

JOB NO. 09-23

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

HONOLULU, OAHU, HAWAII

Department of Design and Construction

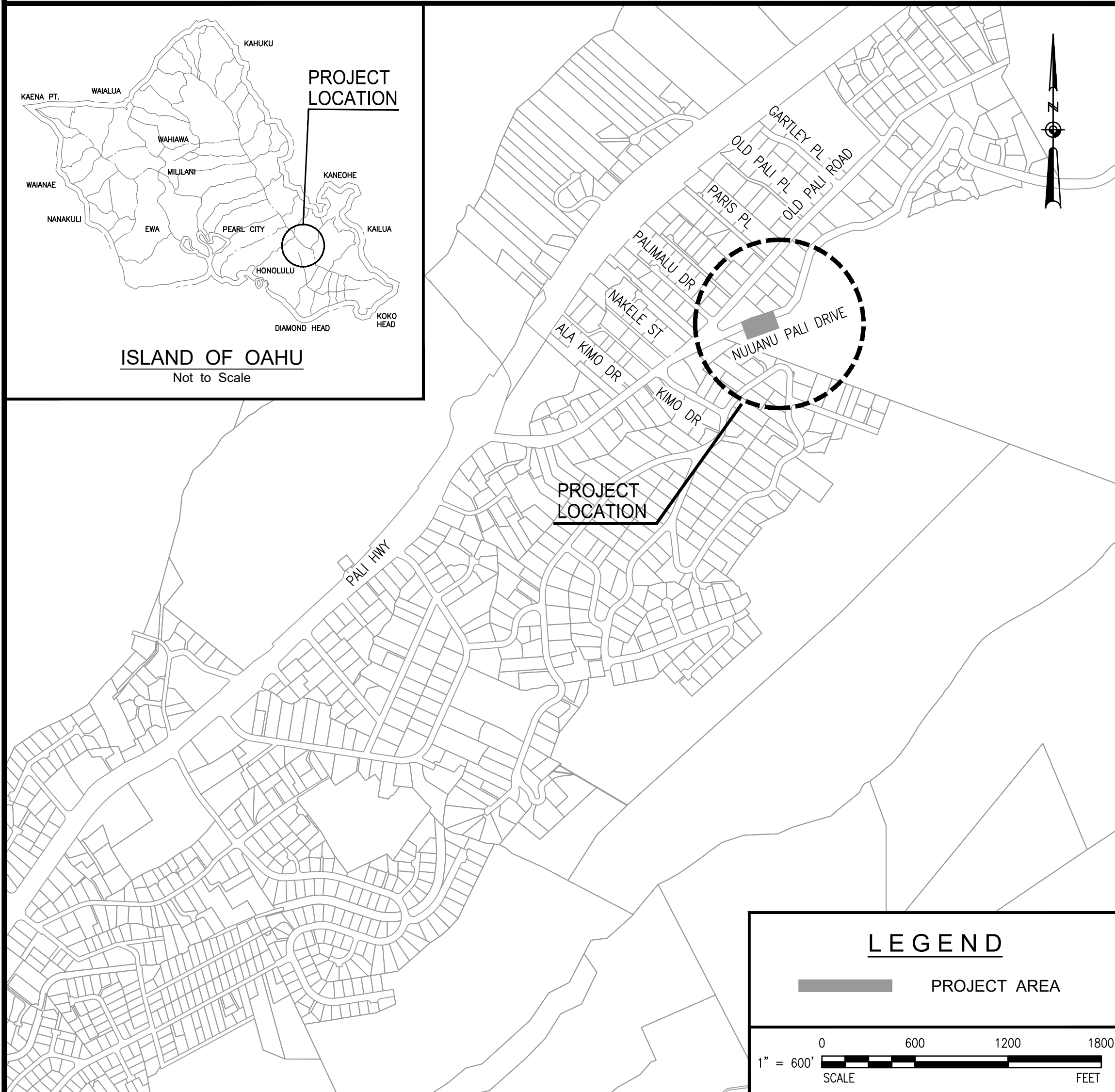
City and County of Honolulu

AECOM 1001 BISHOP ST, SUITE 1600
HONOLULU, HAWAII 96813

LOCATION MAP

INDEX OF DRAWINGS

APPROVED



SHT. No.	DWG. No.	DESCRIPTION
G001	1	TITLE SHEET
G002	2	CONSTRUCTION NOTES - 1
G003	3	CONSTRUCTION NOTES - 2
GC001	4	EROSION & SEDIMENT CONTROL NOTES
GC101	5	EROSION & SEDIMENT CONTROL PLAN & DETAILS
CP101	6	SITE PLAN
CP102	7	GRADING PLAN
CP201	8	PROFILE VIEW
CP301	9	SECTION VIEW - 1
CP302	10	SECTION VIEW - 2
CP303	11	SECTION VIEW - 3
CP501	12	TYPICAL SECTION
CT101	13	TRAFFIC CONTROL PLAN
CT102	14	TRAFFIC CONTROL PLAN
S0.1	15	STRUCTURAL GENERAL NOTES
S0.2	16	SYMBOL AND ABBREVIATIONS
S0.3	17	TYPICAL DETAILS
S0.4	18	TYPICAL REINFORCEMENT DETAILS
S0.5	19	WALER BAR LAYOUT REINFORCING AT FINAL SHOTCRETE FACING DETAIL
S1.1	20	SOIL NAIL WALL PROFILE
S2.1	21	TYPICAL SOIL NAIL WALL SECTION CONSTRUCTION SEQUENCE
S2.2	22	TYPICAL SOIL NAIL WALL SECTION CONSTRUCTION SEQUENCE
S2.3	23	TYPICAL SOIL NAIL SECTION REINFORCING DETAIL
S2.4	24	SOIL NAIL AND CONNECTION PLATE DETAIL
S3.1	25	CRM WALL SECTION

DIRECTOR _____ DATE _____
DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU

GENERAL CONSTRUCTION NOTES:

- 1. ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986, AND THE 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.
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 CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE 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 18A 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 FOR THE FOLLOWING: (A) STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES THAT DISTURB ONE (1) ACRE OR MORE, AND (B) DISCHARGES OF HYDROTASTING 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 (DOH), 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. THE CONTRACTOR SHALL COORDINATE INSPECTIONAL SERVICES WITH THE RESPONSIBLE CITY AGENCY.
6. ANY PAVEMENT OUTSIDE THE CONTRACT ZONE LIMITS DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ITS ORIGINAL, OR BETTER, CONDITION. SUCH RESTORATION SHALL BE TO THE SATISFACTION OF THE ENGINEER AT CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATION OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING. THE CONTRACTOR SHALL COORDINATE ALL WORK.
8. ALL WORK NOT ITEMIZED IN THE PROPOSAL BUT REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT, SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE LUMP SUM BID.
9. THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION ALL IMPROVEMENTS DAMAGED AS A RESULT OF CONSTRUCTION, INCLUDING PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALLS, FENCES, ETC. UNLESS PROVIDED FOR SPECIFICALLY IN THE PROPOSAL, DEMOLITION AND RESTORATION OF EXISTING ITEMS SHALL BE INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.
10. THE EXISTING IMPROVEMENTS ON THE PREMISES AND IN ADJACENT AREAS, THAT ARE NOT TO BE REMOVED, SHALL BE PRESERVED AND PROTECTED. ANY AND ALL DAMAGES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION OPERATIONS SHALL BE REPLACED AND REPAIRED TO ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND PAID FOR BY THE CONTRACTOR.
11. UNLESS RELOCATION IS CALLED FOR ON THE PLANS, EXISTING UTILITIES SHALL REMAIN IN SERVICE AND IN PLACE. IF RELOCATION OF EXISTING UTILITIES IS REQUIRED FOR THE CONTRACTOR'S CONVENIENCE, INTERRUPTION OF SERVICE SHALL BE KEPT TO A MINIMUM AND SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND ONLY WITH THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL NOTIFY PROPERTY OWNER OF PROPERTIES THAT WILL BE AFFECTED TWO (2) WEEKS PRIOR TO THE INTERRUPTION OF SERVICE.
12. THE EXISTENCE AND LOCATION OF SURFACE AND UNDERGROUND UTILITIES, APPURTENANCES, AND STRUCTURES ARE BASED ON AVAILABLE RECORDS, VERIFIED WHENEVER POSSIBLE BY FIELD SURVEYS. NO GUARANTEE IS MADE ON THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE LOCATION AND THE PROTECTION OF EXISTING SURFACE AND SUBSURFACE UTILITIES AND FACILITIES WITHIN AND ABUTTING THE PROJECT SITE THAT THE CONTRACTOR ENCOUNTERS DURING THE PROGRESS OF THE WORK, SUCH AS TELEPHONE SYSTEM, ELECTRIC SYSTEM, WATER SYSTEM, SEWER SYSTEM, DRAINAGE SYSTEM, GAS SYSTEM, CABLE SYSTEM, AND IRRIGATION SYSTEM, ETC., WHETHER OR NOT SHOWN ON THE PLANS. SUCH UTILITIES AND FACILITIES SHALL NOT BE DISTURBED OR DAMAGED UNLESS OTHERWISE INSTRUCTED IN THE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE AFFECTED UTILITY AND/OR FACILITY IMMEDIATELY OF ANY DAMAGE OR DISTURBANCE TO THE UTILITY AND/OR FACILITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISTURBANCE OR DAMAGE TO ANY UTILITY. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, INJURIES, DEATH, AND EXPENSES TO PROPERTY AND PERSONS FROM ACCIDENTS TO AND FROM EXISTING UTILITIES AND FACILITIES. THE CONTRACTOR SHALL REPAIR, RESTORE OR RECONSTRUCT, AT ITS COST, ANY DAMAGE TO THE DISTURBED UTILITIES AND FACILITIES TO THE PRE-EXISTING CONDITION, OR BETTER. ANY DAMAGE CLAIMS DUE TO THE DISRUPTION OF SERVICE CAUSED BY THE UTILITIES BEING DAMAGED SHALL BE PAID BY THE CONTRACTOR, WHO SHALL HOLD HARMLESS THE CITY FROM ALL SUITS, ACTIONS OR CLAIMS OF ANY CHARACTER BROUGHT ON ACCOUNT OF SUCH ACTION.
13. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND SERVICES TO PROPERLY PERFORM AND FULLY COMPLETE ALL WORK SHOWN ON CONTRACT, DRAWINGS, AND SPECIFICATIONS.
14. ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS SHALL BE CHECKED AND VERIFIED PRIOR TO THE START OF CONSTRUCTION, AND ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.

GENERAL CONSTRUCTION NOTES (CONTINUED):

- 15. 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 (808-692-8015). IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE CITY AGENCY.
16. THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS.
17. THE CONTRACTOR SHALL PROVIDE ACCESS TO AND FROM DRIVEWAYS AND PUBLIC STREETS AT ALL TIMES.
18. 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:
18.1. 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.
18.2. CONTINUOUS FORCED AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
18.3. ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).

GRADING NOTES:

- 1. ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 18A, ARTICLES 1,2,3 AND 4 AS RELATED TO GRADING, SOIL EROSION, AND SEDIMENT CONTROL OF THE REVISED ORDINANCES OF HONOLULU, 2021, AS AMENDED, AND SOILS REPORT BY GEOTECHNICAL ENGINEERING SERVICES DATED JANUARY 11, 2023. A REPORT AFTER GRADING, PREPARED BY A PROFESSIONAL ENGINEER, IS REQUIRED UPON COMPLETION OF THIS PROJECT.
2. NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION 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 CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
3. THE CONTRACTOR, AT NO ADDITIONAL COST TO THE CITY, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN ACCORDANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL".
4. 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.
5. 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.
6. 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.
7. 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.
8. 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". THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
9. THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
10. THE GENERAL CONTRACTOR/DEVELOPER/OWNER OF THE PROJECT SHALL BE RESPONSIBLE FOR ALL GRADING OPERATIONS TO BE PERFORMED IN 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 18A 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:
10.1. STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES THAT DISTURB ONE (1) ACRE OR MORE, AND
10.2. DISCHARGES OF HYDROTASTING EFFLUENT, DEWATERING EFFLUENT, AND WELL DRILLING EFFLUENT TO STATE WATERS.

GRADING NOTES (CONTINUED):

- 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 WATER. 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.
11. 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.
12. FILL ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
13. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN PLACE AND ESTABLISHED.
14. TEMPORARY EROSION CONTROL PROCEDURES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO APPLICATION FOR GRADING PERMIT.
15. IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
16. THE CONTRACTOR SHALL COORDINATE INSPECTIONAL SERVICES WITH THE RESPONSIBLE CITY AGENCY.
17. 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 (808-692-8015). IN ADDITION, THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE CITY AGENCY.
18. 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 RECEIVED FROM THE DEPARTMENT OF HEALTH, STATE OF HAWAII, AND HAS SATISFIED ANY OTHER APPLICABLE REQUIREMENTS OF THE NPDES PERMIT PROGRAM. THE CONTRACTOR SHOULD PROVIDE A WRITTEN COPY OF THE NGPC TO THE APPROPRIATE CITY DEPARTMENT OR GOVERNMENTAL AGENCY PER THEIR REQUIREMENTS.
19. ALL GRADING AND CONSTRUCTION WORK SHALL IMPLEMENT MEASURES TO ENSURE THAT THE DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE SHALL BE REDUCED TO THE MAXIMUM EXTENT PRACTICABLE AND WILL NOT CAUSE OR CONTRIBUTE TO AN EXCEEDANCE OF WATER QUALITY STANDARDS.
20. NON-COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHALL COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE VIOLATOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECT TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.
21. FOR BENCH MARK, SEE SHEET CP102.

BIOLOGICAL RESOURCE PROTECTION NOTES:

- 1. TO AVOID HARM TO HAWAIIAN HOARY BATS, NO TREES OR WOODY VEGETATION OVER 15 FEET IN HEIGHT SHALL BE TRIMMED OR REMOVED BETWEEN JUNE 1 AND SEPTEMBER 15.
2. SHOULD A HAWAIIAN SHORT-EARED OWL NEST BE DISCOVERED DURING CONSTRUCTION, THE DEPARTMENT OF FORESTRY AND WILDLIFE SHALL BE NOTIFIED AND A 100-FOOT BUFFER SHALL BE ESTABLISHED AROUND THE NEST IN WHICH NO WORK OR CLEARING OF VEGETATION SHALL OCCUR. HAWAIIAN SHORT-EARED OWL CAN BE IDENTIFIED BY ITS BROWN FEATHERS, ROUND FACE, AND YELLOW EYES. THEY ARE ACTIVE BOTH DURING THE DAY AND AT NIGHT. THEIR NESTS CONSIST OF A SCRAPER IN THE GROUND, LINED WITH GRASS AND FEATHERS. ONLY NESTS WITH EGGS OR YOUNG BIRDS REQUIRE PROTECTION.
3. TO AVOID AND MINIMIZE THE SPREAD OF INVASIVE SPECIES ALL EQUIPMENT AND MATERIALS BROUGHT TO THE PROJECT SITE SHALL BE CLEANED AND FREE OF SOIL AND PLANT SEEDS PRIOR TO MOBILIZATION TO THE SITE.
4. TO PREVENT THE SPREAD OF INVASIVE SPECIES, GREEN WASTE FROM THE SITE SHALL BE DISPOSED OF AS TRASH FOR INCINERATION AND SHALL NOT BE DISPOSED OF AT A GREEN WASTE RECYCLING OR MULCHING FACILITY. INVASIVE SPECIES DISCOVERED AT THE PROJECT SITE INCLUDING, MICONIA, CAPE IVY, GLORY BUSH, AND LITTLE FIRE ANTS SHALL BE REPORTED TO THE STATEWIDE PEST HOTLINE AT WWW.643PEST.ORG OR 808-643-7378 OR TO OAHU ISLAND INVASIVE SPECIES COMMITTEE AT OIS@HAWAII.EDU OR VIA PHONE OR TEXT AT 808-286-4616.
5. SHOULD A HAWAIIAN WATERBIRD BE OBSERVED IN THE PROJECT AREA, ALL WORK WITHIN 100 FEET OF THE BIRD SHALL CEASE AND NOT RESUME UNTIL THE BIRD LEAVES THE AREA OF ITS OWN ACCORD. SHOULD HAWAIIAN WATERBIRDS BE OBSERVED NEAR THE PROJECT AREA, A BIOLOGIST SHALL SURVEY FOR NESTS IN AND AROUND THE PROJECT AREA PRIOR TO THE RESUMPTION OF WORK. SHOULD A HAWAIIAN WATERBIRD NEST BE DISCOVERED A 100-FOOT BUFFER SHALL BE ESTABLISHED AND MAINTAINED AROUND THE ACTIVE NEST UNTIL THE CHICKS HAVE FLEDGED.

APPROVED:

Director, Department of Planning and Permitting

DATE 8/5/2024

Chief, Civil Engineering Branch, DPP

BIOLOGICAL RESOURCE PROTECTION NOTES (CONTINUED):

- 6. TO AVOID HARM TO SEABIRDS, NIGHT WORK CONSTRUCTION LIGHTING SHALL BE DOWNWARD FACING AND FULLY SHIELDED.
7. SHOULD AN OAHU ELEPAIO NEST BE DISCOVERED, A 100-FOOT BUFFER SHALL BE ESTABLISHED AND MAINTAINED AROUND THE ACTIVE NEST UNTIL THE CHICKS HAVE FLEDGED.

TRAFFIC NOTES FOR WORK ON CITY AND 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 "HIGHWAY ADMINISTRATIVE 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 HIGHWAY 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 DTS.
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 DTS, 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 RIGHT-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
8. THE CONTRACTOR SHALL REFERENCE TO THE APPROVAL OF DTS AND DPP, 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 CONSTRUCTION ACTIVITIES.
9. THE CONTRACTOR SHALL NOTIFY DPP AT 808-768-8084 ONE (1) WEEK PRIOR TO ANY WORK TO BE DONE ON SIGNS, POSTS, AND/OR PAVEMENTS MARKINGS.
10. NO EQUIPMENT SHALL BE STORED WITHIN STREET RIGHT-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY DTS.
11. DDC 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 #1.

SHPD NOTES:

IN THE EVENT THAT SUBSURFACE HISTORIC RESOURCES, INCLUDING HUMAN SKELETAL REMAINS, STRUCTURAL REMAINS, CULTURAL DEPOSITS, ARTIFACTS, SAND DEPOSITS, OR SINK HOLES ARE IDENTIFIED DURING THE DEMOLITION AND/OR CONSTRUCTION WORK, CEASE WORK IN THE IMMEDIATE VICINITY OF THE FIND, PROTECT THE FIND FROM ADDITIONAL DISTURBANCE, AND CONTACT THE STATE HISTORIC PRESERVATION DIVISION, AT 808-692-8015. SEE GENERAL CONSTRUCTION NOTE FOR ADDITIONAL AGENCIES TO NOTIFY IF ARTIFACTS AND/OR HUMAN SKELETAL REMAINS ARE UNCOVERED.

Professional Engineer Seal for Mingxun Ding, License No. 9248-C, Hawaii, USA. AECOM logo and address: 1001 BISHOP ST, SUITE 1600, HONOLULU, HAWAII 96813. Project title: EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE. Construction Notes - 1. Design: MD/HL, Drawn: JZ, Checked: MD/GN, Date: NOVEMBER 2023. Approved: Chief, Civil Division, DDC, Date: 7/30/24. DWG. NO. G002, SHEET 2 OF 25 SHEETS.

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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.
- REGULARLY INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROLS TO ENSURE CONTINUED PERFORMANCE.
- SLOPE PROTECTION**
SLOPE PROTECTION IS REQUIRED ON AREAS WITH SLOPES GREATER THAN 15% AND ON AREAS OF MODERATE SLOPE THAT ARE PRONE TO EROSION UNLESS THEY ARE BEING ACTIVELY WORKED. USE DIVERSION UPSTREAM OF SLOPE (DIKES, SWALES, SLOPE DRAINS) TO DIVERT WATER AROUND THE SLOPE. PROVIDE A 10-FT BUFFER ZONE AT THE TOE OF SLOPE. ONLY 5 ACRES MAY BE DISTURBED AT ANYTIME ON SLOPES GREATER THAN 15%.
- TEMPORARY STABILIZATION**
TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 7 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.
- PRESERVE EXISTING VEGETATION**
CLEARLY MARK THE AREAS TO BE PRESERVED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.
- MINIMIZE SOIL COMPACTION**
AREAS WHERE FINAL STABILIZATION OR INFILTRATION PRACTICES WILL BE INSTALLED SHALL BE PROTECTED FROM EXCESSIVE COMPACTION DURING CONSTRUCTION. VEHICLE AND EQUIPMENT USE SHALL BE RESTRICTED OR TECHNIQUES TO CONDITION THE SOILS TO SUPPORT VEGETATION SHALL BE IMPLEMENTED IN THE AREAS THAT HAVE BEEN COMPLETED AND ARE DESIGNATED TO REMAIN VEGETATIVE OR POST-CONSTRUCTION INFILTRATION AREAS. CLEARLY MARK THE AREAS TO BE AVOIDED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.
- PERIMETER CONTROLS**
PERIMETER CONTROLS ARE REQUIRED DOWNSLOPE OF ALL DISTURBED AREAS. MAINTAIN DOWNSTREAM VEGETATED BUFFER AREA.
- 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 AS CONSTRUCTION PROGRESSES, REVISIONS MAY BE NECESSARY AND WILL BE PROVIDED TO DPP INSPECTORS.
 - VELOCITY DISSIPATION DEVICES ARE NOT APPLICABLE AS THERE ARE NO OUTLETS.
 - SEDIMENT BARRIERS ARE NOT APPLICABLE AS THE PROVIDED BMPS (PERIMETER CONTROL) WILL BE SUFFICIENT TO ADDRESS ANY POTENTIAL SEDIMENT RUNOFF.
 - DEWATERING PRACTICES ARE NOT APPLICABLE SINCE NO GROUNDWATER WILL BE ENCOUNTERED.
 - DIVERSION BMPS TO DIVER RUNOFF FROM UPSTREAM AREAS AROUND DISTURBED AREAS OF THE SITE ARE NOT APPLICABLE. GRADING OCCURS ON EXISTING SLOPES GREATER THAN 15%. HOWEVER THERE WILL BE NO SEVERE EROSION OF THE STEEPER SLOPES FROM UPSLOPE RUNOFF AND THE PROPOSED BMPS WILL BE SUFFICIENT TO ADDRESS ANY POTENTIAL SEDIMENT RUNOFF.
 - SEDIMENT BARRIERS ARE NOT APPLICABLE AS THE PROPOSED BMPS (PERIMETER CONTROLS) ARE SUFFICIENT TO ADDRESS ANY POTENTIAL SEDIMENT RUNOFF.
 - DRAIN INLET PROTECTION IS NOT APPLICABLE AS THERE ARE NO AFFECTED DRAIN INLETS.
- THE CONTRACTOR SHALL COMPLY WITH THE PROJECT SCHEDULING REQUIREMENTS OF THE CITY'S RULES RELATING TO WATER QUALITY.
- AN ESCP COORDINATOR MUST BE DESIGNATED USING THE FORM IN APPENDIX A TO THE RULES RELATING TO WATER QUALITY PRIOR TO PERMITTING.
- NOTIFY DPP IN WRITING OF PROJECT START DATE TWO WEEKS PRIOR TO STARTING WORK.
- PRACTICE GOOD HOUSEKEEPING MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION.

GOOD HOUSEKEEPING BMPS:

- INSPECT BMPS AND SITE WEEKLY
MAINTAIN BMPS AND SITE AS REQUIRED TO ENSURE CONTINUED PERFORMANCE.
- DUST CONTROL
DUST FROM THE PROJECT SITE SHALL NOT BE TRANSPORTED OR DISCHARGED TO OFF-SITE AREAS. WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS CONTAINED IN THE "HAWAII ADMINISTRATIVE RULES" TITLE 11, CHAPTER 60.1 "AIR QUALITY CONTROL".
- 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 MAXIMUM EXTENT PRACTICABLE (MEP).
- 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 FENCES 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 SEVEN (7) DAYS.
- 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 A MINIMUM, ALL PROJECTS SHALL CLEANUP ALL LEAKS AND 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.
- 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 FACILITIES 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 THREE (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 FACILITIES 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.
- CONTAMINATED SOIL MANAGEMENT
AT MINIMUM CONTAIN CONTAMINATED MATERIAL SOIL BY SURROUNDING IT 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.
- 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 SHOULD BE A MINIMUM OF 10 MILLIMETER POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE 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.
- 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.

GOOD HOUSEKEEPING BMPS (CONTINUED):

- 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.
- 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 MAINTENANCE OPERATIONS BY USING OFF-SITE 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.
- STABILIZED CONSTRUCTION ENTRANCE AND EXIT
A STABILIZED CONSTRUCTION ENTRANCE AND EXIT SHALL BE PROVIDED BASED ON EROSION AND SEDIMENT CONTROL PLAN DETAILS, AND SHALL BE REGULARLY INSPECTED/MAINTAINED TO ENSURE CONTINUED PERFORMANCE.
- DEWATERING OPERATIONS
DEWATERING NON-STORM WATER CANNOT BE DISCHARGED FROM THE SITE WITHOUT PRIOR NOTICE AND APPROVAL FROM THE DPP AND DOH. DEWATERING DISCHARGES SHALL BE KEPT ONSITE USING A SEDIMENT BASIN, SEDIMENT TRAP, WEIR TANK, DEWATERING TANK, FILTRATION SYSTEM OR OTHER MANUFACTURED SYSTEM.

EROSION AND SEDIMENT CONTROL PLAN SCHEDULE AND RAIN RESPONSE PLAN:

PROJECT SEQUENCE:

- INSTALL STABILIZED CONSTRUCTION ENTRANCES, PERIMETER CONTROLS, AND FILTER SOCK FOR PROTECTED AREAS, CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF THESE BMPS.
- CLEAR, GRUB, EXCAVATE AND GRADE THE SITE ALONG WITH SOIL NAIL INSTALLATION, REFER TO SITE PLAN. RELOCATE, RECONSTRUCT AND MAINTAIN BMPS AS NEEDED TO KEEP THEM EFFECTIVE AT ALL TIMES. INITIATE TEMPORARY STABILIZATION IMMEDIATELY ONCE GRADING IS COMPLETED.
- PROCEED WITH CONSTRUCTION WITH LEAST POSSIBLE DISTURBANCE OF VEGETATIVE AREAS AND TEMPORARY STRUCTURES.
- REMOVE OR DISMANTLE TEMPORARY EROSION CONTROL STRUCTURES AFTER AT LEAST 90% ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RAIN RESPONSE PLAN:

THE FOLLOWING WILL BE PERFORMED WHEN RAIN IS IMMINENT OR IS FORECASTED IN THE NEXT 48 HOURS:



- TEMPORARY SUSPENSION OF ACTIVE TRENCHING AND GRADING.
- INSPECT ALL PERIMETER CONTROLS AND MAINTAIN AS NEEDED. REINSTALL ANY PERIMETER CONTROLS THAT WERE REMOVED DUE TO ACTIVE WORK IN THE AREA.
- 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 RAIN EVENT AND REPLACE OR MAINTAIN BMPS AS NEEDED.

P:\HW\FELDMAN, C:\Users\felmanj\Documents\Drawings\10-08-2024\10-08-2024.dwg
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APPROVED:


 For: CHIEF, CIVIL ENGINEERING BRANCH, DPP

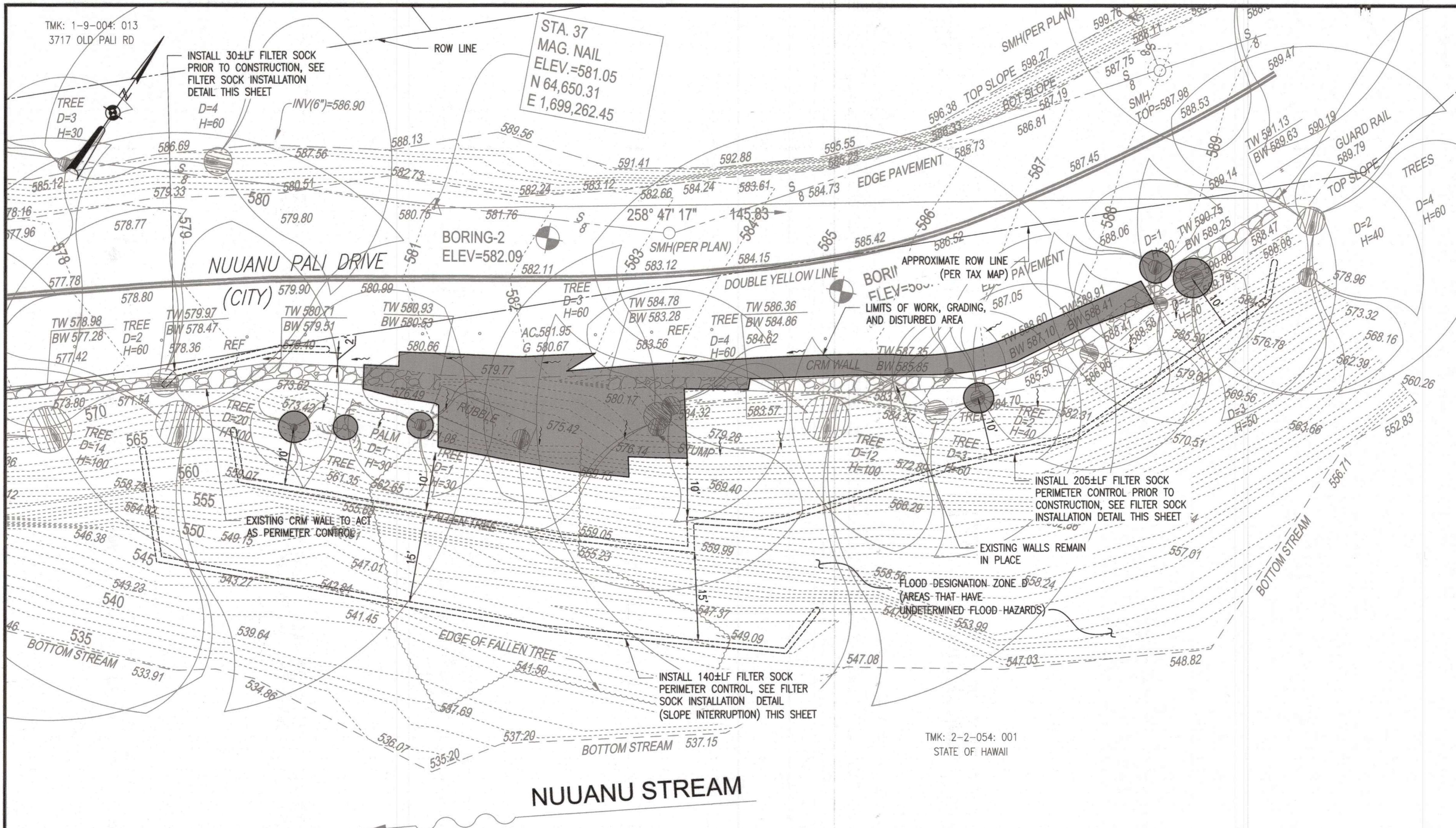
7/26/24
 DATE

		Ding Mingkun SIGNATURE		4/30/26 EXPIRATION DATE OF LICENSE	
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.					
					
1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813					
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED	
EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE					
EROSION & SEDIMENT CONTROL NOTES					
DESIGN:	MD/HL	APPROVED:		DWG. NO.	GC001
DRAWN:	JZ	CHIEF, CIVIL DIVISION, DDC	DATE	SHEET	4
CHECKED:	MD/GN			of 25 SHEETS	
DATE:	NOVEMBER 2023	JOB NO.	09-23		

TMK: 1-9-004: 013
3717 OLD PALI RD

INSTALL 30±LF FILTER SOCK PRIOR TO CONSTRUCTION, SEE FILTER SOCK INSTALLATION DETAIL THIS SHEET

STA. 37
MAG. NAIL
ELEV.=581.05
N 64,650.31
E 1,699,262.45



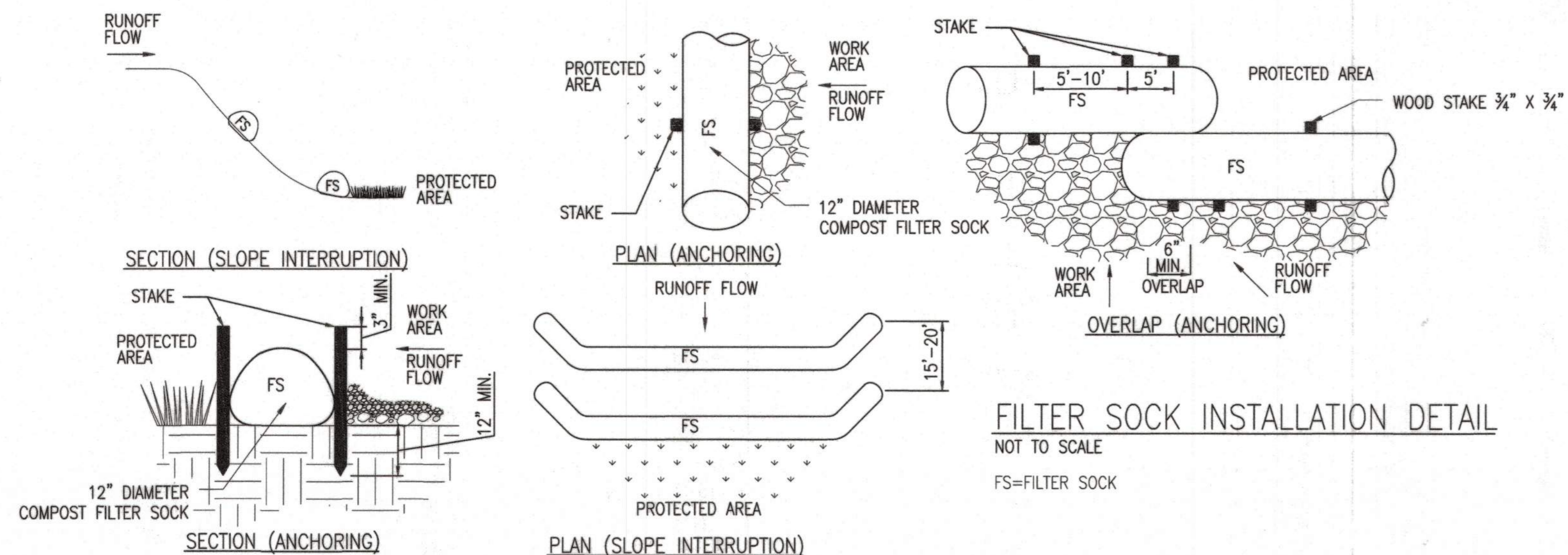
TMK: 2-2-054: 001
STATE OF HAWAII

LEGEND

- FILTER SOCK (FS)
- ~ DIRECTION OF FLOW
- ▭ LIMITS OF WORK, GRADING, AND DISTURBED AREA

0 10 20 30
1" = 10'
SCALE: HORIZONTAL FEET

EROSION & SEDIMENT CONTROL PLAN (CATEGORY 4)
SCALE: 1"=10'



- NOTES:**
- SEE DWG NO. GC001 FOR EROSION & SEDIMENT CONTROL NOTES
 - BASED UPON THE DOH STATE WATER QUALITY MAP, THE PROJECT LOCATION HAS AN INLAND CLASSIFICATION OF CLASS 2 AND MARINE CLASSIFICATION OF CLASS A FOR NUUANU STREAM.

APPROVED:

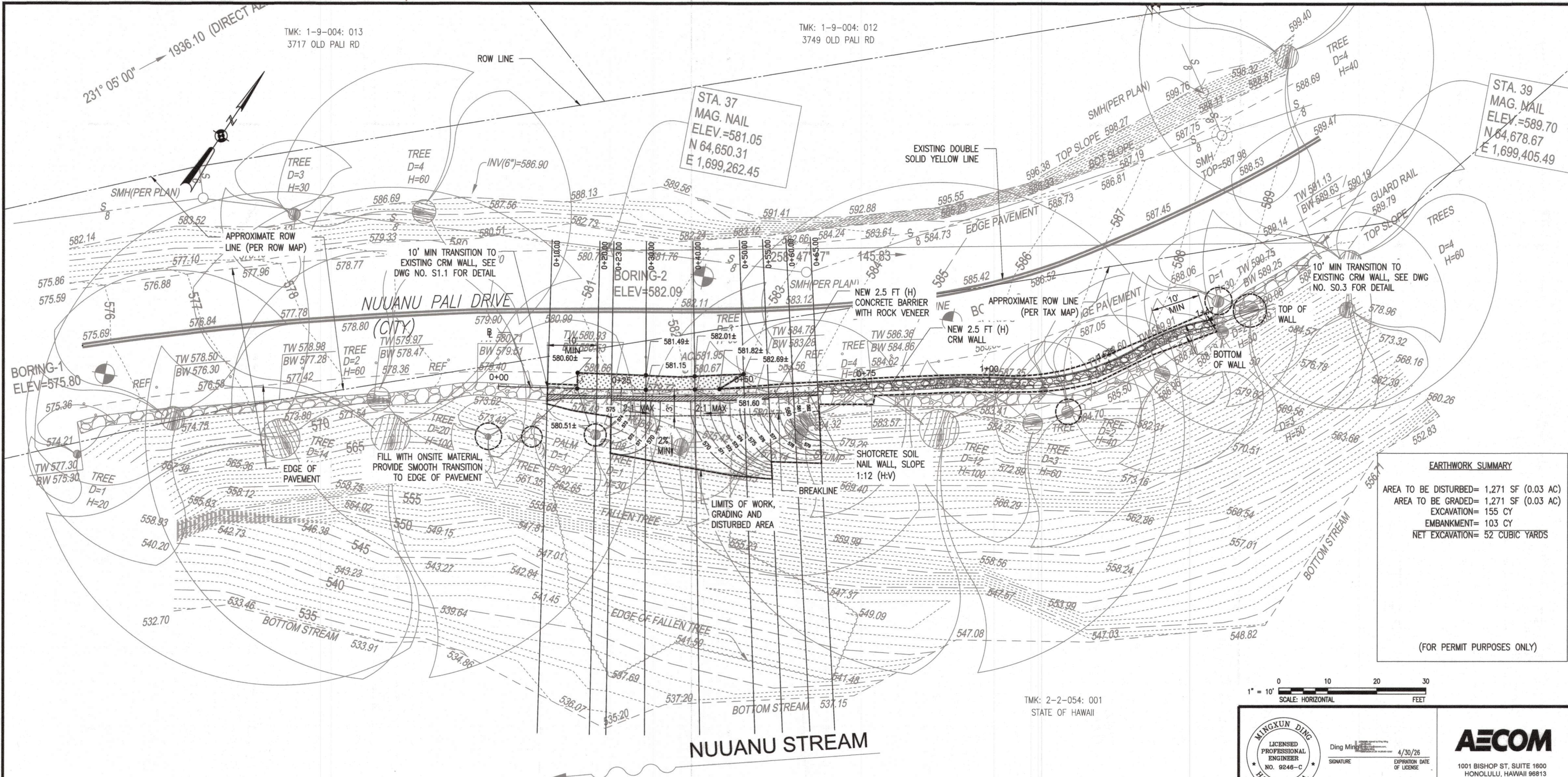
Melani Soliman
CHIEF, CIVIL ENGINEERING BRANCH, DPP

7/30/24
DATE

		<p>Ding Mingxun SIGNATURE</p> <p>4/30/26 EXPIRATION DATE OF LICENSE</p>		<p>AECOM</p> <p>1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813</p>
<p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.</p>				
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
<p>EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE</p>				
<p>EROSION & SEDIMENT CONTROL PLAN & DETAILS</p>				
DESIGN: MD/HL	APPROVED:	DWG. NO.	GC101	
DRAWN: JZ	CHEF, CIVIL DIVISION, DDC	DATE	SHEET 5	
CHECKED: MD/GN			OF 25 SHEETS	
DATE: NOVEMBER 2023	JOB NO. 09-23			

TMK: 1-9-004: 013
3717 OLD PALI RD

TMK: 1-9-004: 012
3749 OLD PALI RD



STA. 37
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ELEV.=581.05
N 64,650.31
E 1,699,262.45

STA. 39
MAG. NAIL
ELEV.=589.70
N 64,678.67
E 1,699,405.49

EARTHWORK SUMMARY

AREA TO BE DISTURBED= 1,271 SF (0.03 AC)
 AREA TO BE GRADED= 1,271 SF (0.03 AC)
 EXCAVATION= 155 CY
 EMBANKMENT= 103 CY
 NET EXCAVATION= 52 CUBIC YARDS

(FOR PERMIT PURPOSES ONLY)

TMK: 2-2-054: 001
STATE OF HAWAII

1" = 10'
SCALE: HORIZONTAL
FEET

MINGXUN DING
 LICENSED PROFESSIONAL ENGINEER
 NO. 9246-C
 HAWAII, U.S.A.

Ding Ming
 SIGNATURE
 4/30/26
 EXPIRATION DATE OF LICENSE

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AECOM
 1001 BISHOP ST, SUITE 1600
 HONOLULU, HAWAII 96813

GRADING PLAN
SCALE: 1"=10'

LEGEND

- CONCRETE BARRIER WITH ROCK VENEER, SEE DWG NO. S2.3 FOR DETAIL
- CRM WALL, SEE DWG NO. S3.1 FOR DETAIL
- SHOTCRETE SOIL NAIL WALL, SLOPE 1:12 (H:V), SEE DWG NO. S0.5, AND S2.1 TO S2.3
- ONSITE FILL
- EXISTING CRM WALL TO BE DEMOLISHED
- PROPOSED CONTOUR
- EXISTING CONTOUR
- ROW LIMITS
- LIMITS OF WORK, GRADING AND DISTURBED AREA
- MATCH EXISTING GRADE

NOTES:

- SEE DWG NO. CP201 FOR PROFILE VIEW AND DWG NO. CP301-CP303 FOR SECTION VIEW.

APPROVED:

Melani J. [Signature]
 CHIEF, CIVIL ENGINEERING BRANCH, DPP
 DATE: 7/30/24

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

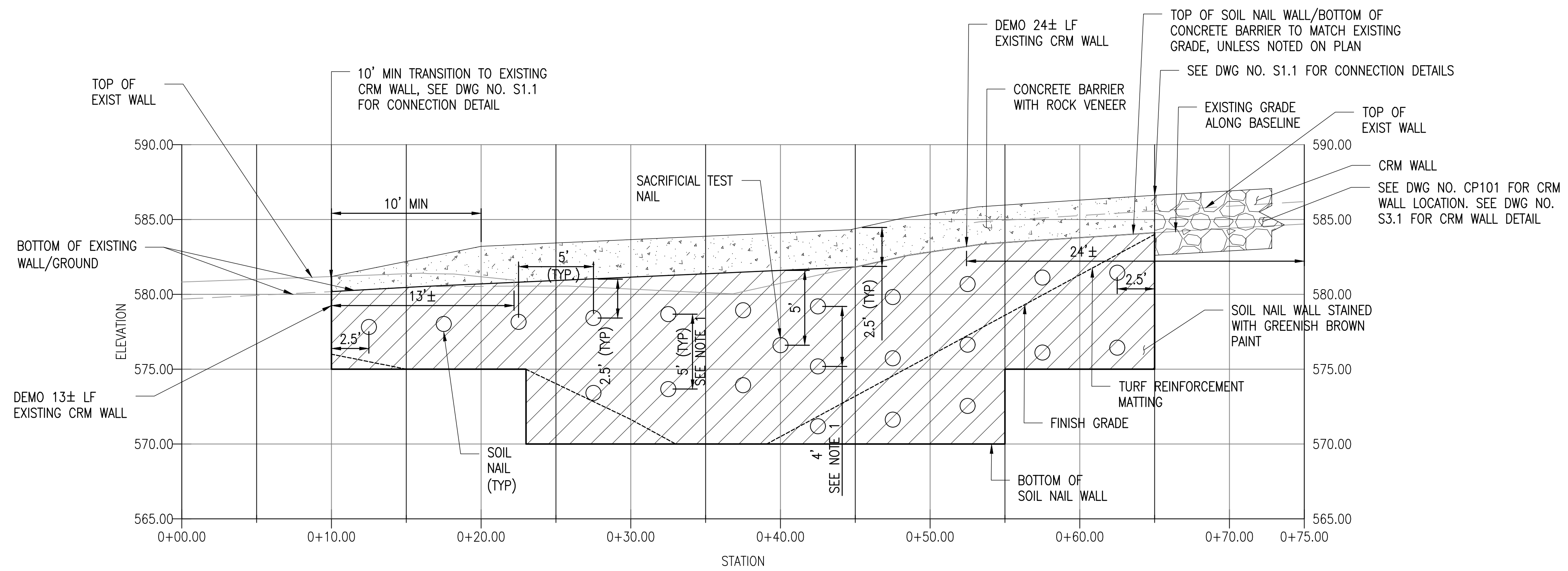
EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

GRADING PLAN

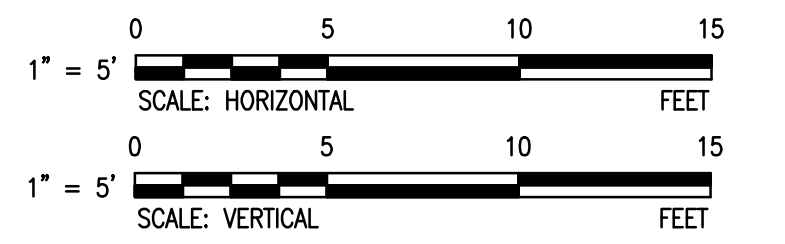
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DRAWN: JZ	CHEF, CIVIL DIVISION, DDC	CP102
CHECKED: MD/GN	DATE:	SHEET 7
DATE: NOVEMBER 2023	JOB NO. 09-23	OF 25 SHEETS

FINAL SUBMITTAL

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PLOT DATE: July 25, 2024 10:03:00 AM



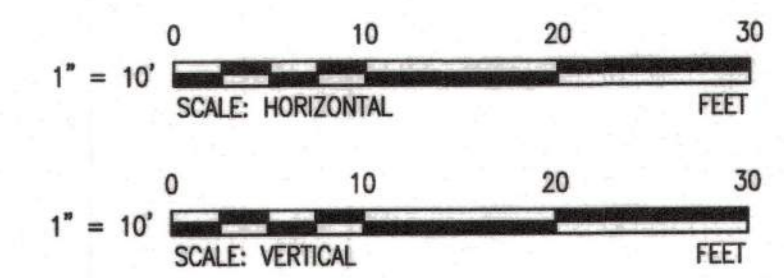
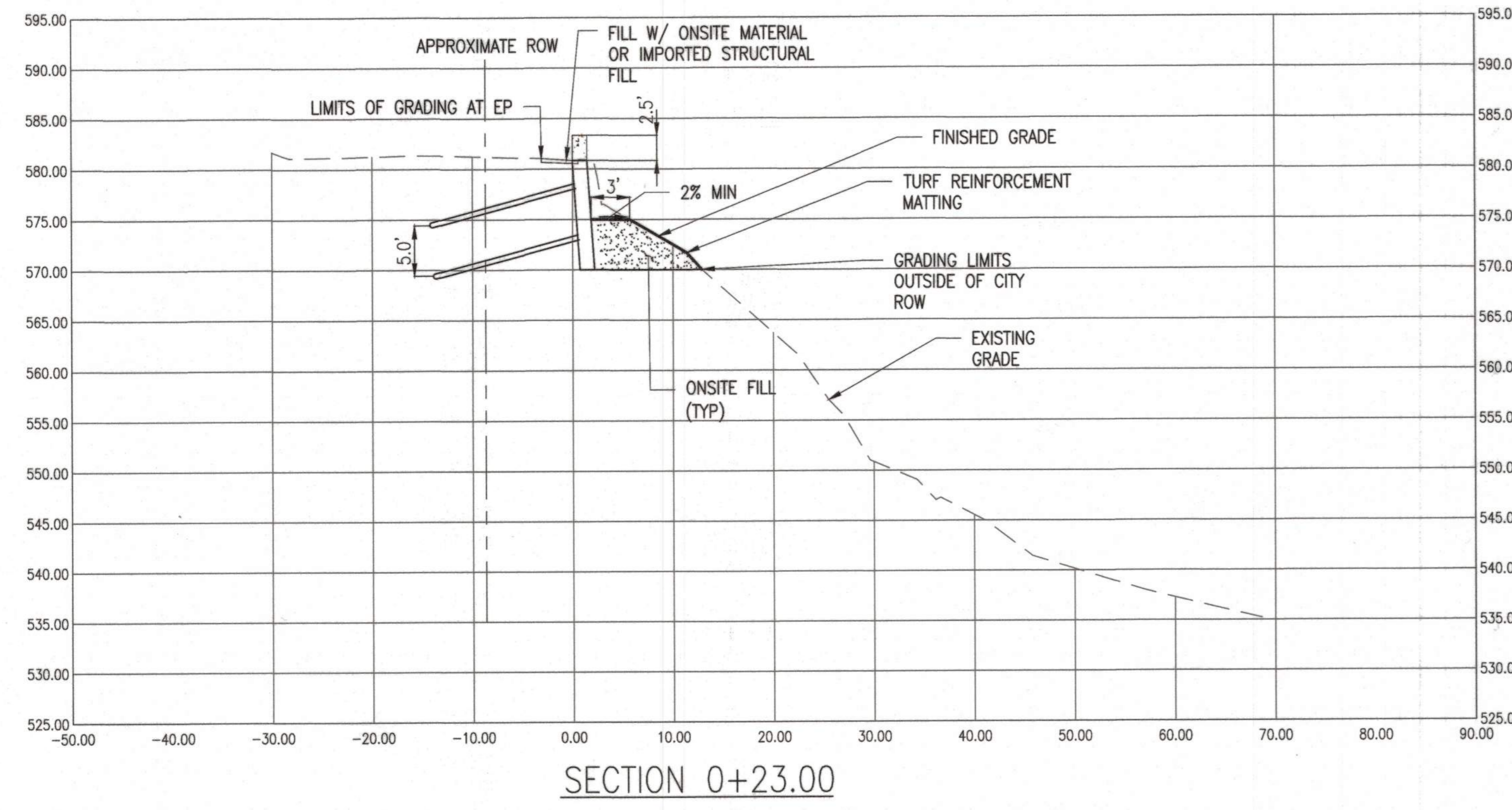
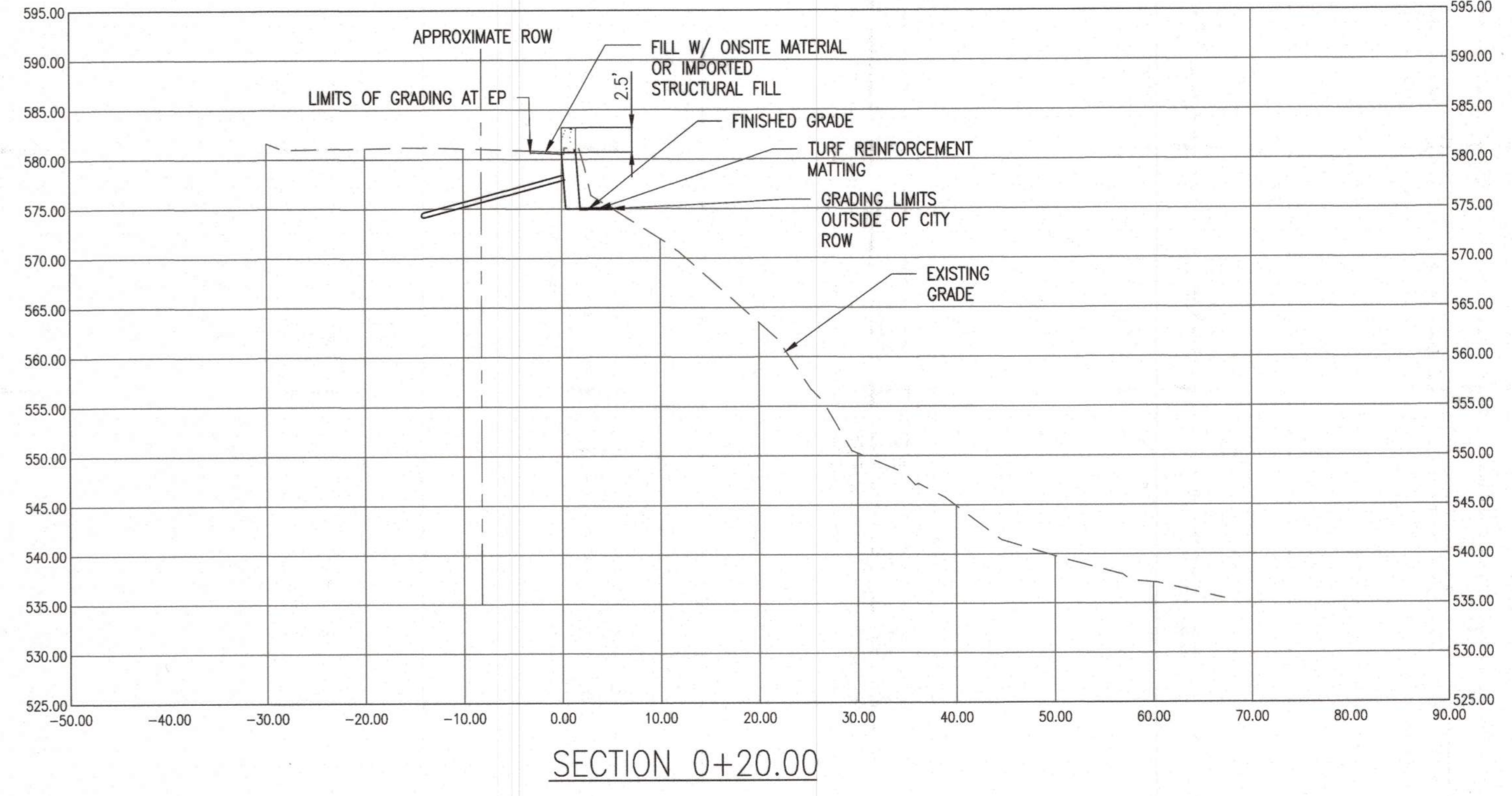
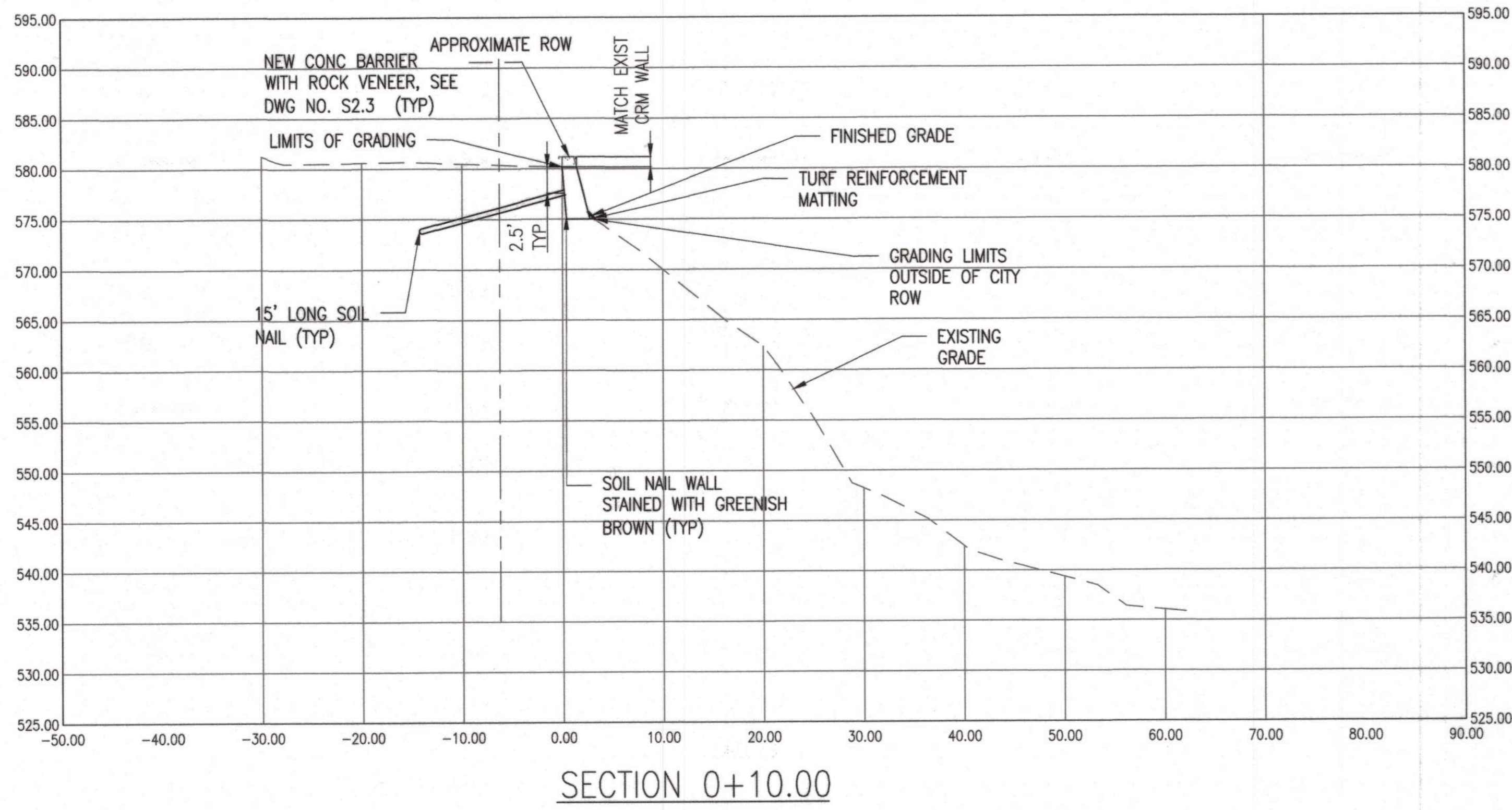
SOIL NAIL WALL - PROFILE VIEW
 SCALE (HORIZONTAL): 1"=5'
 SCALE (VERTICAL): 1"=5'




- NOTES:
 1. 4 FT VERTICAL SPACING FOR SOIL NAIL BETWEEN STATION 0+40 TO 0+55.

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 PLOT DATE: January 23, 2025 @ 03:42:57 PM

SIGNATURE: <i>[Signature]</i> EXPIRATION DATE OF LICENSE: 4/30/26		1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813		
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.				
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE				
PROFILE VIEW				
DESIGN:	MD/HL	APPROVED:	DWG. NO. CP201	
DRAWN:	JZ	CHEF, CIVIL DIVISION, DDC	DATE	SHEET 8
CHECKED:	MD/GN	DATE		
DATE:	JANUARY 2025	JOB NO. 09-23	OF 25 SHEETS	




 MINGXUN DING
 LICENSED PROFESSIONAL ENGINEER
 NO. 9246-C
 HAWAII, U.S.A.

Ding MINGXUN
 SIGNATURE
 4/30/26
 EXPIRATION DATE OF LICENSE

AECOM
 1001 BISHOP ST, SUITE 1800
 HONOLULU, HAWAII 96813

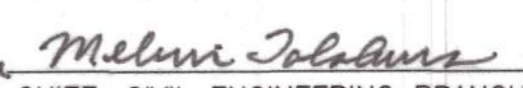
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REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

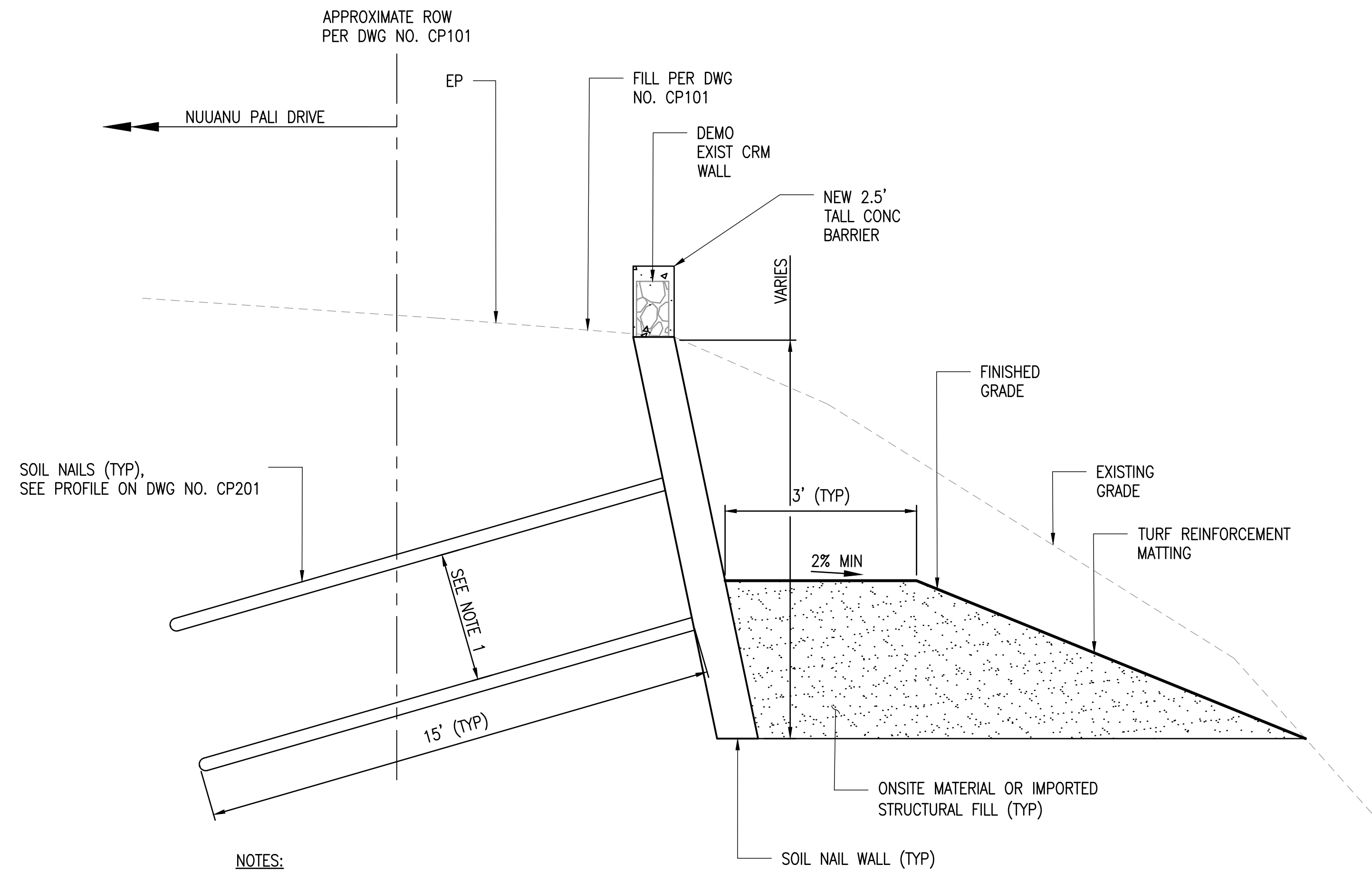
EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

SECTION VIEW - 1

DESIGN: MD/HL	APPROVED:	DWG. NO. CP301
DRAWN: JZ	CHEF, CIVIL DIVISION, DDC	SHEET 9
CHECKED: MD/GN	DATE	OF 25 SHEETS
DATE: NOVEMBER 2023	JOB NO. 09-23	

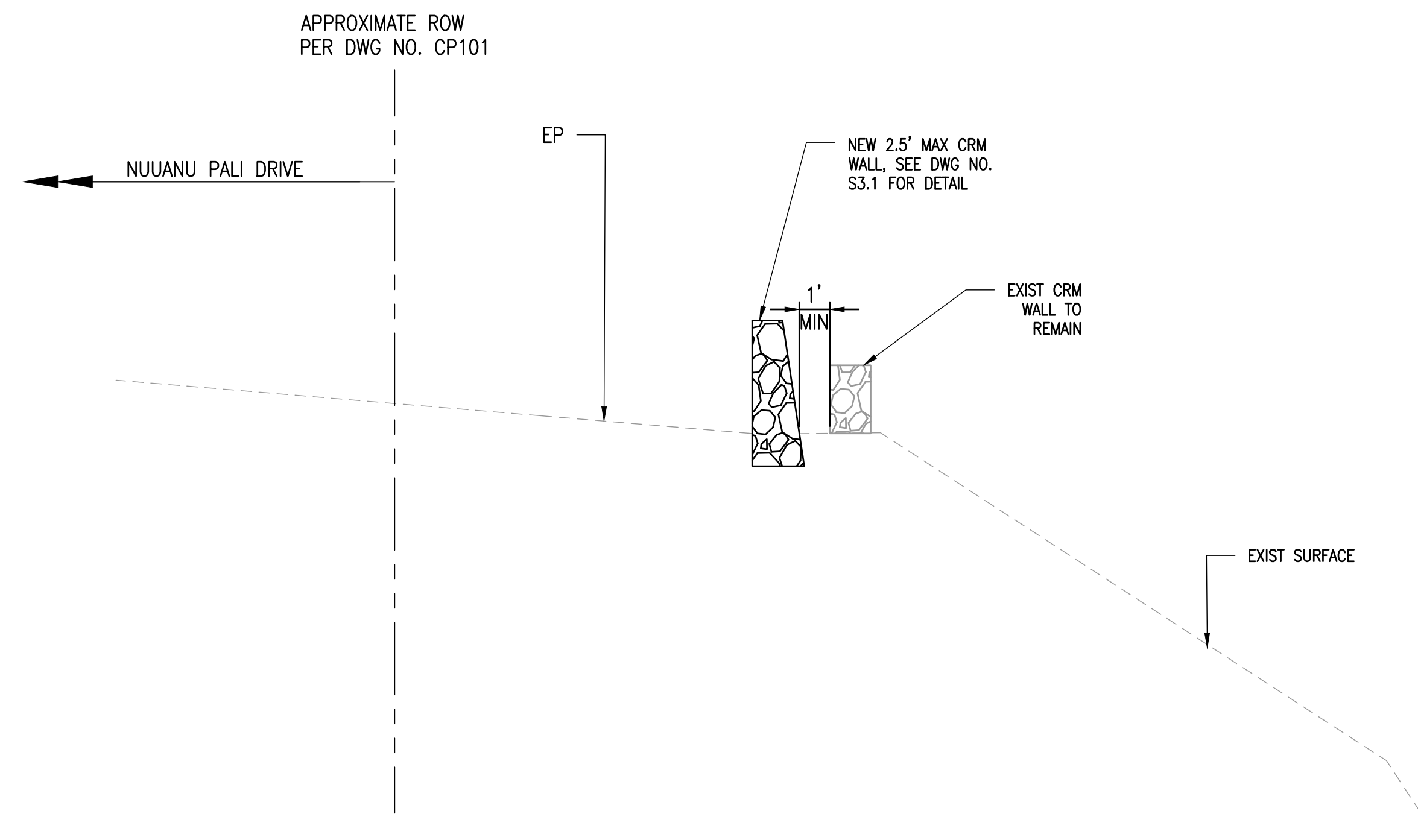
APPROVED:

 CHIEF, CIVIL ENGINEERING BRANCH, DPP
 7/21/24
 DATE

P:\01\EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE\01-SHEETS\01-ROAD PROFILE.dwg
 PLOT DATE: July 26, 2024 10:24:59 AM



- NOTES:
 1. SEE DWG NO. CP201 FOR SOIL NAIL SPACING
 2. ALL SOIL NAILS EMBEDDED 15'

TYPICAL SECTION (0+10.00 TO 0+65.00)
 SCALE: NOT TO SCALE

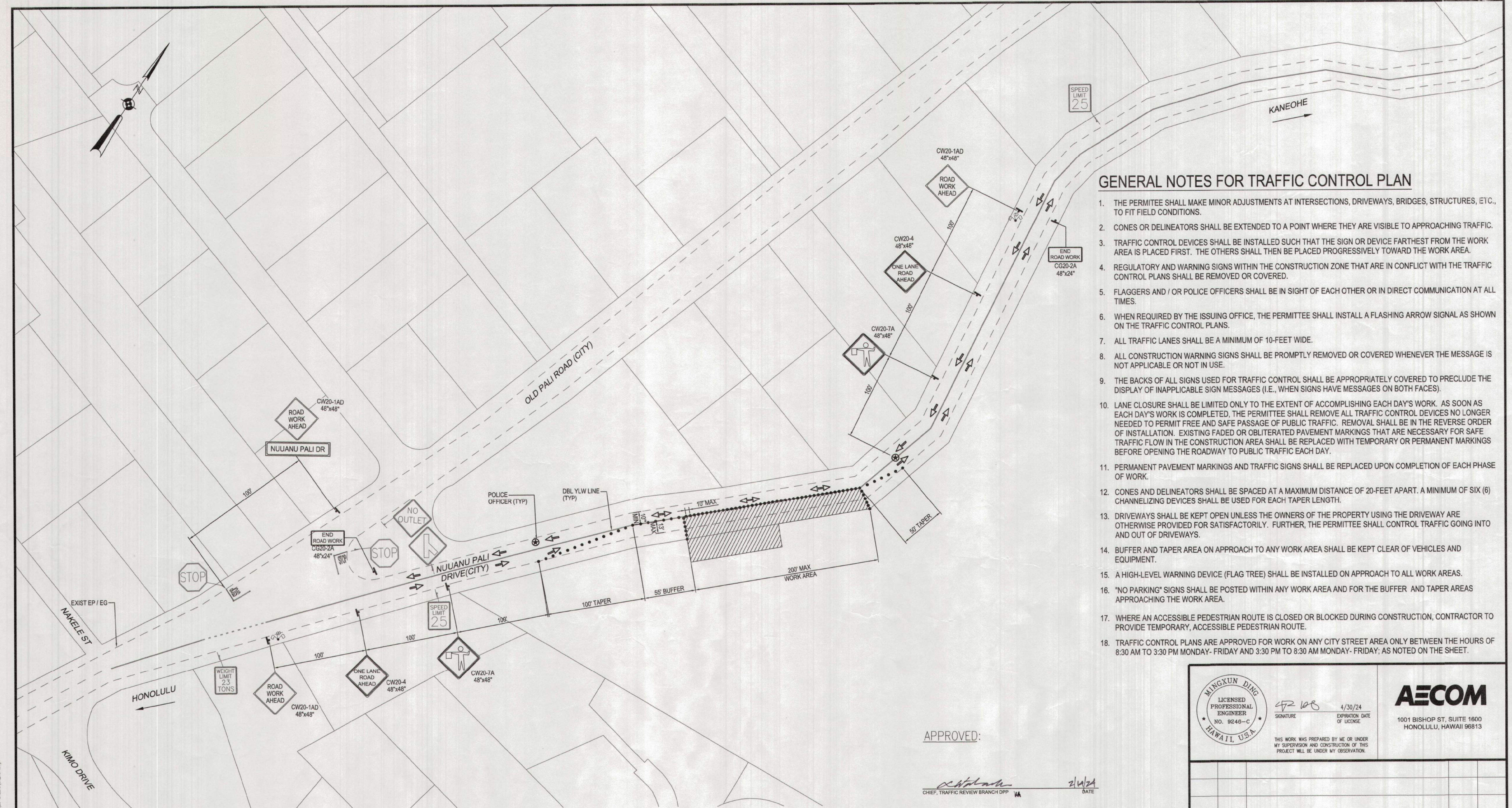


TYPICAL SECTION (0+65.00 TO END)
 SCALE: NOT TO SCALE

		4/30/26
	SIGNATURE	EXPIRATION DATE OF LICENSE
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.		
		1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE				
TYPICAL SECTION				
DESIGN: MD/HL	APPROVED:	DWG. NO. CP501		
DRAWN: JZ	CHEF, CIVIL DIVISION, DDC	DATE	SHEET 12	
CHECKED: MD/GN	JOB NO. 09-23	DATE: JANUARY 2025	OF 25 SHEETS	



GENERAL NOTES FOR TRAFFIC CONTROL PLAN

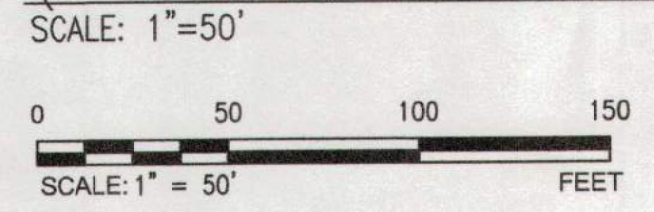
1. THE PERMITEE SHALL MAKE MINOR ADJUSTMENTS AT INTERSECTIONS, DRIVEWAYS, BRIDGES, STRUCTURES, ETC., TO FIT FIELD CONDITIONS.
2. CONES OR DELINEATORS SHALL BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
3. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SUCH THAT THE SIGN OR DEVICE FARTHEST FROM THE WORK AREA IS PLACED FIRST. THE OTHERS SHALL THEN BE PLACED PROGRESSIVELY TOWARD THE WORK AREA.
4. REGULATORY AND WARNING SIGNS WITHIN THE CONSTRUCTION ZONE THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED.
5. FLAGGERS AND / OR POLICE OFFICERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.
6. WHEN REQUIRED BY THE ISSUING OFFICE, THE PERMITEE SHALL INSTALL A FLASHING ARROW SIGNAL AS SHOWN ON THE TRAFFIC CONTROL PLANS.
7. ALL TRAFFIC LANES SHALL BE A MINIMUM OF 10- FEET WIDE.
8. ALL CONSTRUCTION WARNING SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
9. THE BACKS OF ALL SIGNS USED FOR TRAFFIC CONTROL SHALL BE APPROPRIATELY COVERED TO PRECLUDE THE DISPLAY OF INAPPLICABLE SIGN MESSAGES (I.E., WHEN SIGNS HAVE MESSAGES ON BOTH FACES).
10. LANE CLOSURE SHALL BE LIMITED ONLY TO THE EXTENT OF ACCOMPLISHING EACH DAY'S WORK. AS SOON AS EACH DAY'S WORK IS COMPLETED, THE PERMITEE SHALL REMOVE ALL TRAFFIC CONTROL DEVICES NO LONGER NEEDED TO PERMIT FREE AND SAFE PASSAGE OF PUBLIC TRAFFIC. REMOVAL SHALL BE IN THE REVERSE ORDER OF INSTALLATION. EXISTING FADED OR OBLITERATED PAVEMENT MARKINGS THAT ARE NECESSARY FOR SAFE TRAFFIC FLOW IN THE CONSTRUCTION AREA SHALL BE REPLACED WITH TEMPORARY OR PERMANENT MARKINGS BEFORE OPENING THE ROADWAY TO PUBLIC TRAFFIC EACH DAY.
11. PERMANENT PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL BE REPLACED UPON COMPLETION OF EACH PHASE OF WORK.
12. CONES AND DELINEATORS SHALL BE SPACED AT A MAXIMUM DISTANCE OF 20- FEET APART. A MINIMUM OF SIX (6) CHANNELIZING DEVICES SHALL BE USED FOR EACH TAPER LENGTH.
13. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THE DRIVEWAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY. FURTHER, THE PERMITEE SHALL CONTROL TRAFFIC GOING INTO AND OUT OF DRIVEWAYS.
14. BUFFER AND TAPER AREA ON APPROACH TO ANY WORK AREA SHALL BE KEPT CLEAR OF VEHICLES AND EQUIPMENT.
15. A HIGH-LEVEL WARNING DEVICE (FLAG TREE) SHALL BE INSTALLED ON APPROACH TO ALL WORK AREAS.
16. "NO PARKING" SIGNS SHALL BE POSTED WITHIN ANY WORK AREA AND FOR THE BUFFER AND TAPER AREAS APPROACHING THE WORK AREA.
17. WHERE AN ACCESSIBLE PEDESTRIAN ROUTE IS CLOSED OR BLOCKED DURING CONSTRUCTION, CONTRACTOR TO PROVIDE TEMPORARY, ACCESSIBLE PEDESTRIAN ROUTE.
18. TRAFFIC CONTROL PLANS ARE APPROVED FOR WORK ON ANY CITY STREET AREA ONLY BETWEEN THE HOURS OF 8:30 AM TO 3:30 PM MONDAY- FRIDAY AND 3:30 PM TO 8:30 AM MONDAY- FRIDAY; AS NOTED ON THE SHEET.

TYPICAL TRAFFIC PLAN NOTES:

1. POSTED SPEED LIMIT IS 25 MPH.
2. ALL LANES SHALL BE A MINIMUM OF 10' WIDE.
3. FOR CURVED ROADS WITH LIMITED SIGHT-DISTANCE, PROVIDE A POLICE OFFICER OR FLAGGER AT EACH DIRECTION OF ONCOMING VEHICULAR TRAFFIC; BUFFERS BEFORE OR AFTER WORK AREA TO BE EXTENDED AS NEEDED TO ENSURE TAPERS ARE NOT LOCATED WHERE ROAD CURVES.
4. ALL STREETS ARE CITY & COUNTY HONOLULU JURISDICTION, UNLESS OTHERWISE SHOWN ON PLANS.

* ALLOW 1.5± WIDTH FOR TRAFFIC CONES.

**TRAFFIC CONTROL PLAN
(8:30 A.M. TO 3:30 P.M. MONDAY - FRIDAY), 3 MONTHS**



APPROVED:

[Signature] zluza
CHIEF, TRAFFIC REVIEW BRANCH DPP WA DATE

LEGEND

	WORK AREA		SIGN
	DIRECTION OF TRAFFIC		POLICE OFFICER
	CONE		
	HIGH LEVEL WARNING DEVICE (FLAG TREE W / SIGN)		

		4/30/24 EXPIRATION DATE OF LICENSE
	THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.	

AECOM
1001 BISHOP ST. SUITE 1600
HONOLULU, HAWAII 96813

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

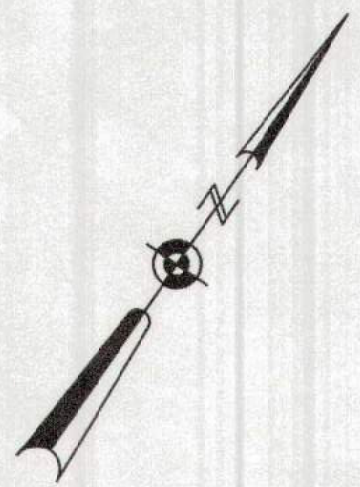
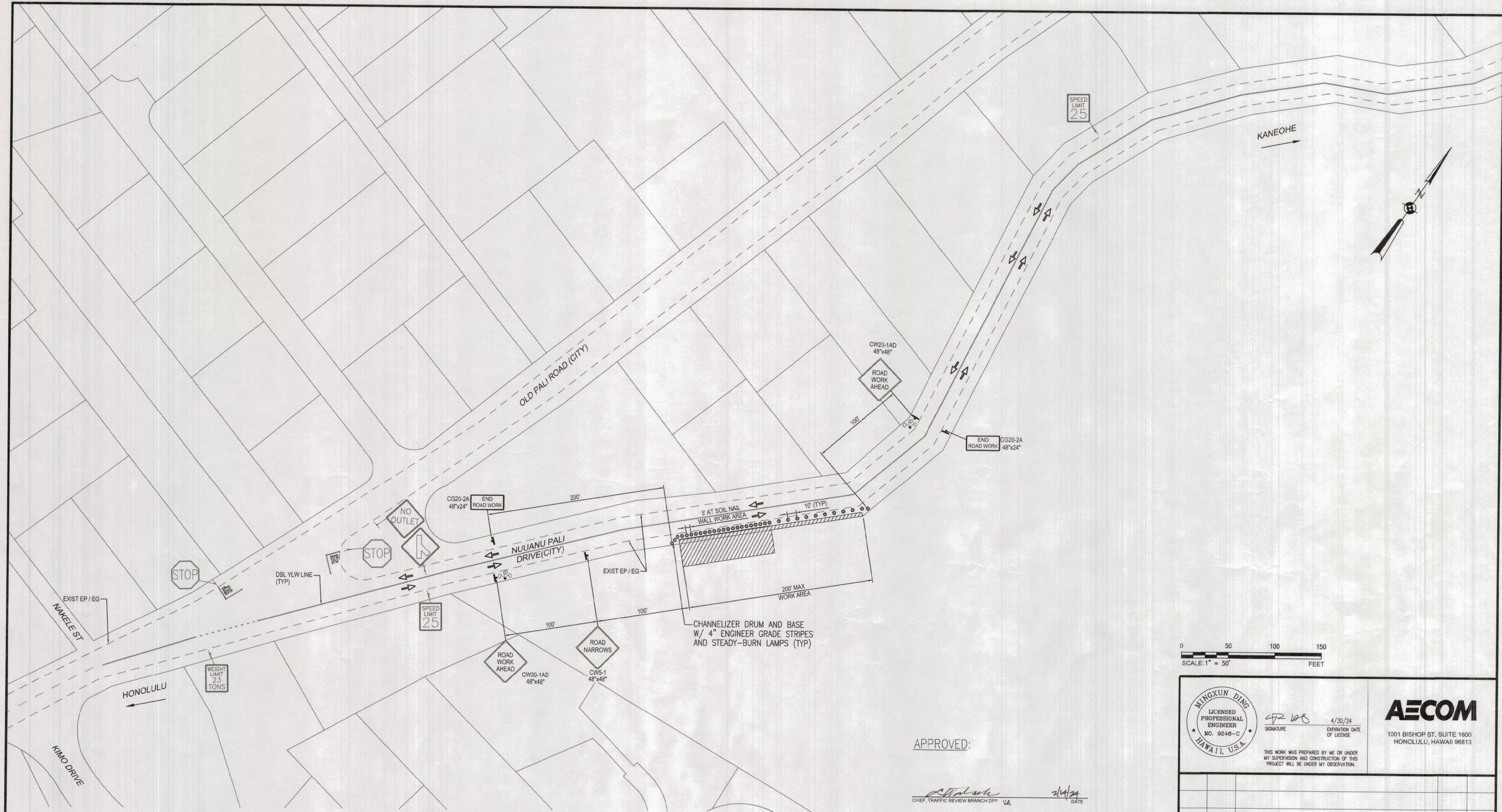
EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

TRAFFIC CONTROL PLAN

DESIGN: MD/HL	APPROVED: _____	DWG. NO. CT101
DRAWN: JZ	CHIEF, CIVIL DIVISION, DDC	SHEET 13
CHECKED: MD/GN	DATE _____	OF 25 SHEETS
DATE: NOVEMBER 2023	JOB NO. 09-23	

FINAL SUBMITTAL

PATH:\F\ENR\1\1\05\Projects\W\16662026_DDC_Nuuanu_Pali_Drive\1000_DWG_05\10_000-5\TRAFFIC_CTL_01.dwg
 LAST UPDATE: February 06, 2024 @ 12:44:25 pm by 104234
 DWG DATE: February 06, 2024 @ 12:44:25 pm



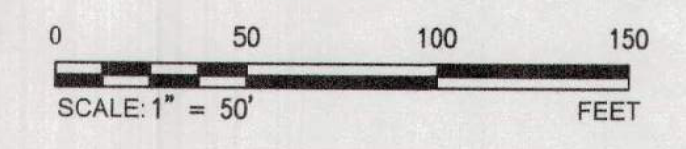
		4/30/24 EXPIRATION DATE OF LICENSE
	THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.	

AECOM
1001 BISHOP ST, SUITE 1600
HONOLULU, HAWAII 96813

APPROVED:

4/24/24
CHIEF, TRAFFIC REVIEW BRANCH DPP VA DATE

TRAFFIC CONTROL PLAN
(3:30 PM TO 8:30 AM MONDAY – FRIDAY), 3 MONTHS
SCALE: 1"=50'



- TYPICAL TRAFFIC PLAN NOTES:**
1. POSTED SPEED LIMIT IS 25 MPH.
 2. ALL LANES SHALL BE A MINIMUM OF 10' WIDE.
 3. BUFFERS BEFORE OR AFTER WORK AREA TO BE EXTENDED AS NEEDED TO ENSURE TAPERS ARE NOT LOCATED WHERE ROAD CURVES.
 4. ALL STREETS ARE CITY & COUNTY HONOLULU JURISDICTION, UNLESS OTHERWISE SHOWN ON PLANS.

* ALLOW 2± WIDTH FOR CHANNELIZER DRUM.

	WORK AREA		SIGN
	DIRECTION OF TRAFFIC		CHANNELIZER DRUM AND BASE

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

TRAFFIC CONTROL PLAN

DESIGN: MD/HL	APPROVED:	DWG. NO. CT102
DRAWN: JZ	CHIEF, CIVIL DIVISION, DDC	SHEET 14
CHECKED: MD/GN	DATE	OF 25 SHEETS
DATE: NOVEMBER 2023	JOB NO. 09-23	

PDS/PLANS: A:\2023\Projects\WV\4660000_000_000\Drawings\090_CAD\090_CAD\090_SHEETS\0101.dwg
 LAST UPDATE: January 26, 2024 @ 10:54:42 am by hmc
 PLOT DATE: January 30, 2024 @ 10:28:12 am

STRUCTURAL GENERAL NOTES

1. GENERAL SPECIFICATIONS: STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986. DEPARTMENTS OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU OF THE STATE OF HAWAII.

2. DESIGN SPECIFICATIONS:

- (A) AASHTO 2020 LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION AND ITS SUBSEQUENT INTERIM SPECIFICATIONS WITH INTERIM SUPPLEMENTS AND MODIFICATIONS BY HDOT.
- (B) MANUAL FOR DESIGN AND CONSTRUCTION MONITORING OF SOIL NAIL WALLS.

3. LOADS:

- (A) RAILING TEST LEVEL: TL-1

4. MATERIALS:

(A) SHOTCRETE FOR WALL:

- (1) SHOTCRETE FOR WALLS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI AND HAVE A MAXIMUM 0.45 WATER TO CEMENT RATIO AND CONTAIN 24 OZ. PER CUBIC YARD OF MIGRATING AMINE CARBOXYLATE CORROSION INHIBITING WATER-BASED ADMIXTURE, CORTEC MCI 2005NS OR APPROVED EQUIVALENT. A SHRINKAGE REDUCING ADMIXTURE, SUCH AS ECLIPSE OR MASTER LIFE SRA 20 OR APPROVED EQUIVALENT SHALL BE ADDED AT A DOSAGE OF 128 OZ. PER CUBIC YARD. SHOTCRETE SHALL CONTAIN EITHER 7.5 LBS OF STRUX 85/50 SYNTHETIC STRUCTURAL FIBER PER CUBIC YARD, FORTA MAC MATRIX OR APPROVE EQUAL.
- (2) TEMPERATURE OF SHOTCRETE SHALL NOT EXCEED 90° F AT THE POINT OF PLACEMENT.
- (3) SHOTCRETE SHALL BE CURED USING SINAK LITHIUM CURE OR APPROVED EQUIVALENT AT A COVERAGE RATE OF 100 SQ. FT. PER GALLON.

(B) SOIL NAIL GROUT SHALL CONSIST OF THE FOLLOWING CONSTITUENTS AND PROPERTIES:

- (1) PORTLAND CEMENT TYPE I/II - 1 SACK (94 LBS)
- (2) POTABLE WATER - 4 GALLONS
- (3) MEYCO FLOWCABLE OR APPROVED EQUIVALENT - 3 LBS
- (4) CORTEC MCI 2005 NS CORROSION INHIBITOR OR APPROVED EQUIVALENT - 1 OZ.
NOTE:
CORROSION INHIBITOR AND FLOWCABLE SHALL BE ADDED TO THE MIXING WATER BEFORE ADDING CEMENT.
- (5) MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4000 PSI
- (6) GLENIUM 3030 OR APPROVED EQUIVALENT MAY BE USED AS A HIGH RANGE WATER REDUCER FOR WORKABILITY AS NEEDED.
- (7) GROUT SHALL BE STABLE (BLEED LESS THAN 2%) PER ASTM C940.
- (8) TEMPERATURE OF GROUT SHALL NOT EXCEED 85° F AT THE END OF THE GROUTING HOSE COUPLING TO FILL TUBE.

(C) ALL REINFORCING STEEL SHALL BE ASTM A 615 GRADE 60, DEFORMED BARS, UNLESS OTHERWISE NOTED.

(D) ALL WIRE MESH REINFORCEMENT SHALL CONFORM TO ASTM A185 OR A497. WIRE MESH REINFORCEMENT SHALL BE HOT-DIP GALVANIZED UNLESS OTHERWISE NOTED.

4. MATERIALS (CONT.):

(E) GLASS FIBER REINFORCED POLYMER (GFRP) REBAR

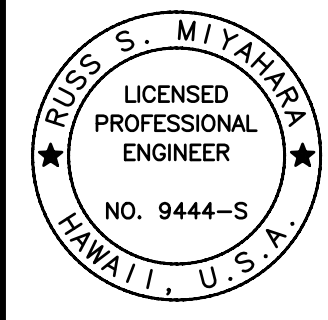


- (1) GLASS FIBER REINFORCED POLYMER (GFRP) REBAR SHALL HAVE A MINIMUM TENSILE FORCE OF 110 KSI FOR #4 BARS. #5 BARS SHALL HAVE A MINIMUM TENSILE FORCE OF 105 KSI.
 - (2) THE MODULUS OF ELASTICITY OF THE GFRP BAR SHALL BE A MINIMUM OF 6,500,000 PSI.
 - (3) GFRP BAR SHALL BE SAND COATED.
 - (4) MINIMUM CONCRETE COVER FOR THE GFRP BARS SHALL BE 1 1/2" UNLESS OTHERWISE NOTED.
 - (5) MINIMUM LAP SPLICE LENGTHS FOR THE GFRP BARS SHALL BE 42 BAR DIAMETERS UNLESS OTHERWISE NOTED.
 - (6) ALL GFRP BARS SHALL BE SECURELY TIED IN PLACE. TIE WIRE SHALL BE ALLOY 302 OR 304 STAINLESS STEEL OR NON-METALLIC. FOLLOW GUIDELINES IN ACI SPEC-440.5-08 "SPECIFICATION FOR CONSTRUCTION WITH FIBER-REINFORCED POLYMER REINFORCING BARS."
 - (7) GFRP BARS MAY BE CUT IN THE FIELD WITH A MASONRY OR DIAMOND BLADE, GRINDER OR FINE BLADE SAW.
 - (8) ALL WORK INCLUDING MATERIALS AND BENDS SHALL FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- (F) SOIL NAILS SHALL BE DOUBLE CORROSION PROTECTED. EACH THREADED STEEL BAR SHALL BE ASTM A615-GRADE 75. PREGROUT, PROVIDED BY MANUFACTURER SHALL CONTAIN CORTEC MCI 2005 NS OR APPROVED EQUIVALENT CORROSION INHIBITOR AND SHALL BE ADDED AT A DOSE OF 24 OZ. PER CUBIC YARD. SOIL NAILS THAT ARE DAMAGED SHALL EITHER NOT BE USED OR SHALL BE REPAIRED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- (G) BEARING PLATES, NUTS, AND WELDED SHEAR CONNECTORS
- (1) BEARING PLATES: AASHTO M183/ASTM A36
 - (2) NUTS: AASHTO M291, GRADE B, HEXAGONAL, FITTED WITH BEVELED WASHERS OR SPHERICAL SEAT TO PROVIDE UNIFORM BEARING.
 - (3) SHEAR CONNECTORS: AASHTO LFRD BRIDGE CONSTRUCTION SPECIFICATIONS 3RD EDITION SECTION 11.3.3.1
- (H) ALL HARDWARE FOR SOIL NAILS, SUCH AS PLATES, NUTS, WASHERS, AND SHEAR CONNECTORS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- (I) GEOCOMPOSITE DRAIN STRIPS SHALL BE MIRADRAIN 6000, AMERDRAIN 500 OR APPROVED EQUAL. DRAIN STRIPS SHALL BE TAPED AT EDGES TO PREVENT SHOTCRETE FROM ENTERING DRAIN DURING PLACEMENT.
- (J) PVC DRAIN PIPE SHALL BE ASTM 1785 SCHEDULE 40, SOLID AND PERFORATED WALL, CELL CLASSIFICATION 12454-B OR 12354-C, WALL THICKNESS SDR 35, WITH SOLVENT WELD OR ELASTOMERIC GASKET JOINTS.

5. REINFORCING STEEL:

- (A) THE MINIMUM COVERING MEASURED FROM THE SURFACE OF THE SHOTCRETE/CONCRETE TO THE FACE OF REINFORCING BARS SHALL BE AS FOLLOWS, EXCEPT AS OTHERWISE SHOWN.
 - (1) SHOTCRETE/CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3".
 - (2) ALL OTHERS UNLESS OTHERWISE NOTED = 2".
- (B) REINFORCING BARS SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION.
- (C) MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS SHALL BE 1 1/2 TIMES THE DIAMETER OF BARS (FOR NON BUNDLED BARS). IN NO CASE SHALL THE CLEAR DISTANCE BETWEEN THE BARS BE LESS THAN 1 1/2 TIMES THE MAXIMUM SIZE OF THE COARSE AGGREGATE OR 1 1/2".
- (D) ALL DIMENSIONS RELATING TO REINFORCING BARS ARE TO CENTERS OF BARS UNLESS OTHERWISE NOTED.
- (E) REINFORCING BARS SHALL BE SECURELY TIED AT ALL INTERSECTIONS AND LAP SPLICES EXCEPT WHERE THE SPACING OF INTERSECTIONS IS LESS THAN ONE FOOT IN EACH DIRECTION, IN WHICH CASE ALTERNATE INTERSECTIONS SHALL BE TIED.
- (F) FOR STEEL REINFORCING, STAGGER ALL SPLICES WHERE POSSIBLE.

6. CONSTRUCTION NOTES:

- (A) THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS AND SHALL REPORT ANY DISCREPANCIES IN WRITING TO THE ENGINEER BEFORE COMMENCING WORK OR ORDERING MATERIALS.
- (B) THE CONTRACTOR SHALL VERIFY SITE CONDITIONS AND NOT RELY UPON THESE PLANS FOR EXISTING DIMENSIONS, ELEVATIONS AND AZIMUTHS, STREAM CHANNEL LOCATION, ROADS, ROADWAY GUTTERS, CURBS, AND SIDEWALKS, ETC. CONDITIONS MAY DIFFER FROM THOSE SHOWN.
- (C) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES, UTILITIES AND EXISTING AND NEW STRUCTURES FROM DAMAGE DUE TO CONSTRUCTION. REPAIRING ANY DAMAGE SHALL BE AT THE CONTRACTOR'S OWN EXPENSE, TO SATISFACTION OF THE ENGINEER.
- (D) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY LINES AND NOTIFY THE RESPECTIVE OWNERS BEFORE COMMENCING WITH EXCAVATION, AND ANY TEMPORARY PILING OR SHEETING.
- (E) EXCEPT AS OTHERWISE NOTED, ALL VERTICAL DIMENSIONS ARE MEASURED PLUMB.
- (F) FOR CONCRETE FINISH SEE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS. CONSTRUCTION JOINTS MAY BE RELOCATED OR ADDITIONAL ONES ADDED SUBJECT TO THE APPROVAL OF THE ENGINEER.
- (G) UNLESS OTHERWISE NOTED, ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4" X 3/4".
- (H) ALL FOOTINGS SHALL BEAR ON FIRM UNDISTURBED NATURAL SOILS OR PROPERLY COMPACTED STRUCTURAL FILL.
- (I) THE CONTRACTOR SHALL CONDUCT HIS WORK IN SUCH A MANNER AND PROVIDE SUCH TEMPORARY SHORING OR OTHER MEASURES AS MAY BE NECESSARY TO INSURE THE SAFETY OF ALL CONCERNED AND TO PROTECT EXISTING STRUCTURES.
- (J) IN THE EVENT OF OVER EXCAVATION, THE SPACE SHALL BE FILLED WITH A MINIMUM OF CLASS D CONCRETE AT THE CONTRACTOR'S EXPENSE AT NO COST TO THE CITY.

	 SIGNATURE EXPIRATION DATE OF LICENSE: 4/30/26	 1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.		

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

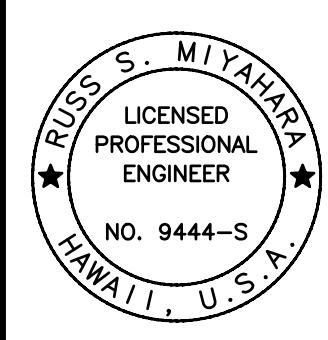


STRUCTURAL GENERAL NOTES

DESIGN: SK	APPROVED:	DWG. NO.
DRAWN: BB	CHEF, CIVIL DIVISION, DDC	S0.1
CHECKED: RM	DATE	SHEET 15
DATE: JANUARY 2025	JOB NO. 09-23	OF 25 SHEETS

P:\P\15\EMMG_Z\10_DWG\13-005-3708_NUUANU_PALI_DR-REV01_00\01-16-25_FINAL_SDRM\VPD-3001_GEN_NOTES.dwg
 PLOT DATE: January 16, 2025 @ 09:26:58 am

SYMBOLS AND ABBREVIATIONS

<p>& @ P C S Z L #</p>	<p>AND AT BASELINE CENTERLINE DIAMETER GREATER THAN OR EQUAL TO LESS THAN OR EQUAL TO NUMBER PLUS OR MINUS</p>	<p>E (E), EXP. EA, EA., EA. EF EFH EFV EJ EL., ELEV. ELEC. EMH EMB. EMBED. EP EPS EQ. EST. EVC EW EX., EXIST. EXC. EXCL. EXT.</p>	<p>EAST EXPANSION EACH EACH FACE EACH FACE HORIZONTAL EACH FACE VERTICAL EXPANSION JOINT ELEVATION ELECTRICAL ELECTRICAL MANHOLE EMBANKMENT EMBEDDED, EMBEDMENT EDGE OF PAVEMENT EXPANDED POLYSTYRENE EQUAL ESTIMATED END OF VERTICAL CURVE EACH WAY EXISTING EXCAVATION EXCLUDING EXTERIOR</p>	<p>M MAX. MECH. MH MIN. MISC. MPH</p>	<p>MODIFIED MAXIMUM MECHANICAL MANHOLE MINIMUM MISCELLANEOUS MILES PER HOUR</p>	<p>T TAN. T&B TEMP. THK. TFE TOD TOF TOT. TOW TRANSV. TS TYP.</p>	<p>TOP OR WALL THICKNESS TANGENT TOP AND BOTTOM TEMPORARY THICK TOP OF FOOTING ELEVATION TOP OF DECK TOP OF FOOTING TOTAL TOP OF WALL ELEVATION TRANSVERSE STRUCTURAL TUBING TYPICAL</p>
<p>AB ABUT. AC ADD. ALT. APPROX. AZ.</p>	<p>ANCHOR BOLT ABUTMENT ASPHALTIC CONCRETE ADDITIONAL, ADDED ALTERNATE APPROXIMATE AZIMUTH</p>	<p>EP EQ. EST. EVC EW EX., EXIST. EXC. EXCL. EXT.</p>	<p>EDGE OF PAVEMENT EXPANDED POLYSTYRENE EQUAL ESTIMATED END OF VERTICAL CURVE EACH WAY EXISTING EXCAVATION EXCLUDING EXTERIOR</p>	<p>N NF NIC NO. NTS</p>	<p>NORTH NEAR FACE NOT IN CONTRACT NUMBER NOT TO SCALE</p>	<p>UNDERGRD. UNO</p>	<p>UNDERGROUND UNLESS NOTED OTHERWISE</p>
<p>B, BOT., BOTT. BAL. BET. BF BFE BK. BLT. BM. BOF BR. BRG., BRGS. BVC BW</p>	<p>BOTTOM BALANCE BETWEEN BOTH FACES, BACK FACE BOTTOM OF FOOTING ELEVATION BACK BOLT BEAM BOTTOM OF FOOTING BRIDGE BEARING, BEARINGS BEGINNING OF VERTICAL CURVE BOTH WAYS</p>	<p>(F) FA FB F'C F'CI</p>	<p>FIXED FORCE ACCOUNT FLAT BAR SPECIFIED STRENGTH OF CONCRETE STRENGTH OF CONCRETE AT TIME OF INITIAL PRESTRESS</p>	<p>OB OC OD O.F. OG</p>	<p>OUTBOUND ON CENTER OUTSIDE DIAMETER OUTSIDE FACE OUTSIDE GIRDER, OUTBOUND GIRDER OPENING OFFSET</p>	<p>V, VERT. VAR. VC</p>	<p>VERTICAL VARIES VERTICAL CURVE</p>
<p>CGT. CBW CC CF CFCW CG CGS CIP CJ CL. CLR. CLSM</p>	<p>CANTILEVER CONCRETE BARRIER WALL CENTER TO CENTER CUBIC FEET CONTINUOUS FLASHING COMPOUND WATERPROOFING CENTER OF GRAVITY CENTER TO GRAVITY OF STRANDS CAST-IN-PLACE CONTROL JOINT CLASS CLEARANCE CONTROLLED LOW STRENGTH MATERIAL</p>	<p>FF FIG. FIN. GR. FRP FT. FTG. F* FU</p>	<p>FAR FACE, FRONT FACE FIGURE FINISH GRADE FIBER REINFORCED PLASTIC FEET, FOOT FOOTING MIN. GUARANTEED TENSILE STRENGTH OF GFRP</p>	<p>PL PLF PP PRC PRESTR. P/S PSF PSI PT., PTS. PT PVC</p>	<p>PULL BOX EFFECTIVE PRESTRESSING FORCE POINT OF CURVATURE PORTLAND CEMENT CONCRETE POUNDS PER CUBIC FOOT PERFORATED POINT OF INTERSECTION OF TANGENTS POINT OF INTERSECTION OF VERTICAL CURVE</p>	<p>W W/ W/C WP WS WW</p>	<p>WEST WITH WATER/CEMENT RATIO WORK POINT, WORKING POINT WATER SURFACE WING WALL</p>
<p>CO COL. CONC. CONN. CONST. CONST. JT. CONT. CRM CSL CY, CU. YD.</p>	<p>CLEAN OUT COLUMN CONCRETE CONNECTION CONSTRUCTION CONSTRUCTION JOINT CONTINUOUS CEMENT RUBBLE MASONRY CROSS HOLE SONIC LOGGIN CUBIC YARD</p>	<p>GA. GALV. GFRP GR. GRD. GRP</p>	<p>GAGE, GAUGE GALVANIZED GLASS FIBER REINFORCED POLYMER GRADE GROUND GROUTED RUBBLE PAVEMENT</p>	<p>R, RAD. RDWY. REBAR REF. REINF.</p>	<p>RADIUS ROADWAY REINFORCING BAR REFERENCE REINFORCED, REINFORCING, REINFORCEMENT</p>	<p>REQ'D. RET. RF R/W, ROW</p>	<p>REQUIRED RETAINING REAR FACE RIGHT OF WAY</p>
<p>DBL. DET. DI DIA. DIAPH. DIM. DIST. DN. DO DS DWG., DWGS. DWLS.</p>	<p>DOUBLE DETAIL DRAIN INLET, DUCTILE IRON DIAMETER DIAPHRAGM DIMENSION DISTANCE DOWN DITTO DRILLED SHAFT DRAWING, DRAWINGS DOWELS</p>	<p>IB ID I.F. IN. INT. INV.</p>	<p>INBOUND INSIDE DIAMETER INSIDE FACE INCH INTERIOR INVERT</p>	<p>S SDMH SE SECT. SF SHT. SIM. SL. SPC., SPG. SPEC. SPRD. SS STA. STAGG. STD. STIFF. STIRR. STL. STR. STRUCT. SY SYMM.</p>	<p>SOUTH SEWER DRAIN MANHOLE SUPER ELEVATION SECTION SQUARE FEET SHEET SIMILAR SLOPE SPACES, SPACING SPECIFICATION SPREAD STAINLESS STEEL STATION STAGGERED STANDARD STIFFENER STIRRUP STEEL STRAIGHT STRUCTURE SQUARE YARD SYMMETRICAL</p>	<p>YR.</p>	<p>YEAR</p>

	 SIGNATURE 4/30/26 EXPIRATION DATE OF LICENSE	 1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.		

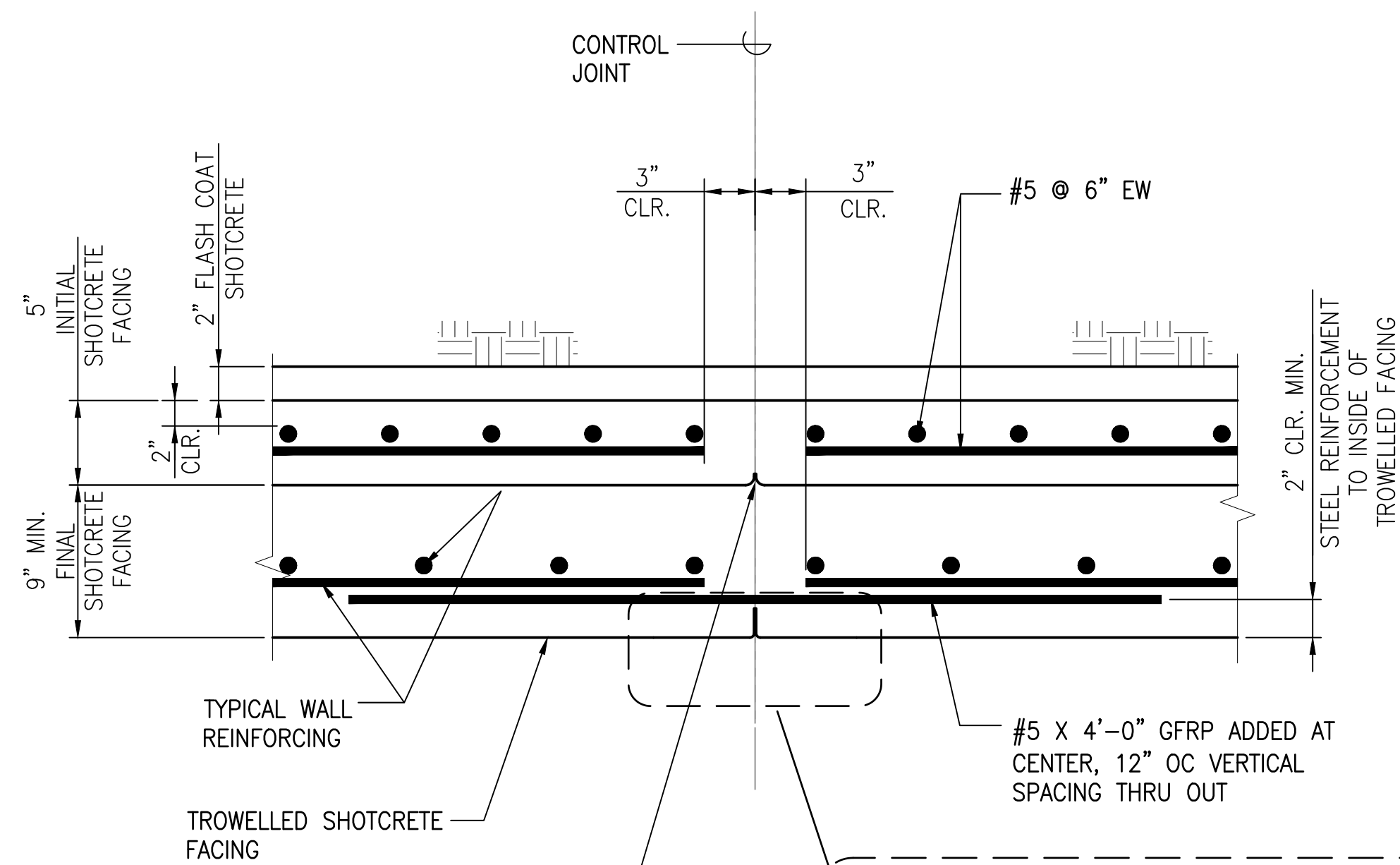
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

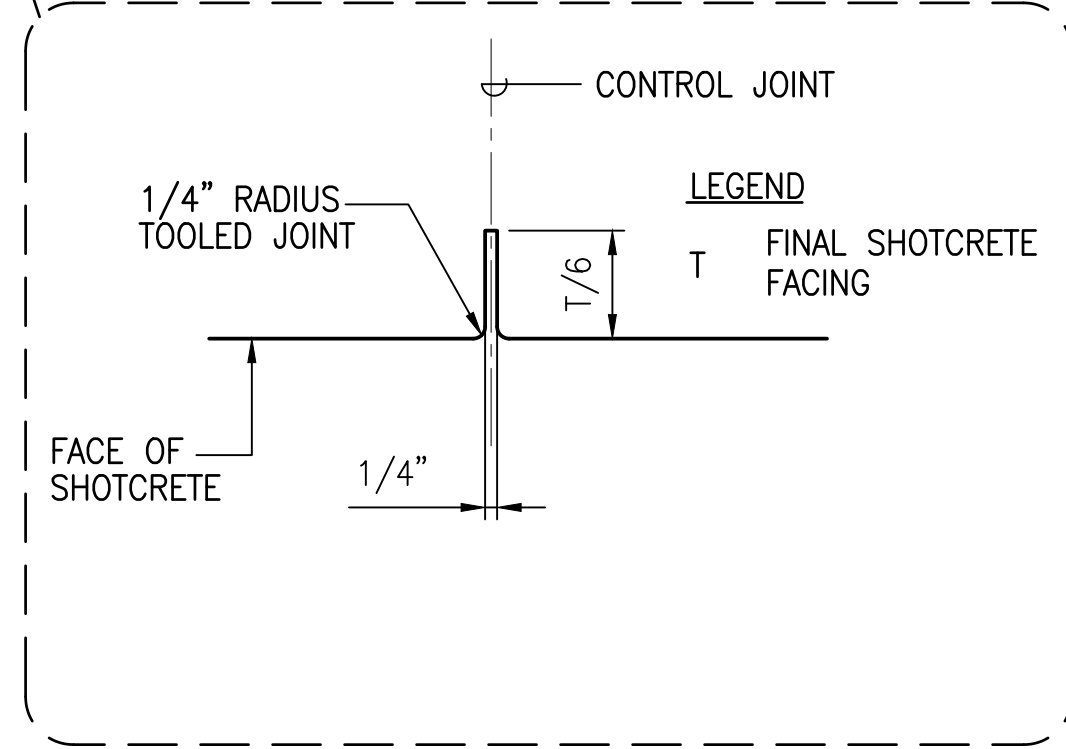
SYMBOLS AND ABBREVIATIONS

DESIGN: SK	APPROVED:	DWG. NO.	S0.2
DRAWN: BB	CHEF, CIVIL DIVISION, DDC	SHEET	16
CHECKED: RM	DATE	DATE	OF 25 SHEETS
DATE: JANUARY 2025	JOB NO. 09-23		

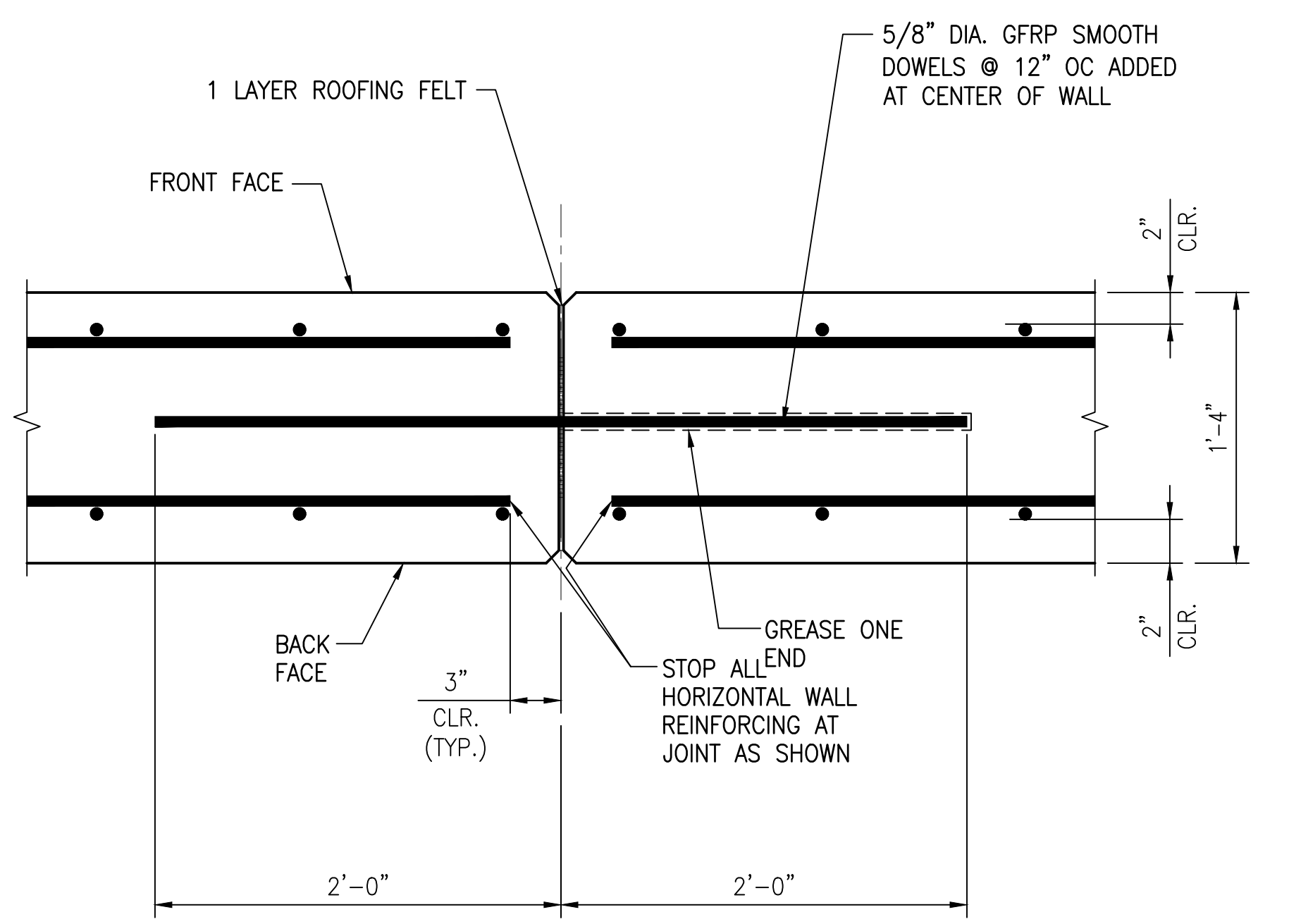
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 PLOT DATE: January 16, 2025 @ 09:27:39 am



TOOLED JOINT IN INITIAL FACING TO MATCH CONTROL JOINT LOCATION, 1" DEPTH, SEE SHEET S1.1 FOR LOCATIONS

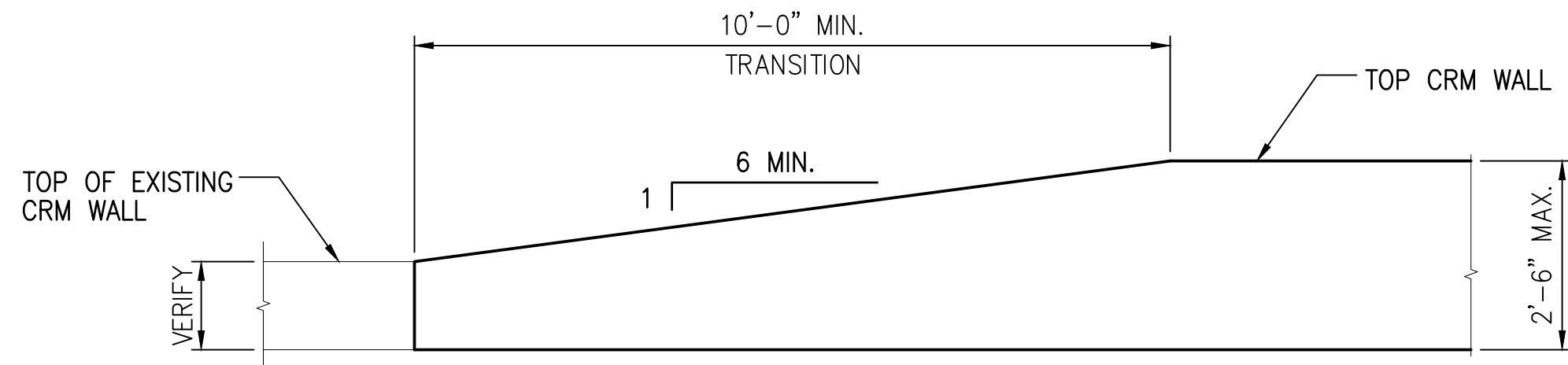


2 CONSTRUCTION JOINT AT CONTROL JOINT LOCATION IN SOIL NAIL WALL
S0.3 SCALE: 1 1/2" = 1'-0"



3 TYPICAL BARRIER WALL VERTICAL CONTROL JOINT DETAIL
S0.3 SCALE: 1 1/2" = 1'-0"

1 CONTROL JOINT (CJ) AT SOIL NAIL WALL
S0.3 SCALE: 1 1/2" = 1'-0"



4 TYPICAL CRM WALL TRANSITION
S0.3 SCALE: 1/2" = 1'-0"

RUSS S. MIYAHARA
LICENSED PROFESSIONAL ENGINEER
NO. 9444-S
HAWAII, U.S.A.

SIGNATURE

4/30/26
EXPIRATION DATE OF LICENSE

AECOM
1001 BISHOP ST, SUITE 1600
HONOLULU, HAWAII 96813

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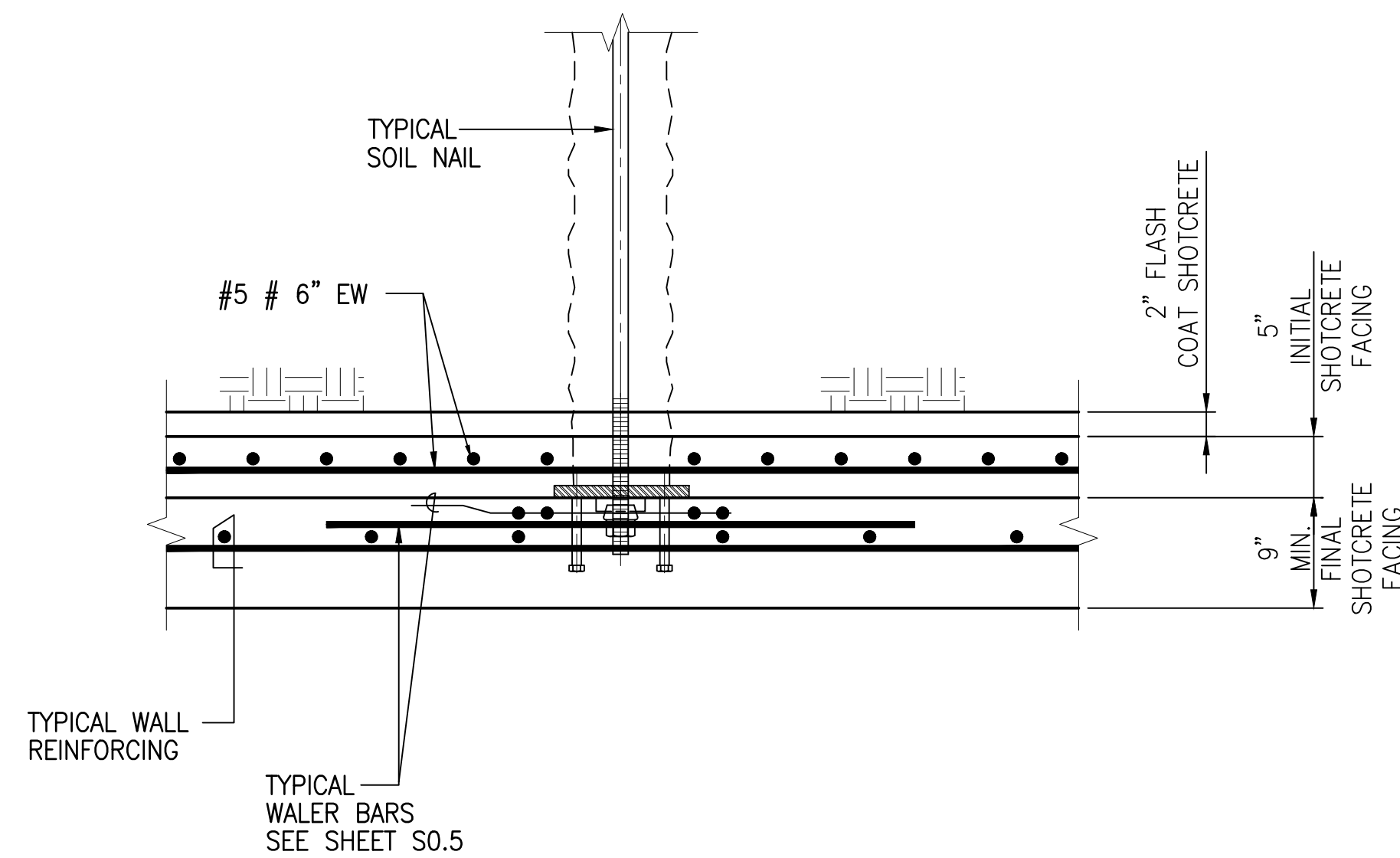
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

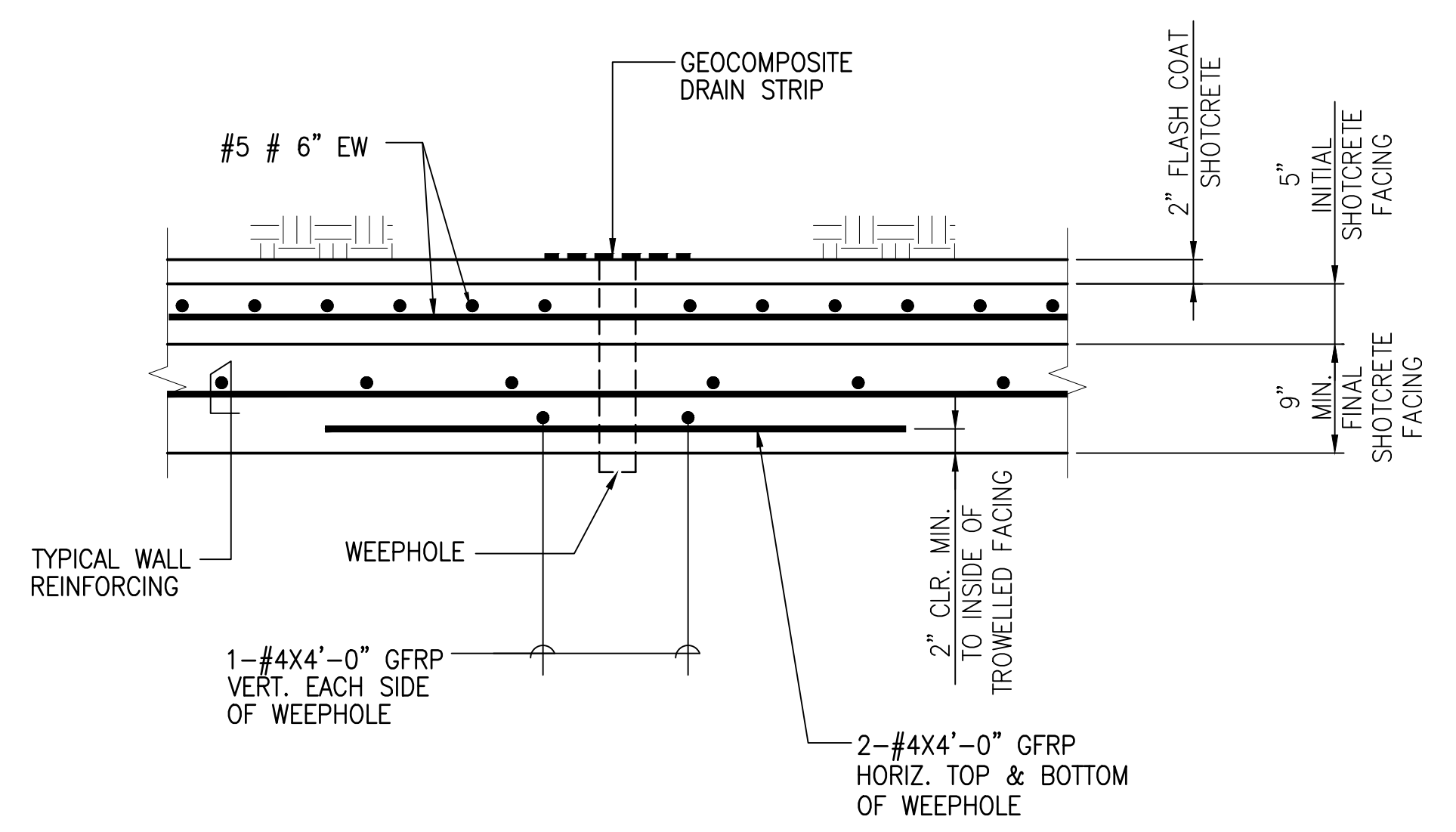
TYPICAL DETAILS

DESIGN: SK	APPROVED:	DWG. NO. S0.3	SHEET 17
DRAWN: BB	CHEF, CIVIL DIVISION, DDC	DATE	OF 25 SHEETS
CHECKED: RM			
DATE: JANUARY 2025	JOB NO. 09-23		

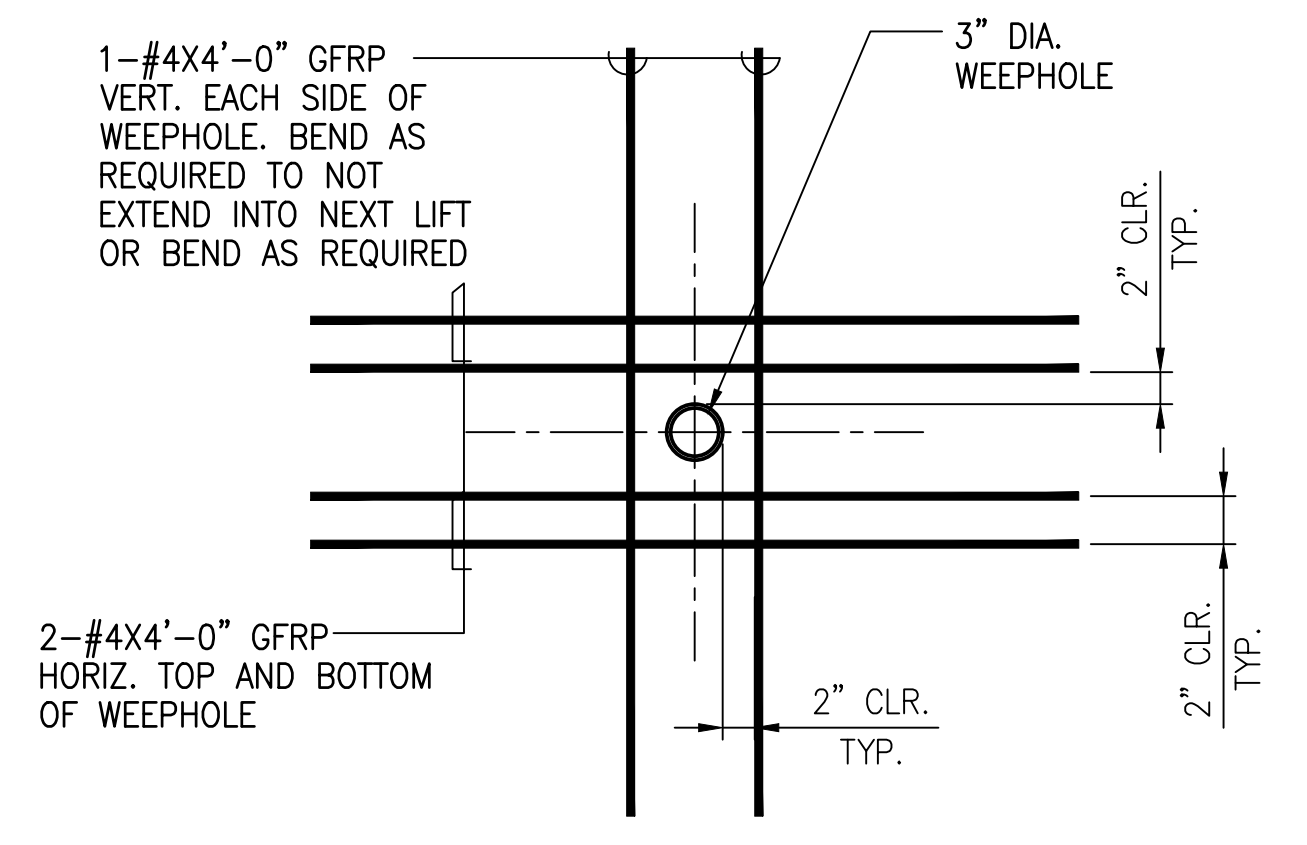
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 PLOT DATE: January 16, 2025 @ 09:28:48 am



1 REINFORCING AT SOIL NAIL
S0.4 SCALE: 1" = 1'-0"



PLAN



ELEVATION

2 ADDED REINFORCING AT WEEPHOLES
S0.4 SCALE: 1" = 1'-0"

NOTE: SHIFT BARS AS REQUIRED TO FIT ADDED BARS.

	SIGNATURE <small>4/30/26</small> EXPIRATION DATE OF LICENSE	

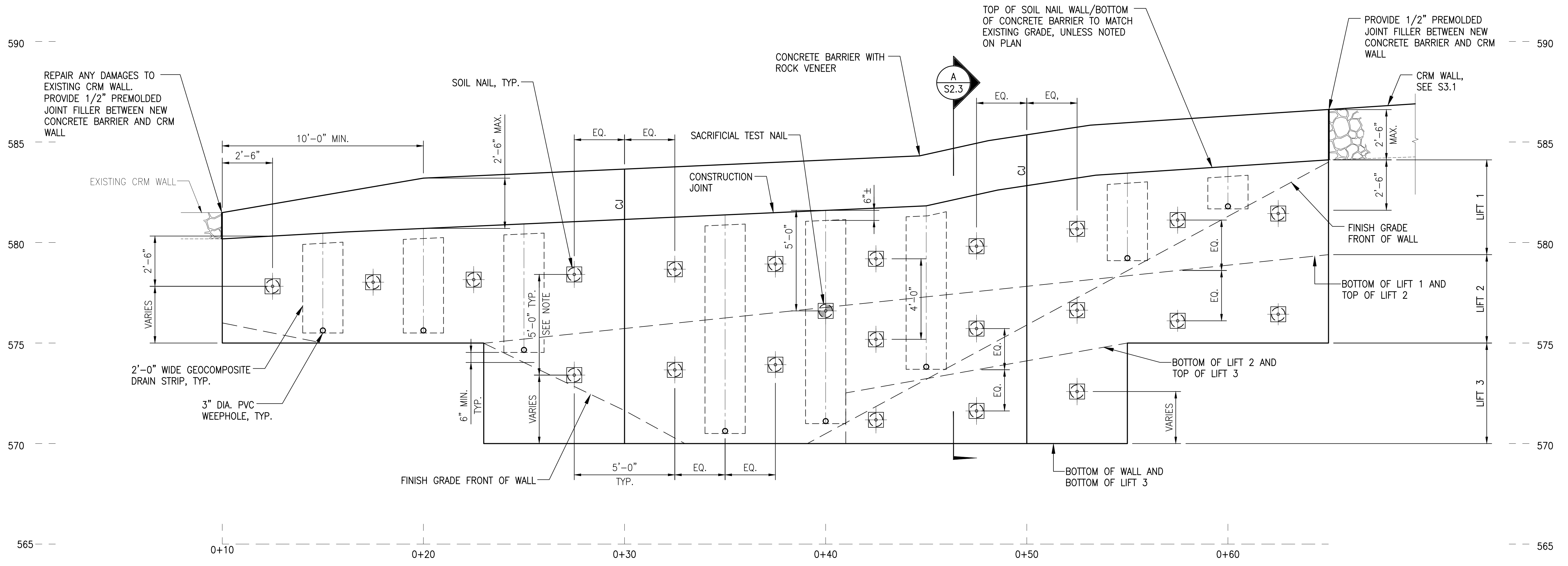
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

TYPICAL REINFORCEMENT DETAILS

DESIGN: SK	APPROVED:	DWG. NO. S0.4
DRAWN: BB	CHEF, CIVIL DIVISION, DDC	SHEET 18
CHECKED: RM	DATE	OF 25 SHEETS
DATE: JANUARY 2025	JOB NO. 09-23	

PATH/FILENAME: Z:\00_DWG\03-002-3708 NUUANU PALI DR-REV01_00\01-16-25_FINAL_S04\VPD-S003_TIP_01.DWG
 PLOT DATE: January 16, 2025 @ 09:28:43 am
 PLOT BY: aad



NOTE:
 4 FEET VERTICAL SPACING FOR SOIL NAIL BETWEEN STATION 0+40 TO 0+55.

A SOIL NAIL WALL PROFILE
 S1.1 SCALE: 3/8" = 1'-0"

		AECOM 1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813
	SIGNATURE 4/30/26 EXPIRATION DATE OF LICENSE	
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REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

SOIL NAIL WALL PROFILE

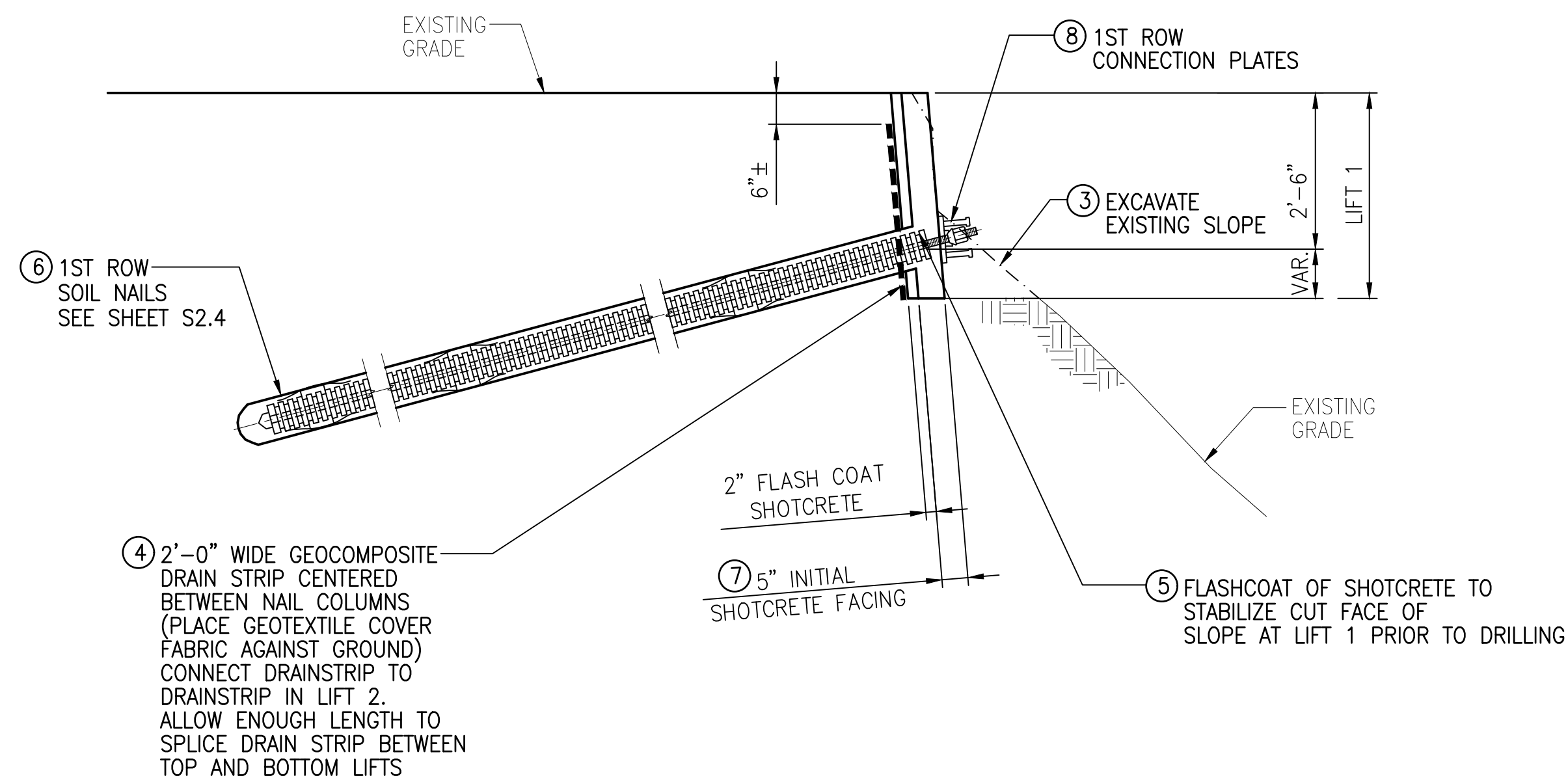
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DRAWN: BB	CHEF, CIVIL DIVISION, DDC	SHEET 20
CHECKED: RM	DATE	OF 25 SHEETS
DATE: JANUARY 2025	JOB NO. 09-23	

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 PLOT DATE: January 16, 2025 @ 09:25:07 am

TYPICAL INITIAL SHOTCRETE SECTION (LIFT 1):

NOTES:

1. SEE B/S2.1, A/S2.2, AND B/S2.2 FOR ADDITIONAL DETAILS.
2. CONTRACTOR SHALL APPLY EXTRA SHOTCRETE AS FILL IN CASE THE FACE OF THE CUT SLOPE IS NOT VERTICAL.

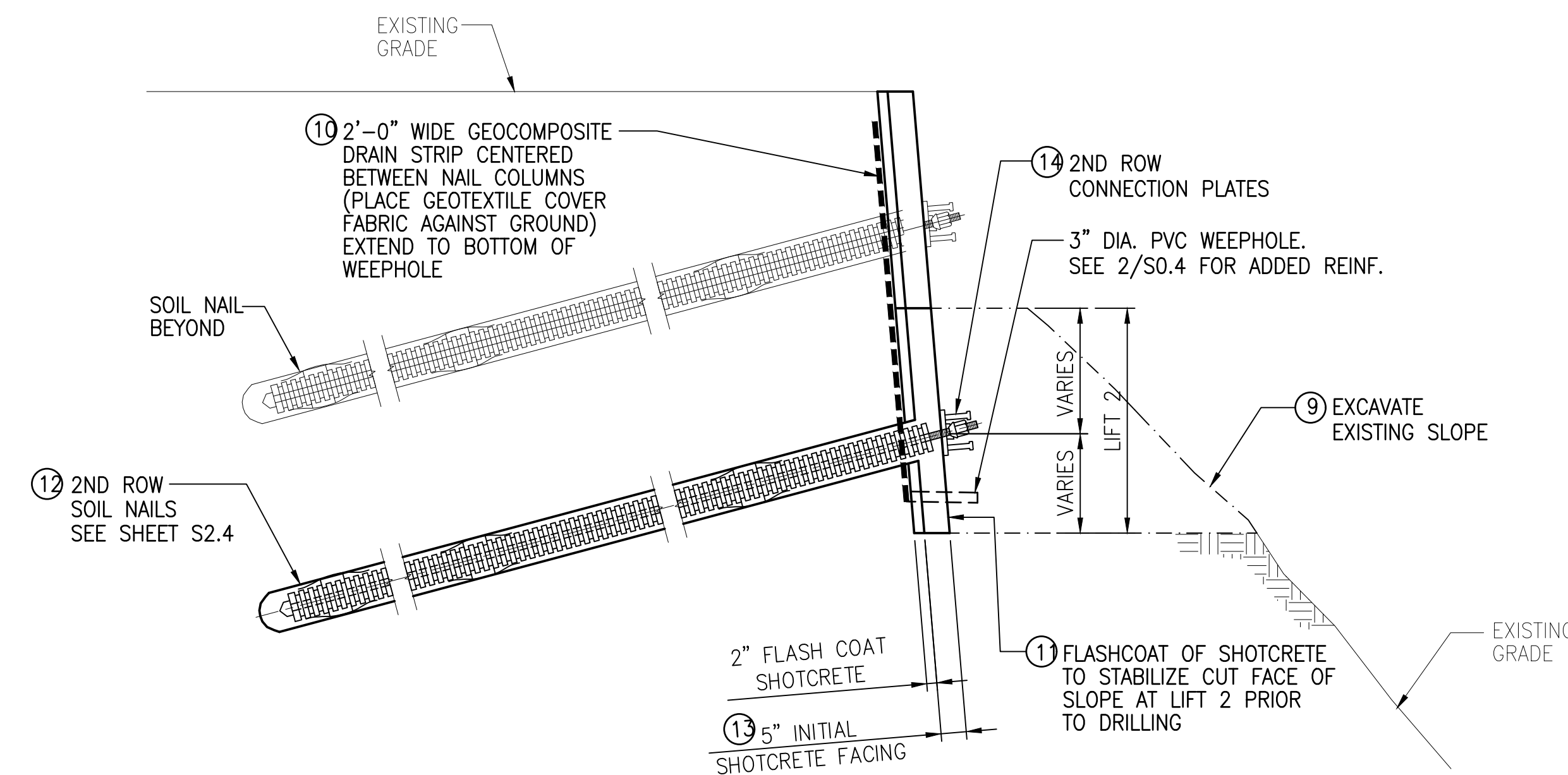


A SECTION - LIFT 1
S2.1 SCALE: 1/2" = 1'-0"

TYPICAL INITIAL SHOTCRETE SECTION (LIFT 2):

NOTES:

1. SEE A/S2.1, A/S2.2, AND B/S2.2 FOR ADDITIONAL DETAILS.
2. CONTRACTOR SHALL APPLY EXTRA SHOTCRETE AS FILL IN CASE THE FACE OF THE CUT SLOPE IS NOT VERTICAL.



B SECTION - LIFT 2
S2.1 SCALE: 1/2" = 1'-0"

CONSTRUCTION SEQUENCE:

1. EACH STAGE SHALL BE COMPLETED IN ITS ENTIRETY BEFORE PROCEEDING TO NEXT STAGE.
2. INSTALL SACRIFICIAL TEST NAILS AND PERFORM VERIFICATION TESTS PRIOR TO EXCAVATION WORK.
3. EXCAVATE TO REQUIRED 1ST LIFT AND REMOVE EXISTING CRM WALLS AS REQUIRED.
4. INSTALL GEOCOMPOSITE DRAIN STRIPS.
5. APPLY FLASH COAT SHOTCRETE.
6. DRILL, INSTALL, AND GROUT 1ST ROW OF SOIL NAILS; RUN ANY NECESSARY PERFORMANCE/PROOF TESTS.
7. PLACE REINFORCING AND APPLY LIFT 1 INITIAL SHOTCRETE FACING. LIFT 1 REINFORCING SHALL EXTEND INTO CONCRETE BARRIER.
8. INSTALL STUDDED CONNECTION PLATES ON 1ST ROW.
9. EXCAVATE TO REQUIRED 2ND LIFT.
10. EXTEND GEOCOMPOSITE DRAIN STRIPS TO LOCATION SHOWN ON S1.1 AND INSTALL PVC WEEPHOLES. COVER WEEPHOLES WITH TAPE BEFORE APPLYING SHOTCRETE WALL FACING.
11. APPLY FLASH COAT SHOTCRETE.
12. DRILL, INSTALL, AND GROUT 2ND ROW OF SOIL NAILS; RUN ANY NECESSARY PERFORMANCE/PROOF TESTS.
13. PLACE REINFORCING AND APPLY LIFT 2 INITIAL SHOTCRETE FACING.
14. INSTALL STUDDED CONNECTION PLATES ON 2ND ROW.
15. EXCAVATE TO REQUIRED 3RD LIFT.
16. APPLY FLASH COAT SHOTCRETE.
17. DRILL, INSTALL, AND GROUT 3RD ROW OF SOIL NAILS; RUN ANY NECESSARY PERFORMANCE/PROOF TESTS.
18. PLACE REINFORCING AND APPLY LIFT 3 INITIAL SHOTCRETE FACING.
19. INSTALL STUDDED CONNECTION PLATES ON 3RD ROW.
20. PLACE REINFORCING AND APPLY FINAL SHOTCRETE WALL FACING. FINAL SHOTCRETE FACING REINFORCING SHALL EXTEND INTO CONCRETE BARRIER.
21. REGRADE SOIL AT MAKAI FACE OF WALL AND LAY TURF REINFORCEMENT MATTING WHERE OCCURS.
22. PLACE REINFORCING AND CONCRETE TO CONSTRUCT BARRIER WITH ROCK VENEER ON TOP OF SOIL NAIL WALL. NOTE LAP SPLICE WITH LIFT 1 AND FINAL SHOTCRETE FACING REINFORCING.

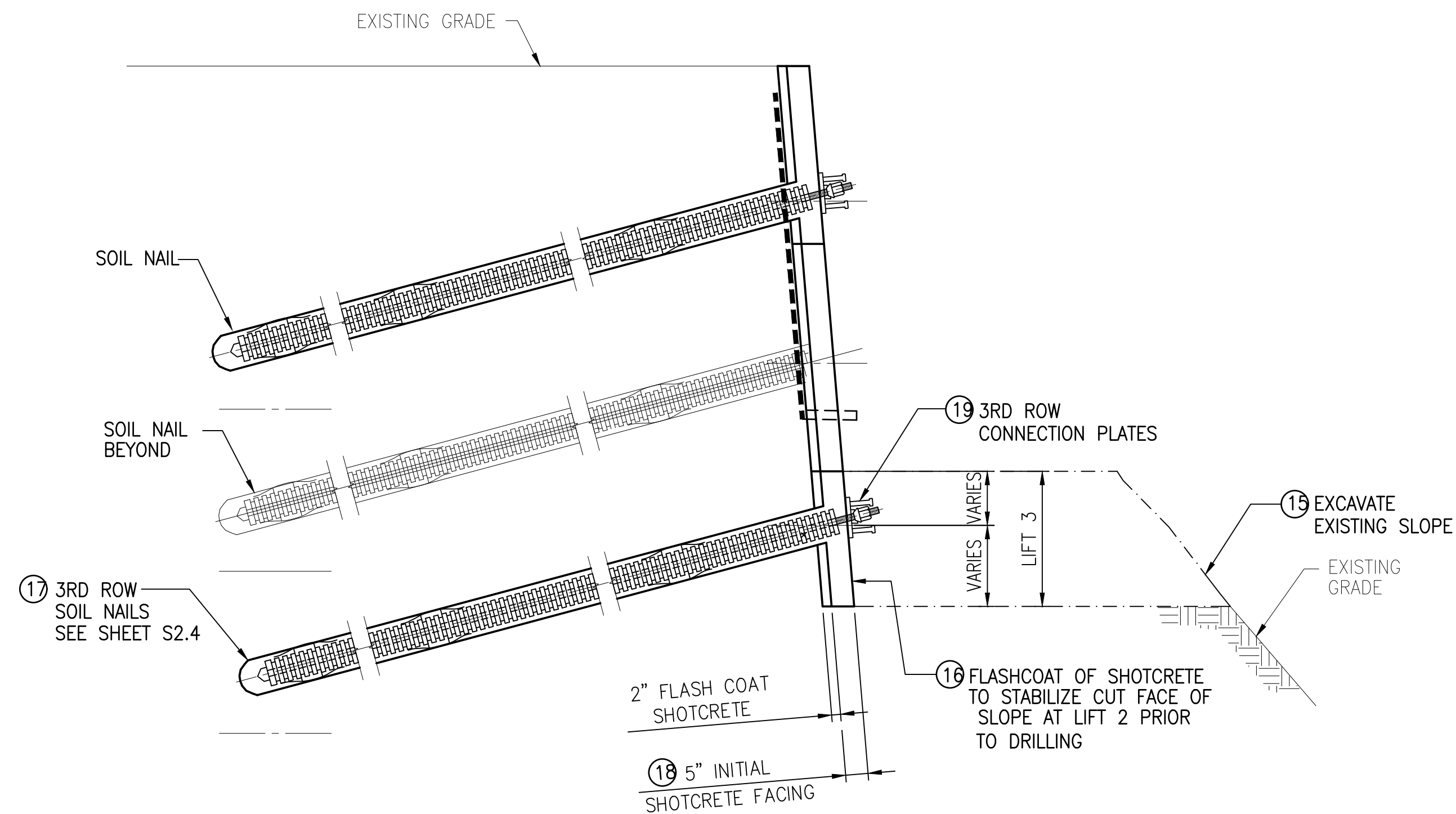
		EXPIRATION DATE: 4/30/26 OF LICENSE	
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.			
1001 BISHOP ST, SUITE 1600 HONOLULU, HAWAII 96813			
REVISION	DATE	DESCRIPTION	MADE BY APPROVED
EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE			
TYPICAL SOIL NAIL WALL SECTION CONSTRUCTION SEQUENCE			
DESIGN: SK	APPROVED:	DWG. NO. S2.1	
DRAWN: BB	CHEF, CIVIL DIVISION, DDC	DATE	SHEET 21
CHECKED: RM	JOB NO. 09-23		OF 25 SHEETS
DATE: JANUARY 2025			

PATH/FILENAME: Z:\00 DRAWINGS\3-000-3708 NUUANU PALI DR-REV01 00\01-16-25 FINAL SUBM\VPD-5201 CONST SEQ.dwg
 PLOT DATE: January 16, 2025 @ 09:20:04 am

TYPICAL INITIAL SHOTCRETE SECTION (LIFT 3):

NOTES:

1. SEE A/S2.1, B/S2.1, AND B/S2.2 FOR ADDITIONAL DETAILS.
2. CONTRACTOR SHALL APPLY EXTRA SHOTCRETE AS FILL IN CASE THE FACE OF THE CUT SLOPE IS NOT VERTICAL.

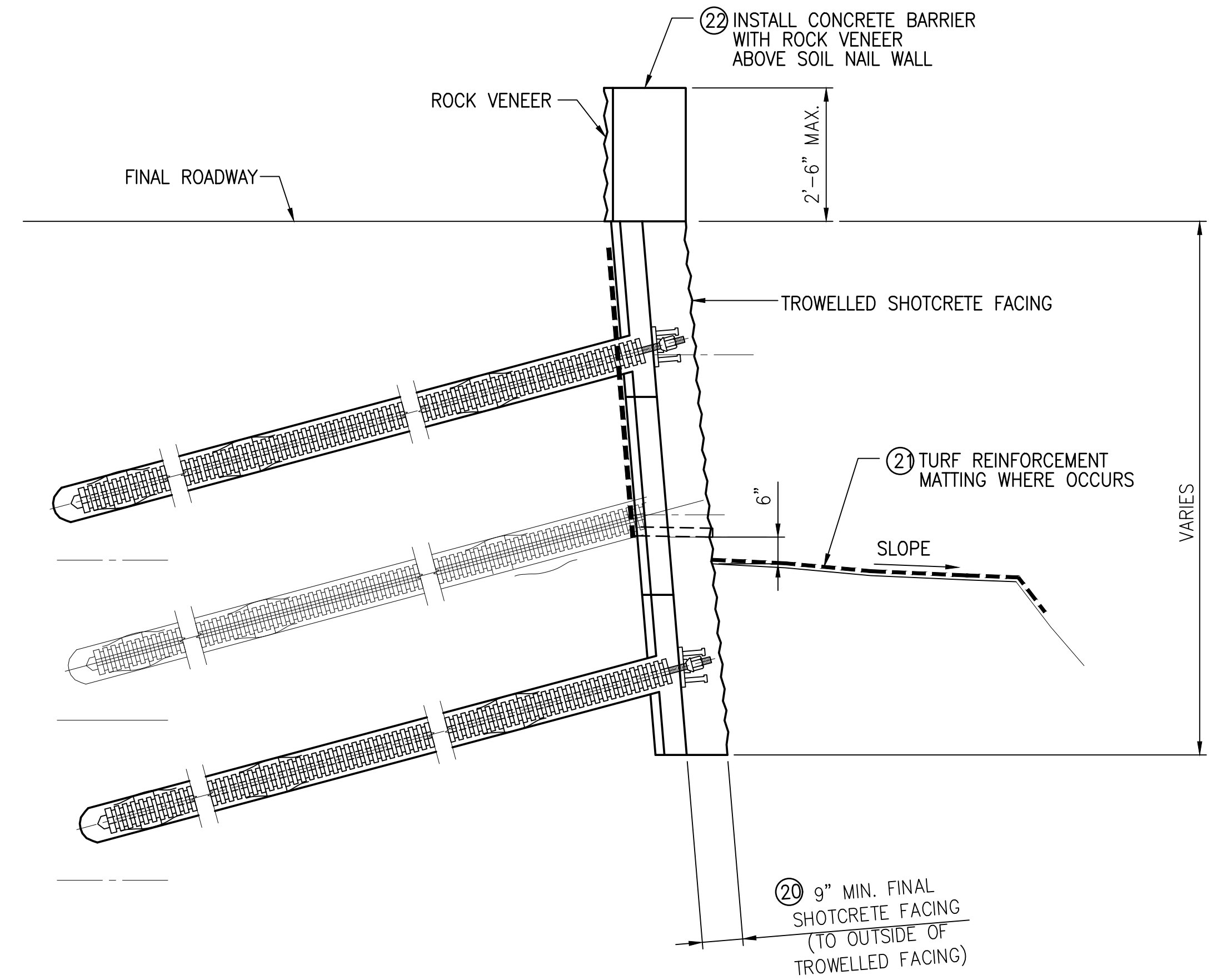


A SECTION - LIFT 3
S2.2 SCALE: 1/2" = 1'-0"

TYPICAL FINAL SHOTCRETE SECTION:

NOTE:

- SEE A/S2.1, B/S2.1, AND A/S2.2 FOR ADDITIONAL DETAILS.



B SECTION - FINAL FACING
S2.2 SCALE: 1/2" = 1'-0"

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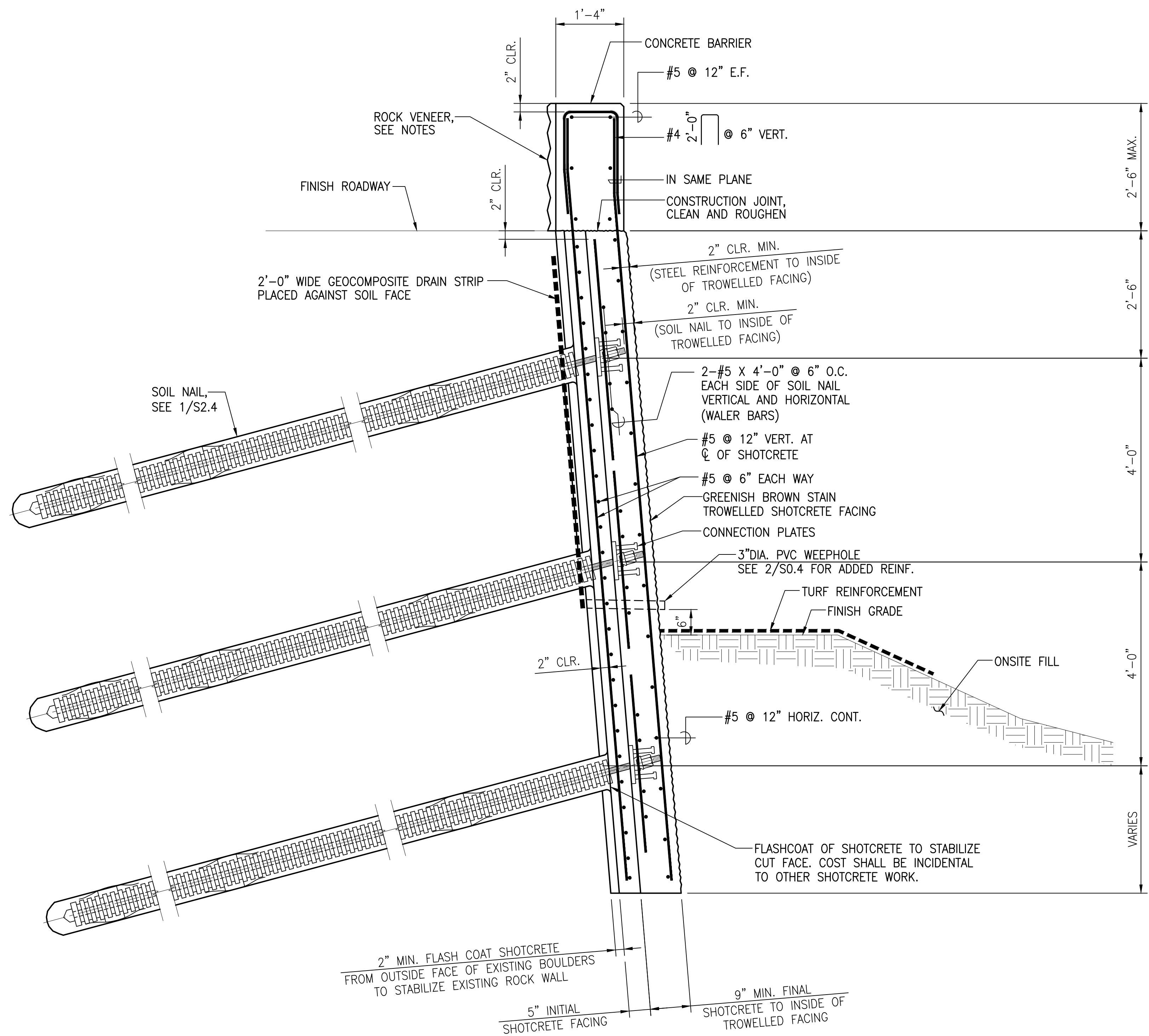
	NO. 9444-S EXPIRATION DATE OF LICENSE: 4/30/26	

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

**EMERGENCY IMPROVEMENTS IN THE VICINITY
 OF 3708 NUUANU PALI DRIVE**

**TYPICAL SOIL NAIL WALL SECTION
 CONSTRUCTION SEQUENCE**

DESIGN: SK	APPROVED:	DWG. NO. S2.2
DRAWN: BB	CHEF, CIVIL DIVISION, DDC	SHEET 22
CHECKED: RM	DATE	OF 25 SHEETS
DATE: JANUARY 2025	JOB NO. 09-23	



NOTES:

1. CONTRACTOR TO SUBMIT ROCK VENEER SAMPLES TO THE OFFICER IN CHARGE FOR APPROVAL. ROCK VENEER COLOR AND TEXTURE SHALL MATCH THE EXISTING CRM WALL.
2. SUBMIT VENEER SPECIFICATIONS AND INSTALLATION PROCEDURES FOR APPROVAL.

A TYPICAL SOIL NAIL SECTION – REINFORCING DETAIL
 S2.3 SCALE: 3/4" = 1'-0"

	NO. 9444-S HAWAII, U.S.A.	

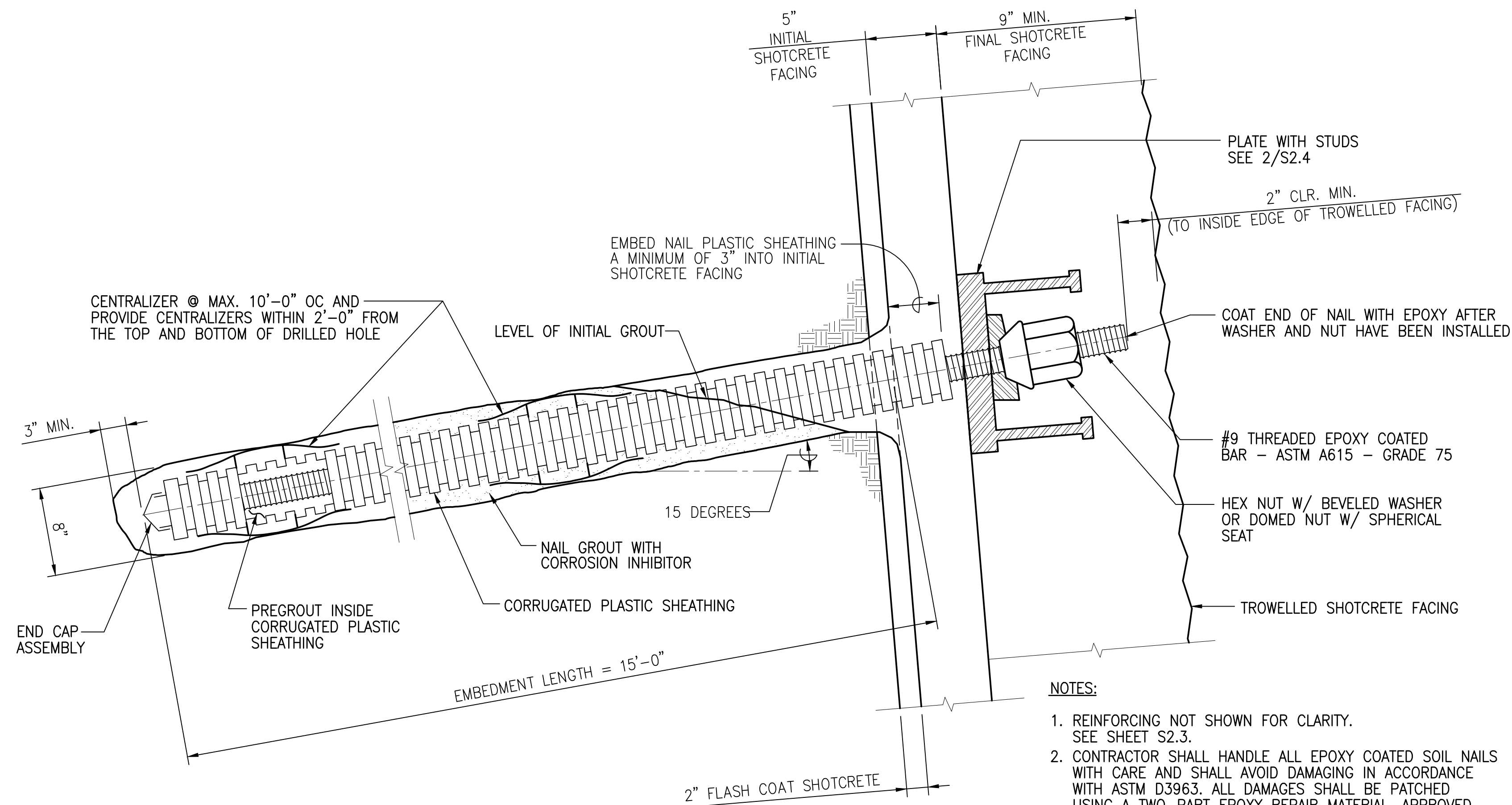
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

TYPICAL SOIL NAIL SECTION REINFORCING DETAIL

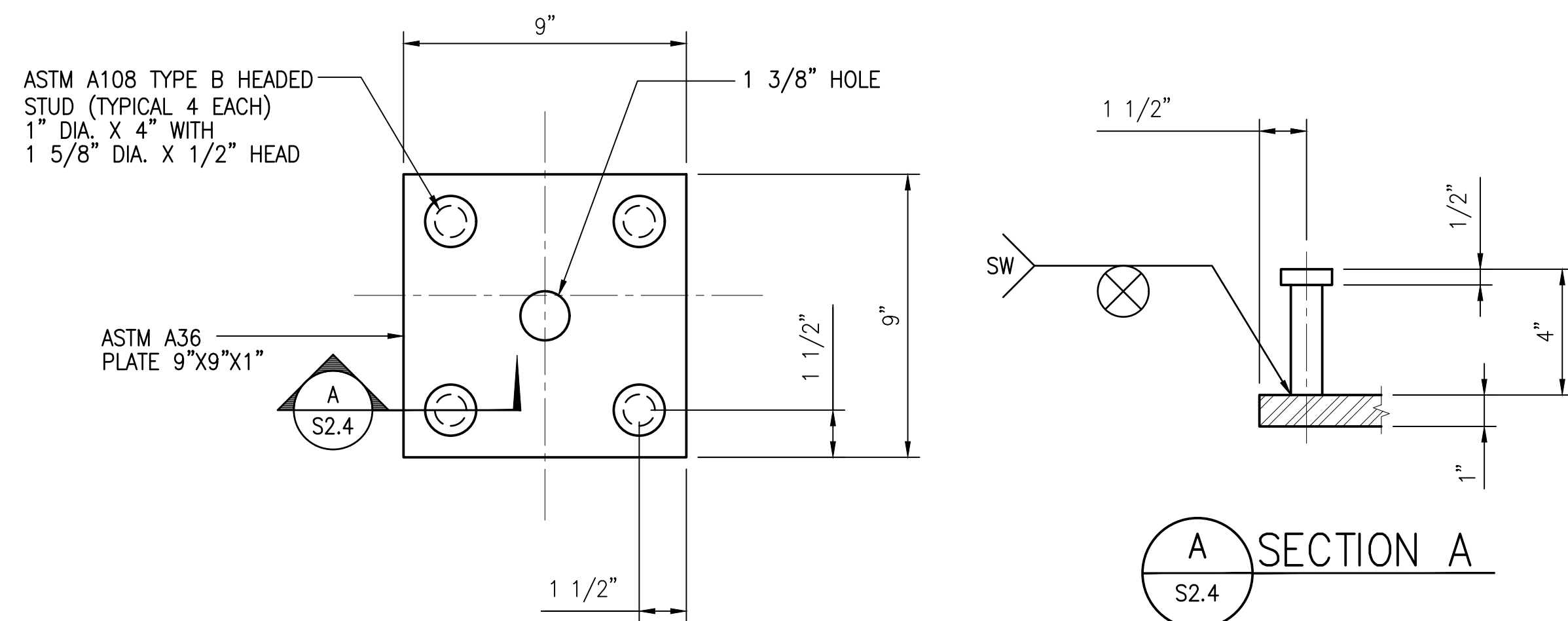
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DRAWN: BB	CHEF, CIVIL DIVISION, DOC	SHEET 23
CHECKED: RM	DATE	OF 25 SHEETS
DATE: JANUARY 2025	JOB NO. 09-23	

PATH/FILENAME: Z:\00_DWG\03-002-3708 NUUANU PALI DR-REV01_00\01-16-25 FINAL SUBM\03-002-3708-SEC2.dwg
 PLOT DATE: January 16, 2025 @ 09:31:10 am



- NOTES:
1. REINFORCING NOT SHOWN FOR CLARITY. SEE SHEET S2.3.
 2. CONTRACTOR SHALL HANDLE ALL EPOXY COATED SOIL NAILS WITH CARE AND SHALL AVOID DAMAGING IN ACCORDANCE WITH ASTM D3963. ALL DAMAGES SHALL BE PATCHED USING A TWO-PART EPOXY REPAIR MATERIAL, APPROVED BY THE COATING MANUFACTURER.
 3. DESIGN LOAD: 30 KIPS

1 ENCAPSULATED PRODUCTION SOIL NAIL DETAIL
S2.4 NOT TO SCALE



A SECTION A
S2.4

NOTE:
ALL PLATES, NUTS, WASHERS, AND SHEAR CONNECTORS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

2 CONNECTION PLATE WITH STUD DETAIL
S2.4 SCALE: 3" = 1'-0"

	LICENSED PROFESSIONAL ENGINEER NO. 9444-S HAWAII, U.S.A.	

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED

EMERGENCY IMPROVEMENTS IN THE VICINITY OF 3708 NUUANU PALI DRIVE

SOIL NAIL AND CONNECTION PLATE DETAIL

DESIGN: SK	APPROVED:	DWG. NO. S2.4
DRAWN: BB	CHEF, CIVIL DIVISION, DDC	SHEET 24
CHECKED: RM	DATE	OF 25 SHEETS
DATE: JANUARY 2025	JOB NO. 09-23	

PATH/FILENAME: Z:\01_DWG\03-2025\3708 NUUANU PALI DR-REV01.DWG (01/01/25) FINAL SUBMITTAL SHEET 24
 PLOT DATE: January 16, 2025 @ 09:31:42 am

