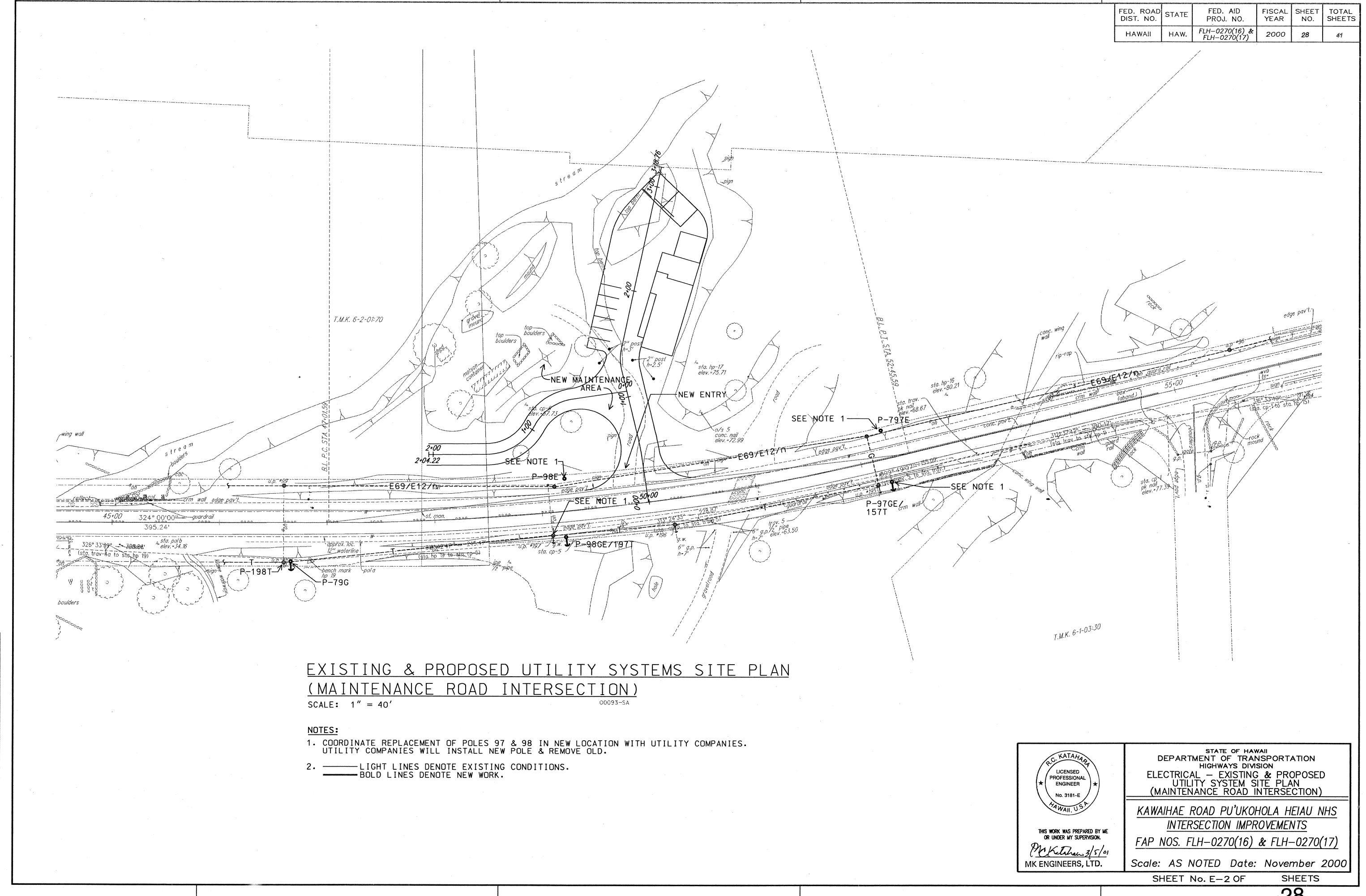


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## VERIZON GENERAL NOTES:

- 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'S EXCAVATION PERMIT SECTION, LOCATED AT 3239 UALENA STREET, THIRD FLOOR, TWO WEEKS PRIOR TO THE START OF CONSTRUCTION. HOURS OF BUSINESS ARE 7:00 a.m. TO 10:45 a.m. AND 11:30 a.m. TO 2:45 p.m. MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS.
- 3. PRIOR TO THE EXCAVATION OF THE DUCTLINE, THE CONTRACTOR SHALL REQUEST THE VERIZON 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.
- 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 FACILITIES. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND SHALL BE LIABLE FOR ANY DAMAGES TO VERIZON FACILITIES. ANY DAMAGES SHALL BE REPORTED IMMEDIATELY TO VERIZON'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, ADJUSTMENTS 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 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 CONTAIN VERIZON FACILITIES. TEMPORARY CABLE AND DUCT SUPPORTS SHALL BE PROVIDED WHENEVER NECESSARY.
- 6. THE CONTRACTOR SHALL NOTIFY VERIZON'S INSPECTOR OR DESIGNATED REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION, BRACING, OR BACKFILLING OF VERIZON'S STRUCTURES OR FACILITIES.
- 7. ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "GTE HAWAIIAN TELEPHONE COMPANY STANDARD SPECIFICATIONS FRO 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'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'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'S STRUCTURES OR FACILITIES.
- 9. THE CONTRACTOR SHALL BRACE ALL POLES OR LIGHT STANDARDS NEAR THE NEW DUCTLINE, MANHOLE OR HANDHOLE DURING HIS OPERATION.
- 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 PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, 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 NUISANCES. 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 INSPECTOR 72 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.
- 18. 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.
- 19. MINIMUM CONCRETE STRENGTH SHALL BE:

2500 PSI AT 28 DAYS FOR DUCTLINE

3000 PSI AT 28 DAYS OR AS SPECIFIED IN DESIGN NOTES FOR MANHOLE

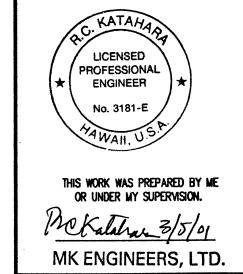
- 20. BENDS IN THE DUCT ALIGNMENT, DUE TO CHANGES IN GRADE SHALL HAVE A MINIMUM RADIUS OF 25 FEET, ALL 90 DEGREE C-BENDS AT A POLE OR AT THE BUILDING FLOOR SLAB PENETRATION, SHALL HAVE A BEND RADIUS OF TEN TIMES THE DIAMETER OF THE DUCT OR GREATER.
- 21. AFTER DUCTLINE HAS BEEN COMPLETED, A MANDREL WITH 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, WP 1800P, VERIZON 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.

ED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO.	SHEETS
HAWAII	HAW.	FLH-0270(16) & FLH-0270(17)	2000	29	41

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	SPENCER ROAD INT			MAINTENANCE	ROAD AREA
POLE ADDRESS	DESCRIPTION OF WORK BY	DESCRIPTION OF WORK BY UTILITY COMPANIES	POLE ADDRESS	DESCRIPTION OF WORK BY CONTRACTOR	DESCRIPTION OF WORK BY UTILITY COMPANIES
92E	1. INSTALL NEW STREET LIGHT FIXTURE.	1. EXTEND SECONDARY TO STREET LIGHT FIXTURE.	97E	1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE. SEE TYPICAL POLE LOCATION DETAIL. POLE
92 <b>X</b> E	1. INSTALL NEW STREET LIGHT FIXTURE.	1. EXTEND SECONDARY TO STREET LIGHT FIXTURE.		NEW POLE WITH UTILITY COMPANIES.	SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE
93E	1. INSTALL NEW STREET LIGHT FIXTURE.	1. EXTEND SECONDARY TO STREET LIGHT FIXTURE.			FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW DOLL OF AND DEMONS OF DOLL OF THE PROPERTY OF T
93X	1. SET NEW POLE AND ANCHOR FOR STREET LIGHT. 2. INSTALL NEW STREET LIGHT FIXTURE.	1. EXTEND SECONDARY TO STREET LIGHT FIXTURE.	97GE/175T	1. GRADE AREA WHERE NEW POLE IS TO BE SET.	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE.
2E/186T	1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES.	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE. SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE, AND REMOVE OLD POLE.	98E	2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES.  1. GRADE AREA WHERE NEW	SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE. AND REMOVE OLD POLE.  1. SET POLE IN NEW LOCATION AS CLOSE TO THE
	FOR STREET LIGHT.  2. INSTALL NEW STREET LIGHT FIXTURE.	1. EXTEND SECONDARY TO STREET LIGHT FIXTURE.		POLE IS TO BE SET.  2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES.	EDGE OF THE RIGHT OF WAY AS POSSIBLE.  SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.
3E/187T	1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES. 3. INSTALL NEW STREET LIGHT FIXTURE.	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE. SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS. SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE, AND REMOVE OLD POLE.  3. EXTEND SECONDARY FOR STREET LIGHT CONNECTION.	98GE/197T	1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES.	2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE, AND REMOVE OLD POLE.  1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE.* SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW
187X	1. SET NEW POLE. 2. INSTALL NEW STREET LIGHT FIXTURE.	1. EXTEND SECONDARY TO STREET LIGHT FIXTURE.	99G	1. GRADE AREA WHERE NEW	POLE, AND REMOVE OLD POLE.  1. SET POLE IN NEW LOCATION AS CLOSE TO THE
4E/188T	1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES. 3. INSTALL NEW STREET LIGHT FIXTURE.	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE. SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE. AND REMOVE OLD POLE.  3. EXTEND SECONDARY FOR STREET LIGHT CONNECTION.	J 300	POLE IS TO BE SET.  2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES.	EDGE OF THE RIGHT OF WAY AS POSSIBLE.  SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT.  NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE, AND REMOVE OLD POLE.
5E/189T	1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES. 3. INSTALL 4 EACH 4" CONDUIT RISERS AT NEW POLE.(SEE NOTE 5, SHEET E-1) 4. SALVAGE LIGHT FIXTURE & BRACKET ARM FROM OLD POLE. 5. INSTALL NEW STREET LIGHT FIXTURE.	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE. SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE. AND REMOVE OLD POLE.  3. EXTEND SECONDARY FOR STREET LIGHT CONNECTION.			
6E/189XT	T 1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES. 3. INSTALL 2 EACH 5" CONDUIT RISERS AT NEW POLE. 4. INSTALL NEW STREET LIGHT FIXTURE.	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE. SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE, AND REMOVE OLD POLE.  3. EXTEND SECONDARY FOR STREET LIGHT CONNECTION.		Q.C. KATAHAAA LICENSED	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
7E/1907	7 1. GRADE AREA WHERE NEW POLE IS TO BE SET. 2. COORDINATE SETTING OF NEW POLE WITH UTILITY COMPANIES. 3. INSTALL NEW STREET LIGHT FIXTURE.	1. SET POLE IN NEW LOCATION AS CLOSE TO THE EDGE OF THE RIGHT OF WAY AS POSSIBLE. SEE TYPICAL POLE LOCATION DETAIL. POLE SETTING DEPTH MUST BE ADJUSTED TO SUIT NEW ELEVATION IF POLE IS SET BEFORE FINISH GRADING IS COMPLETED. NEW ELEVATION WILL BE BELOW EXISTING.  2. TRANSFER CONDUCTORS AND CABLES TO NEW POLE, AND REMOVE OLD POLE.		PROFESSIONAL ENGINEER  No. 3181-E  YAWAH, U.S.P.  THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  DOKalabase 3/5/01	ELECTRICAL — NOTES & POLE SCHEDULE  KAWAIHAE ROAD PU'UKOHOLA HEIAU NHS  INTERSECTION IMPROVEMENTS  FAP NOS. FLH—0270(16) & FLH—0270(17)

CONNECTION.

EXTEND SECONDARY FOR STREET LIGHT



Scale: AS NOTED Date: November 2000

SHEET No. E-3 OF

SHEETS

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