

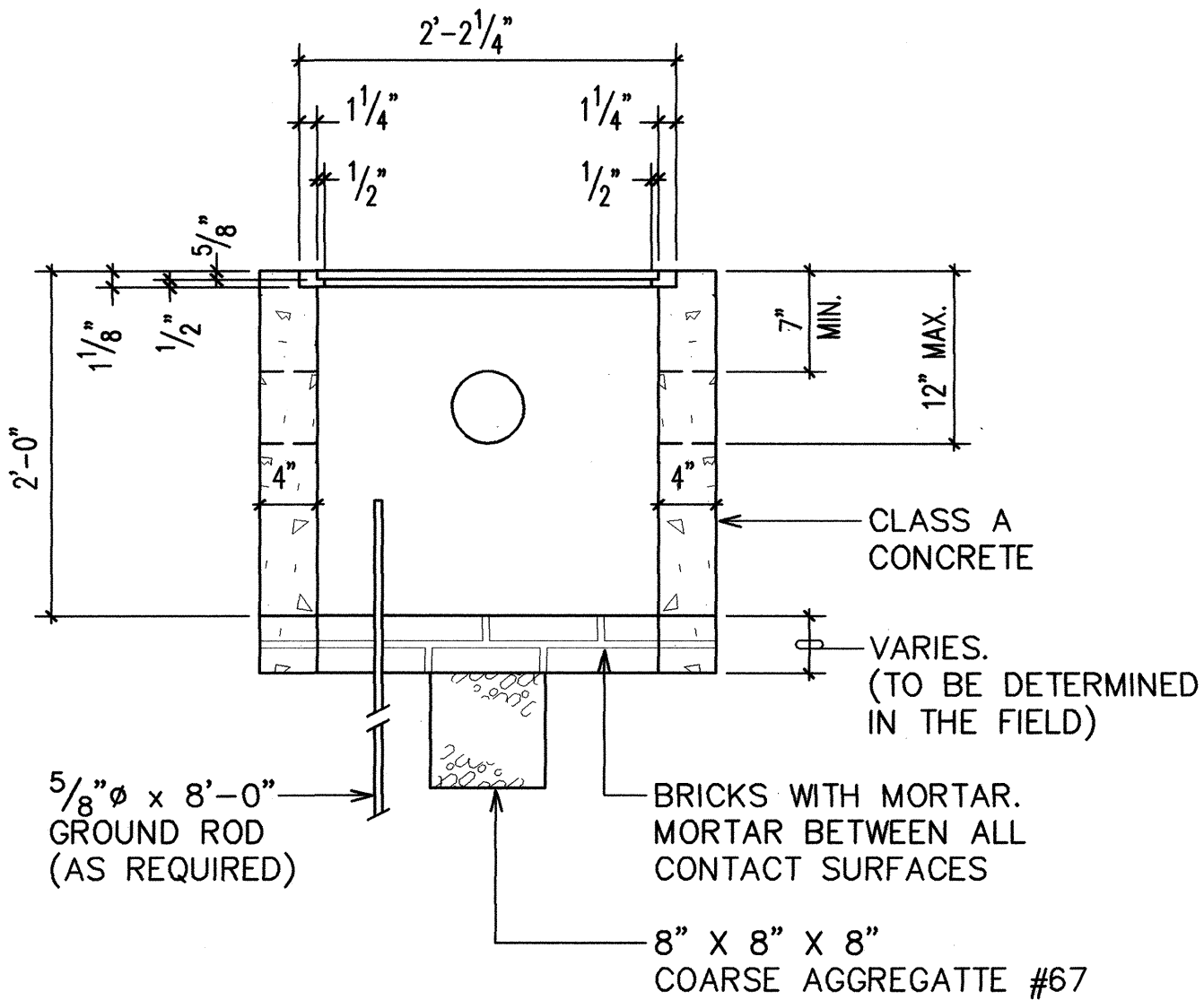
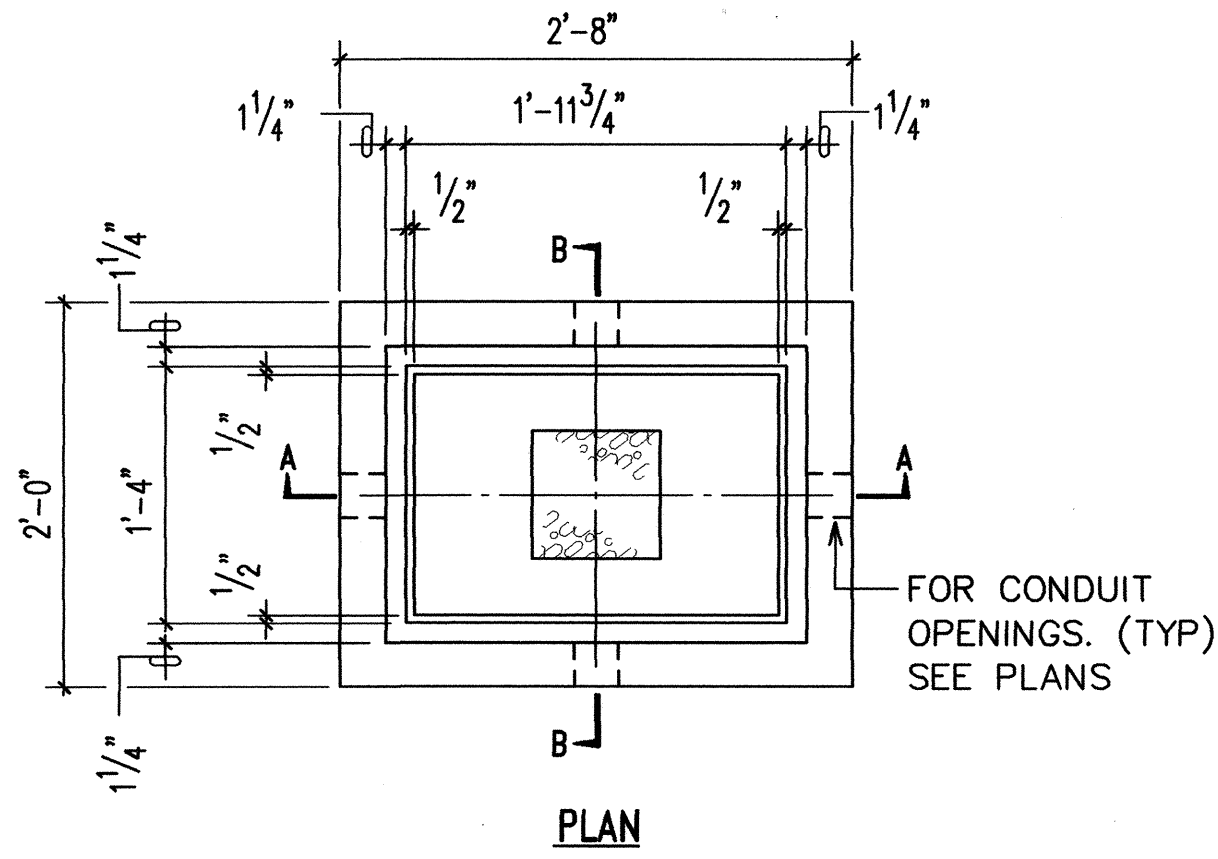
NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

(FOR QUEEN KAAHUMANU HWY-PALANI RD TO KAINI ST.; FOR QUEEN KAAHUMANU HWY - KAINI ST TO PROJECT LIMIT, SEE NOTES ON CIVIL SHEETS C-4 & C-5)

- CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM STATE'S HIGHWAY DISTRICT ENGINEER PRIOR TO COMMENCEMENT OF WORK WITHIN THE STATE RIGHT-OF-WAY.
- CONSTRUCTION & RESTORATION OF ALL EXISTING HIGHWAY FACILITIES WITHIN STATE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE CURRENT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", & THE "SPECIFICATION FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS", OF THE STATE HIGHWAYS DIVISION.
- ALL LANES SHALL BE OPEN TO TRAFFIC DURING MORNING PEAK HOURS FROM 6:00 AM TO 8:00 AM & DURING AFTERNOON PEAK HOURS FROM 3:00 PM TO 6:00 PM, & DURING OFF-WORK HOURS. ONLY ONE LANE OF QUEEN KAAHUMANU HIGHWAY SHALL BE CLOSED AT ANY OTHER TIME.
- CONTRACTOR SHALL PROVIDE, INSTALL & MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, & OTHER PROTECTIVE FACILITIES & SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION & FOR THE CONVENIENCE & SAFETY OF PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES & PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH THE "ADMINISTRATIVE RULES OF HAWAII GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS & HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION, & THE CURRENT U.S. FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS, PART VI - TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION & MAINTENANCE OPERATIONS", DATED 1985. IF LANE CLOSURES ARE REQUIRED DURING CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE INCORPORATED INTO THE CONSTRUCTION PLANS AND MUST BE APPROVED BY THE DIVISION PRIOR TO THE ISSUANCE OF THE PERMIT.
- THE MINIMUM PAVEMENT STRUCTURE SHALL CONSIST OF:  
4" ASPHALT CONCRETE, 6" AGGREGATE BASE COURSE
- NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN HIGHWAY RIGHT-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING & APPROVED BY THE DISTRICT ENGINEER.
- CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADEQUATE, SAFE, NON-SKID BRIDGING MATERIAL OVER TRENCHES, INCLUDING SHORING, WHEN TRENCHING IN PAVEMENT AREAS TO HANDLE ALL TYPES OF VEHICULAR TRAFFIC.
- LONGITUDINAL DRAINAGE ALONG THE HIGHWAY SHALL BE MAINTAINED.
- APPROVAL OF PERMIT CONSTRUCTION PLANS SHALL BE VALID FOR A PERIOD OF ONE YEAR THEREOF FROM THE DATE OF NOTIFICATION OF APPROVAL TO THE APPLICANT. IN THE EVENT CONSTRUCTION DOES NOT COMMENCE WITHIN THIS ONE-YEAR PERIOD, THE APPLICANT WILL BE REQUIRED TO RESUBMIT THIS CONSTRUCTION PLANS FOR DIVISION'S REVIEW AND APPROVAL.
- ALL REGULATORY, GUIDE AND CONSTRUCTION SIGNS AND BARRICADES SHALL BE OF HIGH INTENSITY REFLECTIVE SHEETING.
- COMPACTION TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE SPECIFICATIONS FOR INSTALLATIONS OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS AS FOLLOWS:  
A. SUBBASE: ONE COMPACTION TEST  
B. BASE COURSE: ONE COMPACTION TEST  
C. ONE COMPACTION TEST FOR 300 LINEAL FEET OF TRENCH
- NO TRENCH SHALL BE OPENED MORE THAN 100 FEET IN ADVANCE OF THE INSTALLED AND TESTED PIPE AND/OR DUCTLINE.
- PAVEMENT STRIPING SHALL BE DONE BY CONTRACTOR.
- THE CONTRACTOR SHALL EXERCISE CARE WHEN EXCAVATING IN THE AREA. DAMAGE TO THE EXISTING UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE RESPECTIVE UTILITY COMPANIES, COUNTY OR STATE AGENCY. THE REPAIR WORK SHALL BE DONE AT THE CONTRACTORS EXPENSE.

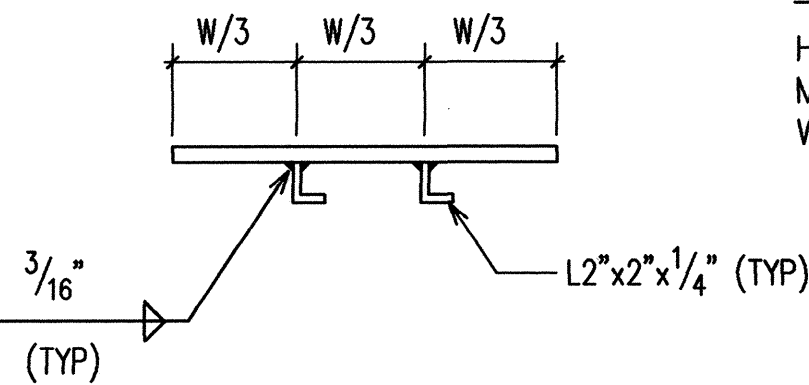
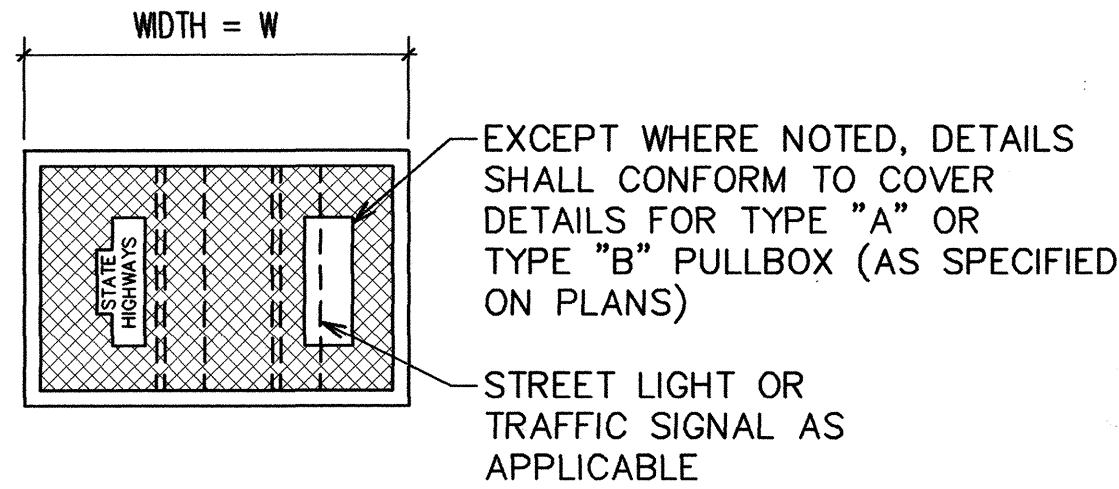
GENERAL NOTES

- THE LOCATION OF 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 EXERCISE EXTREME CAUTION WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF UNDERGROUND LINES AND SHALL MAINTAIN ADEQUATE CLEARANCE WHEN OPERATING EQUIPMENT WITHIN OR UNDER ANY OVERHEAD LINES.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS FROM APPROPRIATE AGENCIES OR UTILITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGES TO HELCO FACILITIES AND SHALL IMMEDIATELY REPORT SUCH DAMAGES TO HELCO'S TROUBLE DISPATCHER.
- THE CONTRACTOR IS TO COMPLY WITH THE DIRECTIONS OF THE STATE OF HAWAII OCCUPATIONAL SAFETY AND HEALTH LAW (DOSH).
- FOR VERIFYING THE LOCATION OF UNDERGROUND DUCT LINES AND FOR ASSISTANCE IN PROVIDING PROPER SUPPORT AND PROTECTION OF THE UNDERGROUND DUCT LINES, THE CONTRACTOR IS TO CONTACT HELCO. A MINIMUM OF 72 HOURS IN ADVANCE.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN THE EXCAVATION AND CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF UNDERGROUND TELEPHONE AND SIGNAL CABLE FACILITIES AND SHALL MAINTAIN ADEQUATE CLEARANCE FOR HIS EQUIPMENT WHILE WORKING CLOSE TO AND/OR UNDER OVERHEAD FACILITIES. ANY DAMAGES TO THE EXISTING UNDERGROUND FACILITIES SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
- FOR FIELD LOCATION OF HTCO FACILITIES, CONTACT HTCO OUTSIDE PLANT ENGINEERING SECTION, A MINIMUM OF 72 HOURS IN ADVANCE PRIOR TO START OF EXCAVATION.
- SHOULD FIELD CONDITIONS AND CONSTRUCTION PROCEDURES REQUIRE THAT UTILITY POLES BE BRACED, THE CONTRACTOR SHALL CONTACT THE FOLLOWING PERSON FOR POLE BRACING INSTRUCTIONS A MINIMUM OF 72 HOURS IN ADVANCE OF ACTUAL REQUIRED BRACING.  
HELCO: CLYDE WILLIAMS PHONE: 326-1657
- WHEN TRENCH EXCAVATION IS ADJACENT TO EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS, AND SETTLEMENT, AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS, OR UNDERPINNING TO FULLY PROTECT IT FROM DAMAGE.
- A 4" WIDE WARNING TAPE, ORANGE IN COLOR WITH A BLACK IMPRINTED MESSAGE "WARNING-STOP DIGGING-CALL GTE COMMUNICATIONS CABLE BURIED BELOW, FAILURE TO COMPLY COULD RESULT IN LEGAL ACTION" SHALL BE PLACED 12" BELOW THE SURFACE, OVER THE DUCT OR CONCRETE JACKET FOR THE ENTIRE LENGTH OF DUCT INSTALLATIONS. SEE HTCO. STD. DWG. NO. 34028. RECOMMENDED TAPE IS MANUFACTURED BY THOR ENTERPRISES, DTGTE-41 OR DTGTE-46, EQUIVALENT TAPES ARE ACCEPTABLE.
- PROVIDE NEPTCO MULETAPE (WP1800) IN ALL NEW DUCTS AND CAP ALL DUCTS AFTER TESTING. NEPTCO MULETAPE IS AVAILABLE FROM WESTINGHOUSE SUPPLY CO. (WESCO). THE NEPTCO MULETAPE IS PRELUBRICATED AND PRINTED WITH SEQUENTIAL FOOTAGE MARKINGS.
- USING THE NEPTCO MULETAPE, THE CONTRACTOR SHALL MEASURE AT LEAST ONE DUCT OF A COMMON DUCT RUN. THE DISTANCE SHALL BE MARKED ON THE RECORD PRINTS AND SUBMITTED TO THE HTCO INSPECTOR FOR RECORD KEEPING.
- ALL ELEC./COMM. CONDUITS SHALL CROSS BELOW ALL WATERLINES. MINIMUM VERTICAL CLEARANCE BETWEEN WATER LINE AND ELEC./COMM. CONCRETE ENCASED DUCTLINE CROSSINGS SHALL BE 1'-0". SEE DETAIL A/E-12.



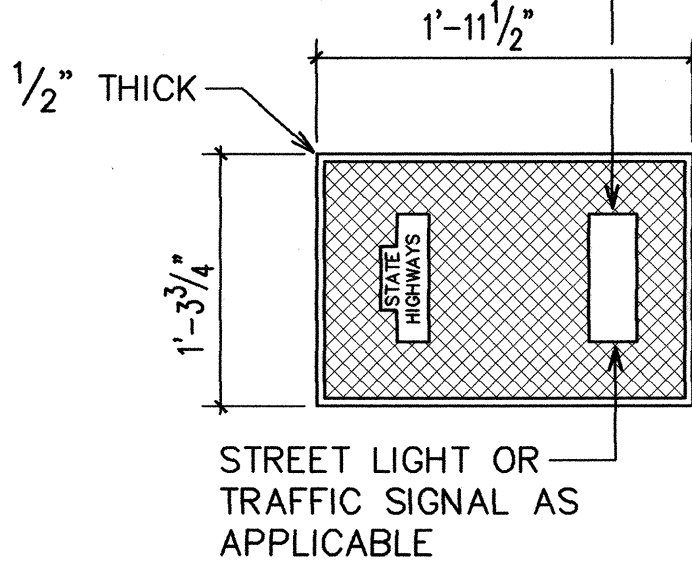
TYPE "A" PULLBOX

A PULLBOX DETAILS  
E-2 NOT TO SCALE

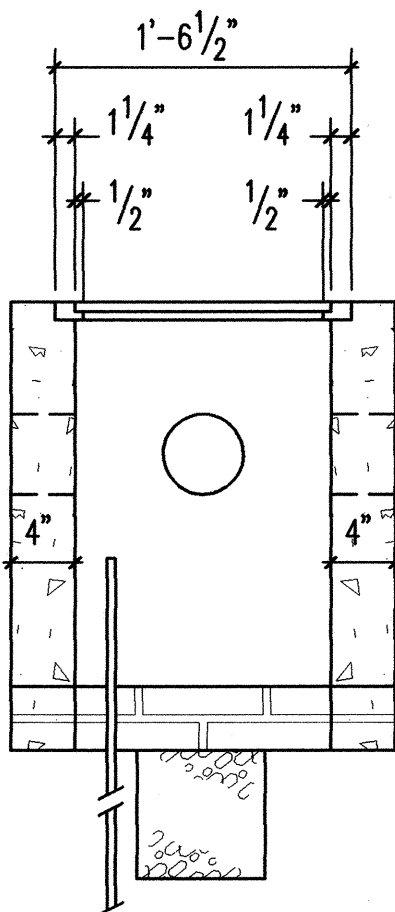


B MODIFIED COVER DETAIL  
E-2 NOT TO SCALE

CAST IRON OR 3/8" ROLLED STEEL PLATE WITH NON-SLIP ABRASIVE SURFACING



PLAN OF COVER



SECTION B-B

Rev	Date	Description	Eng	App

Professional Engineer Seal for Ronald N.S. Ho, Registered Professional Engineer, No. 3787-E, State of Hawaii, U.S.A., dated 11/8/93. The seal includes the text: "This work was prepared by me or under my supervision."

BELT COLLINS ENGINEERING PLANNING LANDSCAPE ARCHITECTURE ENVIRONMENTAL CONSULTING. 680 Ala Moana Blvd. First Floor Honolulu, Hawaii 96813. Phone: (808)521-5361 Fax: (808)538-7819. Consultant: RONALD N. S. HO & ASSOCIATES, INC. Electrical Engineers 2138 Algoroba Street, Suite A Honolulu, Hawaii 96826. Phone: (808)941-0577 Fax: (808)945-2646. Client: KM KONA PARTNERS PAUHI TOWER, SUITE 1410 1001 BISHOP STREET HONOLULU, HAWAII 96813. PHONE: 545-7722 FAX: 545-7725.

MAKALAPUA QUEEN KAAHUMANU HIGHWAY AND MAKALAPUA BLVD. INTERSECTION. NOTES. Designed By: SI Project No. 333.5000 Drawn By: GN Date: OCTOBER 1993. Approved By: [Signature] Date: 5/20/94. HAWAIIAN ELECTRIC LIGHT COMPANY. HAWAIIAN TELEPHONE COMPANY. Date: 3-10-94.

FILE	POCKET	FOLDER	NO.