DIAMOND HEAD SEWER LIFT STATION **EMERGENCY GENERATOR**

DIAMOND HEAD STATE MONUMENT TMK: 3-1-042:006 HONOLULU, HAWAII

FOR THE STATE OF HAWAII DEPARTMENT OF DEFENSE STATE JOB NO. CA-1802-C

PREPARED BY:

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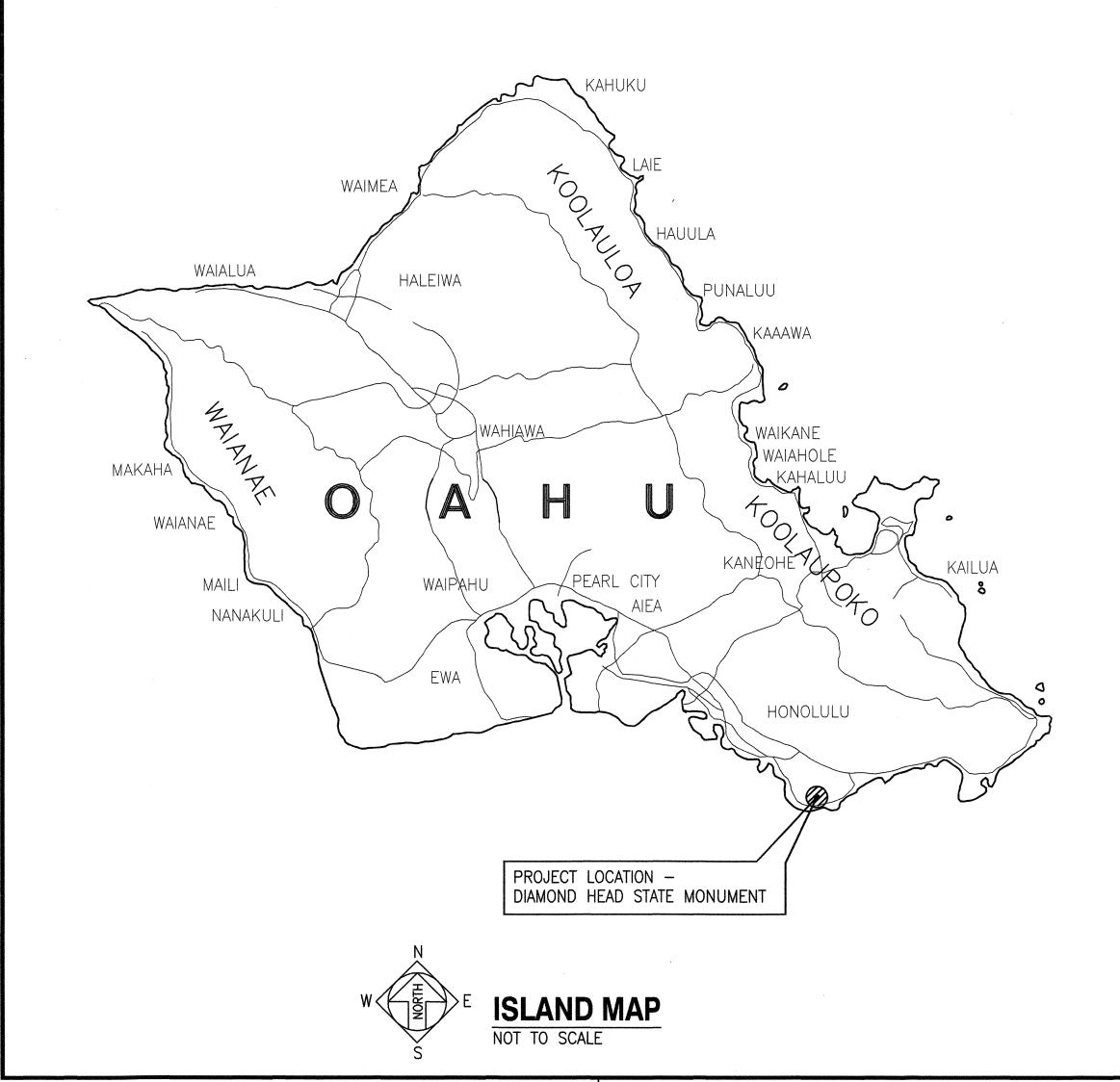
ECS, INC. — ELECTRICAL ENGINEER

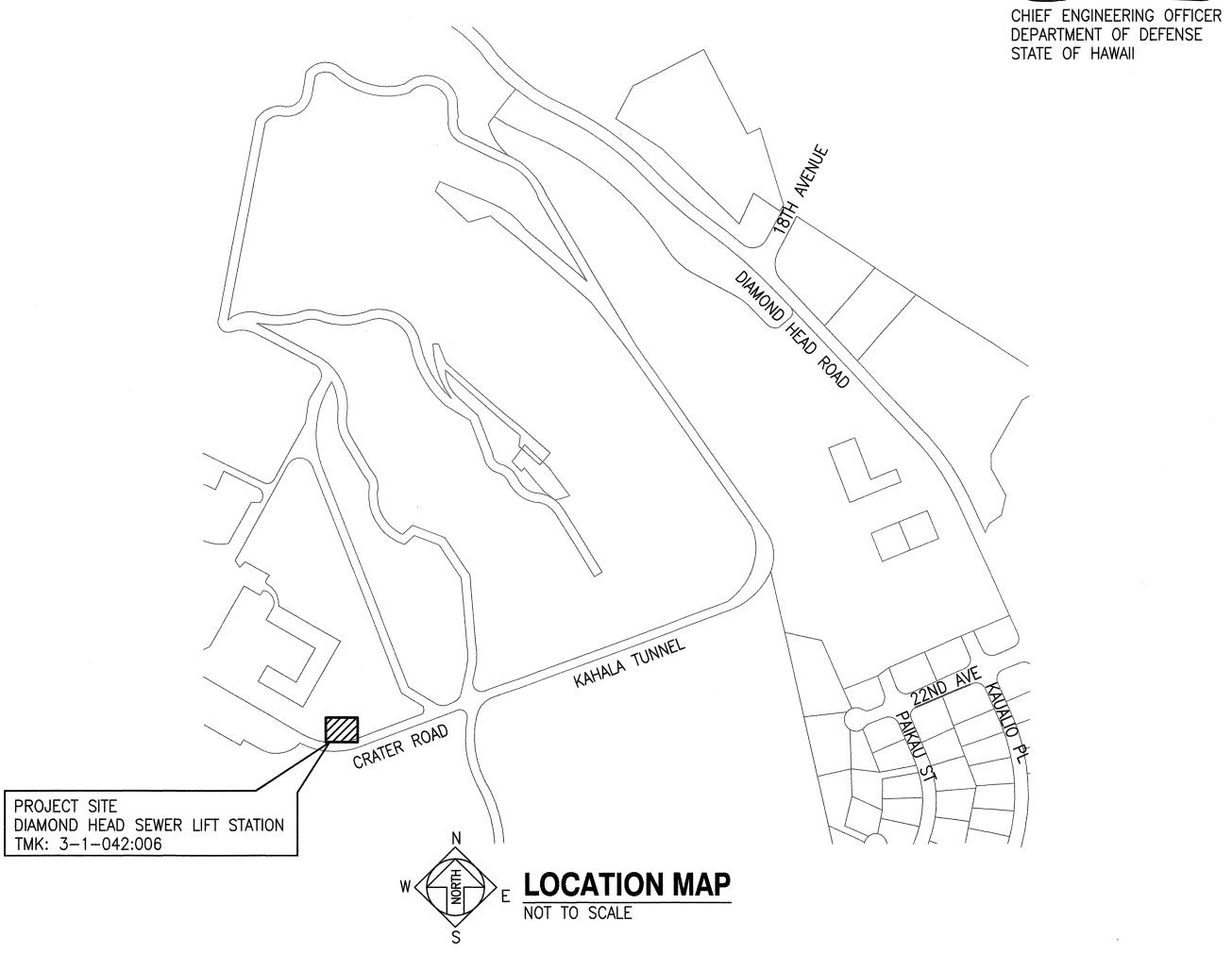
BOW ENGINEERING & DEVELOPMENT, INC. - CIVIL ENGINEER NAGAMINE OKAWA ENGINEERS, INC. — STRUCTURAL ENGINEER LESTER H. INOUYE & ASSOCIATES, LLC - LANDSCAPE ARCHITECT

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APPROVALS:

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FINAL SUBMITTAL SUBMITTAL DATE MAY 2018
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DIAMOND HEAD SEWER LIFT STATION EMERGENCY GENERATOR

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- 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 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.
- 3. NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING CITY DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- 4. THE GENERAL CONTRACTOR/DEVELOPER/OWNER OF THE PROJECT SHALL BE RESPONSIBLE FOR CONFORMANCE WITH APPLICABLE PROVISIONS OF THE 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.

THE GENERAL CONTRACTOR/DEVELOPER/OWNER OF THE PROJECT SHALL OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE(S) FOR THE FOLLOWING:

- 1) STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES THAT DISTURB ONE (1) ACRE OR MORE, AND
- 2) DISCHARGES OF HYDROTESTING EFFLUENT, DEWATERING EFFLUENT, AND WELL DRILLING EFFLUENT TO STATE WATERS.

IN ACCORDANCE WITH STATE LAW, ALL DISCHARGES RELATED TO PROJECT CONSTRUCTION OR OPERATIONS ARE REQUIRED TO COMPLY WITH STATE WATER QUALITY STANDARDS (HAWAII ADMINISTRATIVE RULES, CHAPTER 11–54). BEST MANAGEMENT PRACTICES SHALL BE USED TO MINIMIZE OR PREVENT THE DISCHARGE OF SEDIMENT, DEBRIS, AND OTHER POLLUTANTS TO STATE WATERS. PERMIT COVERAGE IS AVAILABLE FROM THE DEPARTMENT OF HEALTH, CLEAN WATER BRANCH AT http://health.hawaii.gov/cwb. THE OWNER/DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR OBTAINING OTHER FEDERAL, STATE, OR LOCAL AUTHORIZATIONS AS REQUIRED BY LAW.

- 5. 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 INFORM THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING (768–8084); AND FOR CITY PROJECTS, NOTIFY THE RESPONSIBLE CITY AGENCY.
- 6. FOR PROJECTS ABUTTING STATE HIGHWAYS' RIGHTS—OF WAY, THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL NOTIFY THE STATE DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, OAHU DISTRICT, DRAINAGE DISCHARGE UNIT AT 831—6793 FOR AN ASSESSMENT OF STATE HIGHWAYS PERMIT REQUIREMENTS.
- 7. FOR BENCH MARK, SEE SHEET C-03.

By: DTANIGAWA

07 May 2018 - 4:14pm :\FY2017\17044 Diamor 8. SURVEY DATA PROVIDED BY AUSTIN, TSUTSUMI ASSOCIATES DATED DECEMBER 9, 2015.

DIAMOND HEAD STATE MONUMENT PARK NOTES

- 1. EXCEPT FOR PORTIONS OF THE AREA AFFECTED BY THIS CONTRACT, THE PARK WILL BE IN CONTINUOUS USE BY THE PUBLIC. THE CONTRACTOR SHALL COOPERATE FULLY WITH THE STATE OF HAWAII, DIVISION OF STATE PARKS TO EFFECTIVELY MAINTAIN SUCH USE OF THE PARK FACILITIES. CONTACT STATE PARKS, OAHU DISTRICT SUPERINTENDENT, PHONE NO. 733-9102 TWO WEEKS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR RESTRICTIONS OF CONSTRUCTION EQUIPMENT THROUGH THE TUNNEL.
- 3. THE CONTRACTOR SHALL MAINTAIN ALL AREAS AFFECTED BY HIS OPERATIONS, INCLUDING THOSE AREAS OUTSIDE HIS CONSTRUCTION AREA THAT MAY BE AFFECTED.
- 4. THE CONTRACTOR SHALL WORK WITH THE ENGINEER TO LOCATE A SPACE FOR CONSTRUCTION STAFF VEHICLES AND LAYDOWN AREA. THE CONTRACTOR SHALL PARK AND STAGE EQUIPMENT ONLY IN AREAS DESIGNATED BY THE ENGINEER.
- 5. THE PARK SHALL REMAIN OPEN AT NORMAL HOURS OF OPERATION (6:00 AM TO 6:00 PM) DURING THE CONSTRUCTION PERIOD. HOURS OF WORK WORK PERIODS DURING THE WEEK AND GENERAL CONSTRUCTION SCHEDULE, SHALL BE COORDINATED WITH STATE PARKS, OAHU DISTRICT SUPERINTENDENT, PHONE NO. 733-9102, THE DEPARTMENT OF DEFENSE AND ANY OTHER USER OF THE PARK. AT MINIMUM TWO WEEKS PRIOR TO THE START OF CONSTRUCTION.

GRADING NOTES

- . ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15, AND 16, AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED.
- 2. THE CONTRACTOR AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL".
- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT—LADEN RUNOFF FROM LEAVING THE SITE.
- . ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.
- 5. FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
- 6. THE CITY SHALL BE INFORMED OF THE LOCATION OF THE BORROW/DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE BORROW/DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- 7. NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE DIRECTOR, D.P.P., PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH THE COMMUNITY NOISE CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46 "COMMUNITY NOISE CONTROL".
- 8. THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.

- 9. WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY EARTH MOVING PHASE OF THE GRADING IS INITIATED.
- 10. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.
- 11. TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR GRADING PERMIT.
- 12. IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
- 13. BUILDING PERMIT FOR RETAINING WALLS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF GRADING WORK ON SITE.
- 14. FOR ALL PROJECTS, WHICH WILL DISTURB ONE (1) ACRE OR MORE OF LAND, THE CONTRACTOR SHALL NOT START CONSTRUCTION UNTIL A NOTICE OF GENERAL PERMIT COVERAGE (NGPC) IS RECIEVED FROM THE DEPARTMENT OF HEALTH, STATE OF HAWAII, AND HAS SATISFIED ANY OTHER APPLICABLE REQUIREMENTS OF THE NPDES PERMIT PROGRAM. ALSO, FOR NON—CITY OR OTHER GOVERNMENTAL PROJECTS, THE CONTRACTOR SHALL PROVIDE A WRITTEN COPY OF THE NGPC TO THE PERMITTING AND INSPECTION SECTION, CIVIL ENGINEERING BRANCH, D.P.P., AT LEAST SEVEN (7) CALENDAR DAYS BEFORE THE START OF CONSTRUCTION. FOR CITY OR OTHER GOVERNMENTAL PROJECTS, THE CONTRACTOR SHOULD PROVIDE A WRITTEN COPY OF THE NGPC TO THE APPROPRIATE CITY DEPARTMENT OR GOVERNMENTAL AGENCY PER THEIR REQUIREMENTS.
- 15. ALL GRADING AND CONSTRUCTION WORK SHALL IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE WILL BE REDUCED TO THE MAXIMUM EXTENT PRACTICABLE AND WILL NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF WATER QUALITY STANDARDS.
- 16. NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHOULD COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE VIOLATOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECTED TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.
- 17. MATERIALS FOR FILL SHALL BE FREE FROM VEGETABLE MATTER AND OTHER DELETERIOUS SUBSTANCES AND SHALL NOT CONTAIN PARTICLES HAVING A DIAMETER OF MORE THAN THREE INCHES (3").
- 18. SOILS SHALL BE COMPACTED TO AT LEAST NINETY-FIVE PERCENT (95%) OF THE SOIL'S MAXIMUM DRY DENSITY.
- 19. FILL MATERIAL SHALL BE COMPACTED AT THE APPROPRIATE MOISTURE CONTENT. APPROPRIATE MOISTURE CONTENT IS DEFINED, AS OPTIMUM MOISTURE CONTENT (±3%).
- 20. FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS. COMPACTED LAYER THICKNESS NORMALLY WILL BE SIX INCHES (6").





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GENERAL NOTES

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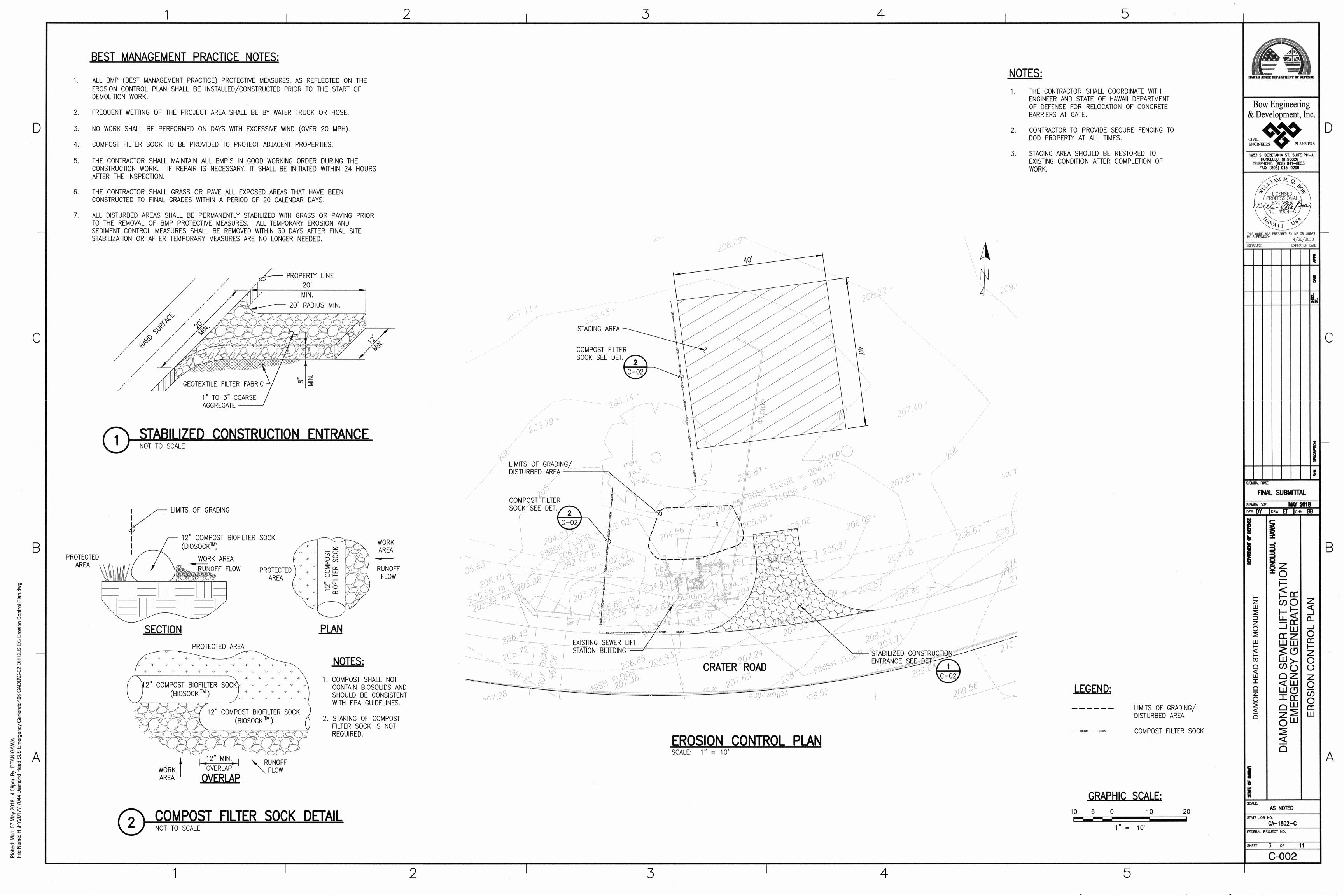
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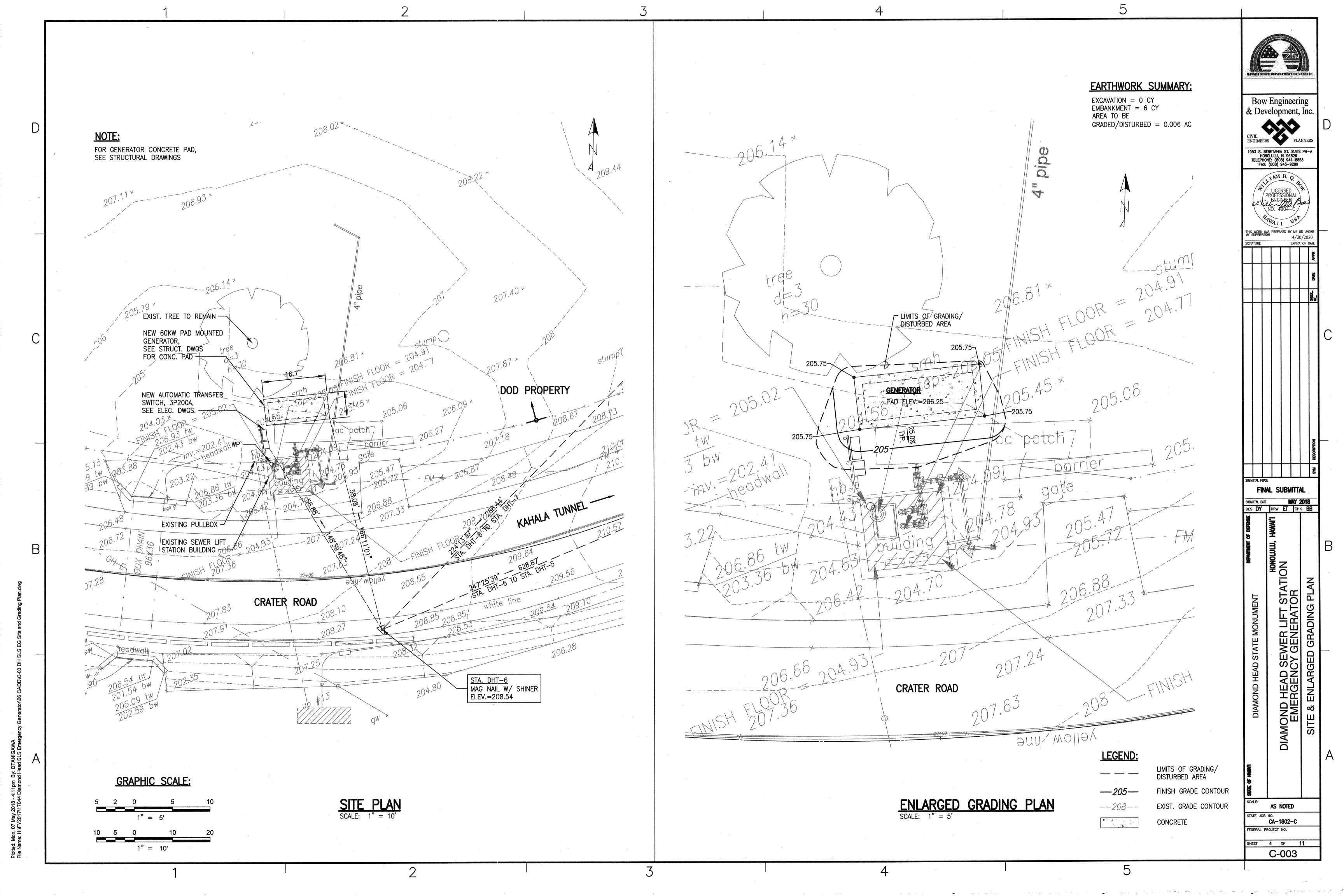
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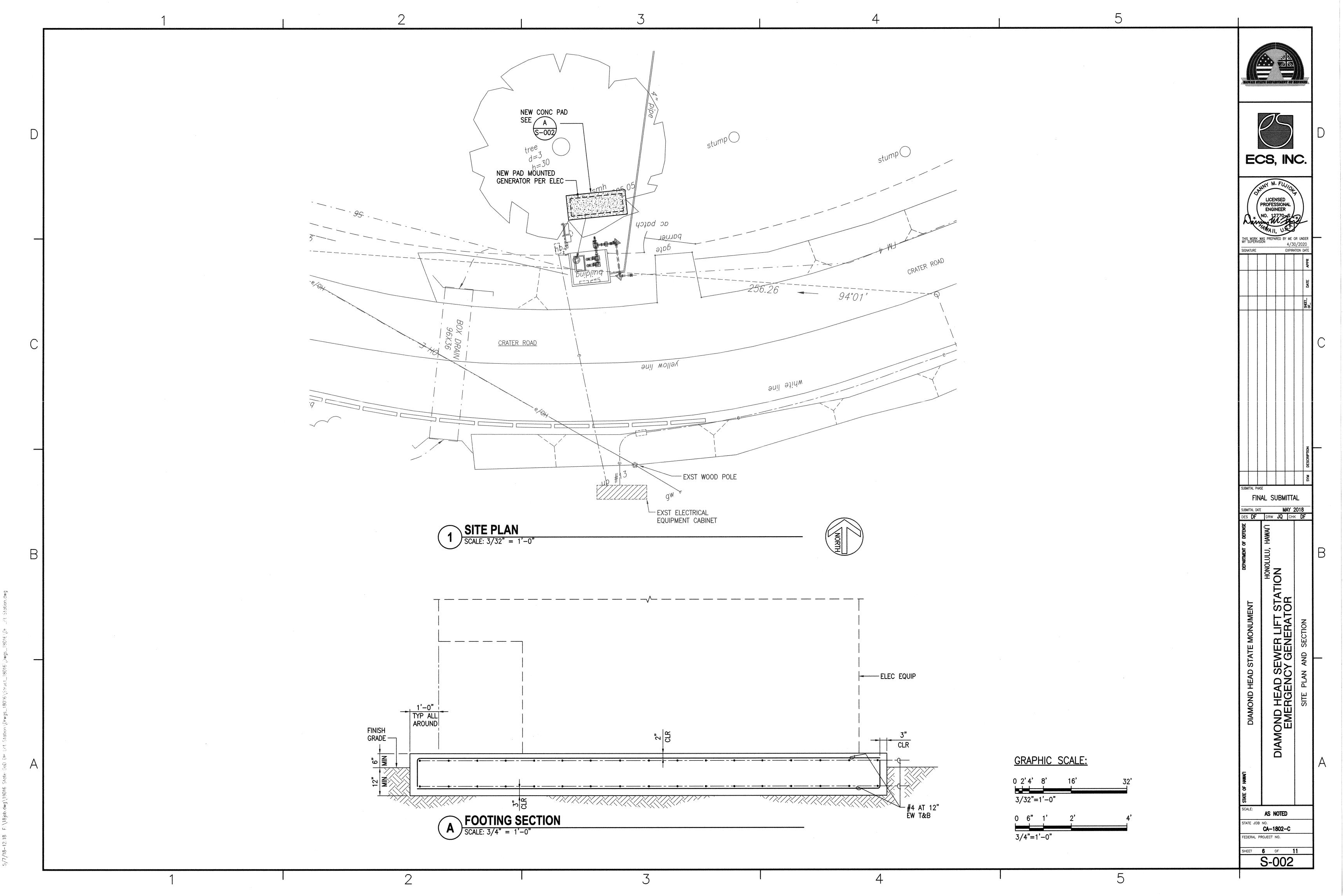
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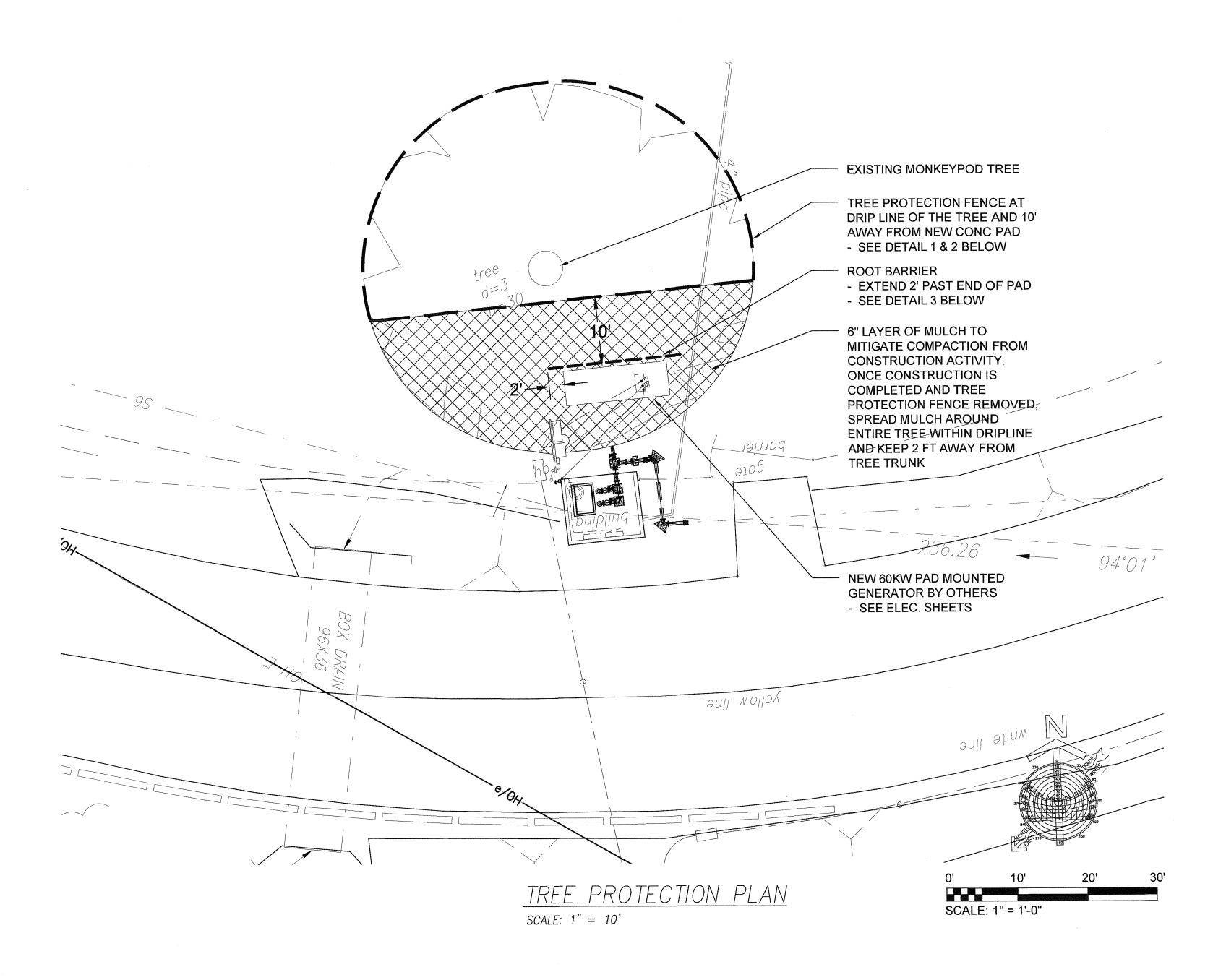
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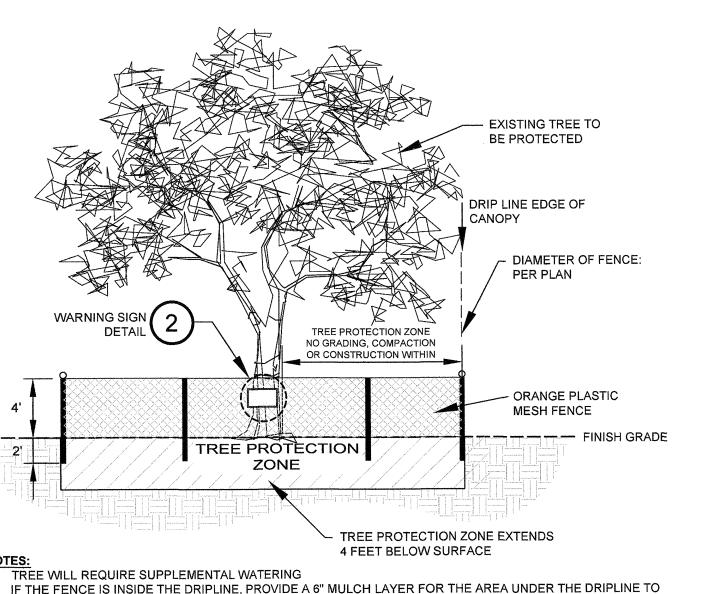
C-001











PROTECT THE TREE ROOTS AND GROUND FROM DAMAGE, SOIL COMPACTION AND EROSION FROM

TREE PROTECTION ZONE DETAIL

3. 2" GALVANIZED IRON POSTS, DRIVEN INTO THE GROUND TO A MIN. 2' DEPTH, AT NO MORE THAN 10' SPACING.

4. THE GENERAL CONTRACTOR SHALL SCHEDULE AN ON SITE MEETING WITH THE OFFICER IN CHARGE (OIC) TO DISCUSS THE INSTALLATION AND LAYOUT OF THE TREE PROTECTION FENCING. CONTACT OIC AT XXX-XXXX.

CONSTRUCTION EQUIPMENT AND VEHICLES.

NOT TO SCALE

AVOID DAMAGING ROOTS DURING POST INSTALLATION.

WARNING TREE PROTECTION ZONE

THIS FENCE AND SIGN SHALL NOT BE REMOVED WITHOUT APPROVAL FROM THE OFFICER IN CHARGE PHONE: XXX-XXXX

STATE OF HAWAII, DEPARTMENT OF DEFENSE

- MINIMUM SIZE OF SIGN: 8-1/2" X 11".
- SECURELY FASTEN TO FENCE. HANG MORE THAN ONE SIGN FOR VISIBILITY PURPOSES IF NEEDED
- SIGN TO BE MADE OF WEATHERPROOF MATERIAL
- WARNING SIGN DETAIL

NOT TO SCALE



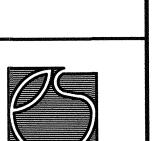
SECTION



- 1. THE CONTRACTOR SHALL HIRE A TREE TRIMMING COMPANY THAT HAS AN INTERNATIONAL SOCIETY OF ABORICULTURE (ISA) CERTIFIED ARBORIST AND OR ISA CERTIFIED TREE WORKER AS PART OF ITS CREW
- 2. THE CONTRACTOR SHALL ALSO HIRE AN ISA CONSULTING CERTIFIED ARBORIST (CCA) WHO SHALL PROVIDE CONSULTING SERVICES PERFORMANCE QUALITY ASSURANCE DUTIES DURING THE CONSTRUCTION PERIOD OF THE WORK. THE CCA SHALL ENSURE THAT ANY BRANCH AND OR ROOT PRUNING IS PERFORMED IN ACCORDANCE WITH ANSI A-300 PART 1 (2008) STANDARDS AS APPROVED BY THE ISA AND THE TREE CARE INDUSTRY ASSOCIATION. THE CCA SHALL FURTHER ENSURE THAT PROPER MEASURES ARE TAKEN TO PROTECT THE CROWN AND ROOT SYSTEM OF THE TREE FROM UNNECESSARY DAMAGE FROM CONSTRUCTION ACTIVITY.
- 3. THE CONSULTING CERTIFIED ARBORIST (CCA) SHALL ENSURE THAT THE TREES ARE PROVIDED PROPERT CARE AND RETAIN GOOD HEALTH DURING THE CONSTRUCTION PERIOD. FIELD DECISIONS BY THE CCA, CONTRACTOR AND CONTRACTING OFFICER MAY BE REQUIRED TO ENSURE THE SAFETY AND HEALTH OF THE TREE. THE CCA SHALL DIRECT, ASSIST AND MONITOR ANY TREE WORK BY THE TREE TRIMMING COMPANY'S ISA CERTIFIED ARBORIST AND OR ISA CERTIFIED TREE WORKER
- 4. ROOT PRUNING: PER ANSI A-300 PART 1 (2008), SURFACE ROOTS THAT ARE GREATER THAN 2 INCHES IN DIAMETER SHALL BE PRUNED BY MANUALLY DIGGING A TRENCH AROUND THE ROOT AND CUTTING THE EXPOSED ROOT SURFACES WITH A POWER OR HANDSAW, ROCK SAW OR NARROW TRENCHER WITH A SHARP BLADE OR APPROVED ROOT PRUNING EQUIPMENT. ROOT PRUNING OF ROOTS BELLOW THE SURFACE SHALL BE DONE BY CAREFULLY EXPOSING THEM BY HAND OR POWER EQUIPMENT UNDER THE SUPERVISION OF THE CCA. ANY ROOTS DAMAGED DURING GRADING OR CONSTRUCTION, SHALL BE EXPOSED TO THE NEAREST SOUND TISSUE AND CUT CLEANLY WITH A SHARP SAW UNDER THE CCA'S APPROVAL. THE CCA SHALL DETERMINE WHETHER CROWN PRUNING IS REQUIRED AS A RESULT OF THE ROOT PRUNING.
- 5. IF TREE CROWN OR ROOT INJURY SHOULD OCCUR: IF DAMAGE OCCURS TO THE TREE'S CROWN OF ROOTS, THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY SUCH INJURY TO THE CCA. THE CCA SHALL EVALUATE THE INJURY AND APPLY THE APPROPRIATE TREATMENT. THE CCA SHALL SUBMIT A WRITTEN REPORT OF THE TREE INJURY AND TREATMENT TO THE CONTRACTING OFFICER.

TREE PROTECTION / PRESERVATION PLAN NOTES:

- THE CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING WHICH SHALL BE ATTENDED BY THE CONTRACTOR, SUB-CONTRACTORS, THE CONTRACTING OFFICER, AND THE CONTRACTOR'S ISA CERTIFIED CONSULTING ARBORIST AND THE PROJECT ARBORIST TO REVIEW PROCEDURES FOR PERFORMING TREE-RELATED WORK, WORK IN THE AREAS AROUND THE TREES, ACCESS ROUTES AND STORAGE AREAS, AND WHAT MEASURES MAY NEED TO BE TAKEN TO PROTECT TREES DURING THE CONSTRUCTION
- 2. THE "TREE PROTECTION ZONE" AND/OR BARRIER: THE ISA CERTIFIED CONSULTING ARBORIST (CCA), CONTRACTOR, AND THE CONTRACTING OFFICER WILL USE THE TREE PROTECTION PLAN AS A GUIDE TO DETERMINE THE AREA TO BE PROTECTED. NO GRADING, COMPACTING, OR CONSTRUCTION ACTIVITY SHALL OCCUR IN THE ZONES IMMEDIATELY SURROUNDING THE TREE AND INSIDE THE BARRICADED AREA. IF UTILITIES MUST TRAVERSE THE TREE PROTECTION ZONE, THEY SHALL BE TUNNELED, BORED AT A DEPTH OF 3 FEET, OR GREATER WITHIN THE ZONE. WHERE FEASIBLE, THE ZONE SHALL BE ENTIRELY ENCLOSED BY A TEMPORARY BARRIER PRIOR TO ANY DEMOLITION WORK AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETED. THE PROTECTION BARRIERS SHALL NOT BE RELOCATED OR REMOVED WITHOUT THE PERMISSION OF THE CCA.
- 3. THE TREE PROTECTION ZONE (TPZ) WARNING SIGN SHALL BE PROMINENTLY DISPLAYED ON EACH TREE PROTECTION FENCE. AFFIX FOUR SIGNS FOR FENCING AROUND INDIVIDUAL TREES, AND FOR LONGER FENCE RUNS, SPACE SIGNS A MINIMUM OF 20 FEET ON CENTER. THE SIGN SHALL BE A MINIMUM SIZE OF 8 1/2 INCHES BY 11 INCHES, AND SHALL CLEARLY STATE: WARNING, TREE PROTECTION ZONE. THIS FENCE AND SIGN SHALL NOT BE REMOVED WITHOUT THE APPROVAL OF CONTRACTING OFFICE, AND SHALL INCLUDE OIC CONTACT PHONE NUMBER.
- 4. MULCH: THE CCA SHALL DETERMINE WHEN MULCH IS REQUIRED INSIDE THE TREE PROTECTION ZONE AND ON THE PROJECT WORK AREA. MULCH SHALL BE INSTALLED INSIDE THE TREE PROTECTION ZONE SIX INCHES THICK. THERE SHALL BE A GAP OF TWO INCHES BETWEEN THE TRUNK AND MULCH LAYER.
- 5. TREE MAINTENANCE: IN CONSULTATION WITH THE CONTRACTOR'S CCA, THE CONTRACTOR SHALL IRRIGATE THE TREES AS NECESSARY TO MAINTAIN THEIR HEALTH DURING THE COURSE OF THE DEMOLITION AND CONSTRUCTION PERIOD. GROUNDCOVER IS TO BE MAINTAINED. NO HERBICIDES ARE PERMITTED UNDER THE TREE CROWNS.
- 6. PENALTIES, COMPENSATION AND MITIGATION: TOTAL TREE LOSS: A SUB-CONTRACTOR SHALL PAY TO THE TREE OWNER THE VALUE OF ANY EXISTING TREES TO REMAIN ON SITE, PROVIDED THAT SUCH TREE DIED, SUSTAINED DAMAGE, AND/OR REQUIRED CARE OR REMOVAL DUE TO FAILURE OF THE SUB-CONTRACTOR TO PROVIDE ADEQUATE PROTECTION, MAINTENANCE OR FULL COMPLIANCE WITH THE TREE PROTECTION AND PROTECTION PLAN SPECIFICATIONS. REPLACEMENT WILL BE WITH A COMPARABLE TREE ACCEPTABLE TO THE TREE OWNER. THE SUBJECT TREE WILL SEE DIE BACK IN THE BRANCHES ABOVE WHERE THE TREE ROOTS WERE CUT TO ACCOMMODATE THE TRANSFORMER PAD. TREE DAMAGE BEYOND THAT, THE ABOVE PENALTIES WILL APPLY.
- 7. IF APPROPRIATE MEASURES HAVE BEEN TAKEN TO MINIMIZE THE DAMAGE, AND NO SIGNIFICANT TREE DECLINE, LOSS OF FUNCTION, OR DEATH OCCURS, PENALTIES AND/OR COMPENSATION MAY BE WAIVED PER APPROVAL OF THE CCA AND CONTRACTING OFFICER.
- 8. THE VALUE OF THE TREE SHALL BE DETERMINED BY THE CCA BASED ON THE METHODS OF TREE APPRAISAL SET FORTH IN GUIDE FOR PLANT APPRAISAL (9TH EDITION). ANY WOUND OR INFLICTION TO TREES REMAINING ON SITE CONSTITUTES A PARTIAL INJURY VIOLATION.
- 9. PARTIAL INJURY INCLUDES BUT IS NOT LIMITED TO:
 - a) MECHANICAL INJURIES AS BREAKS, RIPS, PUNCTURES, HOLES, SPLITS, CRACKS, TEARS AND OTHER WOUND TO TREE TRUNK, BRANCHES OR ROOTS CAUSED BY PERSONS, TOOLS, VEHICLES, EQUIPMENT OR OTHER LARGE OBJECTS ASSOCIATED WITH CONSTRUCTION ACTIVITY.
 - b) CRUSHED ROOTS CAUSED BY PERSONS OR EQUIPMENT
 - c) COMPACTED SOIL CAUSED BY VEHICLES OR HEAVY EQUIPMENT
 - d) CHEMICAL CONTAMINATION BY PERSONS OR EQUIPMENT ON CONSTRUCTION SITE
 - e) UNAPPROVED GRADE LEVEL CHANGES
 - F) IMPROPER PRUNING PROCEDURES



ECS, INC.

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EET 7 OF 11 L-001

EDGE OF PAVING

ROOT GUIDES PER

BACKFILL SOIL TO BE

TAMPED TO PREVENT

UB 24-2 DEEPROOT TREE

CONTINUOUS AT EDGE OF

ROOT GUIDES TO BE

FINISH GRADE OF CONCRETE PAD

SETTLING

INSTALL DEEPROOT TREE

MANUFACTURER'S SPECS.

POWER TRANSFORMER

CIRCUIT BREAKER

NON-FUSED DISCONNECT SWITCH

AUTOMATIC TRANSFER SWITCH

CURRENT TRANSFORMER

METER SOCKET

GROUND

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GENERAL ELECTRICAL NOTES:

- 1. ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE, AND ALL LOCAL RULES AND REGULATIONS.
- 2. THE CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS AND THE EXTENT OF REMOVAL, RELOCATION, RECONNECTION AND/OR NEW WORK PRIOR TO BIDDING. BID SUBMISSION SHALL BE CONSIDERED AS EVIDENCE THAT THE CONTRACTOR HAS VISITED THE SITE AND RESOLVED ALL DISCREPANCIES AND QUESTIONS AND NO EXTRA PAYMENT WILL BE AUTHORIZED FOR WORK MADE NECESSARY BY THE CONTRACTOR'S FAILURE TO DO SO.
- 3. EXISTING DEVICE LOCATIONS, CIRCUIT ASSIGNMENTS, WIRING CONNECTIONS AND CONDUIT RUNS INDICATED WERE DERIVED FROM AVAILABLE REFERENCE DOCUMENTS AND LIMITED FIELD INVESTIGATION. FIELD VERIFY ALL EXISTING CONDITIONS AND MAKE ANY NECESSARY ADJUSTMENTS TO SATISFY THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
- 4. ALL CIRCUITS SHALL INCLUDE AN INSULATED GREEN GROUNDING CONDUCTOR, SIZED PER THE NATIONAL ELECTRICAL CODE. THIS CONDUCTOR SHALL BE CARRIED IN ALL RACEWAYS AND SHALL BE ATTACHED TO THE DEVICE OR EQUIPMENT HOUSING USING A SUITABLE GROUNDING LUG.
- 5. WORK INCIDENTAL TO THE CONTRACT AND NECESSARY TO COMPLETE THE PROJECT, ALTHOUGH NOT SPECIFICALLY REFERRED TO ON THE CONTRACT DOCUMENTS, SHALL BE FURNISHED AND PERFORMED BY THE CONTRACTOR.
- 6. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- 7. SHOULD PROJECT CONDITIONS REQUIRE REARRANGEMENT OF WORK, THE CONTRACTOR SHALL MARK SUCH CHANGES ON THE AS-BUILT DRAWINGS. IF THESE CHANGES REQUIRE ALTERNATE METHODS TO THOSE SPECIFIED IN THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL SUBMIT DRAWINGS TO REFLECT THE PROPOSED ALTERNATE METHODS TO THE PROJECT MANAGER. THE CONTRACTOR SHALL NOT PROCEED UNTIL APPROVAL IS OBTAINED. REARRANGEMENT OF WORK FOR THE PURPOSE OF COORDINATION SHALL NOT BE CONSIDERED AN ITEM FOR EXTRA COST.
- MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO AREAS AND SYSTEMS OUTSIDE OF THE PROJECT LIMITS AND THAT PASS THROUGH THE PROJECT LIMITS. PROVIDE NEW JUNCTION BOXES, CONDUITS AND WIRING, AND THE LABOR REQUIRED TO FACILITATE SAID CONTINUITY. BOXES, CONDUITS AND WIRING SHALL BE IN ACCORDANCE WITH THE NEC.
- 9. EXISTING CONDITIONS: ALL EXISTING DUCTLINES INDICATED ON THE DRAWINGS ARE APPROXIMATE LOCATIONS BASED UPON AVAILABLE "AS-BUILT" DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR TONING THE ROUTES OF THE PROPOSED DUCTLINES TO IDENTIFY ANY POTENTIAL CONFLICTS PRIOR TO EXCAVATION. DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR AS A RESULT OF THE FAILURE TO TONE THE ROUTE PRIOR TO EXCAVATION WORK, WILL REQUIRE THE CONTRACTOR TO REPAIR THE DAMAGE AT NO COST TO THE STATE, TO THE SATISFACTION OF THE PROJECT MANAGER.
- 10. DO NOT USE A COMMON NEUTRAL FOR MULTIPLE BRANCH CIRCUITS INSTALLED IN A COMMON CONDUIT. PROVIDE A DEDICATED NEUTRAL FOR EACH INDIVIDUAL CIRCUIT. WHERE MULTIPLE DEDICATED NEUTRALS ARE INSTALLED IN A COMMON CONDUIT, PROVIDE COLOR CODING OF EACH NEUTRAL CONDUCTOR IN ACCORDANCE WITH NEC 2008.
- 11. PAINTING OF ELECTRICAL EQUIPMENT: PRIME ALL EXPOSED CONDUITS, BOXES, FITTINGS, SUPPORT CHANNELS, MOUNTING HARDWARE AND ACCESSORIES WITH A 2-PART EPOXY PRIMER AND FINISH WITH 2 COATS OF AN ALIPHATIC ACRYLIC URETHANE PAINT. PAINT FINISH TO MATCH THE SURFACE ON WHICH THEY ARE MOUNTED OR TO MATCH THE FINISH OF THE ADJACENT SURFACES. STAINLESS STEEL MATERIALS NEED NOT BE PAINTED.
- 12. THE CONTRACTOR SHALL SCHEDULE ALL WORK TO MINIMIZE DISRUPTION TO EXISTING PUMP STATION OPERATIONS. PROVIDE TEMPORARY POWER SOURCE FOR OUTAGES DURING PARK HOURS OF 6AM THROUGH 6PM. CONTRACTOR SHALL COORDINATE SCHEDULING REQUIREMENTS AND WORK AFTER PARK HOURS WITH THE ENGINEER PRIOR TO COMMENCING WORK.

II STATE DEPARTMENT OF DEFENSE	

ECS, INC.

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TATE JOB NO.

CA-1802-C

TOBERAL PROJECT NO.

FEDERAL PROJECT NO.

SHEET 8 OF 11

E-001

CITY AND COUNTY OF HONOLULU REVISED ORDINANCE CHAPTER 32, HONOLULU COUNTY CODE 1990, AS AMENDED

To the best of my knowledge, this project's design substantially conforms to the Building Energy Conservation Code for:

Mechanical Component Systems Signature: Date: 5/10/	S /10/18

Signatur	e: <u>// /</u>	millon	Date:	3/10/10	
Name:	MICH	ELE N. ADOLPHO			
Title:	PRO	JECT ENGINEER			
License	No.:	10017-E			

