GENERAL NOTES

1. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but are not guaranteed as to accuracy, or that other obstacles may not be encountered during the course of the work. The Contractor shall exercise extreme caution when the construction is in close proximity of underground utility facilities. The Contractor shall be responsible and shall pay for all damages to the existing utilities as well as adjust electrical work to account for any encountered conflict with existing utilities at no additional cost to the State.

Telephone/CATV Lines:

Contractor to obtain excavation clearance 3 working days prior to any excavation work. Use extreme caution during excavation.

Water Lines:

Contractor to call Board of Water Supply, City and County of Honolulu for field locations of water mains and appurtenances a minimum of 48 hours before starting project excavation.

Sewer Lines:

Contractor to call Dept. of Environmental Services, City and County of Honolulu for field locations of sewer lines and laterals a minimum of 48 hours before starting project excavation.

- 2. The minimum clearance between fire hydrants and utility poles or light standards shall be 3'-0".
- 3. The Contractor shall trim or remove all trees, shrubs, bushes, etc. encroaching upon the newly installed highway lighting standards. Foliage shall be trimmed so as not to interfere with the luminaire's light distribution pattern.
- 4. Design Illumination Level = 1.0 Footcandle average maintained Design Uniformity Ratio (Ave.) = 3:1 max Design maintenance factor = 0.75.

CABLE TELEVISION NOTES

- 1. The Location Of Oceanic's Underground And Aerial Facilities Shown On The Plans Are From Existing Records With Varying Degrees Of Accuracy And Are Not Guaranteed As Shown. The Contractor Shall Exercise Extreme Caution Whenever Construction Crosses Or Is In Close Proximity Of Underground Facilities And Shall Maintain Adequate Clearance When Operating Equipment Close To And/or Under Any Overhead Lines. The Contractor Shall Be Liable For All Damages To Existing Oceanic Underground And Aerial Facilities.
- 2. Any Work Required To Relocate Oceanic's Facilities Shall Be Done By Oceanic And The Contractor Shall Be Responsible For All Coordination And Costs Applicable. The Contractor Shall Obtain An Excavation Permit From Oceanic's Engineering Department Located At 200 Akamainui Street A Minimum Of Three (3) Working Days Prior To Start Of Excavation.
- 3. Any Damage To Oceanic's Facilities Will Be Reported Immediately To Oceanic's Repair Dispatch Department At 625–8200.

VERIZON HAWAII (GTE-HTCO) AND SIGNAL CORPS NOTES

- 1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.
- 2. The Contractor shall obtain an excavation permit and toning request from Verizon Hawaii's Excavation Permit Section, located at 3239 Ualena Street, Third Floor, two (2) weeks prior to the start of construction. Hours of business are 8:00 a.m. to 11:00 a.m. and 12:00 a.m. to 3:30 p.m. Monday through Friday, except holidays.
- 3. Prior to the excavation of the ductline, the Contractor shall request Verizon Hawaii to locate existing ductline wherever required. For underground cable locating and marking, five (5) working days advance notice is required. Three (3) working days advance notice is required for any inspection by a designated representative.

- 4. The locations of existing utilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity of Verizon Hawaii facilities. The Contractor shall verify their locations and shall be liable for any damages to Verizon Hawaii facilities. any damages shall be reported immediately to Verizon Hawaii's Repair Section at #611 (24 hours) or to the Excavation Permit Section at 840–1444 (normal working hours, Monday through Friday, except holidays). as a result of his operations, adjustment to the new ductline alignment, if required, shall be made to provide the required clearances.
- The Contractor shall take necessary precaution not to damage existing cables or ducts. A Verizon Hawaii inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contains Verizon Hawaii facilities. Temporary cable and duct supports shall be provided wherever necessary.
- 6. The Contractor shall notify Verizon Hawaii's inspector or designated representative a minimum of 72 hours prior to excavation, bracing, or backfilling of Verizon Hawaii's structures or facilities. Verizon Hawaii's Inspectors as follows:

 Moanalua to Koko Head to Laie: Larry Caetano, 840–2979
- 7. All applicable construction work shall be done in accordance with the "Verizon Hawaii Standard Specifications for Placing Underground Telephone Systems" dated March 1999. All subsequent amendments and additions, and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.
- 8. When excavation is adjacent to or beneath Verizon Hawaii's existing structures or facilities, the Contractor shall:
 - (a) Sheet and/or brace the excavation to prevent slides, cave—ins, or settlements to ensure no movement to Verizon Hawaii's structures or facilities.

 (b) Protect existing structures and/or facilities with beams, struts, or underpinning while excavating beneath them to ensure no movement to Verizon Hawaii's structures or facilities.
- 9. The Contractor shall brace all poles or light standards near the new ductline, manhole, or handhole during his operations.
- 10. The Contractor shall saw—cut A.C. pavement and concrete gutter wherever new manholes, handholes, or ductlines are to be placed and shall restore to existing condition or better.
- 11. The Contractor shall comply with the policy adopted by the Department of Transportation, State of Hawaii concerning the replacement of concrete sidewalks after excavation work.
- 12. The underground pipes, cables, or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
- 13. Wherever connections to existing utilities are shown on the plans, the Contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths.
- 14. The Contractor, at his own expense, shall keep the project and surrounding area free from dust nuisance. The cost for supplementary measures, which will be required by the City and County, shall be borne by the Contractor.
- 15. The Contractor shall pump all manholes dry during final inspection.
- 16. The Contractor shall notify the Verizon Hawaii inspector 24 hours prior to the pouring of concrete or backfilling.
- 17. When connecting to manhole walls, all existing reinforcing bars shall be left intact. Ducts shall be adjusted in the field in order to clear reinforcing. The Contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points necessary to lay out the work correctly. The new ductline shall be adjusted by the Contractor to suit the existing conditions and the details as described in the plans.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	1	TOTAL SHEETS
HAWAII	HAW.	CM-STP-063-1(21)	2001	154	187

19. Minimum Concrete Strength shall be: For Ductline: 2500 psi at 28 days

For Manhole: 3000 psi at 28 days or as specified in design notes

- 20. Bends in the duct alignment, due to changes in grade shall have minimum radius of 25 feet. All 90 degree C-bends at a pole or at the building floor slab penetration, shall have a bend radius of ten times the diameter of the duct or greater.
- 21. After ductline has been completed, a mandrel with a square front not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.
- 22. All ducts and conduits shall have an 1800# polyester mule—tape (NEPTCO, WP1800P, Verizon Hawaii Material Code No. 571154) installed throughout its entire length. All ducts shall be capped to prevent entry of foreign material during construction and at the completion of installation. The Contractor shall pump all manholes dry during final inspection. The Contractor shall notify the Verizon Hawaii inspector 24 hours prior to the pouring of concrete or backfilling.
- 23. Compliance With DOSH:

 The Contractor shall comply with the State of Hawaii's Occupational Safety and Health Law (DOSH)
- 24. Relocation and Adjustment of Verizon Hawaii Facilities:

 Any work required to relocate and adjust Verizon Hawaii facilities shall be done by the Contractor unless otherwise specified on the drawings. The contractor shall be responsible for all coordination, and for possible costs if applicable.
- 25. Existing Direct Buried Communications Cable (Army Signal Corps JTS Cable And Verizon Hawaii, Inc. [GTE-HTCO] Cable) To Remain. Arrange With Verizon Hawaii (GTE-HTCO) To Tone GTE-HTCO Cables a minimum of 8 weeks Before Scheduled Initiation Of Work. Where Roadway Excavation Is Greater Than 12—Inches Notify Verizon Hawaii (GTE-HTCO) A Minimum Of Four (4) Weeks Before Initiating Work. Protect Existing Cables From Physical Damage During Roadway Work. Notify Verizon Hawaii (GTE-HTCO) Immediately Upon Discovery Of Damage To Communication Cables. Caution Shall Be Taken At All Intersections.
- 26. For JTS Cables, Coordinate With Army Corps Of Engineers And Tone The Cable Before Initiation Of Road Work. Toning Work Shall be Done By Contractor.
- 27. AT&T Is Available To Provide This Work At The Contractor's Expense.

 Adjust All Signal Corps JTS Cable Markers And Move Off From The Shoulders Into A Protected Area. Provide Permanent Marker Showing The Off—set Distance Between The Centerline of Cable And The Markers.

APPROVED:

Verizon Hawaii, Inc. (GTE-HTCO)

Date

12/12/01

Oceanic Cablevision Co.

Date



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

C. Alus

DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CENERAL ELECTRICAL AND

UTILITY NOTES

LIKELIKE HIGHWAY RESURFACING

Emmeline Place to the Wilson Tunnel

F. A. Project No. CM-STP-063-1(21)

Scale: None

Date: December, 2001

SHEET No. 1 OF 1



