connecting approaches, side roads and driveways and as directed by the Engineer.
9. Dressing of shoulder and sidewalk 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.
10. All saw cutting work shall be considered incidental to various contract items of work.
11. Existing drainage system shall 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. All construction signs shall be left in place until all construction items have been completed. The Contractor shall obtain prior approval from the Engineer to remove construction signs. This work shall not be paid for separately but shall be considered incidental to various contract items.
13. The Contractor shall not leave more than 1–1/2" drop–offs at the edge of pavement at the end of each work day. This includes drop–offs at the centerline and at the other edges of travel lane.
14. Existing guardrail appurtenances and existing signs and posts that will be removed and replaced shall be delivered to the D.O.T. Kahului Base yard in a reusable condition and stored according to the engineers directions. Payment for removal, storage and delivery shall be considered incidental to various guardrail and regulatory and warning sign pay items unless noted otherwise in the proposal.
15. Scarified A.C. Pavement Material shall be delivered and stockpiled at the D.O.T. Kahului Baseyard. Payment for this item shall be considered incidental to the various Contract Items.
16. Street survey monuments shown on plans shall be verified in the field prior to any construction activity. Monuments that are shown on plans but are missing in the field shall be reestablished and reinstalled by the Contractor. Payment for this work shall be made on a Force Account basic.
17. Street survey monuments shall not be disturbed during cold planing and/or pavement reconstruction. Adjustments of these monuments shall be in accordance with applicable details as shown on the Standard Plans. Monuments that need to be disturbed due to improvements shall be referenced by a Licensed Surveyor and replaced. Cost for this work shall be paid for under Street Survey Monuments in the proposal.
18. Sign posts shall be square tube posts.
19. Existing striping and markings must be referenced by the Contractor for future use. Installation of pavement markings shall not commence until the layout is approved by the Engineer.
20. The Contractor shall provide for access to and from all existing side roads, driveways and streets at all times.
21. All Light Poles and Appurtenances Shall Meet the Design Requirements Of Standard Specifications For Structural Supports For Highway Signs, Luminaries and Traffic Signals, 1994 with 1998 and Interim Revisions.
22. The Contractor shall coordinate his work so as not to interfere with the installation of the National Guard waterline and relocation of existing water meters noted as by others between approximate B.L. stations 232+00 and 240+00. No work shall be done in this area until the waterline and meters are in place and approved by the Department of Water Supply.
23. See sheet 28 for Benchmark.

CONSTRUCTION NOTES WITHIN COUNTY RIGHT–OF–WAY

1. Contractor shall obtain permit to perform work on County highways from the Development Services Administration two weeks prior to the commencement of work.
2. Standard Detail Drawings and Standard Specifications of the Department of Public Works shall be included as part of the construction plans.
3. All construction work shall strictly conform to the applicable sections of the 1994 Hawaii Standard Specifications for Road, Bridge, and Public Works Construction, and the September 1984 "Standard Details" for Public Works Construction of the Department of Public Works, as Amended.
4. If existing utilities, whether or not shown on plans, are damaged during repair such utilities.
5. Contractor shall provide, install and maintain all necessary signs, lights, flares, barricades, and other protective devices for the protection, safety and convenience of the public, according to the "Manual on Uniform Traffic Control Devices for Streets and Highways", 2000, and to the rules and regulations governing the use of traffic control devices at work sites on/or adjacent to public streets and highways adopted by the highway safety coordinator and the U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Highway Construction and Maintenance Operations" dated 2001.
6. The Director of Public Works and/or the Director of the Department of Water Supply has the right to stop construction should any work be found contrary to the approved construction plan or detrimental to the public's interest.
7. The contractor shall schedule a pre–construction meeting with the Development Services Administration five (5) days prior to commencement of construction.
8. The contractor shall, at his own expense, keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health and County Grading Ordinance.
9. The contractor shall remove all silt and debris resulting from his work and deposited in drainage facilities, roadways and other areas. The cost incurred for any necessary remedial action ordered by the Director of Public Works shall be paid by the contractor.
10. Construction debris and wastes shall be deposited at an appropriate work site. The contractor shall inform the Director of Public Works of the location of the disposal sites. The disposal site must fulfill the requirements of the Grading Ordinance.
11. The contractor shall submit a TIFF and five (5) copies of the "As–Builts" drawings prior to the final approval of the improvements.
12. If the clearance between a wastewater line and a new or existing waterline is eighteen inches (18") or less, the wastewater line shall be concrete–jacketed in accordance with the Standard Details of Public Works Construction dated September 1984.
13. Should historic sites such as walls, platforms, pavements, or mounds, or remains such as artifacts burials, concentration of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find and the find shall be protected from further damage. The contractor and/or landowner shall immediately contact the State Historic Preservation Division @ (243–5169), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.
14. Pursuant of Maui County Code Section 3.44.015(C), the County of Maui is not responsible for any park, roadway, easement (including but not limited to drainage, sewer, access, reclaimed water, or irrigation easement), or any other interest in real property shown on this map or shown on these plans, unless the Maui County Council has accepted its dedication by a resolution approved by a majority of Council's Members at a regular or special meeting of the Maui County Council.

COMPACTION FOR COUNTY RIGHT–OF–WAY

1. Testing of materials shall be conducted by an approved independent testing agency in accordance with ASTM Standard Methods, or as specified by the Department of Public Works, Engineering Division, as follows:
   - A. Embankment/select borrow and subgrade materials: one (1) compaction test per 600 square yards per lift;
   - B. Aggregate sub–base course: one (1) compaction test per 400 square yards per lift of material; one (1) gradation and sand equivalent test per project;
   - C. Aggregate base course: one (1) compaction test per 300 square yards per lift of material; one (1) gradation and sand equivalent test per project;
   - D. Asphalt concrete pavement or asphalt treated base course; three (3) A.C. cores for thickness and density tests per project;
   - E. Trench backfill material: one (1) test for each 300 lineal feet of trench per lift of material.
2. Contractor shall submit all testing reports including results to the County's inspection agency for review and approval prior to County's acceptance of work.
3. The contractor shall be required to notify the County of any testing failures and correct each failure prior to proceeding to the next phase of construction.

TRAFFIC NOTES

1. No lane closures will be allowed at anytime without the written approval of the District Engineer. If approved, the contractor shall provide temporary detours to allow continuous two way traffic movement at all times.
2. Detour roads shall be constructed with a minimum of 4" of compacted base course material. Lanes shall be a minimum of 11' wide with 2' shoulders, along with barricades and other saftety features, and shall have smooth riding connections back to existing pavements. Traffic in opposite directions or multilane traffic shall be separated by cones or other approved means.
3. Once work in the area has been completed and the detour road is no longer needed, the contractor shall restore the area to match existing or better conditions to the satisfaction of the Engineer.
4. No construction vehicles or equipment will be allowed to cross or impede through traffic along the highway during 7:00 AM to 8:30 AM and 3:00 PM to 4:30 PM.
5. All costs associated with the above will not be paid for separately and will be considered incidental to the various contract items.

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

9/12/03

PROJ. NO.: M9801.00

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CLIFFORD M. ARAKAWA
LICENSED PROFESSIONAL ENGINEER
No. 1864–C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

04/30/06

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

MOKULELE HIGHWAY WIDENING
Maui Humane Society
To
Vicinity of Kolaloa Bridge
Federal – Aid Project No. NH–A311(6)R

Scale: NONE Date: JUNE 2005

SHEET No. 1 OF 3 SHEETS

3

FED. ROAD DIST. NO.	STATE	FEDERAL – AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH–A311(6)R	2006	4	173

WATER POLLUTION AND EROSION CONTROL

A. General:

1. 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.

2. The Contractor shall comply with the requirements of the project's NPDES permit as outlined in the Dept. of Health's notice of general permit coverage. Copies are available at the Engineer's Honolulu and Maui District office.

3. 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.

4. 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.

5. 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.

6. 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–specified 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 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.

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 as related in Section 209.

2. All measures shall be maintained in good working order. If repair is necessary, it shall be initiated within 24 hours after 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.

5. Temporary and permanent seeding and planting shall be inspected for bare spots, washouts and healthy growth.

6. A maintenance and inspection report shall be made and submitted as related in Section 209.

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 Blocks

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.

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 drum wash water only at 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 and adjusted to include a description and cause of each spill, 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. A National Pollution Discharge Elimination System (NPDES) Permit for construction activities has been obtained for this project. The contractor shall comply with all conditions of the permit.

2. If a NPDES permit for construction dewatering is required, the Contractor shall be responsible to obtain the permit from the Department of Health, Clean Water Branch.

3. The Contractor shall comply with all applicable State and Federal permit conditions. Permits may include but are not limited to the following:

A. NPDES permit for construction activities
B. NPDES permit for construction dewatering

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

7/17/02

PROJ. NO.: M9901.00

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CLIFFORD M. ARAKAWA
LICENSED PROFESSIONAL ENGINEER
No. 1864–C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

04/30/06

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES

MOKULELE HIGHWAY WIDENING
Maui Humane Society
To
Vicinity of Kolaloa Bridge
Federal – Aid Project No. NH–A311(6)R

Scale: NONE Date: JUNE 2005

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL – AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH–A311(6)R	2006	5	173

DRAINAGE NOTES

1. The Contractor shall verify and check all dimensions and details on the drawings before proceeding with the work. Any discrepancy shall be brought to the attention of the Engineer for clarification.
2. All existing utilities and improvements whether or not shown on plans shall be protected at all times by the Contractor unless specified otherwise. Any damages resulting from the Contractor's operations shall be immediately repaired or restored as directed by the Engineer at the Contractor's expense.
3. The Contractor at his own expense shall keep the project area and surrounding area free from rubbish noise, dust, erosion etc. The work shall be done in conformance with the air and water pollution control standards and regulations of the State Dept. of Health.
4. Culverts within the catch basin or grated drop inlets shall be cut flush with the inside face of the wall. Above work shall be considered incidental to the various contract items.
5. Demolishing of existing structure shall not be paid for separately, but shall be considered incidental to the various contract items, unless otherwise noted in the proposal.
6. Concrete shall be Class A unless otherwise noted.
7. Chamfer all exposed concrete edges 1".
8. Restoration of Pavement around GDI shall not be paid for separately but shall be considered incidental to the GDI.
9. Existing drainage system will be functional at all times during construction. Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance of flow, the cost of which shall be incidental to the various contract items.
10. Contractor shall verify the locations of all culverts in the field. Any culvert damaged during construction shall be repaired or replaced by the Contractor at his expense.
11. Inlet and Outlet conditions shall be graded to permit free flow of run–off or as directed by the Engineer. Grading shall be to the satisfaction of the Engineer. Above work shall be considered incidental to the various contract items.
12. The Contractor shall provide bedding materials for culvert, Class "C" bedding. Payment of this work will not be paid for separately but will be considered incidental to the appropriate culvert pay items.
13. Reinforcing Steel for Concrete Structures will not be paid for separately but shall be considered incidental to various concrete pay items unless otherwise noted in the proposal.
14. Locations and elevations of new structures must be laid out in the field for the Engineer's approval.
15. Furnishing and providing backfill materials for drainlines and drainage structures will not be paid for separately but shall be considered incidental to the various contract items.

HAWAIIAN COMMERCIAL & SUGAR COMPANY (HC&S) NOTES:

1. Work Notification:
Contractor shall notify Hawaiian Commercial & Sugar Company (HC&S) at least 2 weeks in advance prior to starting any work on cane field areas and irrigation systems (syphons, ditches, drip irrigation system). Contractor shall coordinate his work schedule with HC&S to minimize any inconvenience and disruption of the agricultural operations. The contractor shall assume all liability, financial or otherwise, in connection with this contract that may arise due to inconvenience, delay or loss experienced by him from the presence or operations of HC&S working on their affected cane fields.

2. Relocation Of Irrigation Pipelines And Appurtenances:
   A. Existing pipelines shown are approximate. Contractor to verify exact location in field in coordination with HC&S.
   B. Coordinate with HC&S for the final location of relocated pipelines and appurtenances, including riser assemblies, valves, air vents, flushouts, etc. Contractor shall be responsible for all new fittings as required, including concrete reaction blocks, to complete the relocation and connection to existing pipelines. Where pipeline extensions are required, the new pipeline shall be of the same material and class as that of the existing pipe.

3. Crop damages:
Crops that are damaged by the contractor outside the project limits shall be paid by the Contractor at no additional cost to the State. Likewise, irrigation ditches, pipelines, etc. when damaged, shall be repaired by the Contractor at his expense to the satisfaction of HC&S.

4. Installation / Relocation of HC&S pipelines and culverts must be completed within seven (7) calendar days. The contractor must coordinate with HC&S for any downtime required and the timing of any work to be done on these pipelines and culverts.

5. Coordinate with HC&S for any downtime required.

DEPARTMENT OF WATER SUPPLY NOTES FOR WATER SYSTEM

1. The contractor shall notify the Department of Water Supply (D.W.S.) in writing, one (1) week prior to commencement of work.
2. All materials used and method of construction of water system facilities shall be in accordance with the latest revisions of D.W.S. standards. Contractor shall obtain the latest revisions of the D.W.S. standard details before commencing construction.
3. The exact depth and location of existing waterlines, service laterals and other utilities are not known. It shall be the contractor's responsibility to locate same prior to trenching for the new waterline. The cost of lowering, relocating or adjusting existing waterlines, service laterals and other utilities shall be considered incidental to the cost of the new waterline, unless noted otherwise, and will not be paid for separately.
4. Concrete for reaction blocks and anchor blocks shall be D.W.S. class 2500.
5. The maximum distance between valve nut and top of manhole cover shall be three (3) feet.
6. The contractor shall submit a materials list to D.W.S. for approval prior to construction.
7. Connection to D.W.S. system:
   A. The contractor shall verify the exact location, depth, type and condition of the existing line before ordering materials for the hook–up. He shall, however, check with D.W.S. before excavating for verification purposes. He shall be responsible for furnishing all necessary fittings and other materials required for the hook–up.
   B. Whenever feasible, mechanical joint fittings shall be used.
   C. Authorized D.W.S. personnel will make the final connection to the existing line. The contractor shall be responsible for all costs incurred by D.W.S. for said work, including the cost of pressure testing.
   D. The contractor shall be responsible for furnishing all material, equipment and labor for chlorination, trench excavation, back filling, paving, and other work necessary to complete the hookup, as directed by and to the satisfaction of the Department of Water supply.
8. The developer shall submit a cost list along with an affidavit for the water system prior to acceptance.
9. The contractor shall submit two sets of record drawings via a consultant prior to acceptance of the water system.
10. Minimum cover over water main, 6" diameter or larger, shall be 3'–0", for 4" diameter shall be 2'–6". Minimum cover for diameters less than 4" shall be 1'–6", or beneath the pavement section whichever is greater.
11. The contractor shall paint and number the fire hydrant. Numbering to be furnished by D.W.S.
12. All buried metals shall be wrapped with poly–wrap. For ductile iron pipe installation, poly–wrap shall be required.
13. All nuts and bolts shall be painted with asphaltic paint.
14. Lubricate hydrant nozzle threads with non–toxic grease.
15. Water mains and appurtenances shall be subject to hydrostatic testing in accordance with the latest revision of AWWA C600, under the "Hydrostatic Testing" section, to a pressure of at least 1.5 times the working pressure. Unless otherwise stated in the construction documents or limited by the pressure rating of equipment, the pressure test and leakage test shall be performed at 225 pounds per square in pressure.

For additional Department of Water notes see sheet 59

LEGEND

——— ———	Existing Easement
——— ———	New Easement
- - - -40- - - -	Existing Contour
——40——	New Contour
○ emh	Existing Electrical Manhole
⊗ EMH	Adjusted Elec. MH Frame/Cover
○ EMH	New Electrical Manhole
——e———	Existing Electrical Line
——— E ———	New Electrical Line
——— t ———	Existing Telephone Line
——— T ———	New Telephone Line
○ pp	Existing Power Pole
○ PP	New Power Pole
○ tp	Existing Telephone Pole
○ TP	New Telephone Pole
—— d —24 ——	Existing Drain Line W/Size
—— D —24 ——	New Drain Line W/Size
—— s —12 ——	Existing Sewer Line W/Size
—— S —12 ——	New Sewer Line W/Size
—— w —12 ——	Existing Water Line W/Size
—— W —12 ——	New Water Line W/Size
—— i —24 ——	Existing Irrigation Line W/Size
—— I —24 ——	New Irrigation Line W/Size
○ wmh	Existing Water Manhole
⊗ WMH	Adjusted Water MH Frame/Cover
○ WMH	New Water MH Frame/Cover
○ aw	Existing Water Air Valve
⊗ AV	Adjusted Water Air Valve MH Frame/Cover
○ AV	New Water Air Valve MH Frame/Cover
○ ww	Existing Water Valve Box
⊗ WV	Adjusted Water Valve Box
○ WV	New Water Valve Box
▭ wm	Existing Water Meter
▣ WM	Adjusted Water Meter
▭ WM	New Water Meter
⊹ fh	Existing Fire Hydrant
⊹ FH	New Fire Hydrant
▨	Reconstruction Areas
▨	Demolition Areas
▨	Cold Planing Areas
⌐ ¬	Paving Limits

○ smh	Existing Sewer Manhole
⊗ SMH	Adjusted Sewer MH Frame/Cover
○ SMH	New Sewer MH Frame/Cover
⊙ mon.	Existing Monument
⊙ MON.	Adjusted Monument
⊙ MON.	New Monument
○ sdmh	Existing Storm Drain Manhole
⊗ SDMH	Adjusted Storm Drain MH Frame/Cover
○ SDMH	New Storm Drain MH Frame/Cover
⊟ gdi	Existing Grated Drop Inlet
⊠ GDI	Adjusted Grated Drop Inlet
⊟ GDI	New Grated Drop Inlet
⊐ ch	Existing Catch Basin
⊐ CB	New Catch Basin
⊦	Existing Traffic Sign With 1 Post
⊦	Existing Traffic Sign With 2 Post
⊦	Existing Traffic Sign With 3 Post
⊦	New Traffic Sign With 1 Post (See Exist. Signs For Multiple Post Symbol)
♀	Existing Highway Lighting Standard
♀	New Highway Lighting Standard
- - - - - -	Existing Metal Guardrail
■ ■ ■	New Metal Guardrail
– × – × –	Existing Fence
× × ×	New Fence
R/W	Existing Right Of Way
New R/W	New Right Of Way
——ep——	Existing Edge Pavement
——ES——	Edge Shoulder
----------	Sawcut Line
	Access Permitted
	No Access Permitted
	Existing Top Bank
	Existing Bottom Bank
	New Top Bank
	New Bottom Bank
	Existing Traffic Signal Sensor Loop
	Rumble Strip
⊩	RM–2
⊪	RM–3

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

PROJ. NO.: M9901.00 R:\maui_ph1c\NOTES.dwg 7/17/02

CLIFFORD M. ARAKAWA
LICENSED PROFESSIONAL ENGINEER
No. 1864–C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

04/30/06
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

MOKULELE HIGHWAY WIDENING
Maui Humane Society
To
Vicinity of Kolaloa Bridge
Federal – Aid Project No. NH–A311(6)R

Scale: NONE Date: JUNE 2005

SHEET No. 3 OF 3 SHEETS