

GENERAL NOTES

1. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
2. UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH ORDINANCE NOS. 2875 AND 3375 (UNDERGROUND UTILITIES).
3. NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION ACTIVITY SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE SITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ANY REMEDIAL ACTIONS NECESSARY.
4. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
5. 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.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS", AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.
7. ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE PROTECTED AT ALL TIMES UNLESS OTHERWISE NOTED.
8. THE 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.
9. THE CONTRACTOR'S ATTENTION IS DIRECTED TO CHAPTER 44B, PUBLIC HEALTH REGULATIONS, DEPARTMENT OF HEALTH, STATE OF HAWAII, "COMMUNITY NOISE CONTROL FOR OAHU", IN WHICH MAXIMUM ALLOWABLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION ACTIVITIES FOR THIS PROJECT WILL EXCEED THE ALLOWABLE NOISE LEVELS, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMIT FROM THE DIRECTOR OF THE DEPARTMENT OF HEALTH. THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 44B AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR CONSTRUCTION ACTIVITIES.
10. PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HONOLULU POLICE DEPARTMENT, THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES-HISTORIC PRESERVATION DIVISION (692-8015). IN ADDITION, FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING (523-4881); AND FOR CITY PROJECTS, INFORM THE RESPONSIBLE CITY AGENCY.
11. 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.
12. DURING NON-WORKING HOURS, THE TRENCHES ON CITY STREETS SHALL BE COVERED WITH NON-SKID STEEL PLATES AND ALL LANES MAINTAINED OPEN FOR TRAFFIC.
13. CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS.
14. FOR BENCH MARK, SEE SHEET 5.
15. THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING AT 523-4881 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT FOUR (4) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
16. THE CONTRACTOR SHALL PERFORM APPLICABLE CONSTRUCTION WORK, ALL IN ACCORDANCE WITH THE STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, DATED SEPTEMBER 1984, AS AMENDED, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, DATED SEPTEMBER 1986, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, 1978, AS AMENDED.

TRAFFIC NOTES FOR WORK ON CITY & COUNTY STREETS

1. A PERMIT SHALL BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION SERVICES BEFORE WORK ON ANY PORTION OF A PUBLIC STREET OR HIGHWAY MAY BEGIN. CONSTRUCTION TRAFFIC CONTROL PLANS APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES AND/OR THE DEPARTMENT OF PLANNING AND PERMITTING MUST BE PROVIDED WHEN APPLYING FOR THE PERMIT.
2. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS AND OTHER PROTECTIVE FACILITIES, WHICH SHALL CONFORM WITH THE "HAWAII ADMINISTRATION RULES GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION, AND THE CURRENT U.S. FEDERAL HIGHWAYS ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI - TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS".
3. WORK ON ANY CITY STREET AREA MAY BE PERFORMED ONLY BETWEEN THE HOURS OF 8:30 A.M. TO 3:30 P.M., MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
4. DURING WORKING HOURS, THE CONTRACTOR SHALL PROVIDE FOR THROUGH TRAFFIC. DURING NON-WORKING HOURS, ALL TRENCHES SHALL BE COVERED WITH A SAFE NON-SKID BRIDGING MATERIAL AND ALL LANES SHALL BE OPEN TO TRAFFIC.
5. AS REQUIRED BY THE DEPARTMENT OF TRANSPORTATION SERVICES, THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.
6. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGE BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED.
7. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THESE RIGHTS-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
8. THE CONTRACTOR SHALL REFERENCE TO THE APPROVAL OF THE DEPARTMENT OF TRANSPORTATION SERVICES AND THE DEPARTMENT OF PLANNING AND PERMITTING. ALL EXISTING TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS DISTURBED BY HIS ACTIVITIES.
9. THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING AT 523-4881 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT FOUR (4) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF WORK TO BE DONE ON SIGNS, POSTS AND PAVEMENT MARKINGS.
10. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN STREET RIGHTS-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
11. THE DEPARTMENT OF HAWAIIAN HOME LANDS SHALL ENSURE THAT THE CONTRACTOR INSTALLS THE CONSTRUCTION TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MUTCD AND HAWAII ADMINISTRATION RULES AS SPECIFIED IN TRAFFIC NOTE #2.

SEWER NOTES

1. ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986, STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, AS AMENDED, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU AND THE COUNTIES OF KAUAI, MAUI AND HAWAII, CURRENT CITY PRACTICES, THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED, AND THE DESIGN STANDARDS OF THE DEPARTMENT OF WASTEWATER MANAGEMENT, VOL. 1, JULY 1993.
2. IN THE EVENT THAT ANY CHANGE IN ALIGNMENT OR GRADE FOR THE PROPOSED SEWERS ARE REQUIRED DUE TO UNFORSEEN CONFLICT WITH OTHER UTILITIES, THE ENGINEER IN CHARGE OR THE MAKER OF THE PLANS SHALL BE RESPONSIBLE FOR THE REQUIRED CHANGES WHICH ARE TO BE PRESENTED TO THE DEPARTMENT OF PLANNING AND PERMITTING (DPP) FOR APPROVAL.
3. THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING, AT 523-4881 TO ARRANGE FOR INSPECTIONAL SERVICES, CALL 7 DAYS PRIOR TO COMMENCEMENT OF SEWER WORK. SUBMIT FOUR (4) SETS OF APPROVED CONSTRUCTION PLANS.
4. CRUSHED ROCK CRADLE IS PERMITTED WHERE SOIL IS STABLE. IN AREAS OF UNSTABLE SOIL, THE MAKER OF THE PLANS AND THE CONSTRUCTION ENGINEER WILL DETERMINE THE PIPE SUPPORT REQUIRED.
5. TREES IN THE ROAD RIGHT-OF-WAY SHALL BE SITUATED A MINIMUM OF SIX (6) FEET FROM THE CITY'S SEWER LINES.
6. THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS RESEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE FACILITIES, INCLUDING AND AFFECTING SEWER LINES, IN THE PRESENCE OF THE DPP INSPECTOR AND EXERCISE PROPER CARE IN EXCAVATING THE AREA. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL DAMAGED UTILITIES.
7. SEWER LATERAL LOCATION MEASURED ALONG THE FRONT PROPERTY LINE SHALL BE SIX (6) FEET FROM THE PROPERTY CORNER UNLESS OTHERWISE NOTED ON THE PLANS AND SHOULD NOT STRADDLE ELECTRICAL TRANSFORMER PAD.
8. SLOPE FOR SEWER LATERALS SHALL BE 1.00% UNLESS OTHERWISE NOTED.
9. BUILDING PLUMBING FACILITIES SHALL BE CONTROLLED BY SEWER LATERAL INVERTS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS SEWER SERVICE TO ALL AFFECTED AREAS DURING CONSTRUCTION.
11. THE CONSULTING ENGINEER SHALL SUBMIT TO THE DEPARTMENT OF PLANNING AND PERMITTING, MYLAR "AS-BUILT" TRACINGS OF THE CONSTRUCTION PLANS AS ACTUALLY CONSTRUCTED, SHOWING ALL CHANGES FROM THE ORIGINAL PLANS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SEWAGE SPILLS CAUSED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE STATE DEPARTMENT OF HEALTH AND UTILIZE APPROPRIATE SAMPLING AND ANALYZING PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC NOTIFICATIONS AND PRESS RELEASES.
13. THE CONTRACTOR SHALL INSTALL "RAINSTOPPER" MANHOLE INSERTS IN ALL SEWER MANHOLES WITH TYPE "SA" FRAME AND COVER.
14. ALL DEEP AND SHALLOW DROP SEWER MANHOLES SHALL BE LINED WITH EPOXY OR PLASTIC LINERS. ALSO, IF THE SLOPE EXCEEDS TEN (10) FEET PER SECOND (FPS), THE SEWER MANHOLE SHALL BE EPOXY OR PLASTIC LINED.
15. THE CONTRACTOR SHALL OBTAIN APPROVAL FOR ADVANCE SEWER RISER AGREEMENT AT THE DEPARTMENT OF PLANNING AND PERMITTING AND OBTAIN PLUMBING PERMIT FOR PLUMBING WORK BEFORE ANY ADVANCE RISER IS MADE.
16. ALL SEWER PIPE JOINTS WITHIN EASEMENTS SHALL BE WRAPPED WITH GEOTEXTILE ROOT BARRIER.
17. SAC PIPE CRADLE SEALS SHALL BE INSTALLED 10 FEET FROM ALL SEWER MANHOLES TO PREVENT SOIL MIGRATION. SEE DETAIL, SHEET 43.
18. GEOTEXTILE FABRIC TO ENVELOP THE PIPE CRADLE AND SELECT BACKFILL MATERIAL SHALL BE PROVIDED WHERE WATER OR UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED.
19. CONFINED SPACE

FOR ENTRY BY CITY PERSONNEL, INCLUDING INSPECTORS, INTO A PERMIT REQUIRED CONFINED SPACE AS DEFINED IN 29 CFR PART 1910.146(b), THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING:

1. ALL SAFETY EQUIPMENT REQUIRED BY THE CONFINED SPACE REGULATIONS APPLICABLE TO ALL PARTIES OTHER THAN THE CONSTRUCTION INDUSTRY, TO INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
 - A. FULL BODY HARNESSES FOR UP TO TWO PERSONNEL.
 - B. LIFELINE AND ASSOCIATED CLIPS.
 - C. INGRESS/EGRESS AND FALL PROTECTION EQUIPMENT.
 - D. TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT.
 - E. EMERGENCY (ESCAPE) RESPIRATOR (10 MINUTE DURATION).
 - F. CELLULAR TELEPHONE TO CALL FOR EMERGENCY ASSISTANCE.
 - G. CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE AT LEAST 20-FEET AWAY).
 - H. PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.
 2. CONTINUOUS FORCED AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
 3. ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).
20. WHEN CONNECTING TO A LIVE SEWER LINE, THE CONTRACTOR SHALL ABIDE BY ALL CONDITIONS THAT THE STATE DEPARTMENT OF HEALTH SETS FORTH TO MITIGATE ANY WASTEWATER SPILL THAT MAY OCCUR. THE CONTRACTOR SHALL INFORM THE CITY'S INSPECTOR FIVE (5) WORKING DAYS PRIOR TO THE ACTUAL CONNECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FINES AND PENALTIES DUE TO ANY SPILLS RESULTING FROM THE CONNECTION.
 21. THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) SHALL PAY TO THE CITY THE APPLICABLE WASTEWATER SYSTEM FACILITY CHARGE.
 22. THE SEWER CONNECTION APPLICATION WAS APPROVED 8/30/04 WITH THE CONDITION THAT NO SEWER CONNECTION WILL BE ALLOWED UNTIL AFTER THE COMPLETION OF THE KAPOLEI INTERCEPT SEWER PROJECT AND THE SUBMITTAL AND APPROVAL OF THE SEWER MASTER PLAN FOR THE VILLAGES OF KAPOLEI.

MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE JOINT POLE COMMITTEE TWO (2) WEEKS IN ADVANCE OF ANY RELOCATION OF UTILITY POLE(S) THAT MAY BE NECESSARY.
2. THE CONTRACTOR SHALL NOTIFY THE MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION, DEPARTMENT OF DESIGN AND CONSTRUCTION, THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK ON THE STREET LIGHTING SYSTEM (PHONE: 523-4106).
3. THE STREET LIGHTING SYSTEM SHALL BE KEPT OPERATIONAL DURING CONSTRUCTION. ANY RELOCATION REQUIRED SHALL BE APPROVED BY THE MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION, DEPARTMENT OF DESIGN AND CONSTRUCTION, AND PAID FOR BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING STREET LIGHTING FACILITIES. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST, IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE CITY'S EXISTING COMMUNICATIONS FIBER OPTIC CABLE SYSTEM. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.

ARCHAEOLOGICAL NOTE

IF DURING CONSTRUCTION, ANY PREVIOUSLY UNIDENTIFIED SITES OR REMAINS (SUCH AS ARTIFACTS, SHELL, BONE, OR CHARCOAL DEPOSITS, HUMAN BURIALS, ROCK OR CORAL ALIGNMENTS, PAVINGS, OR WALLS) ARE ENCOUNTERED, THE APPLICANT SHALL STOP WORK AND CONTACT THE STATE DULNR HISTORIC SITES OFFICE AT 548-7460 IMMEDIATELY. WORK IN THE IMMEDIATE AREA SHALL BE STOPPED UNTIL THE OFFICE IS ABLE TO ASSESS THE IMPACT AND MAKE FURTHER RECOMMENDATIONS FOR MITIGATIVE ACTIVITY.

WATER 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. 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, DRAINAGE, ETC., AND OTHER FEATURES OF IMPROVEMENTS SHALL NOT BE THE RESPONSIBILITY OF THE BOARD OF WATER SUPPLY.
3. TEST PRESSURE SHALL BE 150 PSI. DURING THE 30-MINUTE PRESSURE TEST, THE PRESSURE SHALL NOT DROP MORE THAN 10 PSI.
4. THE CONTRACTOR SHALL NOTIFY BWS CAPITAL PROJECTS DIVISION, CONSTRUCTION SECTION IN WRITING AND SUBMIT FIVE (5) SETS OF APPROVED CONSTRUCTION PLANS ONE WEEK PRIOR TO COMMENCING WORK ON THE WATER SYSTEM.
5. WATER COMMITMENT SHALL BE CANCELED IF THE APPROVED CONSTRUCTION PLANS ARE ALLOWED TO LAPSE.
6. THE CONTRACTOR SHALL CHLORINATE THE ENTIRE SURFACE OF EACH PIPE AND FITTING WITH DISINFECTION SOLUTION OF 5 OUNCES OF SODIUM HYPOCHLORITE MIXED WITH 10 GALLONS OF WATER. (FOR CONNECTION ONLY)
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL WATER LINES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE ESPECIALLY CAREFUL WHEN EXCAVATING BEHIND WATER LINES, TEES AND BENDS WHEREVER THERE IS A POSSIBILITY OF WATER LINE MOVEMENT DUE TO THE 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 HIS CONSTRUCTION METHOD.
8. 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 DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL DAMAGES TO EXISTING UTILITIES. THE CONTRACTOR SHALL NOT ASSUME THAT WHERE NO UTILITIES ARE SHOWN, THAT NONE EXIST.
9. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY BOARD OF WATER SUPPLY, THE MANUFACTURER'S CERTIFICATION THAT ALL CAST IRON (GRAY OR DUCTILE) FITTINGS FOR THE PROJECT CONFORM IN ALL RESPECTS TO THE WATER SYSTEM STANDARDS, DATED 2002.
10. POLYGON SHAPE FOR MECHANICAL JOINT GLANDS AS DESCRIBED IN AWWA STANDARD C111 SHALL BE "STRAIGHT-SIDED" OR AN APPROVED EQUAL ON A JOB-TO-JOB BASIS.
11. RE-APPROVAL SHALL BE REQUIRED IF THIS PROJECT IS NOT UNDER CONSTRUCTION WITHIN A PERIOD OF TWO YEARS.
12. 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.
13. AT THE ELECTRICAL/SIGNAL DUCTLINE WATER CROSSINGS, ADJUST ALL ELECTRICAL/SIGNAL DUCTLINE ELEVATIONS TO MAINTAIN 6" VERTICAL CLEAR SEPARATION FROM ALL WATERLINES (12" CLEAR FOR ALL ELECTRICAL/SIGNAL DUCTLINE STRUCTURES LARGER THAN 16") AT NO COST TO THE BOARD OF WATER SUPPLY.
14. MAINTAIN 3'-0" MIN. HORIZONTAL CLEAR SEPARATION BETWEEN ALL WATERLINE SYSTEMS AND NEAREST ELECTRICAL/SIGNAL DUCTLINES PARALLELING THE WATER SYSTEM AT NO COST TO THE BOARD OF WATER SUPPLY.
15. MAINTAIN 3'-0" MIN. HORIZONTAL CLEAR SEPARATION BETWEEN STREET LIGHT/TRAFFIC SIGNAL STANDARDS (INCLUDING ANY MODULAR UNITS) AND THE NEAREST WATER SYSTEM. CONTRACTOR SHALL FIELD VERIFY FOR ANY CONFLICTS AT EACH STREET LIGHT/TRAFFIC SIGNAL STANDARD LOCATION. WHERE CONFLICTS OCCUR, THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER TO REVISE THE STREET LIGHT/TRAFFIC SIGNAL STANDARD TO PROVIDE THE REQUIRED CLEARANCES AT NO COST TO THE BWS.
16. THE CONTRACTOR/DEVELOPER SHALL OBTAIN A NPDES PERMIT PRIOR TO CHLORINATION AND/OR DEWATERING. A COPY OF THE PERMIT SHALL BE SUBMITTED TO THE BOARD OF WATER SUPPLY, MAINTENANCE UNIT - ENGINEERING, CONSTRUCTION SECTION.
17. SOIL RESISTIVITY FOR THE SITE HAS A CORROSION RATING OF 4 AS REPORTED BY _____, ALL REQUIRED ELECTRICAL ISOLATION PROCEDURES AND CORROSION CONTROL REQUIREMENTS SHALL APPLY.
18. PIPE CUSHION SHALL BE OF HIGH RESISTIVITY MATERIAL. THE CONTRACTOR SHALL SUBMIT A SOIL CERTIFICATION THAT HIGH RESISTANT CUSHION MATERIAL HAS A RESISTIVITY GREATER THAN 5,000 OHM-CM. REMAINDER OF THE BACKFILL MATERIAL SHALL BE AS SPECIFIED IN THE WATER SYSTEM STANDARDS. PIPE CUSHION AND BACKFILL MATERIAL SHALL CONTAIN NO HAZARDOUS SUBSTANCES ABOVE REGULATORY ACTION LEVELS INCLUDING BUT NOT LIMITED TO LEAD, ASBESTOS, MERCURY, CHROMIUM, CADMIUM, ZINC, STRONTIUM, AND POLYCHLORINATED BIPHENYLS (PCB).
19. UPON COMPLETION OF THE PROJECT, THE DEVELOPER SHALL PROVIDE THE BWS WITH A CERTIFICATE FROM A REGISTERED SOILS ENGINEER CERTIFYING THAT THE ROAD PRISM HAS BEEN CONSTRUCTED IN ACCORDANCE TO CITY AND COUNTY ROADS STANDARDS.
20. ALL DUCTILE IRON PIPE, FITTINGS AND VALVES SHALL BE WRAPPED WITH TWO LAYERS OF 8 MIL. POLYETHYLENE WRAP.
21. TWO-WAY BLUE REFLECTIVE HYDRANT MARKERS TYPE DB SHALL BE INSTALLED AT ALL NEW FIRE HYDRANT INSTALLATIONS. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF HYDRANT MARKERS WITH THE NEAREST HONOLULU FIRE DEPARTMENT BATTALION CHIEF.
22. CLEANING SHALL BE BY THE USE OF "PIGS" INTRODUCED INTO THE PIPELINE AND RUN COMPLETELY THROUGH ALL INSTALLED PIPELINES AND ALL BRANCH LINES FOR FIRE HYDRANTS. "PIGGING" OF SERVICE LATERALS IS NOT REQUIRED. BARE FOAM "PIGS" SHALL BE USED TO SWAB PIPING CLEAN AS EACH LENGTH OF THE PIPELINE IS INSTALLED. EACH "PIG" SHALL CONSIST OF A CYLINDRICAL PIECE OF POLYURETHANE FOAM WITH A DENSITY OF 3-7 POUNDS PER CUBIC FOOT AND A VINYL-COATED NOSE. OUTSIDE DIAMETER OF THE "PIG" SHALL BE EQUAL TO 1-1/4 TO 1-1/2 TIMES THE INSIDE DIAMETER OF THE PIPE BEING INSTALLED. THE LENGTH OF THE "PIG" SHALL BE 1-1/2 TO 2 TIMES ITS DIAMETER. PRIOR TO USE, THE "PIG" SHALL BE SUBMERGED IN A CHLORINE SOLUTION OF 1 OZ. OF 5% CHLORINE BLEACH IN 5 GALLONS OF WATER. "PIGGING" OF THE PIPELINE SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE NEW PIPELINE.
23. ALL SECTIONS OF THE WATER MAIN REQUIRING REINFORCED CONCRETE JACKETING SHALL BE DUCTILE IRON PIPE OR CONCRETE CYLINDER PIPE AND FITTINGS.
24. BALL CORP AND BALL STOP SHALL BE USED IN LIEU OF A CORPORATION STOP AND STOPCOCK, RESPECTIVELY.
25. INSTALL 4 MIL. THICK, NON-METALLIC, BLUE COLORED, 6 INCHES WIDE WARNING TAPE OVER CENTERLINE OF THE PIPE AND BELOW THE BASE COURSE ALONG THE ENTIRE LENGTH OF TRENCH. TAPE SHOULD BE MARKED WITH "CAUTION WATER LINE BURIED BELOW".
26. THE CONTRACTOR SHALL INSTALL ELECTRONIC MARKERS TO PVC MAINS AND TEST THE ELECTRONIC MARKERS PRIOR TO INSTALLATIONS TO VERIFY PROPER OPERATION. BWS PERSONNEL SHALL VERIFY THE NUMBER AND LOCATIONS OF PLACED ELECTRONIC MARKERS BEFORE FINAL PAVING OF THE PROJECT.
27. WATER PIPELINE CHLORINATION AND TESTING PROCEDURES:


- A. THE FOLLOWING CHLORINATION AND WATER SAMPLE COLLECTION PROCEDURE SHALL APPLY TO ALL WATER PIPELINE PROJECTS:
 - STEP 1: CHLORINATE MAIN BY FILLING WITH WATER AND INTRODUCING CHLORINE IN SUFFICIENT QUANTITY TO OBTAIN A MINIMUM CHLORINE CONCENTRATION OF 50 PARTS PER MILLION. LEAVE CHLORINATED WATER IN MAIN OVERNIGHT.
 - STEP 2: FLUSH MAIN WITH FRESH WATER UNTIL ALL CHLORINE HAS BEEN FLUSHED OUT AS EVIDENCED BY THE ORTHO-TOLUIDINE TEST, THEN COLLECT A WATER SAMPLE WHILE CONTINUING TO FLUSH THE MAIN.
 - STEP 3: REPEAT STEPS 1 AND 2. AFTER COLLECTING THE SECOND WATER SAMPLE, STOP FLUSHING AND ALLOW THE WATER TO STAND IN THE MAIN OVERNIGHT.
 - STEP 4: THOROUGHLY FLUSH THE MAIN WITH FRESH WATER UNTIL ALL WATER THAT HAD BEEN STANDING IN THE MAIN OVERNIGHT HAS BEEN FLUSHED OUT. STOP FLUSHING AND LET THE WATER STAND IN THE MAIN FOR ONE HOUR. COLLECT A WATER SAMPLE.
- B. THE MAIN IS DEEMED ACCEPTABLE AND CERTIFIED WHEN (1) TWO CONSECUTIVE WATER SAMPLES, COLLECTED 24 HOURS APART UNDER STEPS 1 AND 2, SHOW NO TOTAL AND FECAL COLIFORM AND LESS THAN 200 COLONY FORMING UNITS (CFU) OF TOTAL BACTERIA AND (2) THE SAMPLE OF WATER HELD IN THE MAIN FOR ONE HOUR, COLLECTED UNDER STEP 4, ALSO SHOWS NO TOTAL AND FECAL COLIFORM AND LESS THAN 200 CFU OF TOTAL BACTERIA.
- C. CHLORINATION, FLUSHING, SAMPLING AND TESTING WILL BE EXTENDED SHOULD UNSATISFACTORY RESULTS BE ENCOUNTERED. ANY SAMPLE THAT SHOWS POSITIVE COLIFORM PRESENCE OR TOTAL BACTERIA GREATER THAN 200 CFU IS UNSATISFACTORY.
- D. STEPS 1 AND 2 MAY BE REPEATED BEFORE COLLECTING THE ONE-HOUR HOLD SAMPLE SPECIFIED IN STEP 4. REPEATING STEPS 1 AND 2 IS RECOMMENDED IN THE EVENT SAMPLES SHOW THE PRESENCE OF COLIFORMS AND/OR INCREASING TOTAL BACTERIAL RESULTS FROM ONE SAMPLE TO THE NEXT.
- E. WATER SAMPLES THAT SHOW THE PRESENCE OF ATYPICAL COLONIES, DEBRIS OR RESULTS INCONSISTENT WITH EXISTING WATER ARE SUBJECT TO RECONFIRMATION. BWS RESERVES THE RIGHT TO REQUEST AND TEST ADDITIONAL WATER SAMPLES IN THE INTEREST OF SAFEGUARDING PUBLIC HEALTH AND SAFETY.

WATER NOTES (CONT.)

28. THE PROJECT SHALL PAY THE APPLICABLE WATER SYSTEM FACILITIES AND/OR ONE-TIME SERVICE CHARGE AND FOR THE METER WHICH WILL BE FURNISHED BY BWS AND INSTALLED BY THE CONTRACTOR WHEN THE LATERAL IS INSTALLED.
29. 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 THE 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.
30. POLYVINYL CHLORIDE (PVC) PIPES SHALL BE CLASS 150. ALL DUCTILE IRON VALVES AND METALLIC FITTINGS SHALL BE WRAPPED WITH TWO LAYERS OF 8 MIL. POLYETHYLENE WRAP. NO BENDING OF POLYVINYL CHLORIDE PIPES SHALL BE PERMITTED. THE INSTALLATION OF PVC PIPE, ACCORDING TO THE PLANS AND SPECIFICATIONS AS BID ON BY THE CONTRACTOR, MAY REQUIRE ADDITIONAL DESIGN WORK, ADDITIONAL FITTINGS AND SPECIAL COUPLINGS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID IN THE PROPOSAL FOR PVC PIPE. ANY ADDITIONAL DESIGN WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
31. ALL POLYVINYL CHLORIDE (PVC) PIPE DEFLECTIONS SHALL BE ACCOMPLISHED ONLY BY THE USE OF SPECIAL PVC DEFLECTION COUPLINGS. DEFLECTION AROUND CURVES SHALL BE ACCOMPLISHED ONLY BY THE USE OF PVC DEFLECTION COUPLINGS.
32. THE CONTRACTOR SHALL FURNISH AND INSTALL POLYETHYLENE WRAP, 3 FEET MINIMUM AT ALL TAPS (FOR DI PIPE AND COPPER LATERAL COMBINATION ONLY) AND PLASTIC PIPE (PE TUBING) 3 FEET LONG AFTER METERS FOR ALL SERVICE LATERAL CONNECTIONS.
33. BOSSED TEES REQUIRED FOR ALL LATERAL AND ARV CONNECTIONS TO PVC MAINS.
34. ALL PVC FITTINGS SHALL CONFORM TO AMERICAN WATER WORKS ASSOCIATIONS (AWWA) C-907. DUCTILE IRON FITTINGS SHALL BE USED FOR ALL TYPES OF FITTINGS NOT SPECIFIED IN AWWA C-907.
35. REACTION BLOCK REQUIREMENTS FOR PVC FITTINGS SHALL BE THE SAME FOR DUCTILE IRON FITTINGS.
36. THE USE OF HUB CLAMPS AND SET SCREWS ON PVC FITTINGS IS NOT APPROVED.
37. PRIOR TO THE PVC FITTING INSTALLATION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE BWS, THE MANUFACTURER'S CERTIFICATION THAT ALL PVC FITTINGS CONFORM TO AWWA C-907.

DISABILITY AND COMMUNICATION ACCESS BOARD (DCAB) REQUIREMENTS

1. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGE BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED. TEMPORARY PEDESTRIAN PASSAGES SHALL BE ACCESSIBLE PER ADAAG 4.1.1 (4) AND SHALL COMPLY W/ADAAG 4.3.1.

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
 Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alekeka Street, Sixth Floor Honolulu, Hawaii			
EAST KAPOLEI WATER TRANSMISSION MAIN HONOLULU, EWA, OAHU, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEYS: 9-1-16:109, 9-1-17:4 & 9-1-18:3			
GENERAL NOTES - 1			
DRAWN BY: MN	ENGINEER: SS	CHECKED BY: MS	
APPROVED:			
CHIEF, CAPITAL PROJECTS DIVISION, B.W.S. DATE			
CHIEF, TRAFFIC REVIEW BRANCH, D.P.P. DATE			
FILE	POCKET	FOLDER	NO.

NOTES FOR CONSTRUCTION WITHIN STATE R/W

1. THE CONTRACTOR SHALL OBTAIN A PERMIT TO PERFORM WORK UPON STATE HIGHWAYS FROM THE OAHU DISTRICT ENGINEER, STATE HIGHWAYS, AT 727 KAKO STREET, PRIOR TO COMMENCEMENT OF WORK WITHIN THE STATE'S HIGHWAY RIGHT-OF-WAY.
2. CONSTRUCTION AND RESTORATION OF ALL EXISTING HIGHWAY FACILITIES WITHIN THE STATE'S HIGHWAY RIGHT-OF-WAY, INCLUDING THE LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC, SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, AND THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS, OF THE STATE HIGHWAYS DIVISION.
3. WORK MAY BE PERFORMED BETWEEN THE HOURS OF 8:30 A.M. AND 3:00 P.M., MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS, AND "NO LANE CLOSURE" PERIODS, UNLESS OTHERWISE PERMITTED BY THE DISTRICT ENGINEER.
- DURING WORK HOURS ONLY ONE LANE OF TRAFFIC SHALL BE CLOSED, UNLESS OTHERWISE APPROVED IN WRITING BY THE DISTRICT ENGINEER.
- AT CERTAIN LOCATIONS, "NO LANE CLOSURE" WILL BE ALLOWED DURING THE "BACK TO SCHOOL JAM", THANKSGIVING WEEKEND, CHRISTMAS/NEW YEAR PERIOD AND AT OTHER TIMES AS DIRECTED BY THE HIGHWAYS DIVISION.
4. THE 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 PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES AND 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 AND HIGHWAYS", ADOPTED BY THE DIRECTOR OF TRANSPORTATION, AND THE CURRENT U.S. FEDERAL HIGHWAYS ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART VI - STANDARDS AND GUIDES FOR TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND INCIDENT MANAGEMENT OPERATIONS".
- LANE CLOSURES SHALL CONFORM TO THE TRAFFIC CONTROL PLAN INCORPORATED INTO THESE CONSTRUCTION PLANS AND MUST BE APPROVED BY THE DIVISION PRIOR TO THE ISSUANCE OF THE PERMIT.
5. THE MINIMUM PAVEMENT STRUCTURE SHALL CONSIST OF:
- A. RESIDENTIAL AND COMMERCIAL DRIVEWAYS AND SIDEROADS ON MINOR HIGHWAYS
- (1) 2 1/2" ASPHALT CONCRETE (MIX IV), 8" AGGREGATE BASE COURSE AND 12" SUBBASE, OR 2 1/2" ASPHALT CONCRETE AND 8" ASPHALT CONCRETE BASE COURSE OR ASPHALT CONCRETE.
- (2) 6" OF CLASS "A" CONCRETE REINFORCED WITH 6" X 6"-W2.9 X W2.9 WIRE MESH ON 12" AGGREGATE SUBBASE, IF DEEMED NECESSARY BY THE ENGINEER.
- C. CHANNELLED INTERSECTIONS ON MAJOR HIGHWAYS
- (1) 4" ASPHALT CONCRETE (MIX IV), 8" AGGREGATE BASE COURSE, AND 12" AGGREGATE SUBBASE, OR 4" ASPHALT CONCRETE AND 8" CLASSPAHLL CONCRETE BASE COURSE, OR MATCH EXISTING PAVEMENT STRUCTURE, WHICHEVER IS GREATER
6. 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 DISTRICT ENGINEER.
7. COMPACTION TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS, AS FOLLOWS:
- A. SUBBASE: ONE (1) COMPACTION TEST PER LIFT PER 200 LINEAL FEET OF ROADWAY.
- B. BASE COURSE: ONE (1) COMPACTION TEST PER LIFT PER 200 LINEAL FEET OF ROADWAY.
- C. ONE (1) COMPACTION TEST PER LIFT PER 300 LINEAL FEET OF TRENCH.
- D. A COPY OF THE TEST RESULTS SHALL BE SUBMITTED TO THE DISTRICT ENGINEER.
8. PRIOR TO COMMENCING TRENCH EXCAVATION WORK, THE CONTRACTOR SHALL TAKE A PROFILE ALONG THE CENTERLINE OF THE PROPOSED UTILITY TRENCH. THIS INFORMATION SHALL BE USED IN THE VERIFICATION OF RESTORING THE ROADWAY TO ITS ORIGINAL CONDITION. A COPY OF THE PROFILE SHALL BE SUBMITTED TO THE DISTRICT ENGINEER.
9. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE AND SAFE NONSKID BRIDGING MATERIAL, INCLUDING SHORING, OVER TRENCHES IN PAVEMENT AREAS. THE BRIDGING SHALL BE ABLE TO SUPPORT ALL TYPES OF VEHICULAR TRAFFIC.
10. UNLESS OTHERWISE NOTED, NO TRENCH SHALL BE OPENED MORE THAN 300 FEET IN ADVANCE OF INSTALLED AND TESTED PIPELINE AND/OR DUCTLINE.
11. EXISTING DRAINAGE SYSTEMS SHALL BE FUNCTIONAL AT ALL TIMES.
12. THE CONTRACTOR SHALL EXERCISE CARE TO MINIMIZE DAMAGES TO EXISTING HIGHWAY IMPROVEMENTS. ALL DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR, AT HIS EXPENSE, TO THE ACCEPTANCE OF THE DISTRICT ENGINEER.
13. APPROVAL OF PERMIT CONSTRUCTION PLANS SHALL BE VALID FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF NOTIFICATION OF APPROVAL. IN THE EVENT CONSTRUCTION DOES NOT COMMENCE WITHIN HIS ONE-YEAR PERIOD, THE APPLICANT WILL BE REQUIRED TO RESUBMIT THE CONSTRUCTION PLANS FOR THE DIVISION'S REVIEW AND REAPPROVAL.
14. ALL REGULATORY, GUIDE, AND CONSTRUCTION SIGNS AND BARRICADES SHALL HAVE A HIGH-INTENSITY REFLECTIVE BACKGROUND.
15. THE CONTRACTOR SHALL INFORM THE STATE HIGHWAYS' PERMIT OFFICE (831-6712) AT LEAST TWO (2) DAYS PRIOR TO CLOSING ANY LANES.
16. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTIES USING THESE RIGHTS-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
17. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN A SAFE AND PASSABLE CONDITION, OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGES BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED. ALL WALKWAYS SHALL CONFORM TO ADA REQUIREMENTS.
18. THE CONTRACTOR SHALL REFERENCE, TO THE SATISFACTION OF THE DISTRICT ENGINEER, ALL EXISTING TRAFFIC SIGNS, POSTS, AND PAVEMENT MARKINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNS, POSTS, AND PAVEMENT MARKINGS DISTURBED BY HIS ACTIVITIES, AT HIS EXPENSE, UNLESS DIRECTED OTHERWISE BY THE DISTRICT ENGINEER OR HIS REPRESENTATIVE.
19. THE CONTRACTOR SHALL EXERCISE CARE WHEN PERFORMING WORK IN OR ADJACENT TO THE STATE HIGHWAY RIGHT-OF-WAY. DAMAGES TO EXISTING FACILITIES SHALL BE IMMEDIATELY REPORTED TO THE RESPECTIVE UTILITY COMPANIES, AND/OR CITY OR STATE AGENCIES. THE REPAIR WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
20. THE CONTRACTOR SHALL NOTIFY THE STATE HIGHWAYS' HIGHWAY LIGHTING AND TRAFFIC SIGNAL SUPERVISOR (837-8056), THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK.
21. THE CONTRACTOR SHALL NOTIFY THE CITY DEPARTMENT OF TRANSPORTATION SERVICES, TRAFFIC SIGNAL ENGINEER (523-4589), THREE (3) WORKING DAYS PRIOR TO ANY SIGNALIZED INTERSECTION WORK.
22. TRAFFIC SIGNAL SYSTEM SHALL BE KEPT OPERATIONAL DURING CONSTRUCTION. TEMPORARY OPERATIONAL MICROWAVE OR OTHER APPROVED DETECTION DEVICE SHALL BE INSTALLED THREE (3) WORKING DAYS PRIOR TO ANY SIGNALIZED INTERSECTION EXCAVATION WORK. ALL WORK DONE SHALL BE DONE IN ACCORDANCE TO THE REQUIREMENTS OF THE DEPARTMENT OF TRANSPORTATION SERVICES, CITY AND COUNTY OF HONOLULU, AND PAID FOR BY THE CONTRACTOR.
23. THE CONTRACTOR SHALL NOTIFY OAHU TRANSIT SERVICES, INC. (OTS), ED SNIFFEN AT 848-4571, OR LOWELL TOM AT 848-1578, TWO WEEKS PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR SHALL INFORM OTS OF THE LOCATION AND SCOPE OF WORK, PROPOSED CLOSURE OF ANY STREET OR TRAFFIC LANES, AND THE NEED TO RELOCATE ANY BUS STOP.

NOTES FOR CONSTRUCTION WITHIN STATE R/W (cont'd)

24. THE PERMIT TO PERFORM WORK UPON STATE HIGHWAYS MAY BE REVOKED BECAUSE OF DEFAULT IN ANY OF THE FOLLOWING, BUT NOT LIMITED TO, CONDITIONS:
- A. WORK PERFORMED BEFORE OR AFTER PERMITTED HOURS.
- B. FAILURE TO MAINTAIN ROADWAY SURFACES IN A SMOOTH AND SAFE CONDITION.
- C. FAILURE TO CLEAN UP CONSTRUCTION DEBRIS GENERATED FROM PROJECT WORK.
- D. FAILURE TO PROVIDE PROPER TRAFFIC CONTROL.
- E. FAILURE TO REPLACE DAMAGED PAVEMENT MARKINGS AND SIGNS.
25. THE CONTRACTOR SHALL NOTIFY THE STATE HIGHWAYS PERMIT OFFICE (831-6712) AT LEAST TWO (2) DAYS PRIOR TO PERFORMING ANY TRENCH RESTORATION WORK. THIS WORK SHALL INCLUDE ANY BACKFILLING AND COMPACTING OF TRENCH MATERIAL; ANY PLACING AND COMPACTING OF BASE COURSE MATERIAL; AND ANY PAVING OPERATIONS. ANY TRENCH RESTORATION WORK PERFORMED BY THE CONTRACTOR THAT IS NOT WITNESSED BY A STATE REPRESENTATIVE WILL BE REQUIRED TO BE REMOVED AND RESTORED WITH A STATE REPRESENTATIVE PRESENT. ALL RESTORATION WORK WILL BE DONE AT THE CONTRACTOR'S EXPENSE.
26. TEMPORARY COLD MIX TRENCH PATCHES WILL BE PERMITTED IN ANY GIVEN AREA FOR A MAXIMUM DURATION OF TWO WEEKS, AND SHALL BE A MINIMUM OF 2 INCHES THICK. ALL TEMPORARY PATCHES SHALL BE PLACED OVER PROPERLY PLACED AND COMPACTED BACKFILL AND BASE COURSE LAYERS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY PATCHES AND TO MAKE REPAIRS TO UNSATISFACTORY PATCHES WITHIN 24 HOURS.
27. THE CONTRACTOR WILL MAKE EVERY EFFORT TO MINIMIZE THE USE AND THE DURATION OF USE OF STEEL PLATES. ALL STEEL PLATES SHALL HAVE A NON-SKID SURFACE. THE STATE MAY REQUIRE THE BACKFILLING AND PATCHES OF TRENCHES DUE TO THE EXCESSIVE USAGE OF STEEL PLATES.
28. PLASTIC MARKING TAPE. PROVIDE PLASTIC MARKING TAPE THAT IS ACID AND ALKALI RESISTANT POLYETHYLENE FILM 6 INCHES WIDE WITH MINIMUM THICKNESS OF 0.004 INCH. PROVIDE TAPE WITH MINIMUM STRENGTH OF 1750 PSI LENGTHWISE AND 1500 PSI CROSSWISE. MANUFACTURE TAPE WITH INTEGRAL WIRES, FOIL BACKING OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN THE TAPE IS BURIED UP TO 3 FEET DEEP. MANUFACTURE TAPE SPECIFICALLY FOR MARKING AND LOCATING UNDERGROUND UTILITIES. PROVIDE THE METALLIC CORE OF THE TAPE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORROSION. CONFORM TO THE FOLLOWING TAPE COLOR AND BEAR A CONTINUOUS PRINTED INSCRIPTION DESCRIBING THE SPECIFIC UTILITY.
- RED: ELECTRIC
- YELLOW: GAS, OIL, DANGEROUS MATERIAL
- ORANGE: TELEPHONE, TELEGRAPH, TELEVISION, POLICE, AND FIRE COMMUNICATIONS
- BLUE: WATER SYSTEMS
- GREEN: SEWER SYSTEMS
- CHEVRON PRODUCTS COMPANY NOTES**
- CHEVRON HAWAIIAN REFINERY HAS ONE OR MORE PETROLEUM PRODUCT PIPELINES IN AN EASEMENT THAT RUNS THROUGH OR IMMEDIATELY ADJACENT TO THE PROPOSED PROJECT. THESE PIPELINES ARE USED FOR THE TRANSMISSION OF PETROLEUM PRODUCTS AT HIGH TEMPERATURES AND PRESSURES. THE PIPELINES ARE COATED AND CATHODICALLY PROTECTED. THEY REQUIRE FREQUENT INSPECTION AND MAINTENANCE.
- IT IS ABSOLUTELY NECESSARY THAT CHEVRON BE PROVIDED ACCESS TO THESE BURIED PIPELINES AT ALL TIMES, 24 HOURS A DAY, SEVEN DAYS A WEEK. THEREFORE, THE PROPOSED PROJECT MUST ADHERE TO THE FOLLOWING GUIDELINES:
1. IF THE EASEMENT AREA IS FENCED OR WALLED IN, CHEVRON MUST HAVE A GATE KEY UNLESS THE AREA IS ATTENDED ON A 24-HOUR BASIS.
2. STORAGE OF MATERIAL ON THE EASEMENT SHALL BE AVOIDED. THIS INCLUDES PARKING LOTS.
3. A MINIMUM OVERHEAD CLEARANCE OF 15 FEET MUST BE MAINTAINED WITHIN THE EASEMENT.
4. HEAVY LANDSCAPING (TREES, SHRUBS, SPRINKLERS, ETC.) SHOULD BE KEPT OFF THE EASEMENT.
5. HEAVY OBSTRUCTIONS SHOULD BE KEPT OFF THE EASEMENT (E.G. BUILDINGS, WALLS, EQUIPMENT PADS, ETC.).
6. NO TOP-TO-BOTTOM OBSTRUCTIONS WILL BE PERMITTED IN THE EASEMENT (E.G. POWER POLES, SEWER MANHOLES, SEWER CLEAN-OUTS, BRIDGE ABUTMENTS, ETC.).
7. LIGHT OBSTRUCTIONS (E.G. GRASS, PAVING (ASPHALTIC CONCRETE), CURB CROSSINGS, ETC.) ARE CONSIDERED REASONABLE. GRASSSED AREAS MUST BE SUITABLE FOR ALL-WEATHER VEHICULAR TRAVEL.
8. CHEVRON'S COMPANY REPRESENTATIVE WILL STAKE THE PIPELINES AT CONTRACTOR'S REQUEST. DETERMINATION OF PIPELINE ELEVATIONS SHALL BE CONTRACTOR'S RESPONSIBILITY AND AT CONTRACTOR'S EXPENSE.
9. THE PIPELINE EASEMENT ACCESS ROAD MUST BE KEPT OPEN AT ALL TIMES. AUTHORIZATION TO BLOCK ACCESS ROADS AT ANY TIME DURING YOUR CONSTRUCTION PERIOD MUST BE OBTAINED FROM CHEVRON PRODUCTS COMPANY.
10. AVOID RUNNING ANY SEWERS, FENCES, SPRINKLER LINES, PIPELINES, CABLES, CURBS, ETC., WITHIN THE EASEMENT IN A PARALLEL ORIENTATION TO THE EASEMENT CENTERLINE. CROSSINGS ARE PERMITTED BUT MUST BE HELD TO A MINIMUM OF 45 DEGREES TO EASEMENT CENTERLINE.
11. SEWER AND ELECTRICAL CONDUIT CROSSINGS SHOULD BE KEPT AT A MINIMUM OF FOUR FEET CLEAR BELOW CHEVRON'S PIPELINES FOR THE FULL EASEMENT WIDTH. IF THIS CONDITION CANNOT BE MET, THE CROSSINGS SHOULD BE ENCASED IN SIX INCHES OF CONCRETE, WITH A MINIMUM TWO FEET CLEAR BELOW CHEVRON'S PIPELINES.
12. EXCEPT FOR ITEM 11 ABOVE, ALL CROSSING FACILITIES SHOULD BE AT LEAST 24 INCHES CLEAR BELOW CHEVRON'S PIPELINES FOR THE FULL EASEMENT WIDTH. CROSSINGS ABOVE CHEVRON'S PIPELINES ARE NOT PERMITTED.
13. REMOVAL OF FILL FROM THE EASEMENT SHOULD NOT RESULT IN THERE BEING LESS THAN THREE FEET MINIMUM COVER OVER THE LINES.
14. TRENCHES ACROSS THE PIPELINES SHALL BE LIMITED TO A MAXIMUM WIDTH OF FIVE FEET UNLESS THE LINES ARE SUPPORTED IN A MANNER ACCEPTED IN ADVANCE BY CHEVRON PRODUCTS COMPANY.
15. ALL EXCAVATIONS AND BACKFILLING OPERATIONS IN CHEVRON'S EASEMENT MUST BE WITNESSED BY A CHEVRON COMPANY REPRESENTATIVE. CONTRACTOR SHALL PROVIDE CHEVRON WITH 48 HOURS NOTICE PRIOR TO BEGINNING WORK WITHIN CHEVRON'S EASEMENT. ALL BACKFILL MATERIAL WITHIN SIX INCHES OF OUR PIPELINES MUST BE OF FINELY GRADED DIRT OR SAND. ALL EXCAVATIONS WITHIN TWO FEET OF OUR PIPELINES MUST BE ACCOMPLISHED BY HAND DIGGING. WORK SHALL BE HANDLED IN AN EXPEDITIOUS MANNER IN ORDER TO KEEP CHEVRON'S PIPELINES UNCOVERED FOR AS SHORT A PERIOD AS POSSIBLE.
16. FILL CHEVRON'S EASEMENT SHOULD BE LIMITED TO FOUR FEET MAXIMUM COVER OVER CHEVRON'S PIPELINES. CHEVRON WILL STAKE THE PIPELINES UPON REQUEST SO THAT CONTRACTOR CAN EXCAVATE TO DETERMINE THE DEPTH OF THE PIPELINES.
17. REGARDING OF ADJACENT PROPERTY SHOULD NOT ADVERSELY AFFECT DRAINAGE OF THE EASEMENT AREA OR POSE A HAZARD TO THE EASEMENT SUCH AS LAND SLIDES OR EROSION.
18. THE SLOPE MUST BE KEPT REASONABLY LEVEL ACROSS THE EASEMENT. MAXIMUM SHOULD BE 5:1 TO PROVIDE FOR BACKHOE OPERATION.
19. ALL COSTS PERTAINING TO DAMAGE OF CHEVRON'S PIPELINES, THEIR COATINGS, OR THE CATHODIC PROTECTION DEVICES, OR DAMAGE OF PROPERTY AND INJURY TO PERSONS CAUSED DIRECTLY OR INDIRECTLY BY THIS WORK, WILL BE TO CONTRACTOR'S ACCOUNT. ANY REPAIR WORK OF THE LINES RESULTING FROM CONTRACTOR'S PROJECT SHALL BE PERFORMED BY CHEVRON PRODUCTS COMPANY AND BILLED TO CONTRACTOR.

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 OBTAIN AN EXCAVATION PERMIT FROM HECO'S TECHNICAL DIVISION (543-5654) LOCATED AT 820 WARD AVENUE, 4TH FLOOR, TWO WEEKS PRIOR TO STARTING CONSTRUCTION. PLEASE REFER TO OUR REQUEST NUMBER AT THAT TIME.
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 (OSH 1910.269(k)(28) 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 4 INCHES 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 ENCR OACH WITHIN THE MINIMUM REQUIRED CLEARANCE AT ANY TIME, THE CONTRACTOR SHALL NOTIFY HECO AT LEAST FOUR (4) WEEKS PRIOR TO THE PLANNED ENCR OACHMENT SO THAT, IF FEASIBLE, THE NECESSARY PROTECTIONS (E.G. RELOCATE OR DE-ENERGIZE HECO LINES) CAN BE PUT IN PLACE. HECO MAY ALSO BE ABLE TO BLANKET ITS DISTRIBUTION (12KV AND BELOW) LINES TO PROVIDE A VISUAL AID IN PREVENTING ACCIDENTAL CONTACT. HECO'S COST OF SAFEGUARDING OR IDENTIFYING 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 DEPARTMENT, 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/CONTRACTORS 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 AND MAINTENANCE DEPT., CUSTOMER AND 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 PIPELINES (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 SETTLEMENTS.
- 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.
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.

HECO NOTES (CONT.)

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 (A) |
| WATER LINES, CROSSING | 12 (B) |
| SEWER LINES, PARALLEL | 36 (C) |
| SEWER LINES, CROSSING | 24 (D) |
| DRAIN LINES, PARALLEL | 12 |
| DRAIN LINES, CROSSING | 6 (E) |
| ELECTRICAL AND GAS LINES, PARALLEL | 12 |
| ELECTRICAL AND GAS LINES, CROSSING | 12 |
| TELEPHONE LINES, PARALLEL | 6 (F) |
| TELEPHONE LINES, CROSSING | 6 (F) |
| CHEVRON OIL LINES, PARALLEL | 36 |
| CHEVRON OIL LINES, CROSSING | 48 BELOW OIL LINE (F) |
- A. THE MINIMUM HORIZONTAL CLEARANCES TO WATER LINES PARALLEL TO ELECTRICAL DUCTLINES SHOULD BE INCREASED TO 60 INCHES IF THE WATER LINE IS GREATER THAN OR EQUAL TO 16 INCHES IN DIAMETER.
- B. THE MINIMUM VERTICAL CLEARANCES TO WATER LINES CROSSING ELECTRICAL DUCTLINES CAN BE REDUCED TO 6 INCHES IF THE ELECTRICAL DUCTLINE STRUCTURE IS CONCRETE ENCASED AND IS BELOW THE WATER LINE AND THE WATER LINE IS LESS THAN 16 INCHES IN DIAMETER.
- C. A MINIMUM HORIZONTAL CLEARANCE OF 36 INCHES IS REQUIRED BETWEEN NEW HANDHOLES AND EXISTING SEWER LATERALS.
- D. THE MINIMUM VERTICAL CLEARANCES TO SEWER PIPES CROSSING ELECTRICAL DUCTLINES CAN BE REDUCED TO 12 INCHES IF THE SEWER PIPE IS JACKETED IN CONCRETE.
- E. THE MINIMUM CLEARANCES SHALL BE INCREASED TO 12 INCHES IF THE ELECTRICAL DUCTLINE IS DIRECT BURIED.
- F. 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.
- G. 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.
- THE FOLLOWING CLEARANCE SHALL BE MAINTAINED BETWEEN HECO'S FUEL OIL PIPELINES AND ALL ADJACENT STRUCTURES: 24-INCHES, PARALLEL OR CROSSING. THE MINIMUM CLEARANCE CAN BE REDUCED TO 12 INCHES (PARALLEL AND BELOW ONLY) IF THE STRUCTURE IS JACKETED IN CONCRETE.
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 TORTIOUS 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.

NPDES REQUIREMENTS FOR PERMIT PROJECTS WITHIN STATE HIGHWAY RIGHT-OF-WAY

1. THE CONTRACTOR SHALL OBTAIN AND COMPLY WITH THE "NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS FOR OAHU DISTRICT PERMIT PROJECTS." THIS IS AVAILABLE AT THE OAHU DISTRICT OFFICE AT 727 KAKO STREET (PH. 831-6793). DUE TO POTENTIAL COST IMPACTS, THE CONTRACTOR NEEDS TO BE AWARE OF THESE REQUIREMENTS.
2. THE CONTRACTOR SHALL COMPLETE AND SUBMIT A "CONTRACTOR'S CERTIFICATE OF NPDES COMPLIANCE," INCLUDING COMPLETION OF THE "BEST MANAGEMENT PRACTICE (BMP) CHECKLIST" AND SUBMITTAL OF A WRITTEN BMP PLAN AND DRAWINGS, PRIOR TO ISSUANCE OF THE PERMIT TO PERFORM WORK UPON STATE HIGHWAYS.

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
 Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
EAST KAPOLEI WATER TRANSMISSION MAIN HONOLULU, EWA, OAHU, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEYS: 9-1-16:109, 9-1-17:4 & 9-1-18:3			
GENERAL NOTES - 2			
DRAWN BY: MN	ENGINEER: SS	CHECKED BY: MS	
  THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/08			