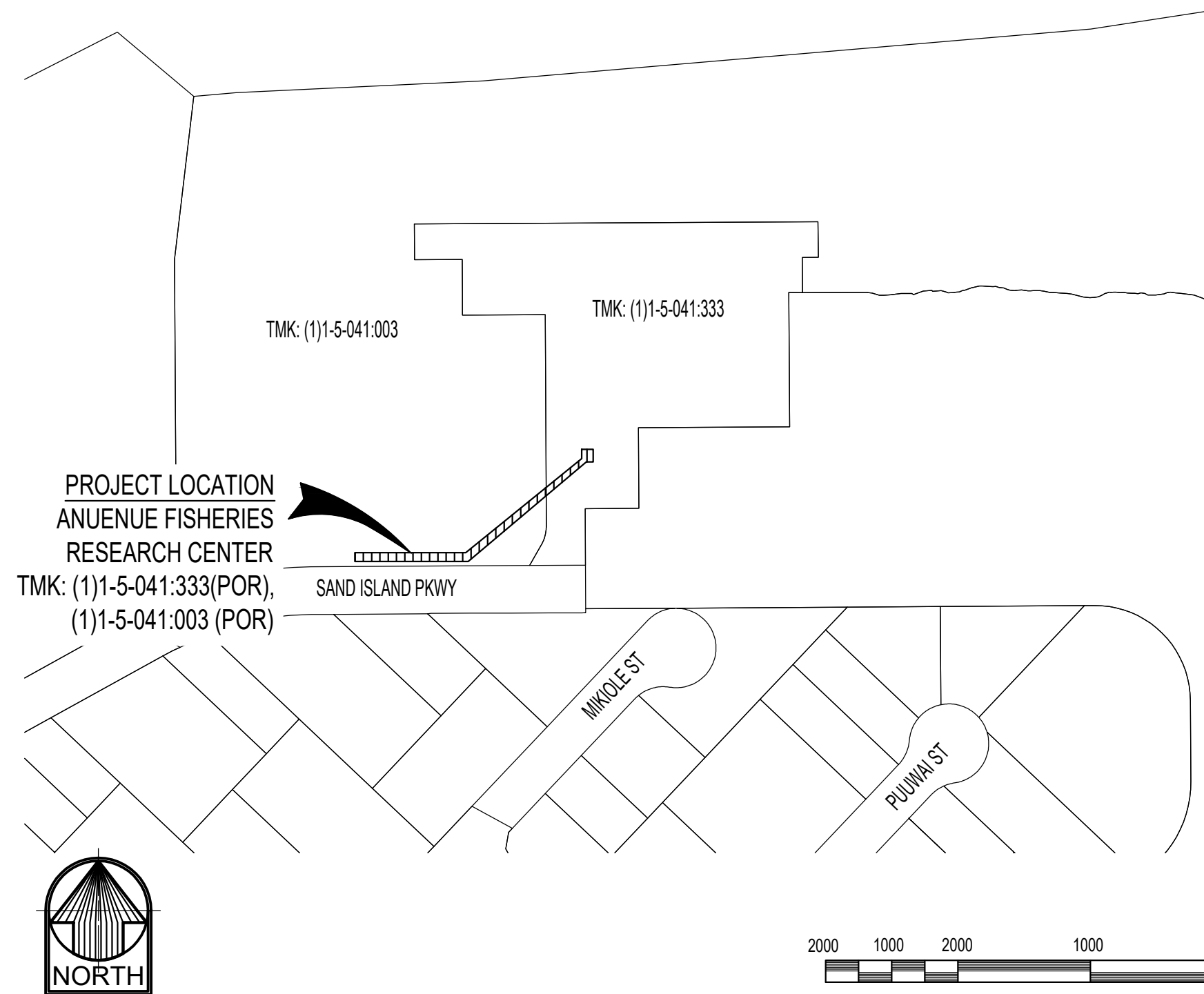


LOCATION MAP



STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 ENGINEERING DIVISION
 FOR
 DIVISION OF AQUATIC RESOURCES

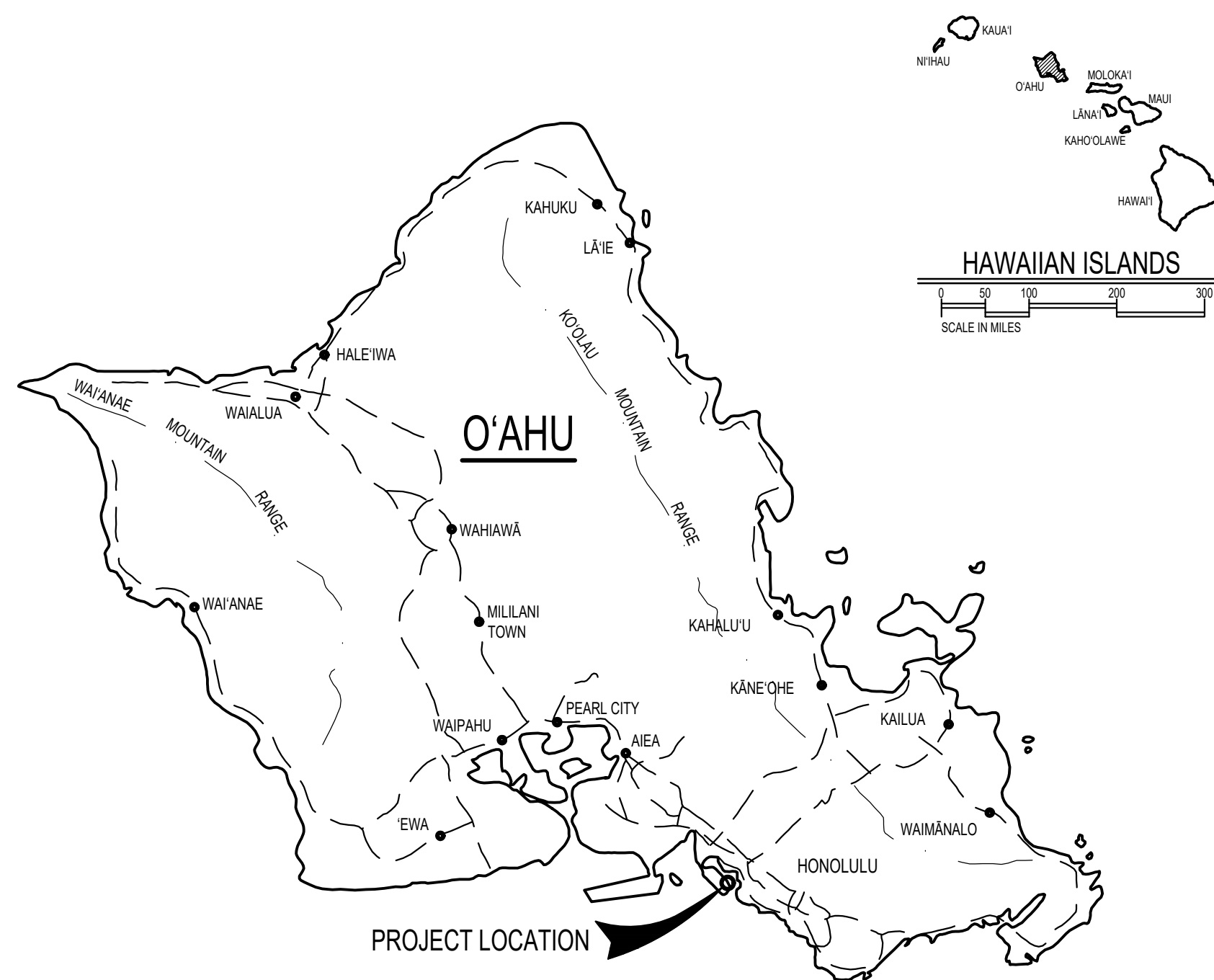
JOB NO. C00B091C
**ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY
 IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS)**
 SAND ISLAND, O'AHU, HAWAII
 TAX MAP KEY: (1) 1-5-041:333 (POR)
 (1)1-5-041:003 (POR)

SHEET INDEX

SHEET NO.	DRAWING NO.	DESCRIPTION
1	C001	TITLE SHEET, PROJECT TEAM, LOCATION, VICINITY MAP & SHEET INDEX
2	C002	NOTES AND ABBREVIATIONS
3	C003	EROSION AND SEDIMENT CONTROL NOTES
4	C101	DEMOLITION AND SITE PLAN
5	C102	EROSION AND SEDIMENT CONTROL PLAN
6	C103	UTILITY PLAN AND PROFILE
7	C501	MISCELLANEOUS DETAILS
8	E001	ELECTRICAL GENERAL NOTES AND SYMBOL LIST
9	E002	SITE ELECTRICAL PLAN
10	E101	ELECTRICAL PLAN
11	E201	MISCELLANEOUS ELECTRICAL DETAILS

TOTAL SHEETS: 11

VICINITY MAP



1 ISLAND OF OAHU
 NTS

SCOPE OF WORK:
 CLOSURE OF EXISTING CESSPOOL AND THE CONSTRUCTION
 OF A LOW PRESSURE SEWER SYSTEM INCLUSIVE OF A
 GRINDER PUMP AND ALL THE APPURTENANCES.

PROJECT TEAM

ARCHITECT
 COMPANY: BOWERS + KUBOTA
 CONTACT: JULIUS VERGABERA
 ADDRESS: 94-408 AKOKI STREET,
 SUITE 201-A, WAIPAHU, HI 96797
 PHONE NUMBER: 808-836-7787
 EMAIL: jvergabera@bowersandkubota.com

CIVIL
 COMPANY: BOWERS + KUBOTA
 CONTACT: LINDSAY NAKASHIMA
 ADDRESS: 94-408 AKOKI STREET,
 SUITE 201-A, WAIPAHU, HI 96797
 PHONE NUMBER: 808-836-7787
 EMAIL: lnakashima@bowersandkubota.com

ELECTRICAL
 COMPANY: BOWERS + KUBOTA
 CONTACT: BRIAN ITOZAKI
 ADDRESS: 94-408 AKOKI STREET,
 SUITE 201-A, WAIPAHU, HI 96797
 PHONE NUMBER: 808-836-7787
 EMAIL: bitozaki@bowersandkubota.com

APPROVED:

Apr 30, 2026

BRIAN J. NEILSON
 ADMINISTRATOR
 DIVISION OF AQUATIC RESOURCES
 DEPARTMENT OF LAND AND NATURAL RESOURCES

DATE

Apr 30, 2026

DINA U. LAU
 ACTING CHIEF ENGINEER
 ENGINEERING DIVISION
 DEPARTMENT OF LAND AND NATURAL RESOURCES

DATE

CHIEF, WASTEWATER BRANCH
 DEPARTMENT OF PLANNING AND PERMITTING
 CITY AND COUNTY OF HONOLULU

DATE

CHIEF, ENVIRONMENTAL MANAGEMENT DIVISION
 DEPARTMENT OF HEALTH
 STATE OF HAWAII

DATE

GENERAL NOTES:

- VERIFY AND CHECK ALL DIMENSIONS AND DETAILS ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- WORK INCIDENTAL TO THE CONTRACT AND NECESSARY TO COMPLETE THE PROJECT, ALTHOUGH NOT SPECIFICALLY REFERRED TO ON THE CONTRACT DOCUMENTS, MUST BE FURNISHED AND PERFORMED BY THE CONTRACTOR.
- IN PERFORMING ALL WORK, THE CONTRACTOR MUST EXERCISE DUE CARE AND CAUTION NECESSARY TO AVOID ANY DAMAGE TO AND IMPAIRMENT IN THE USE OF ANY EXISTING UTILITY LINE. ANY DAMAGE INFLICTED ON EXISTING UTILITY LINES RESULTING FROM THE CONTRACTOR'S OPERATIONS MUST BE IMMEDIATELY REPAIRED, OR RESTORED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE TO THE ACCEPTANCE AND APPROVAL OF THE ENGINEER.
- THE CONTRACTOR AGREES THAT HE/SHE MUST 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; AND THAT THIS REQUIREMENT MUST APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR MUST DEFEND, INDEMNIFY, AND HOLD THE STATE AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CITY OR ENGINEER.
- THE CONTRACTOR, AT HIS/HER OWN EXPENSE, MUST KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM RUBBISH, DUST, NOISE, EROSION, ETC. THE WORK MUST BE DONE IN CONFORMANCE WITH THE AIR AND WATER POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
- THE CONTRACTOR MUST OBTAIN ALL REQUIRED PERMITS FROM APPROPRIATE GOVERNMENT AGENCIES AT NO ADDITIONAL COST TO THE STATE.
- ALL CONSTRUCTION WORK MUST BE DONE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG).

CONSTRUCTION NOTES:

- ALL APPLICABLE CONSTRUCTION WORK MUST BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," SEPTEMBER 1986, AND "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, I, MAUI, AND HAWAII.
- THE UNDERGROUND PIPES, CABLES, OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS/HER SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR MUST 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 MUST EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS AT NO ADDITIONAL COST TO THE STATE TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR THE NEW LINES.
- NO CONTRACTOR MUST 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 MUST IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- THE CONTRACTOR MUST 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.
- FOR NON-CITY PROJECTS, THE CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, D.P.P. AT 808-768-8084 TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT TWO (2) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
- CONFINED SPACE
 - 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:
 - FULL-BODY HARNESSSES FOR UP TO TWO PERSONNEL.
 - LIFELINE AND ASSOCIATED CLIPS.
 - INGRESS/EGRESS AND FALL PROTECTION EQUIPMENT.
 - TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT.
 - EMERGENCY (ESCAPE) RESPIRATOR (10-MINUTE DURATION).
 - CELLULAR TELEPHONE TO CALL FOR EMERGENCY ASSISTANCE.
 - CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE AT LEAST 20-FEET AWAY).
 - PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.
 - CONTINUOUS FORCED-AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
 - ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).

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

- 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:
 - FULL-BODY HARNESSSES FOR UP TO TWO PERSONNEL.
 - LIFELINE AND ASSOCIATED CLIPS.
 - INGRESS/EGRESS AND FALL PROTECTION EQUIPMENT.
 - TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT.
 - EMERGENCY (ESCAPE) RESPIRATOR (10-MINUTE DURATION).
 - CELLULAR TELEPHONE TO CALL FOR EMERGENCY ASSISTANCE.
 - CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE AT LEAST 20-FEET AWAY).
 - PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.
 - CONTINUOUS FORCED-AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
 - ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).
- PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST IMMEDIATELY SUSPEND WORK AND NOTIFY THE ENGINEER, HONOLULU POLICE DEPARTMENT AND STATE DEPARTMENT OF LAND AND NATURAL RESOURCES-HISTORIC PRESERVATION DIVISION (808-692-8015). FOR CITY PROJECTS, THE CONTRACTOR MUST NOTIFY THE RESPONSIBLE CITY AGENCY.

SEWER SYSTEM REQUIREMENTS:

- SEWER MAIN PIPE AND FITTINGS

GRAVITY MAIN

- ALL SANITARY SEWER PIPE AND FITTINGS SHALL BE PVC SDR-26 BELL AND SPIGOT IN CONFORMANCE WITH THE LATEST VERSION OF ASTM D3034, UNLESS OTHERWISE NOTED ON THE APPROVE PLANS
- LAYING OF PIPE SHALL GENERALLY COMMENCE AT THE LOWEST POINT, THE BELL END FACING UPSTREAM, REGARDLESS OF THE STATIONING SHOWN ON THE PLANS. PIPE SHALL BE FITTED TOGETHER AND MATCHED WITH GASKETS PROPERLY SEATED SO THAT WHEN LAID IT WILL FORM A UNIFORM AND SMOOTH INVERT.
- BECAUSE OF THE NATURE OF PLASTIC PIPE AND FITTINGS, THE CONTRACTOR IS CAUTIONED TO EXERCISE CARE IN HANDLING, LOADING, UNLOADING, AND STORING TO AVOID DAMAGE. KEEP PIPE AND GASKETS CLEAN, AWAY FROM OIL, GREASE, EXCESSIVE HEAT AND ELECTRIC MOTORS, WHICH PRODUCE OZONE, AND PROTECTED FROM DIRECT SUNLIGHT AND TEMPERATURE CHANGES IN PROLONGED EXPOSURE TO AVOID CRACKING.

LOW PRESSURE SEWER

- LOW PRESSURE SEWER PIPING SHALL BE POLYVINYL CHLORIDE (PVC) OR HIGH DENSITY POLYETHYLENE (HDPE), UNLESS OTHERWISE APPROVED.
- METALLIC TRACER TAPE SHALL BE INSTALLED ABOVE ALL BURIED PIPING. TRACER TAPE SHALL BE ACID AND ALKALI-RESISTANT, GREEN OR YELLOW, 6-INCHES (MINIMUM) WIDTH, 9-MIL (MINIMUM) THICKNESS AND BE REINFORCED FOR INCREASED BREAKING STRENGTH. METALLIC TRACER TAPE SHALL BE THORTEC DETECTABLE WARNING TAPE OR APPROVED EQUAL AND MUST HAVE WORDING SIMILAR TO "CAUTION - SEWER LINE BURIED BELOW." TRACER TAPE SHALL BE INSTALLED AT A DEPTH OF APPROXIMATELY 12-INCHES FROM GRADE (MINIMUM COVERAGE OF 6-INCHES REQUIRED). TAPE SHALL BE PLACED ON COMPACTED BACKFILL AND SHALL BE LAID IN CONTINUOUS LENGTHS WITH WORDING FACING UPWARDS.

- TRENCHING, PIPE BEDDING, AND BACKFILL

- THE CONTRACTOR SHALL HAVE APPROPRIATE EQUIPMENT ON-SITE TO PRODUCE A DRY, FIRM, SMOOTH, UNDISTURBED SUBGRADE AT THE TRENCH BOTTOM THAT IS TRUE TO LINE AND GRADE. THE TRENCH BOTTOM SHALL BE FREE OF LOOSE MATERIALS OR TOOTH GROOVES FOR THE ENTIRE TRENCH WIDTH PRIOR TO PLACING PIPE BEDDING MATERIAL.
- THE CONTRACTOR SHALL FURNISH AND INSTALL SUFFICIENT TRENCH BOXES, SHORING, SHEETING, OR BRACING TO INSURE THE SAFETY OF WORKMEN AND THE PUBLIC, PROTECT THE WORK, AND PROTECT EXISTING FACILITIES.
 - SHORING, SHEETING, AND BRACING SHALL COMPLY WITH OSHA RULES, ORDERS, AND REGULATIONS.
 - WHERE REQUIRED BY OSHA, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE DRAWINGS AND/OR CALCULATIONS FOR SPECIALLY DESIGNED BRACING AND SHORING, PREPARED BY A HAWAII REGISTERED PROFESSIONAL ENGINEER, TO THE WWD A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO BEGINNING ASSOCIATED EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY OF ALL SHEETING, SHORING, AND BRACING AND COMPLIANCE WITH THE LAW. FAILURE OF THE INSPECTOR TO SUSPEND THE WORK OR NOTIFY THE CONTRACTOR OF ANY INADEQUACY OF SHEETING, SHORING, BRACING, OR NONCOMPLIANCE WITH THE LAW SHALL NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY.
 - THE CONTRACTOR SHALL FURNISH AND MAINTAIN SHORING, SHEETING, AND BRACING UNTIL AFTER THE PIPELINE AND APPURTENANCES HAVE BEEN INSTALLED AND THE INSPECTOR HAS APPROVED THE PLACEMENT OF SUFFICIENT BACKFILL. THE CONTRACTOR SHALL PROVIDE ADEQUATE SAFETY MEASURES TO ALLOW FOR ACCESS BY THE INSPECTOR OR TESTING PERSONNEL TO PERFORM COMPACTION TESTING AND INSPECTION OF THE LIFTS OF BACKFILL PLACED.
- NO TRENCHES IN ROADS OR DRIVEWAYS SHALL BE LEFT OPEN OVERNIGHT. ALL SUCH TRENCHES SHALL BE PLATED OR CLOSED AND NORMAL TRAFFIC FLOW RESTORED BEFORE THE END OF EACH WORK DAY.
 - THE STEEL TRENCH PLATES SHALL BE CAPABLE OF SUPPORTING HS-20 LOADING.
 - THE PLATES MUST EXTEND BEYOND THE EDGE OF THE TRENCH WALL FAR ENOUGH TO ADEQUATELY SUPPORT HS-20 TRAFFIC LOADS. IN NO CASE SHALL THE PLATES EXTEND LESS THAN TWELVE (12) INCHES BEYOND THE TRENCH WALL.
 - EACH PLATE MUST BE FULLY SUPPORTED AROUND ITS' PERIMETER TO PREVENT WOBBLING OR ROCKING.
 - THE PLATES SHALL BE SECURED TO PREVENT ANY MOVEMENT.
 - TRENCHES AND EXCAVATIONS BENEATH THE PLATES SHALL BE ADEQUATELY SHORED AND BRACED TO WITHSTAND HS-20 TRAFFIC LOADS.
 - TEMPORARILY PAVING OR COLD-MIX ASPHALTIC CONCRETE (CUTBACK) SHALL BE PLACED AND CONTINUOUSLY MAINTAINED AROUND ALL OUTSIDE EDGES OF THE TRENCH PLATES UNTIL THEY ARE REMOVED.
- TRENCHES SHALL BE PROPERLY BACKFILLED AND COMPACTED AS SHOWN ON THE APPROVED PLANS.

PUBLIC HEALTH, SAFETY & CONVENIENCE NOTES:

- THE CONTRACTOR MUST OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF THE PUBLIC HEALTH AND SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR, AT HIS OWN EXPENSE MUST KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK MUST BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. THE CITY MAY REQUIRE SUPPLEMENTARY MEASURES AS NECESSARY.
- CONTRACTOR MUST NOT PERFORM ANY CONSTRUCTION ACTIVITY SO AS TO CAUSE FALLING ROCK, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MUST IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
- THE CONTRACTOR MUST PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES AND OTHER PROTECTIVE FACILITIES AND MUST TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC. THE CONTRACTOR MUST APPLY FOR A CONSTRUCTION PERMIT WITH A NOISE POLLUTION CONTROL PLAN.

CESSPOOL ABANDONMENT PROCEDURES:

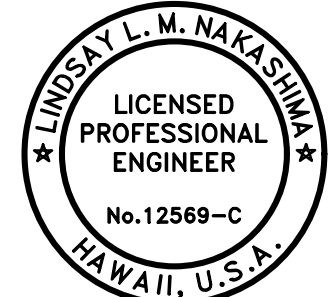

- ABANDONMENT: FOR CESSPOOLS NOT RECEIVING INDUSTRIAL WASTEWATER OR DOMESTIC WASTEWATER IN EXCESS OF 1000 GALLONS PER DAY, THE CESSPOOL CAN BE BACKFILLED WITHOUT AUTHORIZATION FROM THE UIC PROGRAM. THE EXISTING CESSPOOL IS NOT CONSIDERED AN INJECTION WELL AND CAN BE BACKFILLED FOLLOWING THE BELOW PROCEDURES.
- THE CONTRACTOR MUST ABANDON THE CESSPOOL BY FIRST REMOVING ANY EXCESS LIQUID AND SOLIDS AND THEN FILLING THE CESSPOOL AS INDICATED BELOW. IF THE COVER IS REMOVED, THE FINAL THREE (3) FEET OF FILL SHALL BE WITH SOIL WHICH IS COMPACTED TO PREVENT SURFACE CONTAMINANTS FROM GAINING ACCESS TO UNDERGROUND SOURCES OF WATER. ANY LIQUIDS OR SOLIDS REMOVED FROM THE CESSPOOL SHALL BE TAKEN TO A MUNICIPAL WASTEWATER TREATMENT PLANT WHICH ACCEPTS SUCH MATERIALS.
- BACKFILLING:
 - BACKFILL MATERIAL MUST BE APPROVED BY THE ENGINEER.
 - CESSPOOL ABANDONMENT MUST BE DONE UNDER THE OBSERVATION OF THE ENGINEER. CONTRACTOR MUST NOTIFY THE ENGINEER AT LEAST FIVE (5) WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.
 - BREAK AND DROP EXISTING CONCRETE COVER TO CESSPOOL BOTTOM. BACKFILL EXISTING CESSPOOL WITH CLSM (FLOWABLE FILL MATERIAL). THE FINAL THREE (3) FEET OF EXISTING CESSPOOL MUST BE BACKFILLED WITH NATIVE SOIL FREE OF DELETERIOUS MATERIAL AND COMPACTED TO AT LEAST 95% COMPACTION IN ACCORDANCE WITH ASTM D1557.
 - DISTURBED AREAS MUST BE RESTORED BY GRASSING TO MATCH EXISTING CONDITION AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED.
- OWNERS AND CONTRACTORS ARE ADVISED TO AVOID DISCHARGING ANY CESSPOOL LIQUIDS OR SOLIDS ON THE GROUND AS PENALTIES AND FINES OF \$25,000 PER DAY OF VIOLATION COULD BE ASSESSED.

TOPOGRAPHIC SURVEY NOTES:

- TOPOGRAPHIC SURVEY WORK COMPLETED BY CONTROLPOINT SURVEYING, INC., MAP ENTITLED "TOPOGRAPHIC SURVEY OF DLNR ANUENUE FISHERIES RESEARCH, HAWAII TAX MAP KEY: (1) 1-5-041 DATED AUGUST 22, 2025".
- ELEVATIONS ARE REFERRED TO MEAN SEA LEVEL.
- UNDERGROUND UTILITY LINES AND/OR STRUCTURES, IF SHOWN, ARE PROVIDED FOR INFORMATION ONLY AND ARE BASED ON INFORMATION SHOWN ON PLANS/MAPS PREPARED BY OTHERS. THE INFORMATION SHOWN, THEREFORE, MAY OR MAY NOT BE REPRESENTATIVE OF ACTUAL FIELD CONDITIONS. THE UNDERGROUND UTILITY LINES AND/OR STRUCTURES MAY OR MAY NOT BE PRESENT AT THE LOCATIONS SHOWN OR OTHER UNDERGROUND UTILITY LINES AND/OR STRUCTURES NOT SHOWN MAY BE PRESENT.
- UNLESS OTHERWISE NOTED, ALL LOCATIONS OF UNDERGROUND UTILITY LINES AND/OR STRUCTURES ARE APPROXIMATE. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE USER(S) OF THIS TOPOGRAPHIC SURVEY MAP SHALL VERIFY THE INFORMATION, AS NEEDED, BEFORE CONSTRUCTION.
- ALL ELEVATIONS AND DISTANCES SHOWN ARE IN FEET.
- FOR BENCHMARK, SEE DRAWING C101.

ABBREVIATIONS:

"	INCH/INCHES
'	FEET
AC	ASPHALT CONCRETE
ADAAG	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
C	CENTERLINE
CLR	CLEARANCE
CONC	CONCRETE
COTG	CLEANOUT TO GRADE
D	DRAIN, DIAMETER
DIA	DIAMETER
DLNR	DEPARTMENT OF LAND AND NATURAL RESOURCES
DPW	DEPARTMENT OF PUBLIC WORKS
E/, EXIST	EXISTING
ELEV	ELEVATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FT	FEET
GAL	GALLONS
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
INV	INVERT
L	LENGTH/LITER
LF	LINEAR FEET
LPS	LINED PIPING SYSTEM
MIN	MINIMUM
MM	MILLIMETER
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
OD	OUTER DIAMETER
OSHA	OCCUPATIONAL SAFETY AND HAZARD
POR	PORTION
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
RCJ	REINFORCED CONCRETE JACKET
S	SEWER
SS	SEWER SYSTEM
SDMH	STORM DRAIN MANHOLE
SMH	SEWER MANHOLE
SFM	SEWER FORCE MAIN
SSCO	SANITARY SEWER CLEAN OUT
STA	STATION
STD	STANDARD
TMK	TAX MAP KEY

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS) SAND ISLAND, O'AHU, HAWAII					
NOTES AND ABBREVIATIONS					
DESIGNED: JLG		SUBMITTED: APRIL 2026 <i>LLN</i>			
DRAWN: JLT		DATE: APRIL 2026			
CHECKED: LLN		SCALE: AS NOTED			
APPROVED: <i>Dina Lau</i>		Dina Lau		DRAWING NO.	
CHIEF ENGINEER		E-signed 2026-04-30 11:56AM HST dina.u.lau@hawaii.gov		C002	
 <small>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. APRIL 30, 2028 EXPIRATION DATE OF THE LICENSE</small>		 <small>State of Hawaii Civil Engineer</small>			

**EROSION PREVENTION /
SEDIMENT CONTROL NOTES:**

- THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE CITY AND COUNTY OF HONOLULU'S "RULES RELATING TO WATER QUALITY."
- MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY CONSTRUCTION IS INITIATED.
- TEMPORARY STABILIZATION
TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 14 CONSECUTIVE DAYS OR MORE.
- PERMANENT STABILIZATION
ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED USING VEGETATIVE COVERING, PAVEMENT, OR EQUIVALENT, PRIOR TO REMOVING EROSION AND SEDIMENT MEASURES. TRAPPED SEDIMENT AND AREAS OF DISTURBED SOIL WHICH RESULT FROM THE REMOVAL OF THE TEMPORARY MEASURES SHALL BE IMMEDIATELY AND PERMANENTLY STABILIZED.
- PERIMETER CONTROLS
PERIMETER CONTROLS ARE REQUIRED DOWNSLOPE OF ALL DISTURBED AREAS. MAINTAIN DOWNSTREAM VEGETATED BUFFER AREA.
- INLET PROTECTION
 - ALL STORM DRAIN INLETS ONSITE AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE UNLESS THEY ARE DIRECTED TO A SEDIMENT BASIN.
 - SEDIMENT LEVELS MAY NOT EXCEED ONE THIRD OF THE HEIGHT OF A SEDIMENT BARRIER OR INLET PROTECTION DEVICE AT ANY POINT ALONG THE LENGTH OF THE SEDIMENT BARRIER OR THE INLET PROTECTION DEVICE.
 - SEDIMENT BARRIERS AND INLET PROTECTION DEVICES MUST BE UNLOGGED AND CLEANED WHEN PERFORMANCE IS COMPROMISED.
 - TORN, WEATHERED OR SAGGING SEDIMENT BARRIERS OR INLET PROTECTION DEVICES MUST BE REPAIRED OR REPLACED IMMEDIATELY.
- TRACKING CONTROL
 - MINIMIZE SEDIMENT TRACK-OUT ONTO OFF-SITE STREETS, OTHER PAVED AREAS, AND SIDEWALKS FROM VEHICLES EXITING THE CONSTRUCTION SITE BY RESTRICTING VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND USING ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXITING THE SITE.
 - VEHICULAR PARKING AND MOVEMENTS ON PROJECT SITES MUST BE CONFINED TO PAVED SURFACES OR PREDEFINED PARKING AREAS AND VEHICLE PATHS, WHICH SHALL BE MARKED WITH FLAGS OR BOUNDARY FENCING.
 - ALL POLLUTANTS AND MATERIALS THAT ARE DROPPED, WASHED, TRACKED, SPILLED, OR OTHERWISE DISCHARGED FROM A PROJECT SITE TO OFF-SITE STREETS, OTHER PAVED AREAS, SIDEWALKS OR THE MS4 MUST BE CLEANED USING DRY METHODS SUCH AS SWEEPING OR VACUUMING.
 - WASHING POLLUTANTS AND MATERIALS THAT ARE DISCHARGED FROM THE PROJECT SITE TO THE MS4 INTO DRAIN INLETS OR CATCH BASINS IS PROHIBITED UNLESS THE MATERIAL IS SEDIMENT AND THE INLETS ARE DIRECTED TO A SEDIMENT BASIN OR SEDIMENT TRAP.
- BEST MANAGEMENT PRACTICES (BMPs) SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS COMPLETE FOR THAT PHASE.
- REFER TO CITY AND COUNTY OF HONOLULU BEST MANAGEMENT PRACTICES MANUAL - CONSTRUCTION, FOR MORE INFORMATION ON BMPs.
- THE FOLLOWING BMPs WERE DETERMINED TO BE NOT APPLICABLE BASED ON THE SPECIFIC SITE CONDITIONS. A BRIEF EXPLANATION OF WHY EACH OMITTED BMP IS UNNECESSARY OR IMPRACTICABLE FOR THE PROJECT HAS BEEN PROVIDED UNDER SEPARATE DOCUMENTATION TO DPP. AS CONSTRUCTION PROGRESS, REVISIONS MAY BE NECESSARY AND WILL BE PROVIDED TO DPP INSPECTORS.
 - STABILIZED CONSTRUCTION ENTRANCE AND EXIT
 - SLOPE MANAGEMENT AND PROTECTION
 - VELOCITY DISSIPATION DEVICES
- THE CONTRACTOR SHALL COMPLY WITH THE PROJECT SCHEDULING REQUIREMENTS OF THE CITY'S RULES RELATING TO WATER QUALITY.
- THE OWNER OF THE PROPERTY OR THEIR AUTHORIZED AGENT MUST DESIGNATE A PERSON RESPONSIBLE FOR IMPLEMENTING THE ESCP AT THE PROJECT SITE ("ESCP COORDINATOR") PRIOR TO PERMIT ISSUANCE USING THE FORM PROVIDED AS APPENDIX A TO THE RULES RELATING TO WATER QUALITY.

**EROSION AND SEDIMENT CONTROL PLAN
SCHEDULE AND RAIN RESPONSE PLAN:**

PROJECT SEQUENCE:

- INSTALL PERIMETER CONTROLS.
- PROCEED WITH CONSTRUCTION WITH LEAST POSSIBLE DISTURBANCE OF VEGETATIVE AREAS AND TEMPORARY STRUCTURES. INITIATE TEMPORARY STABILIZATION ONCE GRADING IS COMPLETED.
- ESTABLISH PERMANENT GROUND COVER AS SOON AS FINAL GRADES ARE ESTABLISHED.
- REMOVE OR DISMANTLE TEMPORARY EROSION CONTROL STRUCTURES AFTER FULL ESTABLISHMENT OF PERMANENT GROUND COVER.
- PRACTICE GOOD HOUSEKEEPING MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.
- BMP INSPECTIONS MUST BE PERFORMED DAILY BY THE CONTRACTOR, BEFORE START OF WORK AND AT THE END OF EACH DAY. BMP INSPECTIONS MUST BE PERFORMED WEEKLY BY THE ESCP COORDINATOR.

RAIN RESPONSE PLAN:

THE FOLLOWING WILL BE PERFORMED WHEN HEAVY RAINS, TROPICAL STORM OR HURRICANE IS IMMINENT OR IS FORECASTED IN THE NEXT 48 HOURS:

- TEMPORARY SUSPENSION OF ACTIVE GRADING.
- INSPECT ALL PERIMETER CONTROLS, INLET PROTECTION DEVICES, AND OTHER BMPs, AND MAINTAIN AS NEEDED. REINSTALL ANY PERIMETER CONTROLS THAT WERE REMOVED DUE TO ACTIVE WORK IN THE AREA. IF A SEVERE STORM IS EXPECTED, REMOVE INLET PROTECTION DEVICES TO PREVENT FLOODING ON SURROUNDING STREETS.
- COVER OR RELOCATE MATERIAL STOCKPILES AND LIQUID MATERIAL CONTAINERS TO AVOID CONTACT WITH RAINWATER.
- PLACE SPILL PANS OR OIL-ONLY SPILL PADS UNDER CONSTRUCTION VEHICLES TO PREVENT RUNOFF FROM CONTACTING ANY SPILLED PETROLEUM PRODUCTS. PROPERLY DISPOSE OF ANY ACCUMULATED OILY WATER AFTER THE RAIN EVENT.
- RE-INSPECT AFTER THE APPROACHING HEAVY RAINS, TROPICAL STORM OR HURRICANE AND REPLACE OR MAINTAIN BMPs AS NEEDED.

GOOD HOUSEKEEPING BMPs:

- STREET SWEEPING AND VACUUMING.

ALL POLLUTANTS DISCHARGED FROM CONSTRUCTION SITE TO OFF-SITE AREAS MUST BE SWEEPED OR VACUUMED EACH DAY BEFORE LEAVING THE JOB SITE.

- MATERIALS DELIVERY, STORAGE AND USE MANAGEMENT.

PREVENT, REDUCE, OR ELIMINATE THE DISCHARGE OF POLLUTANTS FROM MATERIAL DELIVERY, STORAGE, AND USE TO THE STORM WATER SYSTEM OR WATERCOURSES BY MINIMIZING THE STORAGE OF HAZARDOUS MATERIALS ONSITE, STORING MATERIALS IN A DESIGNATED AREA, INSTALLING SECONDARY CONTAINMENT. CONSTRUCTION MATERIALS, WASTE, TOXIC AND HAZARDOUS SUBSTANCES, STOCKPILES AND OTHER SOURCES OF POLLUTION SHALL NOT BE STORED IN BUFFER AREAS, NEAR AREAS OF CONCENTRATED FLOW, OR AREAS ABUTTING THE MS4, RECEIVING WATERS, OR DRAINAGE IMPROVEMENTS THAT DISCHARGE OFF-SITE. PRIMARY AND SECONDARY CONTAINMENT CONTROLS AND COVERS SHALL BE IMPLEMENTED TO THE MEP.

- SPILL PREVENTION AND CONTROL.

CREATE AND IMPLEMENT SPILL PREVENTION AND RESPONSE PLANS TO ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO THE MS4 AND RECEIVING WATERS FROM LEAKS AND SPILLS BY REDUCING THE CHANCE FOR SPILLS, ABSORBING, CONTAINING, AND CLEANING UP SPILLS AND PROPERLY DISPOSING OF SPILL MATERIALS. AT MINIMUM, ALL PROJECTS SHALL CLEANUP ALL LEAKS AND SPILLS IMMEDIATELY.

- HAZARDOUS MATERIALS.

PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM HAZARDOUS WASTE THROUGH PROPER MATERIAL USE AND WASTE DISPOSAL. IN THE EVENT THAT HAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF FACILITY MAINTENANCE, HONOLULU FIRE DEPARTMENT, AND HONOLULU POLICE DEPARTMENT OF THE DISCHARGE BY TELEPHONE. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.

- NON-HAZARDOUS MATERIALS.

IN THE EVENT THAT NON-HAZARDOUS MATERIALS ARE DISCHARGED TO THE MS4, THE PROPERTY OWNER OR ESCP COORDINATOR SHALL NOTIFY THE CITY DEPARTMENT OF FACILITY MAINTENANCE BY TELEPHONE NO LATER THAN THE NEXT BUSINESS DAY. A WRITTEN REPORT DESCRIBING THE POLLUTANTS THAT WERE DISCHARGED, THE REASONS FOR THE DISCHARGE, AND THE MEASURES THAT HAVE BEEN TAKEN OR WILL BE TAKEN TO PREVENT A REOCCURRENCE OF THE DISCHARGE SHALL BE SUBMITTED TO THE DIRECTOR NO LESS THAN 3 DAYS AFTER NOTIFICATION BY PHONE.

GOOD HOUSEKEEPING BMPs (CONT.):

- VEHICLE AND EQUIPMENT CLEANING.

ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT CLEANING OPERATIONS BY USING OFF-SITE FACILITIES WHEN FEASIBLE, WASHING IN DESIGNATED, CONTAINED AREAS ONLY, AND ELIMINATING DISCHARGES TO THE STORM DRAIN SYSTEM BY EVAPORATING AND/ OR TREATING WASH WATER, AS APPROPRIATE OR INFILTRATING WASH WATER FOR EXTERIOR CLEANING ACTIVITIES THAT USE WATER ONLY.

- VEHICLE AND EQUIPMENT FUELING.

PREVENT FUEL SPILLS AND LEAKS BY USING OFF-SITE FACILITIES, FUELING ONLY IN DESIGNATED AREAS, ENCLOSING OR COVERING STORED FUEL, AND IMPLEMENTING SPILL CONTROLS SUCH AS SECONDARY CONTAINMENT AND ACTIVE MEASURES USING SPILL RESPONSE KITS.

- VEHICLE AND EQUIPMENT MAINTENANCE.

ELIMINATE AND MINIMIZE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM VEHICLE AND EQUIPMENT OPERATIONS BY USING OFF-SITE MAINTENANCE FACILITIES WHEN FEASIBLE, PERFORMING WORK IN DESIGNATED AREAS ONLY, USING SPILL PADS UNDER VEHICLES AND EQUIPMENT, CHECKING FOR LEAKS AND SPILLS, AND CONTAINING AND CLEANING UP SPILLS IMMEDIATELY.

- SOLID WASTE MANAGEMENT.

PREVENT OR REDUCE DISCHARGE OF POLLUTANTS TO THE LAND, GROUNDWATER, AND IN STORM WATER FROM SOLID WASTE OR CONSTRUCTION AND DEMOLITION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS, COLLECT SITE TRASH DAILY, AND ENSURING THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS.

- SANITARY/SEPTIC WASTE MANAGEMENT.

TEMPORARY AND PORTABLE SANITARY AND SEPTIC WASTE SYSTEMS SHALL BE MOUNTED OR STAKED IN, WELL-MAINTAINED AND SCHEDULED FOR REGULAR WASTE DISPOSAL AND SERVICING. SOURCES OF SANITARY AND/OR SEPTIC WASTE SHALL NOT BE STORED NEAR THE MS4 OR RECEIVING WATERS.

- STOCKPILE MANAGEMENT.

STOCKPILES SHALL NOT BE LOCATED IN DRAINAGE WAYS, WITHIN 50 FEET FROM AREAS OF CONCENTRATED FLOWS, AND ARE NOT ALLOWED IN THE CITY RIGHT-OF-WAY. SEDIMENT BARRIERS OR SILT FENCE SHALL BE USED AROUND THE BASE OF ALL STOCKPILES. STOCKPILES SHALL NOT EXCEED 15 FEET IN HEIGHT. STOCKPILES GREATER THAN 15 FEET IN HEIGHT SHALL REQUIRE 8 FOOT WIDE BENCHING IN ACCORDANCE WITH ROH CHAPTER 18A, ARTICLE 3. STOCKPILES MUST BE COVERED WITH PLASTIC SHEETING OR A COMPARABLE MATERIAL IF THEY WILL NOT BE ACTIVELY USED WITHIN 7 DAYS.

- LIQUID WASTE MANAGEMENT.

LIQUID WASTE SHALL BE CONTAINED IN A CONTROLLED AREA SUCH AS A HOLDING PIT, SEDIMENT BASIN, ROLL-OFF BIN, OR PORTABLE TANK OF SUFFICIENT VOLUME AND TO CONTAIN THE LIQUID WASTES GENERATED. CONTAINMENT AREAS OR DEVICES MUST BE IMPERMEABLE AND LEAK FREE AND SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS.

- CONCRETE WASTE MANAGEMENT.

PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORM WATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE OR PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL CONTAINMENT AREAS OR DEVICES SHOULD NOT BE LOCATED WHERE ACCIDENTAL RELEASE OF THE CONTAINED LIQUID CAN DISCHARGE TO WATER BODIES, CHANNELS, OR STORM DRAINS. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75 PERCENT FULL. ONCE CONCRETE WASTES ARE WASHED INTO THE DESIGNATED AREA AND ALLOWED TO HARDEN, THE CONCRETE SHOULD BE BROKEN UP, REMOVED, AND DISPOSED OF AS SOLID WASTES.

- CONTAMINATED SOIL MANAGEMENT.

AT MINIMUM CONTAIN CONTAMINATED MATERIAL SOIL BY SURROUNDING WITH IMPERMEABLE LINED BERMS OR COVER EXPOSED CONTAMINATED MATERIAL WITH PLASTIC SHEETING. CONTAMINATED SOIL SHOULD BE DISPOSED OF PROPERLY IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

- DUST CONTROL.

DUST FROM A PROJECT SITE SHALL NOT BE TRANSPORTED OR DISCHARGED TO OFF-SITE AREAS. THE WORK MUST BE IN CONFORMANCE WITH AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES: TITLE 11 CHAPTER 60.1 "AIR POLLUTION CONTROL." ALL ESCPS SHALL PROVIDE FOR THE CONTROL OF DUST BY ONE OR MORE OF THE FOLLOWING:

- MULCHING TO A DEPTH OF NO LESS THAN 1 INCH.
- SPRINKLING EXPOSED SOILS WITH WATER TO MAINTAIN MOISTNESS AT A DEPTH OF 2-3 INCHES DURING WORKING HOURS AND NOT TO GENERATE ANY RUNOFF.
- VERTICAL DUST BARRIERS NO LESS THAN 6 FEET IN HEIGHT, CONSTRUCTED OF MATERIALS CAPABLE OF EFFECTIVELY PREVENTING THE SPREAD OF DUST PARTICLES.

- BMP AND SITE MAINTENANCE.

ALL ESCP BMPs SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. ADDITIONAL BMPs SHALL BE IMPLEMENTED AS NECESSARY TO ADDRESS EROSION AND SEDIMENT CONTROL AT THE PROJECT SITE.

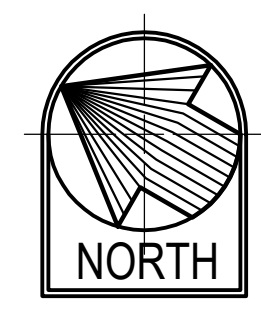
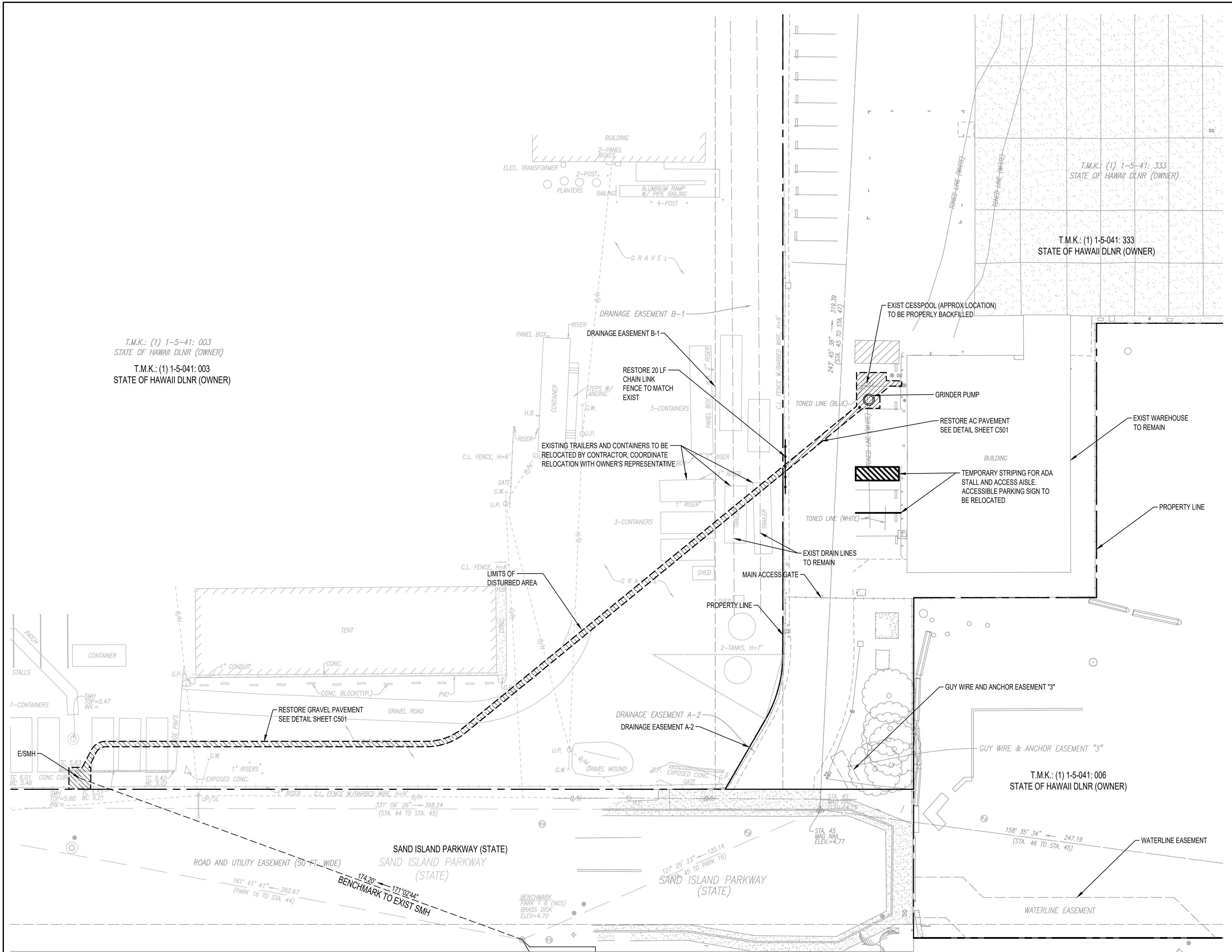
REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS) SAND ISLAND, O'AHU, HAWAII					
EROSION AND SEDIMENT CONTROL NOTES					
DESIGNED: JLG		SUBMITTED: APRIL 2026 <i>LLN</i>			
DRAWN: JLT		DATE: APRIL 2026			
CHECKED: LLN		SCALE: AS NOTED			
APPROVED: <i>Dina Lau</i>		Dina Lau		DRAWING NO.	
CHIEF ENGINEER		E-signed 2026-04-30 11:56AM HST		C003	
		dina.u.lau@hawaii.gov			
		State of Hawaii			
		Civil Engineer			

- LEGEND**
- — — — — PROPERTY LINE
 - - - - - PROPERTY EASEMENT
 - ▨ EXIST CONCRETE
 - ▤ EXIST CHAIN-LINK FENCE
 - - - - - LIMITS OF DISTURBED AREA
 - ▨ RESTORE AC PAVEMENT
 - ▨ RESTORE GRAVEL PAVEMENT
 - — — — — RESTORE CHAIN LINK FENCE
 - GRINDER PUMP

NOTE:
 COORDINATE ALL CONSTRUCTION ACTIVITIES, SCHEDULES,
 AND SITE ACCESS WITH OTHER ACTIVE CONSTRUCTION AT
 THE FACILITY TO PREVENT CONFLICTS AND MINIMIZE
 DISRUPTION TO ONGOING FACILITY OPERATIONS.

T.M.K.: (1) 1-5-41: 003
 STATE OF HAWAII DLNR (OWNER)

T.M.K.: (1) 1-5-041: 003
 STATE OF HAWAII DLNR (OWNER)

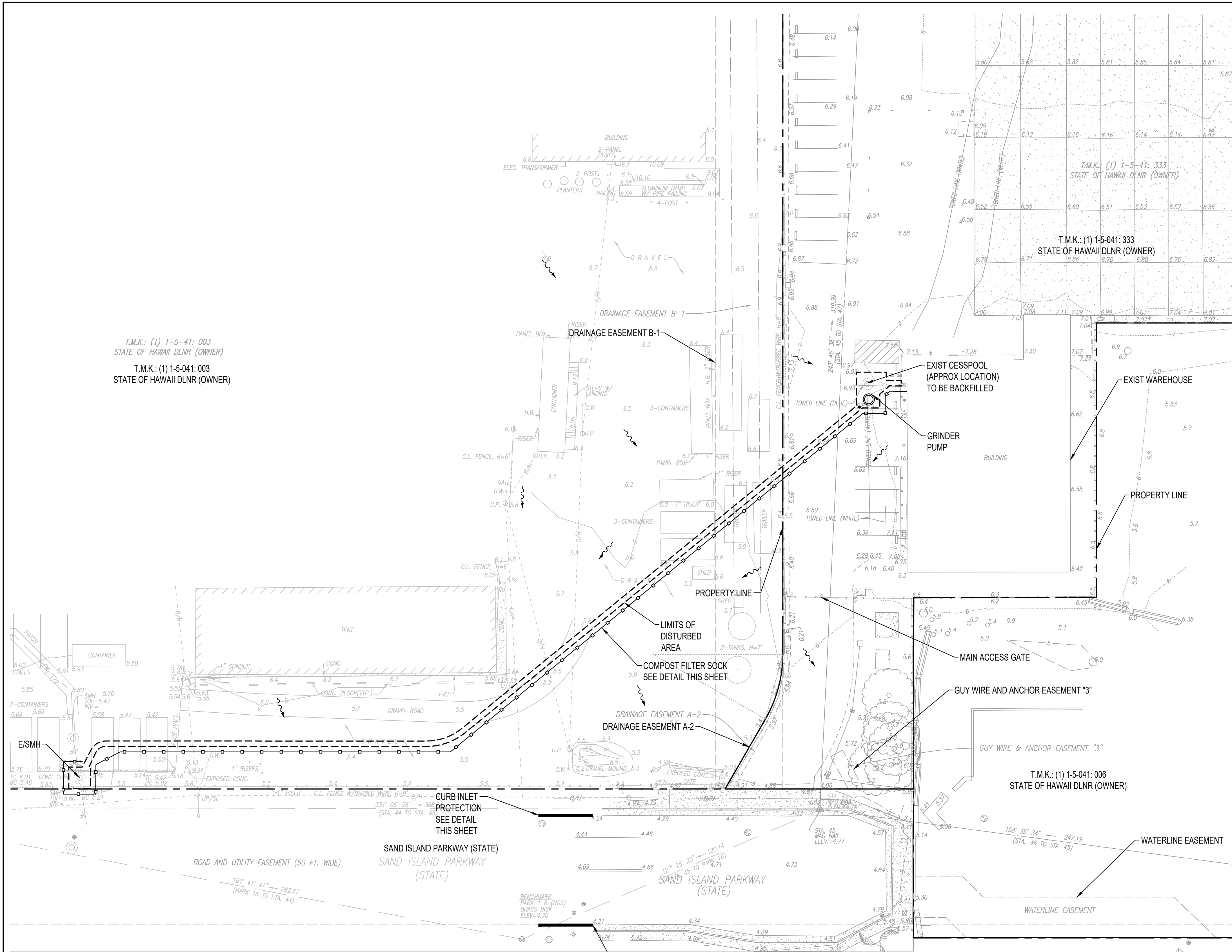


DEMOLITION PLAN
 SCALE: 1"=20'



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

	STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION	
	ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS) SAND ISLAND, O'AHU, HAWAII	
	DEMOLITION PLAN	
	DESIGNED: JLG	SUBMITTED: APRIL 2026
DRAWN: JLT	DATE: APRIL 2026	
CHECKED: LLN	SCALE: AS NOTED	
APPROVED: <i>Dina Lau</i>	Dina Lau E-signed 2026-04-30 11:56AM HST dina.lau@hawaii.gov	DRAWING NO. C101
CHIEF ENGINEER	State of Hawaii Civil Engineer	

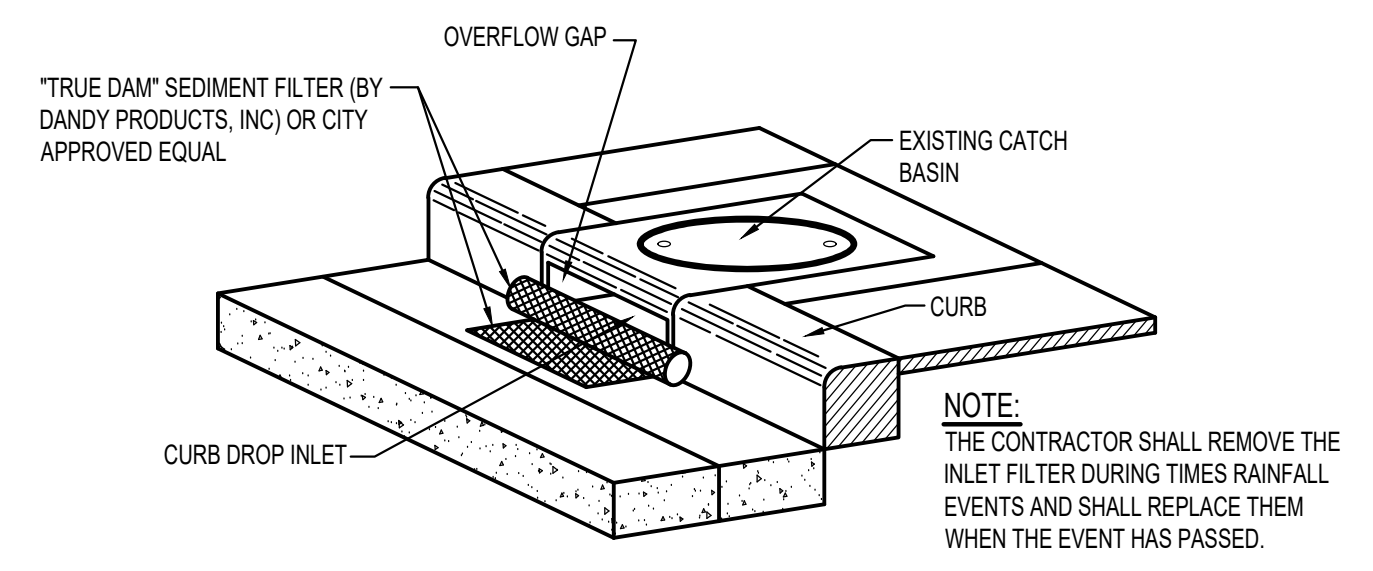
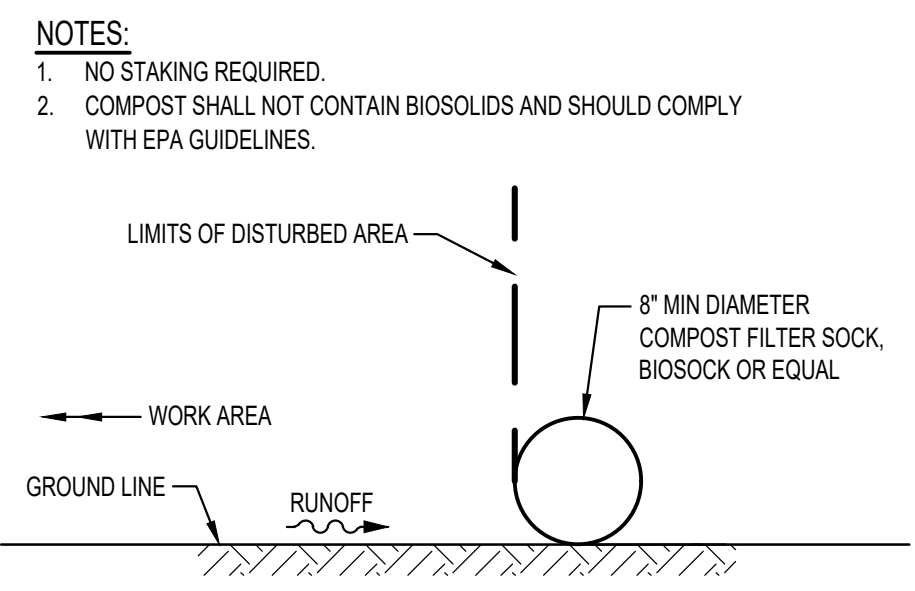


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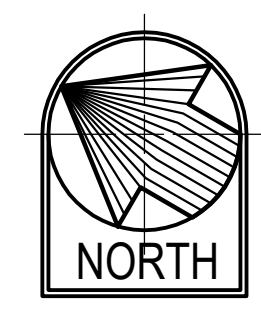
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- - - - - PROPERTY EASEMENT
- - - - - EXIST CHAIN-LINK FENCE
- - - - - LIMITS OF DISTURBED AREA
- ○ ○ ○ ○ FILTER SOCK
- GRINDER PUMP
- DIRECTION OF RUNOFF FLOW

T.M.K.: (1) 1-5-41: 003
STATE OF HAWAII DLNR (OWNER)

T.M.K.: (1) 1-5-041: 003
STATE OF HAWAII DLNR (OWNER)



EROSION AND SEDIMENT CONTROL PLAN (CATEGORY 1B)
SCALE: 1"=20'



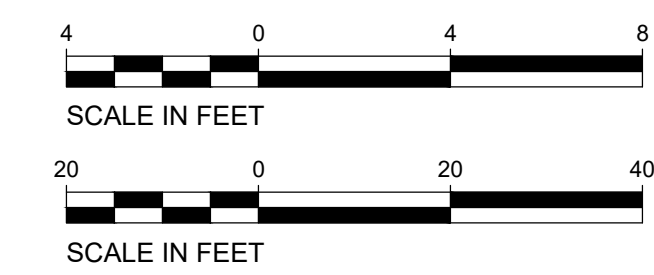
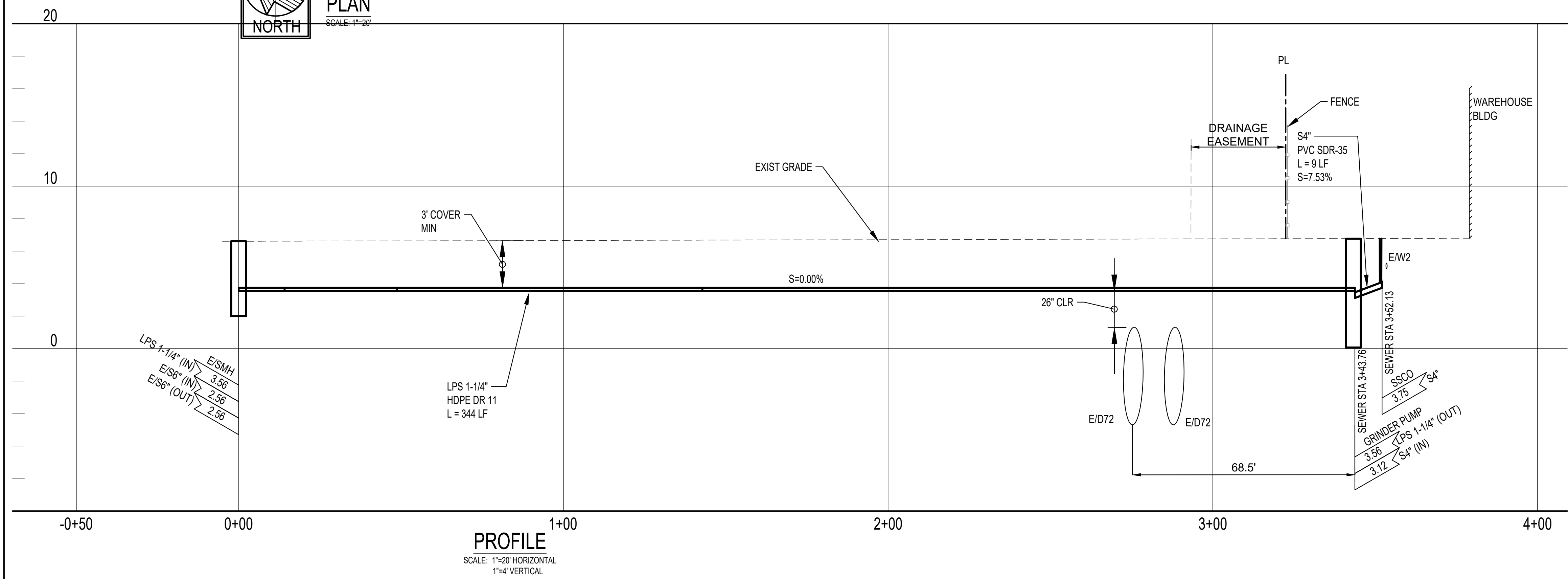
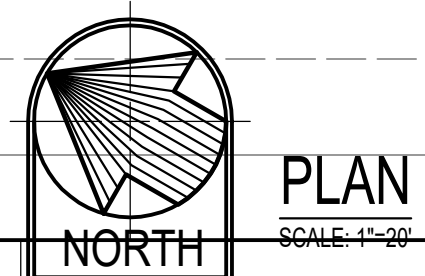
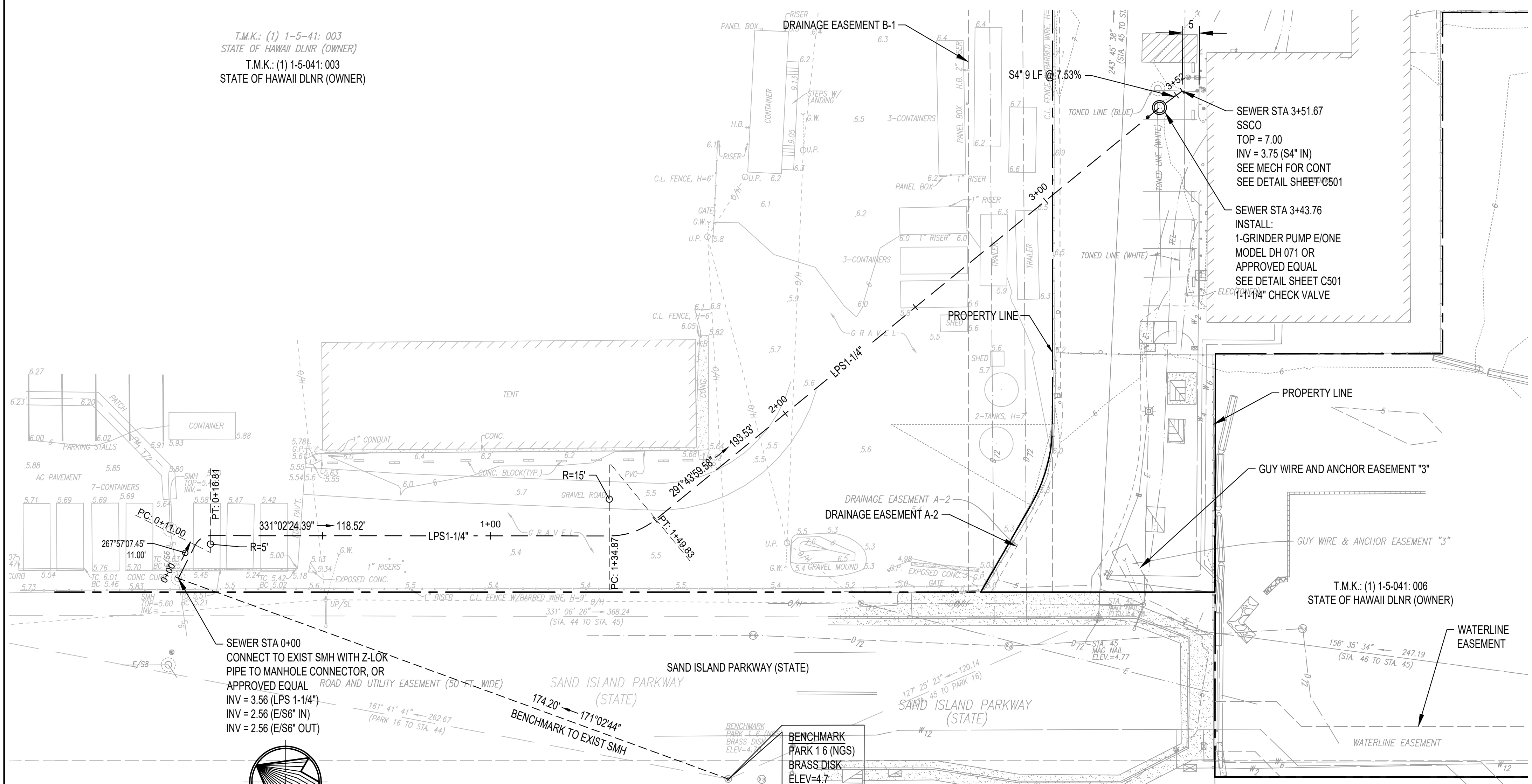
REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED

	STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION	
	ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS) SAND ISLAND, O'AHU, HAWAII	
	EROSION AND SEDIMENT CONTROL PLAN	
	DESIGNED: JLG	SUBMITTED: APRIL 2026
DRAWN: JLT	DATE: APRIL 2026	
CHECKED: LLN	SCALE: AS NOTED	
APPROVED: <i>Dina Lau</i>	Dina Lau E-signed 2026-04-30 11:56AM HST dina.u.lau@hawaii.gov	DRAWING NO. C102
CHIEF ENGINEER	State of Hawaii Civil Engineer	

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STATE OF HAWAII DLNR (OWNER)
T.M.K.: (1) 1-5-041: 003
STATE OF HAWAII DLNR (OWNER)

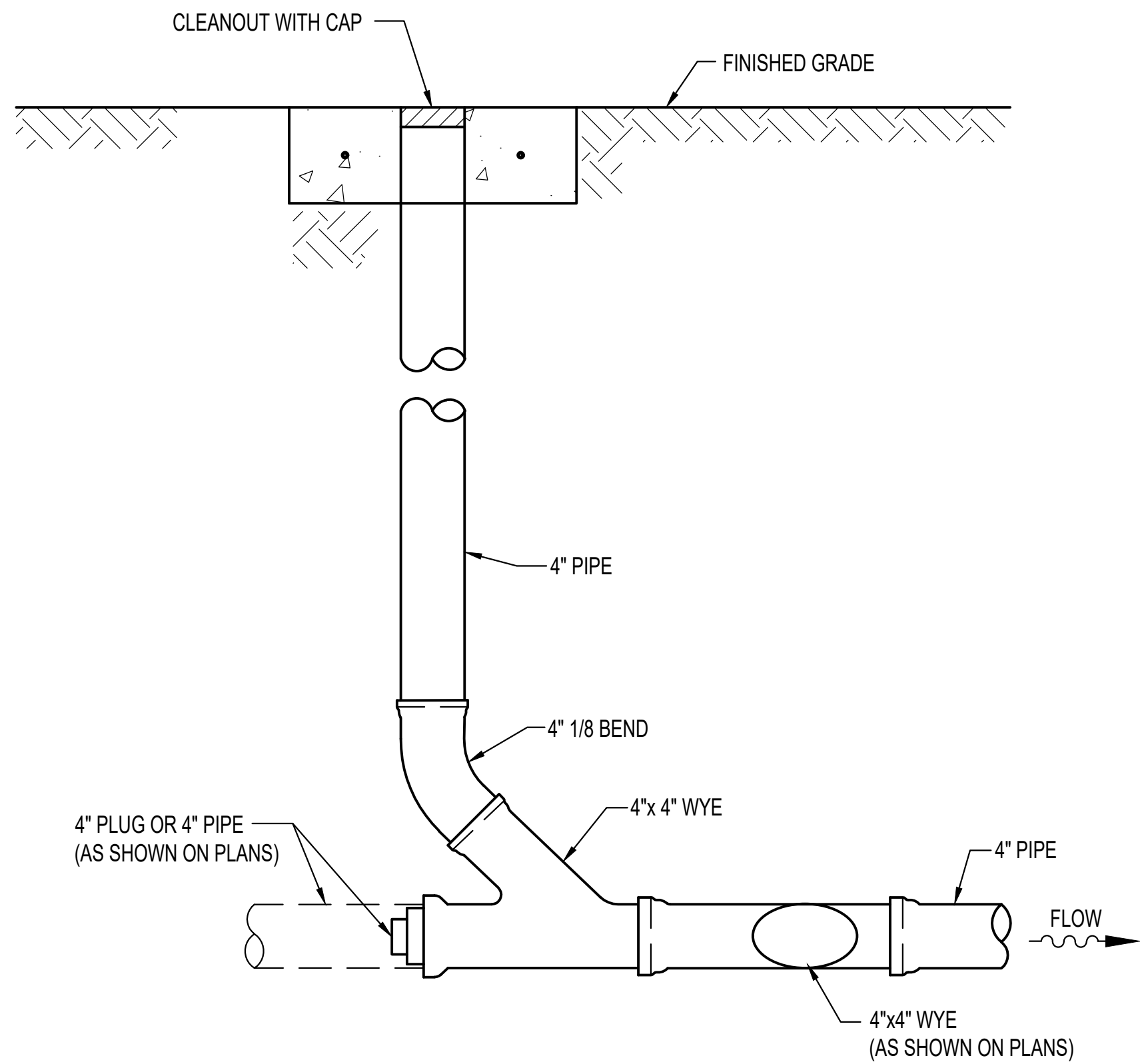
LEGEND

	PROPERTY LINE
	PROPERTY EASEMENT
	EXIST CHAIN-LINK FENCE
	EXIST MAJOR CONTOUR
	EXIST MINOR CONTOUR
	EXIST WATERLINE
	EXIST SEWER LINE
	EXIST DRAINLINE
	EXIST ELECTRICAL LINE
	EXIST TELEPHONE LINE
	1-1/4" LOW PRESSURE SEWER
	4" GRAVITY SEWER LINE

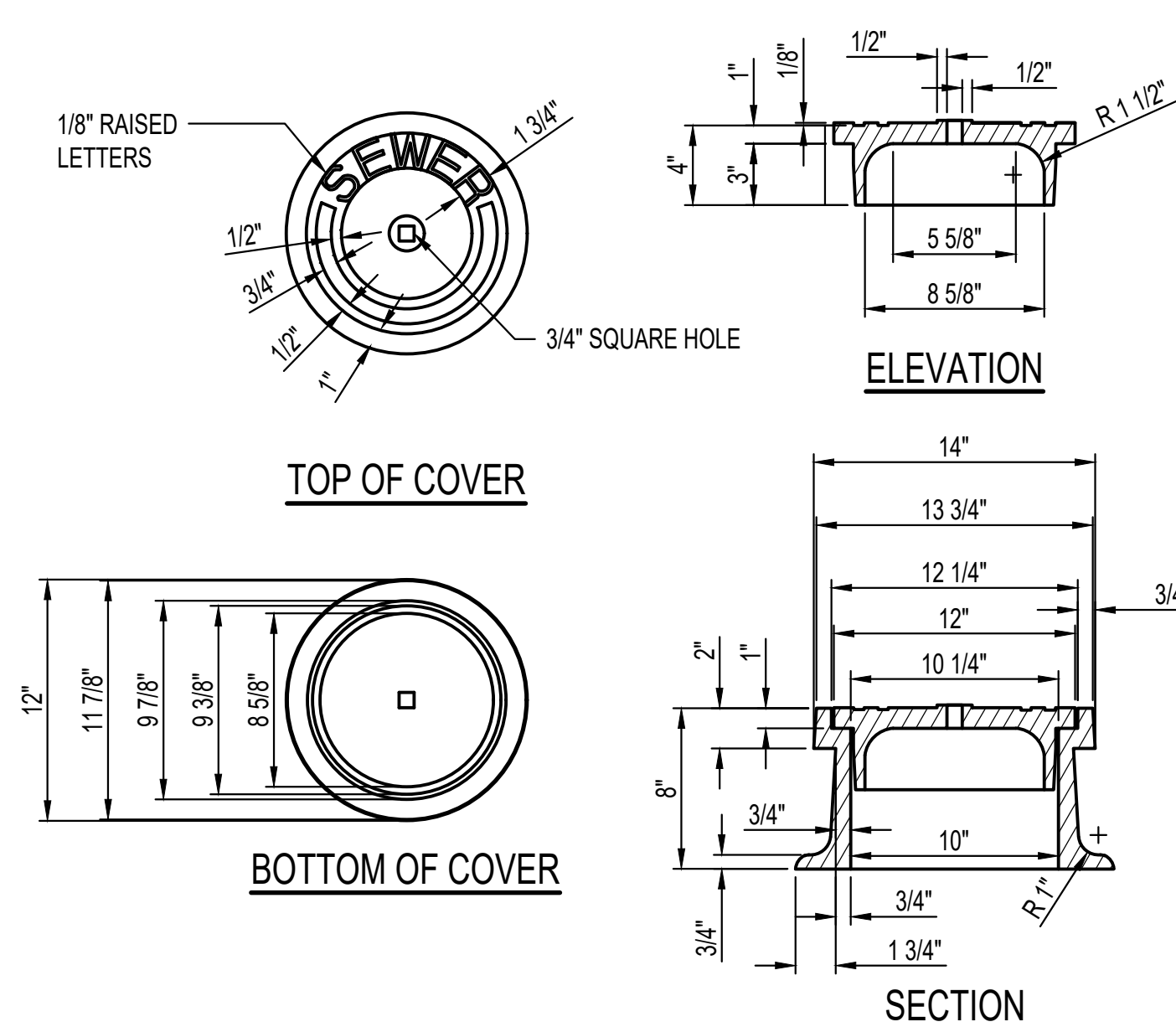


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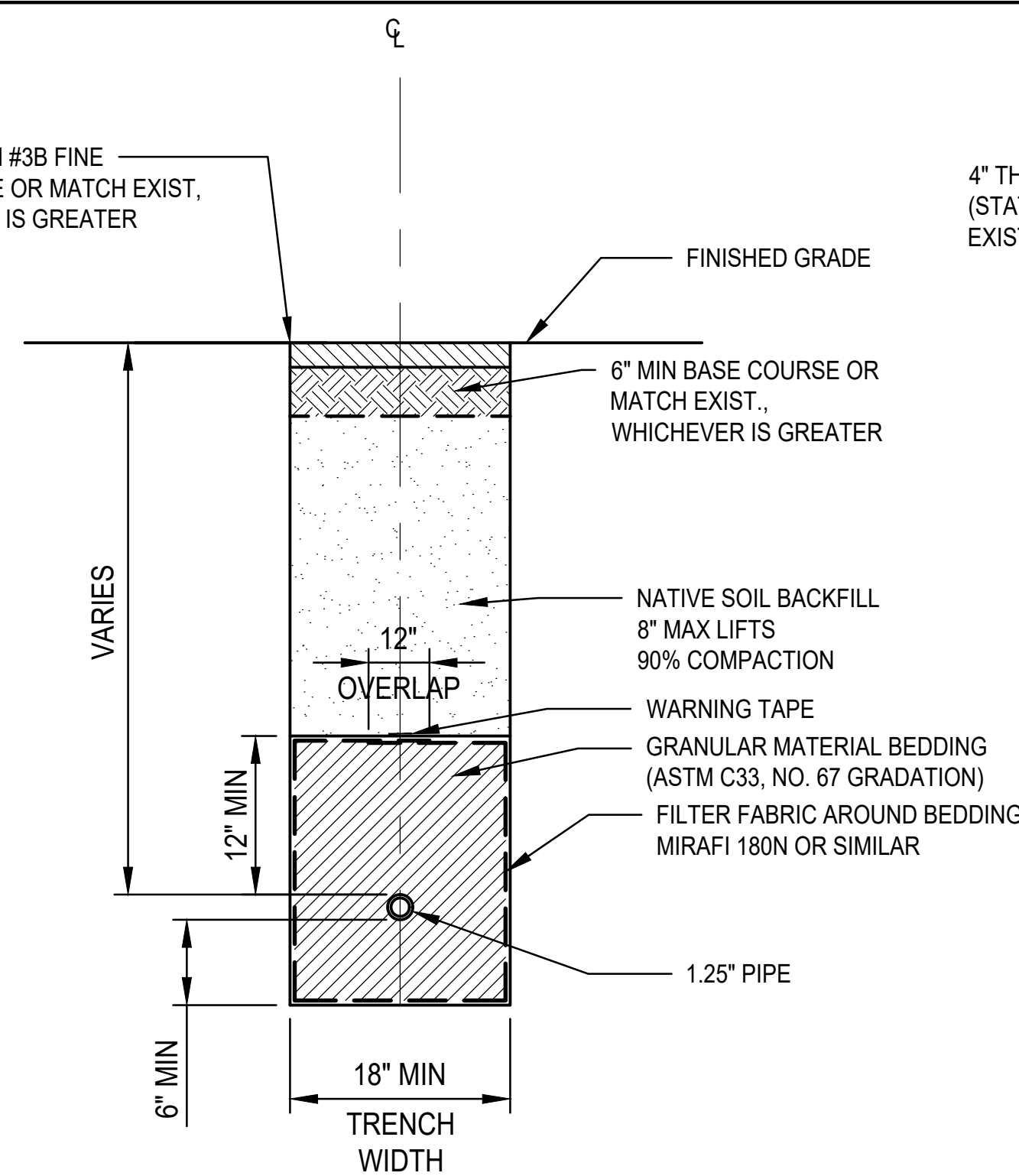
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	ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS) SAND ISLAND, O'AHU, HAWAII	
	UTILITY PLAN AND PROFILE	
	DESIGNED: JLG	SUBMITTED: APRIL 2026
DRAWN: JLT	DATE: APRIL 2026	
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APPROVED: <i>Dina Lau</i>	Dina Lau E-signed 2026-04-30 11:56AM HST dina.u.lau@hawaii.gov	DRAWING NO. C103
CHIEF ENGINEER	State of Hawaii Civil Engineer	



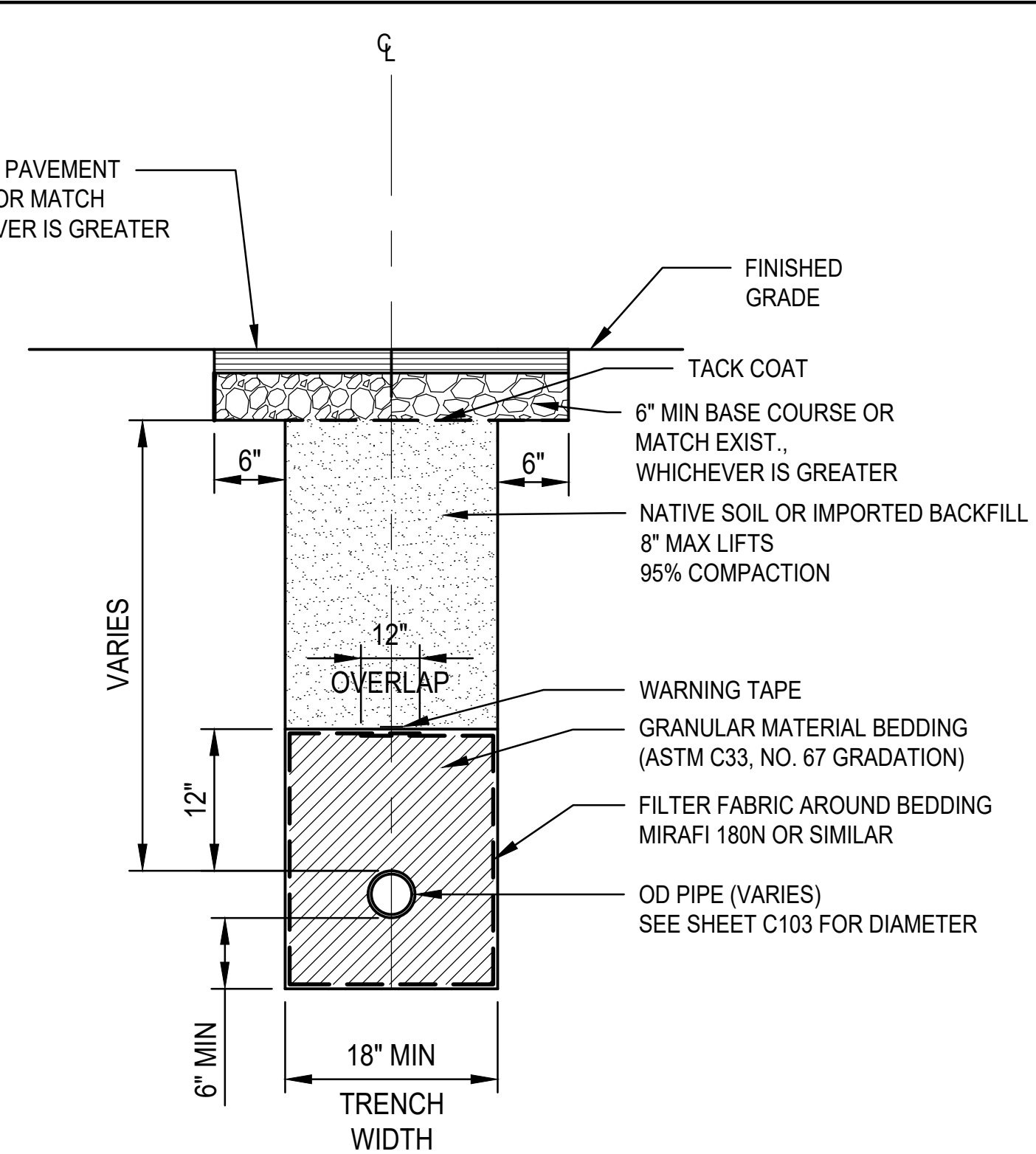
SEWER COTG DETAIL
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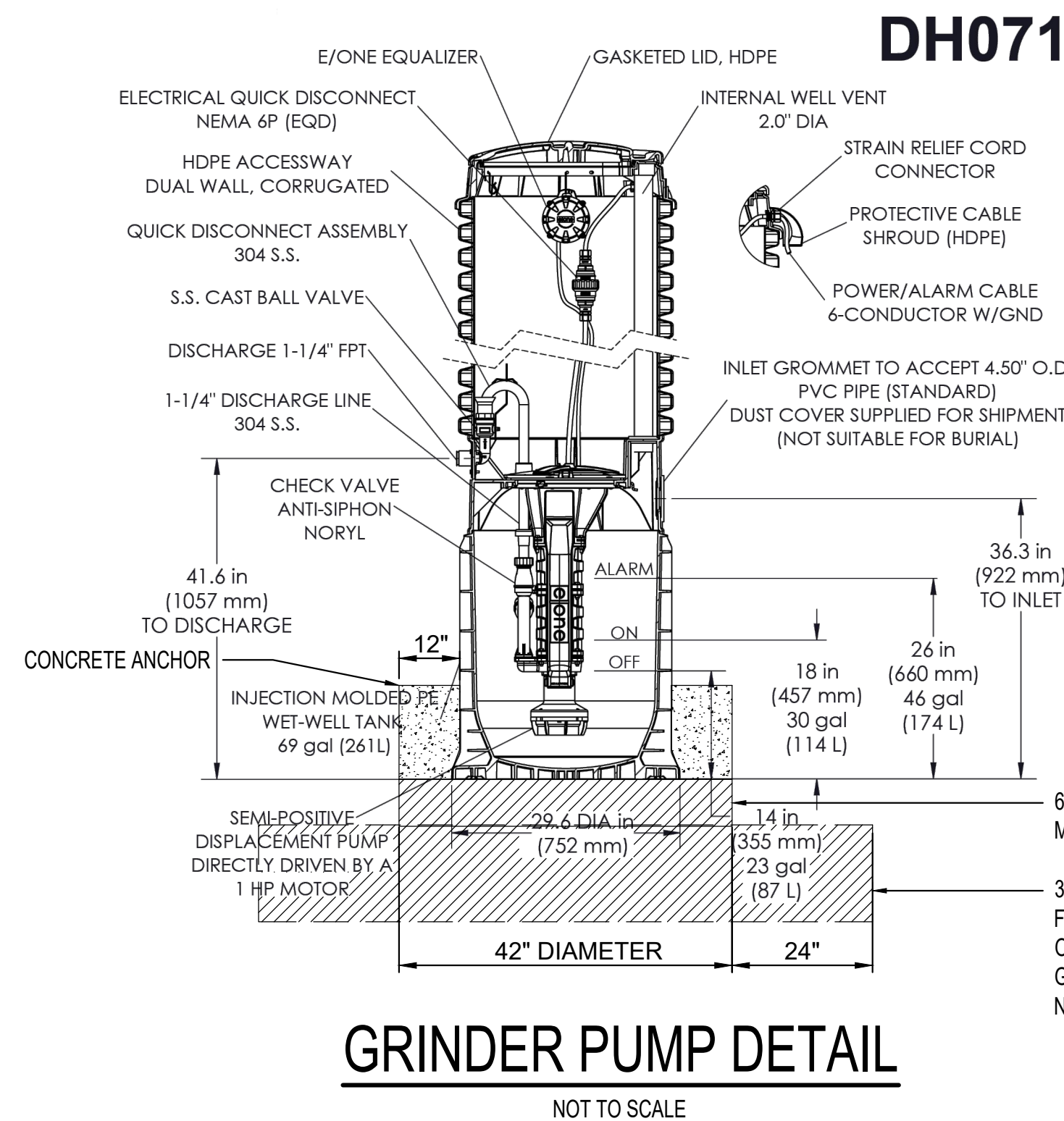
CLEANOUT FRAME AND COVER DETAIL
NOT TO SCALE



SEWERLINE TRENCH DETAIL (UNPAVED AREAS)
SCALE: NTS



SEWERLINE TRENCH DETAIL (PAVED AREAS)
SCALE: NTS



GRINDER PUMP DETAIL
NOT TO SCALE

NOTES:

- SEWER PUMP CONSISTS OF GRINDER PUMP, CHECK VALVE, CONCRETE ANCHOR, AND ALL NECESSARY CONTROL PACKAGED INTO A SINGLE UNIT.
- DISCHARGE RATES:
15 GPM AT 0 PSIG
11 GPM AT 40 PSIG
7.8 GPM AT 80 PSIG
- PUMP SHALL BE EONE D-SERIES OR APPROVED EQUAL.

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS) SAND ISLAND, O'AHU, HAWAII MISCELLANEOUS DETAILS					
DESIGNED: JLG		SUBMITTED: APRIL 2026		DRAWING NO.	
DRAWN: JLT		DATE: APRIL 2026		C501	
CHECKED: LLN		SCALE: AS NOTED		APPROVED: Dina Lau	
APPROVED: Dina Lau		E-signed 2026-04-30 11:56AM HST		CHIEF ENGINEER	
APRIL 30, 2028		Civil Engineer		State of Hawaii	

GENERAL ELECTRICAL NOTES:

- ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO BIDDING. BID SUBMISSION SHALL BE CONSIDERED AS CONFIRMATION THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS RESOLVED ALL DISCREPANCIES AND QUESTIONS REGARDING THE WORK. NO EXTRA PAYMENT WILL BE GIVEN FOR WORK MADE NECESSARY BY THE CONTRACTOR'S FAILURE TO VISIT THE SITE.
- ALL RACEWAYS AND OUTLETS SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
- CONDUIT SIZES INDICATED ON THE DRAWINGS ARE NOT NECESSARILY BASED ON THE MINIMUM SIZE ALLOWED BY THE NATIONAL ELECTRICAL CODE AND MAY BE PURPOSELY OVERSIZED FOR FUTURE CONDUCTORS OR TO AVOID CONDUIT HEATING. CONDUIT SIZES NOT CALLED OUT ON THE DRAWINGS SHALL BE SIZED BY THE CONTRACTOR, BASED ON THE ACTUAL NUMBER OF CONDUCTORS TO BE INSTALLED, USING THE NATIONAL ELECTRICAL CODE AS A GUIDE. IN NO CASE SHALL CONDUIT SIZES BE SMALLER THAN 3/4" DIAMETER.
- ALL WIRING SHALL INCLUDE AN INSULATED GREEN GROUNDING CONDUCTOR SIZED PER TABLE 250.122 OF THE NATIONAL ELECTRICAL CODE. THIS CONDUCTOR SHALL BE CARRIED IN ALL RACEWAYS INCLUDING THOSE INSTALLED FOR SWITCH LEGS AND SHALL BE ATTACHED TO THE DEVICE, LIGHT FIXTURE, OR EQUIPMENT HOUSING USING A SUITABLE GROUNDING LUG.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL JUNCTION AND PULL BOXES REQUIRED FOR THE INSTALLATION OF ELECTRICAL DEVICES AND EQUIPMENT, WHETHER OR NOT SPECIFICALLY INDICATED ON THE PLANS. SIZING OF THESE BOXES SHALL BE PER THE NATIONAL ELECTRICAL CODE.
- ALL PENETRATIONS THROUGH FIRE RATED WALLS AND SLABS SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF THE FIRE RATING USING A U.L. LISTED FIRE STOPPING SYSTEM.
- THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER BEFORE MAKING ANY PENETRATIONS THROUGH STRUCTURAL MEMBERS OR FIRE RATED WALLS AND SLABS.
- PROJECT CONDITIONS MAY REQUIRE REARRANGEMENT OF ELECTRICAL WORK, THE CONTRACTOR SHALL INDICATE SUCH CHANGES ON THE AS-BUILT DRAWINGS. WHERE CHANGES REQUIRE ALTERNATE METHODS TO THOSE SPECIFIED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE PROPOSED METHOD FOR APPROVAL. THE CONTRACTOR SHALL NOT PROCEED UNTIL APPROVAL IS OBTAINED. REARRANGEMENT OF WORK FOR THE PURPOSE OF COORDINATION BETWEEN TRADES SHALL NOT BE CONSIDERED A REASON FOR EXTRA COST.
- EXISTING CONDITION SHOWN ON DRAWINGS ARE TAKEN FROM PAST DESIGN DRAWINGS AND VISUAL FIELD INVESTIGATION. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS SHOWN. DEVIATIONS SHALL BE SHOWN ON AS-BUILT DRAWINGS.
- THE CONTRACTOR SHALL PAINT ALL NEW EXPOSED RACEWAYS (INCLUDING SURFACE METAL RACEWAYS) AND BOXES TO MATCH SURROUNDING FINISH.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.
- REFINISH AND PATCH TO MATCH ALL EXISTING WALL AND CEILING SURFACES DAMAGED OR SCRATCHED BY ELECTRICAL REMOVAL AND INSTALLATION WORK. NEW TOUCH-UP PAINT WORK SHALL BLEND INTO AND MATCH EXISTING FINISH.
- ALL NEW WIRES SHALL BE # 12 AWG, UNLESS OTHERWISE NOTED.
- ALL MATERIAL, EQUIPMENT, AND WIRING LOCATED OUTDOORS SHALL BE RATED FOR WET LOCATIONS.
- AVOID CORING OR DRILLING THROUGH RE-BARS WHEN PENETRATING THROUGH EXISTING CONCRETE WALL, CEILING OR FLOOR. ALL EXTERIOR WALL PENETRATIONS SHALL BE WATERTIGHT.
- EXPOSED RACEWAYS SHALL NOT CROSS OVER EACH OTHER AT LOW POINT ON WALL. CROSSOVERS, WHEN REQUIRED, SHALL BE DONE HIGH ON WALL NEAR JUNCTION BOXES.
- THE CONTRACTOR SHALL FILL-IN THE PANEL SCHEDULES OF ELECTRIC PANEL USING A TYPEWRITER. PROVIDE CIRCUIT DESCRIPTIONS BASED ON PANEL SCHEDULE DESCRIPTIONS FOR NEW AND EXISTING CIRCUITS.
- ALL MULTIWIRE BRANCH CIRCUITS SHALL BE IN ACCORDANCE WITH NEC ARTICLE 210.4. ALL CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS.
- THE TERM "WIRING" SHALL INCLUDE RACEWAY, CONDUCTORS, EQUIPMENT, AND WIRING.
- THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
- ALL EXTERIOR RACEWAYS SHALL BE GALVANIZED RIGID STEEL.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED WIRING AND CONNECTIONS FOR ALL MECHANICAL EQUIPMENT, WHETHER OR NOT SHOWN ON THE ELECTRICAL DRAWINGS. WIRING SHALL INCLUDE DISCONNECT SWITCHES, MOTOR DISCONNECTS, OUTLET BOXES, CIRCUIT BREAKERS, RACEWAYS, WIRES, ETC. FOR A COMPLETE MECHANICAL SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF MECHANICAL CONTRACTOR FURNISHED MOTOR STARTERS, VARIABLE FREQUENCY DRIVES, DUCT SMOKE DETECTORS, AND OTHER MECHANICAL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
- FLEXIBLE RACEWAYS SHALL BE METALLIC.
- ALL NEW EXTERIOR SURFACE OUTLET BOXES SHALL BE CAST METAL TYPE WITH GASKETED COVERS. PRESSED STEEL BOXES SHALL NOT BE USED.
- ALL CONCRETE OR CMU WALLS SHALL BE ASSUMED TO BE FIRE RATED. FOR GYPBOARD WALLS, CONTRACTOR SHALL USE THE RATING OF THE DOOR(S) IN THE WALL TO DETERMINE IF THE WALL IS FIRE RATED. ALL FIRE RATED DOORS SHOULD HAVE A FIRE RATING LABEL. SINGLE LAYER WOOD WALLS ARE NOT FIRE RATED.
- THE CONTRACTOR SHALL DISPOSE OF REMOVED MATERIAL AT AN APPROPRIATE SITE OUTSIDE OF THE PROJECT LIMITS.
- CONTRACTOR SHALL EXERCISE CAUTION WHEN DRILLING INTO PAINTED SURFACES. MEASURES SHALL BE TAKEN TO CONTAIN ANY DUST GENERATED.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED WIRES AND CABLES FOR ALL ELECTRICAL WORK SHOWN ON DRAWINGS (WHETHER OR NOT CALLED FOR) FOR COMPLETE SYSTEMS. CONTRACTOR SHALL VERIFY WIRING REQUIREMENTS WITH EQUIPMENT SUPPLIERS.

ABBREVIATIONS LIST

A	AMPERES
ADMIN	ADMINISTRATION
AFF	ABOVE FINISH FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
BLDG	BUILDING
BKBD	BACKBOARD
C	CONDUIT
CKT	CIRCUIT
CKT BRKR	CIRCUIT BREAKERS
CL	CURFEW LIGHTS
COMM	COMMUNICATION
CONC	CONCRETE
CONT	CONTINUE
D	DEEP
DIA	DIAMETER
DISC	DISCONNECT
ELEC	ELECTRIC
EQUIP	EQUIPMENT
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FIN FLR	FINISH FLOOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRD	GROUND
H	HIGH
JB	JUNCTION BOX
K	KELVIN
MISC	MISCELLANEOUS
MTD	MOUNTED
MTG	MOUNTING
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NL	NIGHT LIGHT
OC	ON CENTER
P	POLE
PFB	PROVISION FOR FUTURE BREAKER
PH	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RECEP	RECEPTACLE
RM	ROOM
SQ	SQUARE
SWBD	SWITCHBOARD
SWBK	SWITCHBANK
TYP	TYPICAL
V	VOLTS
W	WATT
W	WIDE
WP	WEATHERPROOF

NOTE:
COORDINATE ALL CONSTRUCTION ACTIVITIES, SCHEDULES, AND SITE ACCESS WITH OTHER ACTIVE CONSTRUCTION AT THE FACILITY TO PREVENT CONFLICTS AND MINIMIZE DISRUPTION TO ONGOING FACILITY OPERATIONS.

BASIS OF DESIGN
THIS ELECTRICAL DESIGN IS BASED ON THE NATIONAL ELECTRICAL CODE (NEC), 2020 EDITION, AS ADOPTED AND ENFORCED BY THE REVISED ORDINANCES OF HONOLULU (ROH) §18-4.3, INCLUDING ALL APPLICABLE LOCAL AMENDMENTS.

ELECTRICAL SYMBOL LIST

EXISTING	NEW	DESCRIPTION
		OUTLET/JUNCTION BOX, WALL MOUNTED, 2-GANG BOX, UNLESS OTHERWISE SPECIFIED.
		PUMP CONNECTION.
		ELECTRIC PANEL.
		RACEWAY, CONCEALED BELOW FINISH FLOOR. NUMBER OF HASHMARKS INDICATE NUMBER OF WIRES WITHIN. NO HASHMARKS INDICATES TWO WIRES WITHIN.
		EXPOSED RACEWAY.
		FLEXIBLE RACEWAY.
		ELECTRICAL NOTE INDICATOR.
		DUCT SECTION INDICATOR.
		FIXTURE INDICATOR. UPPER HALF: FIXTURE TYPE. LOWER HALF: WATTS.
		DETAIL INDICATOR. UPPER HALF: DETAIL NUMBER. LOWER HALF: SHEET NUMBER, DETAIL LOCATION.

NOTE:
ALL EXTERIOR AND EXPOSED COMPONENTS SHALL BE MARINE-GRADE AND/OR CORROSION-RESISTANT.

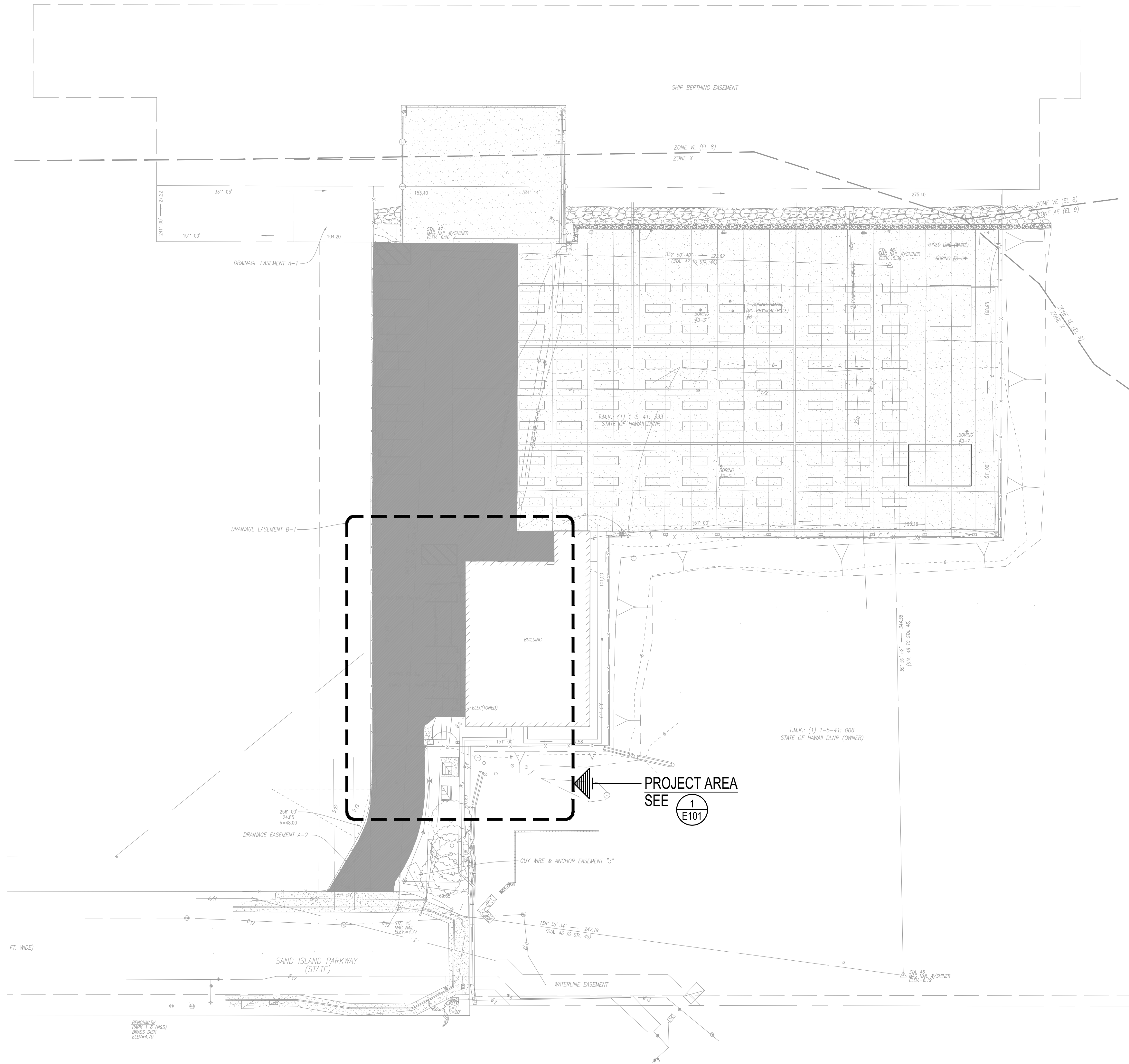
CITY AND COUNTY OF HONOLULU
REVISED ORDINANCE OF HONOLULU 2021
CHAPTER 16B

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

- Building Component Systems
- Electrical Component Systems
- Mechanical Component Systems

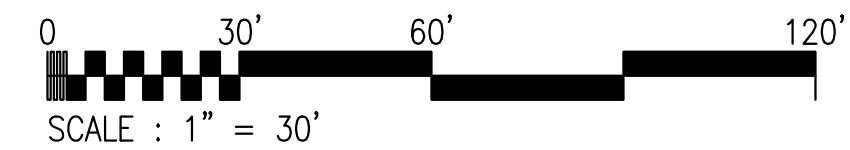
Signature: Date: 04-22-26
Name: BRIAN ITOZAKI
Title: ELECTRICAL ENGINEER
License No.: 9058-E

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION ANUENUE FISHERIES RESEARCH CENTER ANNEX FACILITY IMPROVEMENTS - PHASE 1B (SEWER IMPROVEMENTS) SAND ISLAND, O'AHU, HAWAII			
EXPIRATION DATE OF LICENSE 04/30/2028		ELECTRICAL GENERAL NOTES & SYMBOL LIST			
DESIGNED: BI		SUBMITTED: APRIL 2026			
DRAWN: KN		DATE: APRIL 2026			
CHECKED: BI		SCALE: AS NOTED			
APPROVED:		Dina Lau E-signed 2026-04-30 11:56AM HST dina.u.lau@hawaii.gov		RAWING NO. E001	
CHIEF ENGINEER		State of Hawaii Civil Engineer			



PROJECT AREA
SEE
1
E101

1 SITE ELECTRICAL PLAN
SCALE: 1" = 30'



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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

ANUENUE FISHERIES RESEARCH CENTER
ANNEX FACILITY IMPROVEMENTS - PHASE 1B
(SEWER IMPROVEMENTS)
SAND ISLAND, O'AHU, HAWAII

SITE ELECTRICAL PLAN

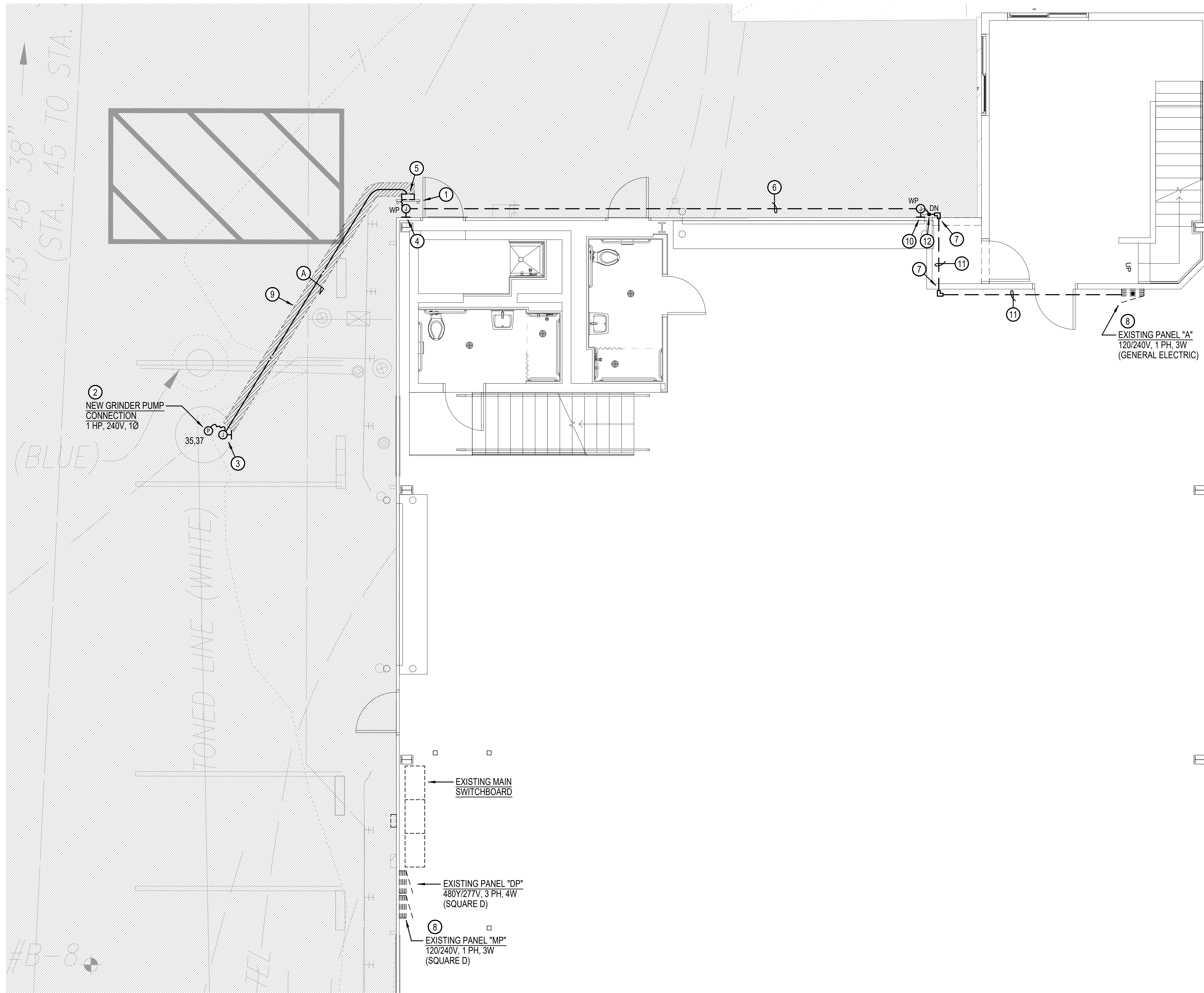
DESIGNED: BI	SUBMITTED: APRIL 2026
DRAWN: KN	DATE: APRIL 2026
CHECKED: BI	SCALE: AS NOTED

APPROVED: *Dina Lau*
Dina Lau
E-signed 2026-04-30 11:56AM HST
dina.u.lau@hawaii.gov
State of Hawaii
Civil Engineer

Job No. C00B091C

SHEET NO. 9 OF 11 SHEETS

RAWING NO. **E002**



ELECTRICAL NOTES: NEW WORK

- ① PROVIDE NEW STEEL CHANNEL H-FRAME.
- ② PROVIDE WATERTIGHT CONNECTION TO PUMP WITH SUBMERSIBLE RATED CABLING.
- ③ PROVIDE WATERTIGHT BOX FOR POWER AND CONTROL WIRING. SEE DIAGRAM: 1/E201.
- ④ PROVIDE NEW SURFACE MOUNTED CAST OUTLET BOX. MOUNT WALL @ 7'-6" A.F.F. TO TOP.
- ⑤ INSTALL NEW CONTROL PANEL FURNISHED BY OTHERS. PROVIDE ALL WIRING CONNECTIONS. MOUNT ON H-FRAME @ 5'-6" A.F.F. TO TOP. SEE DETAIL: 2/E201.
- ⑥ MOUNT NEW EXPOSED RACEWAY ABOVE EXISTING ROLL-UP DOOR ON WALL/ON CEILING. PROVIDE HANGERS AND SUPPORTS PER N.E.C.
- ⑦ DRILL THROUGH EXISTING WALL TO INSTALL NEW RACEWAY. PATCH TO MATCH EXISTING CONDITION. MAINTAIN FIRE RATING OF WALL. PROVIDE WATERTIGHT SEAL AT EXTERIOR WALLS.
- ⑧ CONNECT NEW RACEWAY TO TOP OF PANEL.
- ⑨ SAWCUT EXISTING ASPHALT TO INSTALL NEW DUCTLINE. PATCH TO MATCH EXISTING CONDITION. SEE DETAIL: 3/E201.
- ⑩ PROVIDE NEW SURFACE MOUNTED CAST OUTLET BOX. MOUNT ON WALL ABOVE EXISTING ROLL-UP DOOR.
- ⑪ MOUNT NEW EXPOSED RACEWAY HIGH ON WALL/ON CEILING. PROVIDE HANGERS AND SUPPORTS PER N.E.C.
- ⑫ ROUTE NEW EXPOSED RACEWAY DOWN WALL.

② NEW GRINDER PUMP CONNECTION
1 HP, 240V, 1Ø

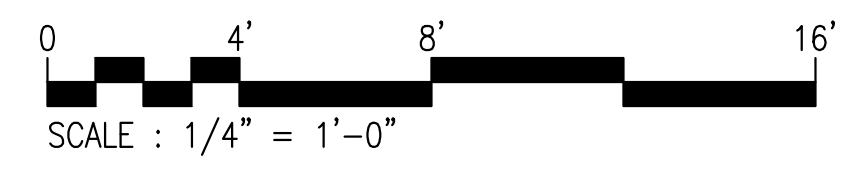
⑧ EXISTING PANEL "A"
120/240V, 1 PH, 3W
(GENERAL ELECTRIC)

EXISTING MAIN SWITCHBOARD

EXISTING PANEL "DP"
480Y/277V, 3 PH, 4W
(SQUARE D)

⑧ EXISTING PANEL "MP"
120/240V, 1 PH, 3W
(SQUARE D)

NOTE:
FOR DUCT SECTIONS
SEE SHEET: E201.



1 ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

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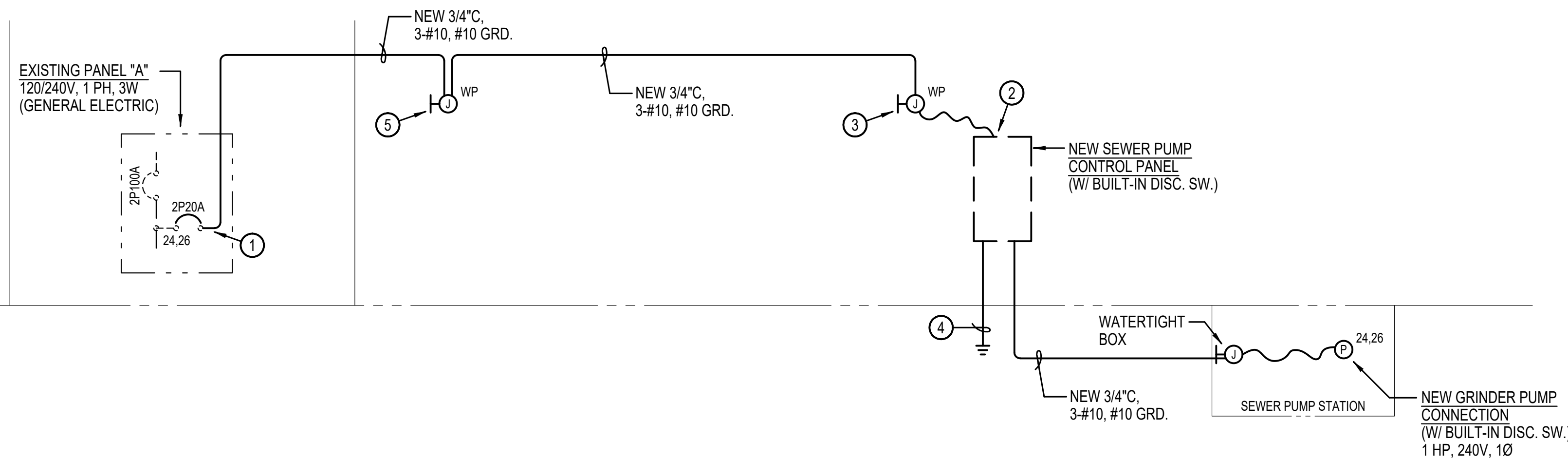
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DEPARTMENT OF LAND AND NATURAL RESOURCES
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ANUENUE FISHERIES RESEARCH CENTER
ANNEX FACILITY IMPROVEMENTS - PHASE 1B
(SEWER IMPROVEMENTS)
SAND ISLAND, O'AHU, HAWAII

ELECTRICAL PLAN

DESIGNED: BI SUBMITTED: APRIL 2026
DRAWN: KN DATE: APRIL 2026
CHECKED: BI SCALE: AS NOTED

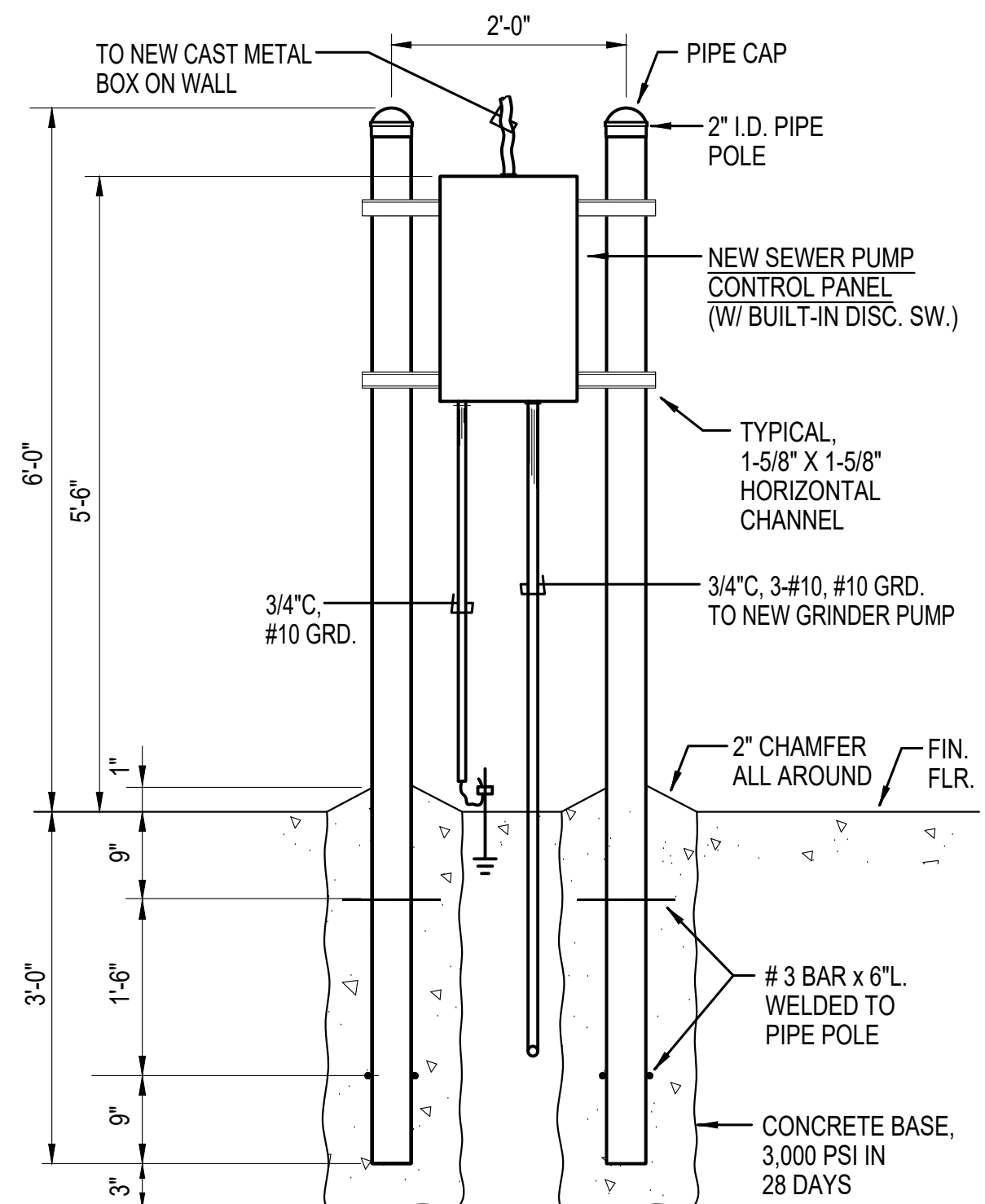
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Dina Lau
E-signed 2026-04-30 11:56AM HST
dina.u.lau@hawaii.gov
CHIEF ENGINEER State of Hawaii

RAWING NO. E101
SHEET NO. 10 OF 11 SHEETS



1 SEWER PUMP CONNECTION DIAGRAM
SCALE: N.T.S.

EXISTING PANEL "A" (GENERAL ELECTRIC)		120/240 VOLTS, 1 PHASE, 3 WSN BREAKER MIN. A.I.C. 10,000 SURFACE MTG. 100A MAIN BREAKER					
CKT. NO.	USE	CIRCUIT BREAKER POLES	AMPS	CONNECTED LOAD (KVA)			WIRE SIZE
				A	B	C	
1	RECEP. RM. 105	1	20	0.4			12
2	RECEP. RM. 105	1	20	0.4			12
3	RECEP. RM. 105	1	20		0.7		12
4	RECEP. FOR REFRIG.	1	20		0.6		12
5	RECEP. RM. 105	1	20		0.7		12
6	DISPOSER 3/4 HP	1	20	1.6			12
7	RECEP. RM. 105	1	20		0.7		12
8	RECEP. RM. 201	1	20		0.4		12
9	RECEP. RM. 201	1	20	0.5			12
10	RECEP. RM. 100	1	20	0.2			12
11	SUMP PUMP 1/3 HP	1	20		1.2		12
12	SPARE	1	20		0.4		12
13	PFB	---	---	---	---	---	---
14	PFB	---	---	---	---	---	---
15	PFB	---	---	---	---	---	---
16	PFB	---	---	---	---	---	---
17	PFB	---	---	---	---	---	---
18	PFB	---	---	---	---	---	---
19	A/C FAN COIL UNIT 1/3 HP	2	15		0.4		12
20	EWB	2	30		2.3		10
21	A/C FAN COIL UNIT 1/3 HP	---	---		0.4		12
22	EWB	---	---		2.3		10
23	PFB	---	---	---	---	---	---
* 24	GRINDER PUMP	2	20		1.0		10
25	PFB	---	---	---	---	---	---
* 26	GRINDER PUMP	---	20		1.0		10
27	PFB	---	---	---	---	---	---
28	PFB	---	---	---	---	---	---
29	PFB	---	---	---	---	---	---
30	PFB	---	---	---	---	---	---
31	PFB	---	---	---	---	---	---
32	PFB	---	---	---	---	---	---
33	PFB	---	---	---	---	---	---
34	PFB	---	---	---	---	---	---
35	PFB	---	---	---	---	---	---
36	PFB	---	---	---	---	---	---
37	PFB	---	---	---	---	---	---
38	PFB	---	---	---	---	---	12
39	MAIN BREAKER	2	100		---		2
40	PFB	---	---	---	---	---	---
41	MAIN BREAKER	---	100		---		2
42	PFB	---	---	---	---	---	---
PFB - PROVISION FOR FUTURE BREAKER				TOTAL LOAD / PHASE	7.5	7.7	
* PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE. UPDATE PANEL SCHEDULE.				TOTAL LOAD	15.2	KVA	
				DEMAND FACTOR	0.8		
				DEMAND LOAD	12.2	KVA	

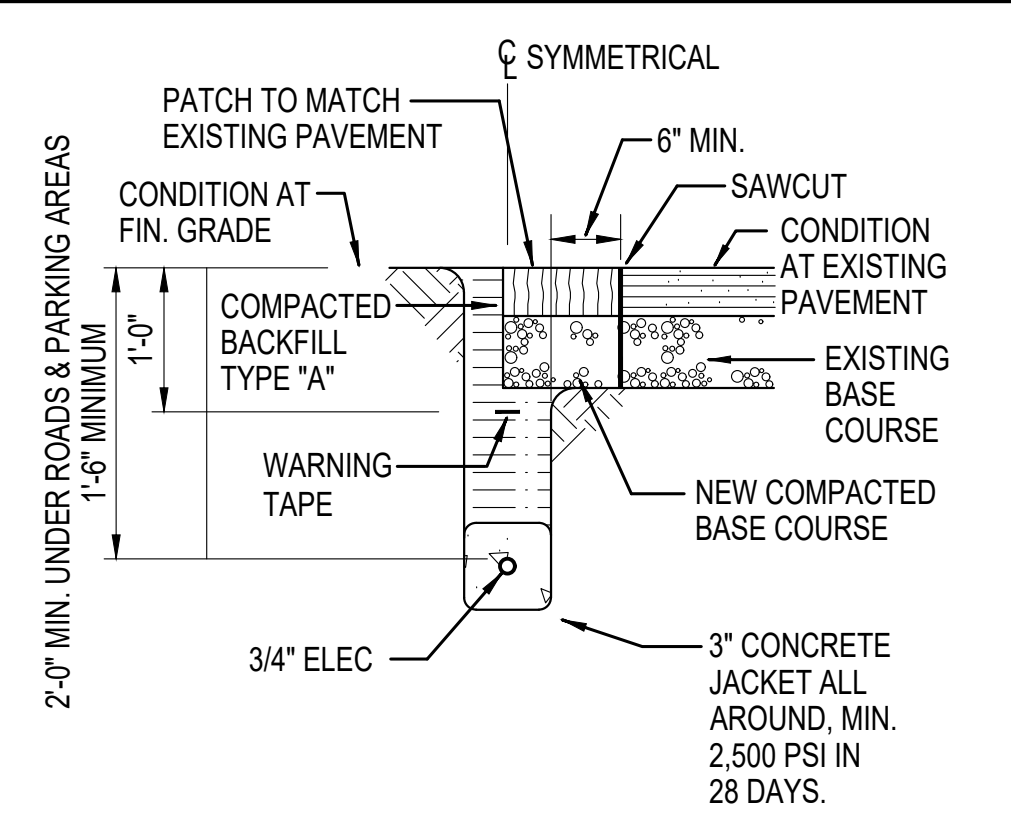


3 ELEVATION - CONTROL PANEL MTD. ON H-FRAME
SCALE: N.T.S.

ELECTRICAL NOTES: NEW WORK

- PROVIDE NEW CIRCUIT BREAKER IN EXISTING SPACE.
- PROVIDE ELECTRICAL CONNECTION TO EQUIPMENT WITH LIQUID-TIGHT FLEXIBLE CONDUIT.
- PROVIDE NEW SURFACE MOUNTED CAST OUTLET BOX. MOUNT WALL @ 7'-6" A.F.F. TO TOP.
- PROVIDE NEW 3/4" # 10 GROUNDING ELECTRODE CONDUCTOR TO NEAREST METAL WATER PIPE OR STRUCTURAL METAL GROUNDING ELECTRODE AND ADDITIONAL GROUND PER N.E.C. 250.53.
- PROVIDE NEW SURFACE MOUNTED CAST OUTLET BOX. MOUNT ON WALL ABOVE EXISTING ROLL-UP DOOR.

- NOTES:**
- BACKFILL MATERIAL TYPE "A"
BLACK OR BEACH SAND, EARTH AND GRAVEL MIXTURE. IF EARTH & GRAVEL MIXTURE, ROCK SIZE SHALL BE 1-INCH OR SMALLER AND SHALL NOT CONTAIN MORE THAN 50% ROCK PARTICLES BY VOLUME. THIS FILL SHALL BE USED OVER CONCRETE ENCASED DUCTS IN ACCORDANCE WITH DRAWINGS.
 - ALL DUCTS SHALL BE PVC SCHEDULE 40.
 - PROVIDE DETECTABLE DUCT WARNING TAPE 12" BELOW FINISH GRADE OR PAVEMENT DIRECTLY ABOVE DUCTS.
 - PROVIDE AC SEALER AT SAWCUT TRANSITION BETWEEN NEW AND EXISTING AC. SEALER SHALL BE PER AC MATERIAL REQUIREMENTS.
 - PROVIDE SMOOTH TRANSITION BETWEEN NEW AND EXISTING PAVEMENT SURFACES.
 - PROVIDE A MINIMUM OF 4" TOPSOIL AND GRASS TO RESTORE THE NON-PAVED AREA. GRASS SHALL BE FULLY ESTABLISHED AT COMPLETION OF PROJECT.
 - PROVIDE A MINIMUM OF 12" CLEARANCE FROM WATERPIPE.



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ANNEX FACILITY IMPROVEMENTS - PHASE 1B
(SEWER IMPROVEMENTS)
SAND ISLAND, O'AHU, HAWAII

MISCELLANEOUS ELECTRICAL DETAILS

DESIGNED: BI	SUBMITTED: APRIL 2026
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Dina Lau
E-signed 2026-04-30 11:56AM HST
dina.u.lau@hawaii.gov
State of Hawaii
Civil Engineer

RAWING NO.
E201

Job No. C00B091C SHEET NO. 11 OF 11 SHEETS