OCEANIC TIME WARNER CABLE NOTES

- 1. The locations of existing utilities are approximate only. The Contractor shall verify their locations and shall be responsible for any damages to these utilities as a result of his operations. Adjustments to the new ductline alignment, if required, shall be made to provide the required clearances.
- 2. 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 areas. 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.
- 3. Prior to the excavation of the ductline, the Contractor shall request that Oceanic Cable Company locate the existing ductline wherever required.
- 4. The Contractor shall take necessary precaution not to damage existing cables or ducts. Any work involving existing cables or ducts shall be done in the presence of the Oceanic Cable Company Inspector or his representative.
- 5. The Contractor shall notify the Oceanic Cable Company Inspector 48 hours prior to the pouring of concrete or backfilling.
- 6. 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.
- 7. The locations of CATV facilities shown on plans are from existing records with varying degrees of accuracy as to its actual fixed location. The Contractor shall use extreme caution when working in close proximity of CATV facilities.
- 8. The Contractor shall obtain excavation permit clearance from Oceanic's Engineering section located at 200 Akamainui St., Mililani Tech Park.
- 9. For any field assistance or verification of CATV facilities, the contractor shall call the technical operations center at 625–8378.
- 10. Any work required to relocate CATV facilities shall be done by Oceanic Cable and the Contractor shall be responsible for all coordination requirements and associated costs.
- 11. Any damage to Oceanic's facilities shall be reported to ACI's repair dispatch department at 625–8437.

- 12. For 3" conduits or larger, the Contractor shall install NEPTCO WP1800 muletape or approved equal in all ductlines, leave muletape in place for future use as a pull or fish line, unless otherwise noted. Reference GTE material code no. 571154. All ducts shall be capped to prevent entry of foreign material during constriction and at completion of installation. Endbells are required for conduits 2" and larger.
- 13. Penetration into pullboxes if necessary to be from factory installed opening or from bricks position. Penetration from pullbox walls is not acceptable.
- 14. A minimum of (2) precast sections must be used on all 2x4 or 2x6 pullboxes.
- 15. Two minimum layers or bricks to be used shall always be at least one layer lower than the lowest duct entering the pullbox. At no time however, shall there be less than two layers of bricks on each installation.
- 16. At no time shall cement mortar, wood, or any other material be used between precast sections. Leveling or raising of boxes to grade must be done at brickwork section using cement mortar. The permanent installation of wooden wedges to accomplish this purpose will not be accepted.
- 17. Concrete precast base may be used as an alternative to bricks.
- 18. Trenching to be by hand digging near and across existing utility lines.
- 19. Underground utilities shown hereon is for information only. No guarantee is made on the accuracy or completeness of said installation.
- 20. For underground cable locating and marking, five working days advance notice is required. Three working days advance notice is required for any inspection by a designated representative. Contractor shall take necessary precaution not to damage any existing cables or ducts. Oceanic's 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 Oceanic's facilities.
- 21. Concrete strength shall be 3000 psi in 28 days.
- 22. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 20—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.

FED. ROAD
DIST. NO.STATEFED. AID
PROJ. NO.FISCAL
YEARSHEET
NO.TOTAL
SHEETSHAWAIIHAW.NH-072-1(52)2008964

- 23. After ductline has been completed, a mandrel with a square front not less than 12—inch long and having a diameter of 1/4—inch less than the inside diameter of 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.
- 24. Metallic entrance conduits shall be grounded.
- 25. All construction must be inspected and approved by Oceanic prior to the installation of any of its facilities and the energizing of its system.
- 26. Install 4-mil. thick orange color warning take 3-inch wide, entire length of trench when placing CATV conduits. Tape should read "Caution Buried Cable Line Below".

 Manufactured by Harris Industries, Inc., catalog number UT-43 or equivalent tape. Tape to be installed 12-inches below grade.

LICENSED
PROFESSIONAL
ENGINEER
No. 9023-E
MANAN. U.S.
2/17/09

APRIL 30, 2010

EXPIRATION DATE OF LICENSE

THIS WORK WAS PREPARED BY ME OR LINDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

OCEANIC NOTES

KALANIANAOLE HIGHWAY IMPROVEMENTS

VICINITY OF HAWAII KAI DRIVE

TO KEAHOLE STREET

FEDERAL—AID PROJECT NO. NH—072—1(52)

SHEET No. UE-3 OF 3 SHEETS

APPROVED BY:

Solve Makey on 02-18-09

OCEANIC TIME WARNER CABLE

DATE

DATE: January 2009