


GENERAL NOTES

1. The scope of work for this project consists of cold planing; resurfacing, reconstruction of weakened pavement areas; adjusting utility box frames & covers; replacing signs and reflector markers; installing pavement markings; replacing and/or reconstructing of sidewalks & curb ramps; upgrading guardrails, end treatments and bridge railings; replacing existing highway lighting systems; drainage system improvements; and bridge deck strengthening.
2. The Contractor is reminded of the requirements of Subsection 108.01 - Subcontracting, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bids.
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 - 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 be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
6. The exact locations and limits or areas to be filled with leveling course shall be determined in the field by the Engineer.
7. The Contractor shall notify in writing, Oahu Transit Services, Inc. Roads Supervision Office, 811 Middle St., Hon., HI 96819 (ph. #848-4571) two weeks prior to construction, informing them of location, scope of work, road/lane closure and dates of closure.
8. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
9. The Contractor shall remove and dispose of all existing raised pavement markers and 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.
10. All holes, depressions and wheel ruts shall be filled and compacted with Asphalt Concrete Pavement, Mix No. V prior to resurfacing. This work will be paid for under Leveling Course.
11. Smooth riding connections shall be constructed at all limits of resurfacing and reconstruction, 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.
12. Dressing of shoulder and sidewalk shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved adjacent areas 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.
13. 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.



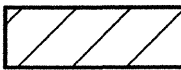
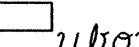

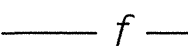
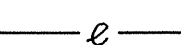
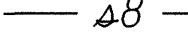

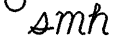


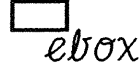

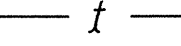
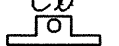


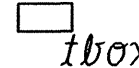

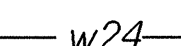
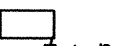



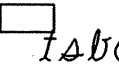




14. Earth swale shall be graded to drain. This work shall be considered incidental to the various contract items.
15. The contractor shall provide for access to and from all existing side streets and driveways at all times.
16. All saw cutting work shall be considered incidental to various contract items.
17. Prior to his resurfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished pavement grade. Additionally, the Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, electrical, telephone and cable utilities to be adjusted to the new finished grade. This work shall be considered incidental to the various contract items.
18. After completion of resurfacing, the Contractor and the Engineer will test for, and determine ponding areas (i.e. low spots within the resurfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas. Corrective measures shall be approved by the Engineer.
19. 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 a location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the right-of-way from the State Highways Right-of-Way Branch at telephone no. 692-7332.
20. Tack coat shall be incidental to the various Asphalt Concrete Pavement items.
21. The Contractor is to take special measures to reduce dust from cold planing operations including but not limited to use of water misters on cold planing equipment and vacuum sweepers. Use of power brooms to sweep road is not allowed if a dust nuisance is created.
22. The Contractor shall be held liable for any damages incurred to the existing utilities as a result of his operations. All damaged portions shall be replaced in accordance with the Standards and Specifications of the affected utility company at the Contractor's expense.
23. The Contractor shall obtain all necessary permits prior to start of work at his own cost.
24. The Contractor shall submit maintenance plans and schedules, including traffic detours, road or lane closures, lane switches, and the placement of temporary traffic control devices, to the Engineer for acceptance prior to construction.
25. The exact location and limits of guardrail improvements shall be determined in the field by the Engineer.
26. All existing usable sand barrels shall be removed and delivered to Oahu District Baseyard. All unusable materials shall be disposed of according to the contract. Payment for removal, delivery, and disposal shall be considered incidental to various Terminal Impact Attenuator pay items.
27. Steel construction plates shall not be used on freeway on- or off-ramps.

PUBLIC HEALTH, SAFETY, AND CONVENIENCE:

1. The Contractor shall observe and comply with all federal, state and local laws required for the protection of public health and safety and environmental quality.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-05M	2006	3R	106

LEGEND

	A.C. Reconstruction Areas		Existing Gas Line
	P.C.C. Reconstruction Areas		Existing Utility Box
	Resurfacing Limits		Existing Fuel Line
	Existing Electrical Line		Existing Sewer Line
	Existing Power Pole		Existing Sewer Manhole
	Existing Electric Manhole		Existing Storm Drain Manhole
	Existing Electric Box		Existing Concrete Drainage Inlet
	Existing Telephone Line		Existing Catch Basin
	Existing Telephone Manhole		Existing Highway Lighting Standard
	Existing Telephone Box		New Highway Lighting Standard
	Existing Water Line		Existing Traffic Signal Pullbox
	Existing Water Manhole		Adjusted Traffic Signal Pullbox
	Adjusted Water MH Frame/Cover		Existing Traffic Signal Pullbox
	Existing Water Valve		Existing Guardrails & Posts
	Adjusted Water Valve Frame/Cover		New Guardrails & Posts


2. The Contractor at his own expense, shall keep the project and its surrounding areas free from dust nuisance. The work shall be in conformance with the Air Pollution Standards and Regulations of the State Department of Health. The City shall require supplementary measures as necessary.
3. Contractor shall provide, install and maintain all necessary signs, lights, flares barricades, markers, cones, and other protective facilities and shall take all necessary precautions for the protection, convenience, and safety of the public.

PAVING AROUND MANHOLES:

1. The Contractor shall first lower manholes more than 2" prior to cold planing. The work shall be considered incidental to the various paving contract items. Upon final paving, the manhole shall be raised and paid under various contract items pertaining to manhole adjustments.
2. The Contractor shall place hot asphalt concrete around manholes and compact properly with a vibrating plate compactor.
3. If a plate compactor is not used, the Contractor shall use a pneumatic roller to roll the area around the manhole which is not rolled by the steel roller.
4. The Contractor shall fog seal or brush emulsion seal on the material placed as backfill on the area around the manhole that was not compacted by the roller. Black sand shall be used to blot out the area if the fog is too heavy.

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ORIGINAL PLAN
NOTE BOOK
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	9/14/05	Revise Note No. 6 Per Addendum No. 1.
DATE	REVISION	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
GENERAL NOTES AND LEGEND
AIEA ACCESS ROAD RESURFACING
MOANALUA ROAD
TO KAMEHAMEHA HIGHWAY
PROJECT NO. HWY-0-01-05M
Date: June, 2005
SHEET No. 1 OF 1 SHEETS

HECO NOTES:

1. **Location of HECO Facilities**
The location of HECO'S overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall verify in the field the locations of the facilities and shall exercise proper care in excavating and working in the area. Wherever connections of new utilities to existing utilities and utility crossings are shown, the Contractor shall expose the existing lines at the proposed connections and crossings to verify the depths prior to excavation for the new lines. The Contractor shall be responsible for any damages to HECO'S facilities whether shown or not shown on the plans.
2. **Compliance with Hawaii Occupational Safety and Health Laws**
The Contractor shall comply with the State of Hawaii's Occupational Safety and Health laws and regulations, including without limitation, those related to working on or near exposed or energized electrical lines and equipment.
3. **Excavation Permit**
The Contractor shall comply with the State of Hwaii's Occupational Safety and Health laws and regulations, including without limitation, those related to working on or near exposed or energized electrcal lines and equipment.
4. **Caution!!! Electrical Hazard!!!**
Existing HECO overhead and underground lines are energized and will remain energized during construction unless prior special arrangements have been made with HECO. Only HECO personnel are to handle these energized lines and erect temporary guards to protect these lines from damage. The Contractor shall work cautiously at all times to avoid accidents and damage to existing HECO facilities, which can result in electrocution.
5. **Overhead Lines**
State law requires that a worker and the longest object he or she may contact cannot come closer than a minimum radial clearance of 10 feet when working close to or under any overhead lines rated 50kV and below. For each additional 1kV above 50kV, an additional 0.4 inch shall be added to the 10-foot clearance requirement. The preceding information on line clearance requirements is provided as a convenience, and it is the Contractor's responsibility to be informed of and comply with any revisions or amendments to the law.
- Should the Contractor anticipate that his work will result in the need to encroach within the minimum required clearance at any time, the Contractor shall notify HECO at least four (4) weeks prior to the planned encroachment so that, if feasible, the necessary protections (e.g. relocate, de-energize, or blanket HECO lines) can be put in place. HECO's cost of safeguarding its lines will be charged to the Contractor.
- Contact HECO's Customer Installations Department at 543-7846 for assistance in identifying and safeguarding overhead power lines.
- Refer to Section X of HECO's Electric Service Installation Manual for additional guidelines when working around HECO's facilities. A copy may be obtained from HECO's Customer Installations Department.
6. **Pole Bracing**
A minimum clearance of 10 feet must be maintained when excavating around utility poles and/or their anchor system to prevent weakening or pole support failure. Should work require excavating within 10 feet of a pole and/or its anchor system, the Contractor shall protect, support, secure, and take all other precautions to prevent damage to or leaning of these poles. The Contractor is responsible for all associated costs to brace, repair, or straighten poles. All means of structural support for the pole proposed by the Contractor shall first be reviewed by HECO before implementation. For pole bracing instructions, the Contractor shall call the HECO Construction and Maintenance Dept., Customer & System Superintendent at 543-4223 a minimum of two (2) weeks in advance.
7. **Underground Lines**
The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines. HECO's existing electrical cables are energized and will remain energized during construction. Only HECO personnel are to break into existing HECO facilities, handle these cables, and

erect temporary guards to protect these cables from damage. The cost of HECO's assistance in providing proper support and protection of its underground lines will be charged to the Contractor. Special precautions are required when excavating near HECO's 138kV underground lines (See HECO Instructions to Consultants/Contractor's on "Excavation near HECO's Underground 138kV Lines" for detailed requirements).

For verification of underground 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 & Maintenance Dept., Customer & System Superintendent, at 543-4223, a minimum of two (2) weeks in advance.

8. **Underground Fuel Pipelines**
The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of HECO's underground fuel oil pipelines. Special precautions are required when excavating near HECO's underground fuel oil pipeline (See HECO instructions to Consultants/Contractors on "Excavation near HECO's Underground Fuel Pipelines" for detailed requirements).
9. **Excavations**
When trench excavation is adjacent to or beneath HECO's existing structures or facilities, the Contractor is responsible for:
- a) Sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure and to prevent possible slides, cave-ins, and settlement.
- b) Properly supporting existing structures or facilities with beams, struts, or under-pinnings to fully protect it from damage.
- c) Backfilling with proper backfill material including special thermal backfill where existing (refer to Engineering Department for thermal backfill specifications).
10. **Relocation of HECO Facilities**
Any work required to relocate or modify HECO facilities shall be done by HECO, or by the Contractor under HECO's supervision. The Contractor shall be responsible for all coordination, and shall provide necessary support for HECO's work, which may include, but not be limited to, excavation and backfill, permits and traffic control, barricading, and restoration of pavement, sidewalks, and other facilities.
- All costs associated with any relocation or modification (either temporary or permanent) for the convenience of the Contractor, or to enable the Contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations shall be borne by the Contractor.
11. **Conflicts**
Any redesign or relocation of HECO's facilities not shown on the plans may be cause for lengthy delays. The Contractor acknowledges that HECO is not responsible for any delay or damage that may arise as a result of any conflicts discovered or identified with respect to the location or construction of HECO's electrical facilities in the field, regardless of whether the Contractor has met the requested minimum advance notices. In order to minimize any delay or impact arising from such conflicts, HECO should be notified immediately upon discovery or identification of such conflict.
12. **Damage to HECO facilities**
The Contractor shall be responsible for the protection of all HECO surface and subsurface utilities and shall be responsible for any damages to HECO's facilities as a result of his operations. The Contractor shall immediately report such damages to HECO's trouble dispatcher at 548-7961. Repair work shall be done by HECO or by the Contractor under HECO's supervision. Costs for damages to HECO's facilities shall be borne by the Contractor.
- In case of damage or suspected damage to HECO's fuel pipeline, the Contractor shall immediately notify HECO's Honolulu Power Plant shift supervisor at 533-2102 (A 24 hour number) so HECO personnel can secure the damaged section and report any oil spills to the proper authorities. All costs associated with the damage, repair, and oil spill cleanup shall be borne by the Contractor.

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13. **HECO Stand-By Personnel**
The Contractor may request HECO to provide an inspector to stand-by during construction near HECO's facilities. The cost of such inspection will be charged to the Contractor.

The Contractor shall call the HECO Construction and Maintenance Dept., Customer & System Superintendent at 543-4223 a minimum of 5 working days in advance to arrange for HECO stand-by personnel.

14. **Clearances**
The following clearances shall be maintained between HECO's ductline and all adjacent structures (charted and uncharted) in the trench:
- | STRUCTURE TYPE | MINIMUM CLEARANCE (INCHES) |
|------------------------------------|----------------------------|
| Water Lines, Parallel | 36 |
| Water Lines, Crossing | 12(A) |
| Sewer Lines, Parallel | 36(B) |
| Sewer Lines, Crossing | 24(C) |
| Drain Lines, Parallel | 12 |
| Drain Lines, Crossing | 6(D) |
| Electrical and Gas Lines, Parallel | 12 |
| Electrical and Gas Lines, Crossing | 12 |
| Telephone Lines, Parallel | 6(D) |
| Telephone Lines, Crossing | 6(D) |
| Chevron Oil Lines, Parallel | 36 |
| Chevron Oil Lines, Crossing | 48 Below Oil Line (E) |
- A. The minimum vertical clearances to water lines crossing electrical ductlines can be reduced to 6 inches if the electrical ductline structure is smaller than 16 inches, is concrete encased, and is below the water line.
- B. A minimum horizontal clearance of 36 inches is required between new handholes and existing sewer laterals.
- C. The minimum vertical clearances to sewer pipes crossing electrical ductlines can be reduced to 12 inches if the sewer pipe is jacketed in concrete.
- D. The minimum clearances shall be increased to 12 inches if the electrical ductline is direct buried.
- E. The minimum vertical clearances to oil lines crossing electrical ductlines can be reduced to 24 inches below oil lines if the crossings are encased in 6 inches of concrete.
- F. The Contractor shall notify the construction manager & HECO of any heat sources (power cable duct bank, steamline, etc.) encountered that are not properly identified on the drawing.
15. **Indemnity**
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 tortuous 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.

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ORIGINAL PLAN	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITY NOTES
AIEA ACCESS ROAD RESURFACING
MOANALUA ROAD
TO KAMEHAMEHA HIGHWAY
PROJECT NO. HWY-0-01-05M
Date: June, 2005
SHEET No. 1 OF 2 SHEETS

BOARD OF WATER SUPPLY NOTES:

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", dated 2002, the "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", Volume 3, dated 1991, and all subsequent amendments and additions.
2. The Contractor shall notify the Board of Water Supply in writing one week prior to commencing work on the water system.
3. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, etc., and drainage and other features of improvements shall not be the responsibility of the Board of Water Supply.
4. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water line tees and bends wherever there is a possibility of water line movement due to 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 their construction methods.
5. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles and shall pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
6. Reapproval shall be required if this project is not under construction within a period of two years.
7. The Contractor shall verify al existing service lateral locations, whether or not shown on the plans, prior to commencing with any of the work and shall not assume that, where no services are shown, none exists.
8. Prior to any excavation, the Contractor shall verify in the field the location of existing water mains and appurtenances. The Contractor shall have existing mains toned before construction of work in the vicinity of water mains, call the Investigation Section at 527-5296 for toning services. The Contractor shall pay for all toning services.
9. Maintain 3'-0" minimum cover for all existing waterlines (18" minimum for service laterals) from new finish grade. The Contractor shall probe the waterline and service laterals and submit the probing data to BWS Construction Section. Any adjustments to the existing water system to meet the minimum cover and the requirements of the BWS standards, whether shown on plans or not, shall be done by the Contractor at no cost to BWS and the State.
10. The Contractor shall adjust all manhole frames/valve boxes within the resurfaced area prior to resurfacing. The Contractor shall be responsible for "referencing" these manholes/valve boxes to facilitate the adjustments.
11. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. Meter and valve boxes to be or already abandoned shall be demolished or removed and properly disposed of. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor and at no cost to BWS and the State.
12. Board of Water Supply approval of these plans does not constitute a water commitment. Availability of water will be determined when building permit is presented to the Department. Water commitment will depend upon the status of the water system at that time. Should water service be made available, the water commitment will be effective when the project receives an approved building permit from the building department. All water commitments will be canceled in the event the building permit is canceled.

THE GAS COMPANY NOTES:

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

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HAWAII	HAW.	HWY-0-01-05M	2006	5	106

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
UTILITY NOTES
AIEA ACCESS ROAD RESURFACING
MOANALUA ROAD
TO KAMEHAMEHA HIGHWAY
PROJECT NO. HWY-0-01-05M
Date: June, 2005
SHEET No. 2 OF 2 SHEETS