

GRADING AND CONSTRUCTION PLANS
FOR
**LALAMILO HOUSING
PHASE 2A, INCREMENT 1**

WAIMEA, SOUTH KOHALA, ISLAND OF HAWAII, HAWAII

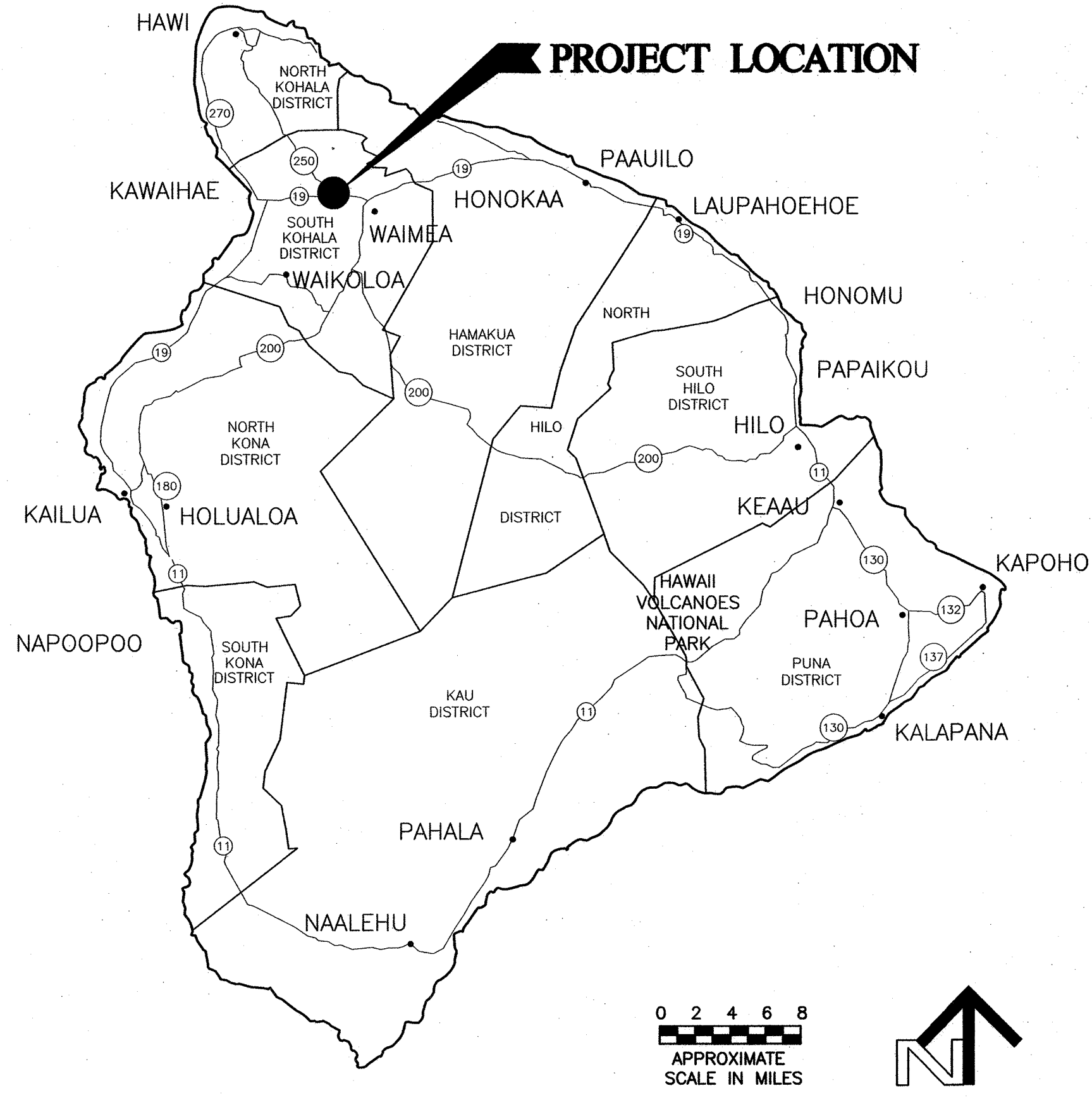
SUBDIVISION FILE NO. SUB-07-000603 DWS FILE NO. 6673-E

OWNER AND DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS

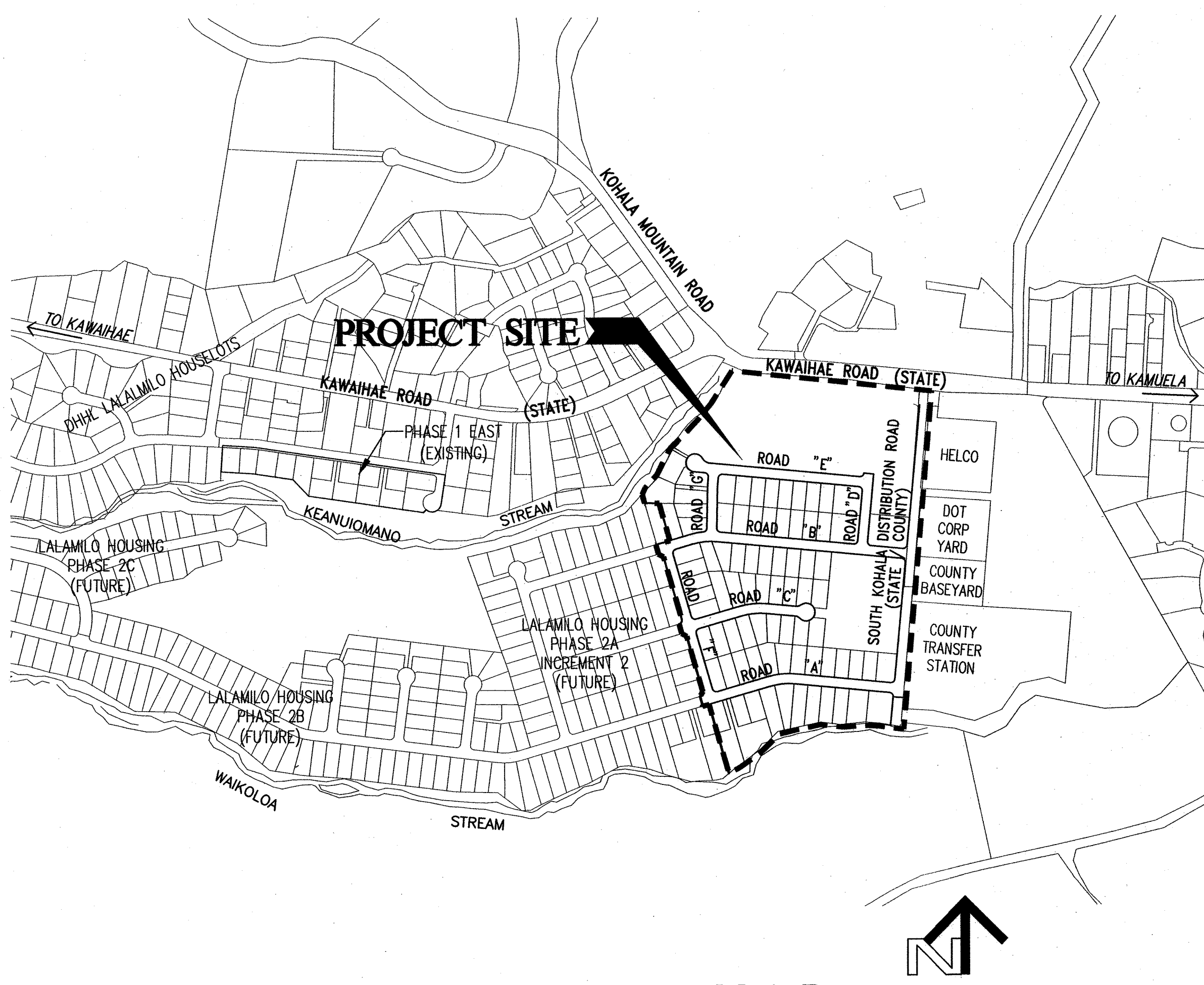
TAX MAP KEY: (3) 6-6-01:10 & 77



Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, Sixth Floor
Honolulu, Hawaii



VICINITY MAP

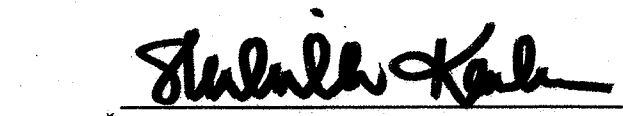


LOCATION MAP
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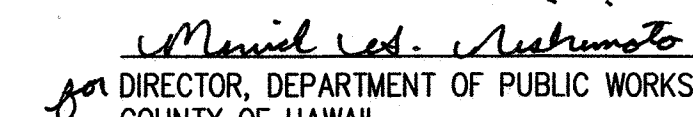
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APPROVED



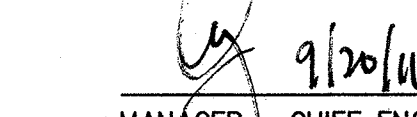
CHAIRMAN, HAWAIIAN HOMES COMMISSION
DEPARTMENT OF HAWAIIAN HOME LANDS
STATE OF HAWAII

10/12/11
DATE



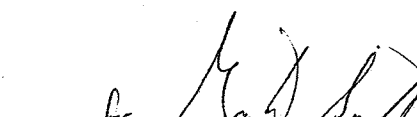
DIRECTOR, DEPARTMENT OF PUBLIC WORKS
COUNTY OF HAWAII

09/27/11
DATE



MANAGER - CHIEF ENGINEER, DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

9-28-11
DATE



DIRECTOR, PLANNING DEPARTMENT, COUNTY OF HAWAII

Sept. 27, 2011
DATE

P:\Land Projects\DHHL Lalamilo Phase 2\Construction Drawings\Lalamilo Housing Phase 2A, Increment 1\Government Review\#2\Title Sheet Phase 2 Incre. 1 GH#2.dwg, TITLE SHEET, 9/13/2011 3:52:53 PM, 1:1

LALAMILO HOUSING PHASE 2A, INCREMENT 1

GENERAL NOTES

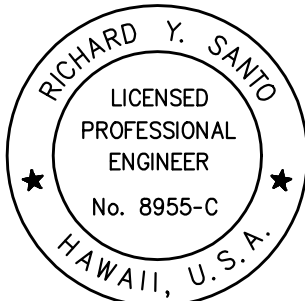
1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING VALVE BOXES, MANHOLE COVERS AND CENTERLINE MONUMENTS AND SHALL HAVE THEM RAISED TO MEET THE NEW PAVEMENT GRADE.
2. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD DETAILS AND STANDARD SPECIFICATIONS OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF HAWAII.
3. EXISTING PAVEMENT SHALL BE BROOMED OFF AND SHALL RECEIVE A TACK COAT OF 0.15 GALLON PER SQUARE YARD OF EMULSIFIED ASPHALT (SS-1) BEFORE PLACING A.C. PAVEMENT. THE COST OF THE TACK COAT SHALL BE INCIDENTAL TO THE A.C. PAVEMENT.
4. THE CONTRACTOR SHALL PAVE THE TOTAL WIDTH OF ROADWAY EACH DAY SO AS NOT TO LEAVE A LONGITUDINAL PAVEMENT DROP BETWEEN LANE PASSES OF THE PAVER. HOWEVER, AT THE DISCRETION OF THE ENGINEER, THE CONTRACTOR MAY CONSTRUCT A TRANSITION TAPER (1' WIDE) SO AS NOT TO LEAVE A VERTICAL FACE.
5. THE CONTRACTOR SHALL PROVIDE A SMOOTH-RIDING CONNECTION TO EXISTING STREETS AND DRIVEWAYS AND AT THE BEGINNING AND ENDING OF THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER.
6. PAVEMENT STRIPING, INCLUDING CENTERLINE, CROSSWALK, STOP LINES, ETC. AND RAISED PAVEMENT MARKERS SHALL CONFORM TO THE COUNTY STANDARDS FOR PAVEMENT MARKINGS AND STRIPING NOTES OR AS MODIFIED BY THE DETAILS ON THESE PLANS.
7. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREAS FREE FROM DUST NUISANCES. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL RULES OF THE STATE DEPARTMENT OF HEALTH, HAR 11-60.1, FUGITIVE DUST.
8. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL COORDINATE THE REFERENCING OF THE CENTERLINE MONUMENTS TO BE RECONSTRUCTED BY A SURVEYOR LICENSE TO PRACTICE IN THE STATE OF HAWAII. AFTER PAVING, THE SURVEYOR SHALL LOCATE THE MONUMENTS, AND AFTER RECONSTRUCTION OF THE MONUMENTS, THE SURVEYOR SHALL PUNCH THE CENTERLINE LOCATION ON THE BRASS PINS. THE SURVEYOR SHALL SUBMIT WRITTEN CERTIFICATION OF THE INSTALLATION AND LOCATION OF THE CENTERLINE MONUMENTS TO THE ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE DWS EXISTING WATER SYSTEM.
10. ROADWAYS SHALL BE IN COMPLIANCE TO SUPPORT AXLE AND WHEEL LOADS PERMITTED UNDER SECTION 291-35, HAWAII REVISED STATUTES (HRS).

CONSTRUCTION NOTES

1. THE ENGINEER RESERVES THE RIGHT TO MAKE CHANGES TO THE DRAINAGE SYSTEM AS SUCH CHANGES ARE FOUND TO BE NECESSARY AS THE LAND IS CLEARED AND EROSION CONTROL CONSTRUCTION PROGRESSES.
2. ALL CONSTRUCTION LINES, GRADES AND SURVEY MONUMENT STAKEOUTS SHALL BE MADE BY LICENSED SURVEYORS.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER SUFFICIENTLY IN ADVANCE OF OPENING ANY OR UTILIZING EXISTING BORROW PITS OR ON SITE BORROW, SO THAT A DETERMINATION CAN BE MADE AS TO THE SUITABILITY OF THE BORROW MATERIAL TO BE INCORPORATED INTO THE ROAD CONSTRUCTION.
4. THE CONTRACTOR SHALL CONDUCT ALL TESTS AS REQUESTED BY THE ENGINEER AND BE RESPONSIBLE FOR ALL EXPENSES INCURRED IN CONDUCTING THESE TESTS.
5. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLAN OR NOT, AND SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF SAME IN THE EVENT OF DAMAGES DUE TO HIS CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE RESPECTIVE UTILITY COMPANIES.
6. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," AND TO THE SATISFACTION OF THE ENGINEER.
7. ALL VEGETATION, INCLUDING TREES, SHALL BE REMOVED FROM WITHIN THE ENTIRE GRADED ROADWAY RIGHT-OF-WAY.

NOTES FOR WORK WITHIN COUNTY RIGHT-OF-WAY

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE COUNTY OF HAWAII, DEPARTMENT OF PUBLIC WORKS (DPW), "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," DATED SEPTEMBER 1986, AND "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION," DATED SEPTEMBER 1984.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLAN OR NOT, AND SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF SAME IN THE EVENT OF DAMAGES DUE TO HIS CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE RESPECTIVE UTILITY COMPANIES.
3. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," AND AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS.
4. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS 48 HOURS BEFORE THE COMMENCEMENT OF ANY UTILITY LINE WORK TO SCHEDULE A FIELD REVIEW AND SECURE APPROVAL OF THE PROPOSED UTILITY LINE LOCATION WITHIN THE COUNTY RIGHT-OF-WAY.
5. THE PROPOSED UTILITY LINE LOCATION SHALL BE LAID OUT IN THE FIELD PRIOR TO THE CONDUCTING OF THE FIELD REVIEW BY THE DEPARTMENT OF PUBLIC WORKS.
6. FIELD ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE COMMENCEMENT OF ANY UTILITY LINE WORK.
7. THE REQUIRED PERMIT, UNDER CHAPTER 22, ARTICLE 4, DIVISION 1 OF THE HAWAII COUNTY CODE, SHALL BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS BY THE CONTRACTOR FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY.
8. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE (1) LANE FOR TRAFFIC MOVEMENT AT ALL TIMES. TWO (2) LANES FOR TRAFFIC MOVEMENT SHALL BE PROVIDED BETWEEN THE HOURS OF 3:30 P.M. TO 8:00 A.M.
9. THE EXISTING PAVEMENT SHALL BE SAW-CUT BEFORE COMMENCEMENT OF TRENCHING WORK.
10. ANY PAVEMENT OUTSIDE OF THE CONTRACT ZONE LIMITS DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ITS ORIGINAL CONDITION, OR BETTER, AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS.
11. A TEMPORARY COLD MIX PATCH SHALL BE APPLIED IMMEDIATELY UPON COMPLETION OF THE BACKFILLING OPERATION AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL A PERMANENT PATCH IS AUTHORIZED BY THE DEPARTMENT OF PUBLIC WORKS.
12. NO MATERIAL, EXCEPT THE TRENCH EXCAVATED MATERIAL, SHALL BE STOCKPILED CLOSER THAN SIX (6) FEET FROM THE EXISTING EDGE OF PAVEMENT.
13. NO CONSTRUCTION EQUIPMENT SHALL BE PARKED WITHIN THE ROAD RIGHT-OF-WAY IN SUCH A MANNER THAT THE EQUIPMENT WILL OBSTRUCT THE NORMAL MOVEMENT AND SIGHT DISTANCE OF THE DRIVING MOTORIST, EXCEPT DURING ACTUAL WORKING HOURS.
14. EXCEPT DURING ACTUAL WORKING HOURS, ALL SIGNS THAT DO NOT PERTAIN TO THE CONSTRUCTION ACTIVITY, SUCH AS "MEN WORKING" AND "FLAGMEN AHEAD" SHALL BE COVERED OR LAID DOWN. HOWEVER, ALL SIGNS NECESSARY FOR THE SAFETY OF THE PUBLIC SHALL BE MAINTAINED.
15. ANY PAVEMENT MARKINGS, STRUCTURES, AND THE APPURTENANCES (WITHIN OR OUTSIDE OF THE CONTRACT ZONE LIMITS) DAMAGED AND/OR WORN AWAY UNDER THE PERMIT SHALL BE REPAINTED OR RECONSTRUCTED AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS.
16. NO TRENCHING SHALL BE LEFT OPEN FOR MORE THAN FIVE (5) WORKING DAYS.
17. SHOULD TRENCHING OCCUR THROUGH THE EXISTING SIDEWALK, OR SHOULD DAMAGES OCCUR TO THE SIDEWALK AS A RESULT OF ANY CONSTRUCTION WORK, THE FOLLOWING PROCEDURE SHALL BE UTILIZED TO REPAIR THE SIDEWALK:
 - A. ALL PORTLAND CEMENT CONCRETE TO BE REMOVED SHALL FIRST BE CUT WITH A CONCRETE SAW THAT HAS A DIAMOND OR CARBORUNDUM ABRASIVE WHEEL. THOSE CUTS SHALL BE MADE TO A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE DEPTH OF THE SLAB, OR ENOUGH AS IS DEEMED NECESSARY BY THE DEPARTMENT OF PUBLIC WORKS, TO THE PERMIT BREAKING OUT THE BALANCE OF THE CONCRETE WITHOUT SPALLING OFF THE EXPOSED EDGES OF THE SLAB LEFT IN PLACE.
 - B. IF ANY CONCRETE BLOCK IS TOUCHED, THE WHOLE BLOCK SHALL BE REMOVED AND LATER REPLACED, UNLESS A MINOR VARIATION IS AUTHORIZED BY THE DPW OR ITS REPRESENTATIVE.
 - C. ANY DAMAGES TO ADJACENT AREAS DUE TO SETTLEMENT OR TO ANY OTHER EFFECTS WHATSOEVER CAUSED BY CONSTRUCTION WORK SHALL BE PROPERLY REPAIRED AND CORRECTED.
 - D. ALL OTHER INCIDENTAL WORK SHALL BE SATISFACTORILY PERFORMED TO EFFECT THE PROPER RESTORATION OF THE SIDEWALK AREA.
 - E. SHOULD DAMAGE TO A SIDEWALK, CURB AND/OR GUTTER OCCUR AT A LOCATION WHERE A CURB RAMP SHOULD EXIST, OR TO A DRIVEWAY THAT DOES NOT MEET WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), REPAIR WORK SHALL INCLUDE THE CONSTRUCTION OF A CURB RAMP, OR RECONSTRUCTION TO THE DRIVEWAY SUCH THAT THE REPAIR WORK COMPLIES WITH THE ADA AND MEETS WITH THE APPROVAL OF THE DPW.
18. WHEN WORK INTERFERES WITH A SIDEWALK, THE APPLICANT SHALL PROVIDE FOR THE SAFE PASSAGE OF PEDESTRIANS INCLUDING THE DISABLED AROUND OR THROUGH THE WORK AREA.
19. THE PERMITEE SHALL MAINTAIN, TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC WORKS, THE AREA WORKED WITHIN THE GOVERNMENT RIGHT-OF-WAY INCLUDING ANY REPAIRS TO PAVEMENT AND SHOULDER DAMAGED AS A RESULT OF THE INSTALLATION WORK, FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL INSPECTION. THE PERMITEE SHALL UNDERTAKE REPAIRS EXPEDITIOUSLY, WHENEVER DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS DURING THE MAINTENANCE PERIOD.
20. CONTRATOR SHALL PROVIDE A NOTICE OF GENERAL PERMIT COVERAGE NPDES WITH AN APPLICATION FOR A PERMIT TO WORK IN THE COUNTY RIGHT-OF-WAY.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE		DESCRIPTION	MADE BY
DESCRIPTION		MADE BY	APPROVED
<div>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii</div>			
<div>LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77</div>			
GENERAL NOTES - 1			
DRAWN BY:	LYT	ENGINEER:	FJC
CHECKED BY:	RYT		
APPROVED:			

WATER NOTES

1. ALL WORK SHALL BE DONE ACCORDING TO THE WATER SYSTEM STANDARDS, STATE OF HAWAII, DATED 2002, AS AMENDED.
2. ALL EXISTING WATERLINES, WATERLINE APPURTENANCES AND OTHER UTILITY LOCATIONS SHOWN ON THE PLANS ARE OBTAINED FROM THE LATEST RELIABLE SOURCES. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXACT LOCATION OF ALL UTILITIES IN THE FIELD AND SHALL BEAR ALL COSTS FOR DAMAGES DONE DURING THE CONTRACT PERIOD.
3. THE CONTRACTOR SHALL INFORM THE D.W.S. ENGINEER 72 HOURS PRIOR TO THE BEGINNING OF ANY WATERLINE WORK AND TWO WEEKS PRIOR TO ANY CONNECTION, CHLORINATION, SHUT-OFF OR RELOCATION WORK.
4. ALL CONNECTIONS TO THE EXISTING WATER SYSTEM SHALL BE DONE BY THE D.W.S. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, BACKFILL, ROAD REPAIR, TRAFFIC CONTROL, AND PROVIDE EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE CONNECTION.
5. THE CONTRACTOR SHALL PAY FOR ALL WORK, EQUIPMENT AND MATERIAL FURNISHED BY THE D.W.S.
6. WHERE WATER SHUTOFF OF MORE THAN 3-HOURS BECOMES NECESSARY, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE A TEMPORARY BYPASS LINE, SIZE OF WHICH SHALL BE DETERMINED BY THE D.W.S. ENGINEER. THE D.W.S. ENGINEER ALSO RESERVES THE RIGHT TO REQUIRE BYPASS LINES, REGARDLESS OF THE WATER SHUT-OFF PERIOD, IF DEEMED NECESSARY.
7. PROJECT REQUIRING TEMPORARY CONSTRUCTION WATER SERVICE SHALL BE METERED AND PAID FOR BY THE CONTRACTOR.
8. OUTSIDE OF STATE ROAD RIGHT-OF-WAYS: MINIMUM COVER ON THE WATER SYSTEM PIPELINES 4-INCH THROUGH 8-INCH TO BE 2.0 FEET. MINIMUM COVER ON 12-INCH PIPELINES TO BE 2.5 FEET. MINIMUM COVER ON PIPELINES GREATER THAN 12-INCH TO BE 3.0 FEET. MAXIMUM COVER ON PIPELINES NOT TO EXCEED 5 FEET UNLESS APPROVED BY THE MANAGER OF D.W.S. WITHIN STATE ROAD RIGHT-OF-WAYS: MINIMUM COVER ON ALL SIZES OF WATERLINES TO BE 3.0 FEET.
9. ALL NEWLY INSTALLED WATERLINES SHALL HAVE A 4 MIL. THICK, 6-INCH WIDE, NON METALLIC BLUE WARNING TAPE OVER CENTERLINE OF PIPE LABELED "CAUTION - WATERLINE BURIED BELOW" PLACED 12 INCHES BELOW FINISHED GRADE ALONG THE ENTIRE LENGTH OF THE TRENCH.
10. MINIMUM VERTICAL CLEARANCE BETWEEN WATERLINES AND OTHER UTILITIES SHALL BE 12-INCHES PROVIDED THE OTHER UTILITY IS CONCRETE JACKETED, AND 18-INCHES IF NO CONCRETE JACKETS ARE USED. IN ALL APPLICABLE INSTANCES, THE WATERLINES SHALL BE AT A GRADE HIGHER THAN OTHER UTILITIES. UTILIZE PERPENDICULAR CROSSINGS WHERE PRACTICABLE. FOR WATERLINES, CENTER FULL PIPE LENGTHS AT UTILITY CROSSINGS WHENEVER POSSIBLE.
11. MINIMUM HORIZONTAL CLEARANCE BETWEEN WATERLINES AND OTHER UTILITIES SHALL BE 8- FEET (CLEAR SPACE - NOT CENTERLINE TO CENTERLINE) FOR ROAD RIGHT-OF-WAYS OF 50 FEET OR LESS, AND 10- FEET FOR ROAD RIGHT-OF-WAYS OF MORE THAN 50- FEET.
12. ALL WATER SYSTEM PIPELINES, 4-INCHES OR LARGER IN DIAMETER, SHALL BE DUCTILE IRON, PUSH ON JOINTS, CLASS 52, AND ALL PIPELINES SMALLER THAN 4-INCHES IN DIAMETER SHALL BE SOFT COPPER, TYPE "K", UNLESS OTHERWISE SPECIFIED.
13. ALL FITTINGS (MINIMUM CLASS 250) AND GATE VALVES (RESILIENT TYPE, CLASS 200) SHALL BE DUCTILE IRON, WITH MECHANICAL JOINTS UNLESS OTHERWISE SPECIFIED. BUTTERFLY VALVES (MJ) SHALL BE CLASS 250 WITH FUSION EPOXY COATED INTERIOR UNLESS OTHERWISE SPECIFIED. SLOPE OF PIPE INVERT AT VALVE LOCATIONS SHALL NOT EXCEED 6% - ADJUST PIPE AS APPROPRIATE PER STANDARDS.
14. PIPE JOINT RESTRAINTS FOR MECHANICAL JOINT (MJ) FITTINGS AND MJ VALVES SHALL BE "MEGALUG" SERIES AS MANUFACTURED BY EBAA IRON, INC., OR AN APPROVED EQUAL (WEDGE TYPE), WHERE EVER CALLED FOR ON THE PLANS AND SPECIFICATIONS.
15. FIRE HYDRANT CONNECTIONS SHALL UTILIZE EBAA "MEGALUGS" (OR APPROVED EQUAL) AT ALL MJ CONNECTIONS.
16. 4"x4"x4" REINFORCED CONCRETE SLAB FOR FIRE HYDRANT SHALL BE REINFORCED WITH 6x6x10/10 WELDED WIRE FABRIC. SLAB TO SLOPE AWAY FROM HYDRANT AT 2% IN ALL DIRECTIONS.
17. THE WATERLINE SHALL BE TESTED AT A MINIMUM OF 225 PSI OR ONE-AND-ONE-HALF TIMES THE STATIC PRESSURE AT THE LOW POINT (WHICHEVER IS GREATER), UNDER D.W.S. SUPERVISION. THE TESTING SHALL BE DONE JUST PRIOR TO PAVING, WHENEVER APPLICABLE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CHLORINATION OF THE WATER SYSTEM PER THE MOST CURRENT STANDARDS OF GOVERNING AGENCIES AND SHALL BEAR ALL COST(S). THE PERSON(S) ENGAGED TO DO THE CHLORINATION WORK MUST HAVE THE APPROPRIATE VALID LICENSE TO PERFORM THE WORK IN THE STATE OF HAWAII.
19. EXISTING VALVES, FIRE HYDANTS UNITS, VALVE BOXES, FRAMES, AND COVERS DESIGNATED "REMOVE AND SALVAGE" SHALL BE CLEANED OF ALL DIRT, SCABS, AND CONCRETE AND DELIVERED TO THE RESPECTIVE D.W.S. BASEYARD. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS, UNLESS SPECIFIED OTHERWISE.
20. EXISTING WATERINES, VALVES, FITTINGS AND APPURTENANCES NOT DESIGNATED "REMOVE AND SALVAGE" SHALL BE ABANDONED IN PLACE. ALL EXPOSED VALVE BOXES, VALVE, PIPES AND APPURTENANCES SHALL BE REMOVED AND DISPOSED OF PROPERLY AT NO COST TO THE D.W.S.
21. SERVICE LATERALS TO BE ABANDONED SHALL BE CUT AND PLUGGED AT THE WATER MAIN. METER BOXES TO BE ABANDONED SHALL BE REMOVED AND GROUND SHALL BE RESTORED TO A CONDITION BETTER OR EQUAL TO SURROUNDING AREA.
22. WHEN COMPACTION TESTS ARE REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE D.W.S. WITH PROCTOR RESULTS OF MATERIALS TO BE USED FOR THAT PORTION OF THE WORK REQUIRING COMPACTION. THESE RESULTS SHALL BE CERTIFIED AND SHALL BE FURNISHED TO D.W.S. ONE WEEK PRIOR TO COMMENCEMENT OF WORK. COST FOR COMPACTION SHALL BE INCIDENTAL TO PIPELINE INSTALLATION.
23. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AND CERTIFY THE RECORD DRAWINGS (AS-BUILT DRAWINGS) AS TO ACCURACY AND AS-BUILT CONDITION, AND A LICENSED ENGINEER HIRED BY THE CONTRACTOR SHALL THEN STAMP THE CERTIFIED DRAWINGS. THE CONTRACTOR SHALL THEN SUBMIT THE RECORD DRAWINGS AND AS-BUILT TRACINGS TO THE D.W.S.
24. PRESSURES AT ALL LOCATIONS WITHIN THE WATER SYSTEM IMPROVEMENTS SHALL NOT BE LESS THAN 40 PSI STATIC OR GREATER THAN 125 PSI STATIC. PRESSURES AT ALL LOCATIONS WITHIN THE WATER SYSTEM SHALL NOT FALL BELOW 20 PSI RESIDUAL DURING MAXIMUM DAY FLOW PLUS FIRE FLOW FROM ANY FIRE HYDRANTS WITHIN THE WATER SYSTEM IMPROVEMENTS SHOWN.
25. FOR COUNTY WATER SYSTEMS: THE D.W.S. WILL NOT ASSUME OWNERSHIP OR GRANT ANY WATER SERVICE UNTIL THE WATER SYSTEM IS DEDICATED TO THE D.W.S. ALONG WITH ALL NECESSARY EASEMENTS AND DOCUMENTS.
26. FOR PRIVATE WATER SYSTEMS: THE DEPARTMENT OF WATER SUPPLY (D.W.S.) IS PROVIDING ITS REVIEW AND INSPECTION FOR THE SUBJECT WATER SYSTEM IMPROVEMENTS ONLY. THIS REVIEW IS BASED ON THE INFORMATION AND CERTIFICATION PROVIDED TO D.W.S. BY THE DEVELOPER, LICENSED ARCHITECT OR ENGINEER, AND OWNER OF THE WATER COMPANY/UTILITY AND SUCCESSORS OR ASSIGNS, AND IS FOR GENERAL CONFORMANCE TO THE CURRENT WATER SYSTEM STANDARDS AND D.W.S. RULES AND REGULATIONS.
27. WATER SYSTEM APPROVED ON CONFORMANCE TO WATER SYSTEM STANDARDS ONLY. PLAN APPROVAL AND SIGNATURE BY THE MANAGER, DEPARTMENT OF WATER SUPPLY ONLY INDICATES THAT THE WATER SYSTEM IMPROVEMENTS SHOWN ON THE PLANS GENERALLY CONFORM TO WATER SYSTEM STANDARDS FOR THE COUNTY OF HAWAII. THEY ARE NOT GUARANTEES OF WATER AVAILABILITY OR A WATER COMMITMENT FOR THE SUBJECT PROJECT WHICH IS HANDLED SEPARATELY FROM PLAN REVIEW.

WATER NOTES (CONT.)

28. WATER SERVICES THAT REQUIRE A DEPARTMENT OF WATER SUPPLY APPROVED BACKFLOW PREVENTER SHALL HAVE ONE INSTALLED IN ACCORDANCE WITH DEPARTMENT OF WATER SUPPLY STANDARD (DIVISION 100 - SECTION 107 AND DETAIL V-9). THE SERVICE OWNER SHALL BE RESPONSIBLE FOR THE INSTALLATION, YEARLY TESTING AND MAKE PROVISIONS FOR WATER DURING THE TESTING AND MAINTENANCE OF THE BACKFLOW ASSEMBLY. THE BACKFLOW PREVENTER INSTALLATION SHALL BE APPROVED BY THE DEPARTMENT BEFORE SERVICE AT THE METER IS ACTIVATED.
- WATER NOTES (DEPARTMENT OF HEALTH)
- CHLORINATION OF WATER SYSTEMS
1. WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD FOR DISINFECTING WATER MAINS, ANSI/AWWA C651-99.
2. LIQUID CHLORINE THAT HAS BEEN TESTED AND CERTIFIED AS MEETING THE SPECIFICATIONS OF ANSI/NSF STANDARD 60, DRINKING WATER TREATMENT CHEMICALS - HEALTH EFFECTS, SHALL BE USED FOR THE CHLORINATION OF THE WATER MAINS AND STORAGE TANK.
3. PRIOR TO CHLORINATION, THE WATER MAINS AND SHALL BE THOROUGHLY FLUSHED.
4. THE INTERIOR SURFACES OF THE WATER MAINS SHALL BE EXPOSED TO THE CHLORINATING SOLUTION, BY COMPLETELY FILLING THE MAIN TO REMOVE ALL AIR POCKETS, FOR A MINIMUM OF 24 HOURS AND THE FREE CHLORINE RESIDUAL-SHALL NOT BE LESS THAN 10 PPM AFTER SUCH TIME.
5. AT THE END OF THE 24 HOUR DISINFECTION PERIOD, REPRESENTATIVE SAMPLES SHALL BE TAKEN AND ANALYZED TO ASSURE A FREE CHLORINE RESIDUAL OF AT LEAST 10 PPM.
6. SHOULD THE FREE CHLORINE RESIDUAL RESULTS INDICATE ADEQUATE CHLORINATION, THE WATER MAINS SHALL BE THOROUGHLY FLUSHED AND FILLED WITH WATER FROM THE EXISTING SYSTEM AND AGAIN TESTED FOR FREE CHLORINE RESIDUAL. THE FLUSHING SHALL BE CONSIDERED ADEQUATE IF THE FREE CHLORINE RESIDUAL TEST RESULTS INDICATE THAT THE WATER IN THE WATER MAINS HAS A COMPARABLE CHLORINE RESIDUAL AS THE WATER IN THE EXISTING SYSTEM.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF CHLORINATED WATER TO SAFEGUARD PUBLIC HEALTH AND ENVIRONMENT IN ACCORDANCE WITH APPLICABLE STATE DEPARTMENT OF HEALTH REQUIREMENTS. A NEUTRALIZING CHEMICAL SHALL BE APPLIED TO THE WATER TO BE WASTED TO THOROUGHLY NEUTRALIZE THE CHLORINE RESIDUAL REMAINING IN THE WATER IN ACCORDANCE WITH AWWA C651-99, SECTION 4.5.2, AND APPENDIX C.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE DEPARTMENT OF HEALTH, CLEAN WATER BRANCH PRIOR TO THE START OF CONSTRUCTION, FOR THE DISPOSAL OF WATER USED FOR HYDROTESTING AND CHLORINATION.
9. FOLLOWING THE ACCEPTABLE FLUSHING OF THE WATER MAINS, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN AT LEAST 24 HOURS APART, FROM REPRESENTATIVE POINTS SHALL BE TAKEN AND SUBJECTED TO MICROBIOLOGICAL TESTS. FOR WATERLINES, AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1,200 FEET OF THE NEW WATER MAIN, PLUS ONE FROM THE END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH. FOR THE STORAGE TANK, THE SAMPLE SHALL BE COLLECTED FROM THE TANK'S EFFLUENT LINE SAMPLE TAP. POSITIVE OR INVALID TEST RESULTS WILL NOT BE ACCEPTABLE AND THE PROCESS WILL BE REPEATED.
10. ALL MEASUREMENTS FOR CHLORINE RESIDUAL SHALL BE ANALYZED USING E.P.A. APPROVED METHODS FOR DRINKING WATER.
11. ALL MICROBIOLOGICAL TESTS SHALL BE PERFORMED BY A LABORATORY APPROVED BY THE DEPARTMENT OF HEALTH, STATE OF HAWAII.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ALL OF THE FOREGOING.
13. SEE ANSI/AWWA C651-99, SEC. 4.3.6 FOR SWABBING CHLORINATION PROCEDURES.
- OTHER
1. ALL MATERIALS (PIPE, PIPE LUBRICANTS, PAINTS, SEALANTS, FORM OIL, CONCRETE ADMIXTURES, ETC.) IN DIRECT CONTACT WITH THE POTABLE WATER SHALL HAVE NATIONAL SANITATION FOUNDATIONS (NSF) APPROVALS. THE CONTRACTOR SHALL SUBMIT THESE APPROVALS TO THE DEPT. OF WATER SUPPLY FOR REVIEW AND APPROVAL PRIOR TO ITS APPLICATION.
- GRADING NOTES
1. ALL GRADING WORK SHALL CONFORM TO CHAPTER 10 OF THE HAWAII COUNTY CODE. SHOULD A GRADING PERMIT BE REQUIRED, NO WORK SHALL COMMENCE UNTIL THE DEPARTMENT OF PUBLIC WORKS (DPW) APPROVES A GRADING PERMIT.
2. THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS RESULTING FROM HIS WORK. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE DPW SHALL BE PAYABLE BY THE CONTRACTOR.
3. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREAS FREE FROM DUST NUISANCES. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL RULES OF THE STATE DEPARTMENT OF HEALTH, HAR 11-60.1, FUGITIVE DUST.
4. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 55, WATER POLLUTION CONTROL AND CHAPTER 54, WATER QUALITY STANDARDS, AND TO THE EROSION AND SEDIMENTATION CONTROL STANDARDS AND GUIDELINES OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF HAWAII.
5. THE CONTRACTOR SHALL SOD OR PLANT ALL SLOPES AND EXPOSED AREAS IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED.
6. FILLS ON SLOPES SHALL BE IN ACCORDANCE TO THE RECOMMENDATIONS WITH THE "DRAFT PRELIMINARY GEOTECHNICAL EXPLORATION REPORT, DHHL, LALAMILO RS10 SUBDIVISION PROJECT, LALAMILO, WAIMEA, BIG ISLAND OF HAWAII", PREPARED BY PSC CONSULTANTS, LLC, DATED JULY 28, 2006.
7. THE CONTRACTOR SHALL INFORM THE DPW OF THE LOCATION OF THE DISPOSAL AND/OR BORROW SITE(S) REQUIRED FOR THIS PROJECT WHEN AN APPLICATION FOR A GRADING PERMIT IS MADE. THE DISPOSAL AND/OR BORROW SITE(S) MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
8. NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS ANYTIME WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS. GRADING WORK ON NORMAL WORKING DAYS SHALL BE BETWEEN THE HOURS OF 7:00 A.M. TO 3:30 P.M.
9. FILLS SHALL BE COMPACTED TO 90 PERCENT (90%) OF THE MINIMUM DENSITY PER ASTM D-1557 TEST.
10. THE CONTRACTOR SHALL REMOVE ALL VEGETATION BEFORE PLACING FILLS ON NATURAL GROUND SURFACE.
11. EARTHWORK QUANTITIES SHOWN ON DWG. NO. C-7.

STOCKPLING NOTES

1. ALL STOCKPILING WORK SHALL BE DONE IN ACCORDANCE WITH THE SOILS REPORT ENTITLED "DRAFT PRELIMINARY GEOTECHNICAL EXPLORATION REPORT PROPOSED DEPARTMENT OF HAWAIIAN HOME LANDS LALAMILO RS 10 SUBDIVISION PROJECT, LALAMILO, WAIMEA, BIG ISLAND OF HAWAII" DATED JULY 2006, BY PSC CONSULTANTS, LLC.
2. NO CONTRACTOR SHALL PERFORM ANY STOCKPILING 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 HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 60.1, "AIR POLLUTION CONTROL."
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 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 OF 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 STOCKPILING WORK HAS BEEN COMPLETE. STOCKPILING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.
7. FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.
8. THE COUNTY SHALL BE INFORMED OF THE LOCATION OF THE BORROW SITE FOR THE PROJECT WHEN THE APPLICATION FOR A STOCKPILING PERMIT IS MADE. THE BORROW SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
9. NO STOCKPILING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE DIRECTOR, DHHL, PROVIDED SUCH STOCKPILING WORK IS ALSO IN CONFORMANCE WITH COMMUNITY NOISE CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, "COMMUNITY NOISE CONTROL."
10. THE LIMITS OF THE AREA TO BE STOCKPILED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE STOCKPILING WORK.
11. ALL STOCKPILING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS" AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AND IF APPLICABLE, THE NPDES PERMIT FOR THE PROJECT.
12. WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY STOCKPILING WORK IS INITIATED.
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 STOCKPILING PERMIT.
15. IF THE STOCKPILING WORK INVOLVES CONTAMINATED SOIL, THEN ALL STOCKPILING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.
16. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS TO ARRANGE FOR INSPECTIONAL SERVICES AND SUBMIT THREE (3) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
17. 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 SUBJECTED TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.
18. FOR BENCHMARKS, SEE DWG. NO. C-5, C-6, AND C-10.

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<div><div><div>Community Planning and Engineering, Inc.</div><div>Engineering Design Construction Management Infrastructure Planning</div><div>1100 Alakea Street, Sixth Floor</div><div>Honolulu, Hawaii</div></div><div><div>LALAMILO HOUSING</div><div>PHASE 2A, INCREMENT 1</div><div>WAIMEA, SOUTH KOHALA, HAWAII</div><div>SUBD. FILE NO. SUB-07-000603</div><div>OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS</div><div>TAX MAP KEY: (3) 6-6-01:10 & 77</div></div></div>			
GENERAL NOTES - 2			
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			
<div><div><div><div><div></div><div>RICHARD Y. SANDO</div><div>LICENSED PROFESSIONAL ENGINEER</div><div>No. 8955-C</div><div>HAWAII, U.S.A.</div></div></div><div><div>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12</div></div></div></div>			
FILE	POCKET	FOLDER	NO.

WATER POLLUTION AND EROSION CONTROL NOTES

A. GENERAL:

- THE CONTRACTOR IS REMINDED OF THE REQUIREMENTS OF SECTION 209 – WATER POLLUTION AND EROSION CONTROL, (HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005). SECTION 209 DESCRIBES BUT IS NOT LIMITED TO THE SUBMITTAL REQUIREMENTS; SCHEDULING OF WATER POLLUTION AND EROSION CONTROL CONFERENCE WITH THE ENGINEER; CONSTRUCTION REQUIREMENTS; METHOD OF MEASUREMENTS; AND BASIS OF PAYMENT.
- THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE "BEST MANAGEMENT PRACTICES MANUAL FOR CONSTRUCTION SITES IN HONOLULU", DATED MAY 1999 OR AS AMENDED IN DEVELOPING, INSTALLING AND MAINTAINING THE BEST MANAGEMENT PRACTICES (BMP) FOR THE PROJECT.
- THE ENGINEER MAY ASSESS LIQUIDATED DAMAGES OF UP TO \$27,500 FOR NON-COMPLIANCE OF EACH BMP REQUIREMENT AND EACH REQUIREMENT STATED IN SECTION 209, FOR EVERY DAY OF NON-COMPLIANCE. THERE IS NO MAXIMUM LIMIT ON THE AMOUNT OF ASSESSED PER DAY.
- THE ENGINEER WILL DEDUCT THE COST FROM THE PROGRESS PAYMENT FOR ALL CITATIONS RECEIVED BY THE DEPARTMENT FOR NONCOMPLIANCE, OR THE CONTRACTOR SHALL REIMBURSE THE STATE FOR THE FULL AMOUNT OF THE OUTSTANDING COST INCURRED BY THE COUNTY.
- THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE HONOLULU'S CITY AND COUNTY "RULES FOR SOIL EROSION STANDARDS AND GUIDELINES" FOR ALL PROJECTS ON OAHU. USE APPLICABLE SOIL EROSION GUIDELINES FOR PROJECTS ON MAUI, MOLOKAI, KAUAI, AND HAWAII.
- FOR PROJECTS THAT REQUIRE A NPDES PERMIT FROM THE DEPARTMENT OF HEALTH, INSTALL A RAIN GAGE PRIOR TO ANY FIELD WORK INCLUDING THE INSTALLATION OF ANY SITE-SPECIFIC BEST MANAGEMENT PRACTICE. THE RAIN GAGE SHALL HAVE A TOLERANCE OF AT LEAST 0.05 INCHES OF RAINFALL, AND HAVE AN OPENING OF AT LEAST ONE-INCH IN DIAMETER. INSTALL THE RAIN GAGE ON THE PROJECT SITE IN AN AREA THAT WILL NOT DETER RAINFALL FROM ENTERING THE GAGE OPENING. THE RAIN GAGE INSTALLATION SHALL BE STABLE AND PLUMBED. DO NOT BEGIN FIELD WORK UNTIL THE RAIN GAGE IS INSTALLED AND SITE-SPECIFIC BEST MANAGEMENT PRACTICES ARE IN-PLACE.
- THE GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE "WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS" CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, CHAPTER 11-54, "WATER QUALITY STANDARDS," CHAPTER 11-55, "WATER POLLUTION CONTROL", CHAPTER 10 OF THE "HAWAII COUNTY CODE, EROSION AND SEDIMENTATION CONTROL" AND IF APPLICABLE, THE NPDES PERMIT FOR THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF CHAPTER 54, WATER QUALITY STANDARDS, AND CHAPTER 55, WATER POLLUTION CONTROL OF TITLE 11, ADMINISTRATIVE RULES OF THE STATE DEPARTMENT OF HEALTH.
- THE CONTRACTOR AT HIS OWN EXPENSE SHALL KEEP THE PROJECT AREA AND SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR AND WATER POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.

B. WASTE DISPOSAL:

- WASTE MATERIALS

ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER SHALL BE EMPTIED A MINIMUM OF TWICE PER WEEK OR AS IS DEEMED NECESSARY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. THE CONTRACTOR'S SUPERVISORY PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE OFFICE TRAILER OR APPROPRIATE LOCATION TO INSURE COMPLIANCE, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
- HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS OR BY THE MANUFACTURER. THE CONTRACTOR'S PROJECT SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES AND SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.
- SANITARY WASTE

ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE TOILET UNITS A MINIMUM OF ONCE PER WEEK, OR AS REQUIRED.

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK, AND WITHIN 24 HOURS OF ANY RAINFALL EVENT OF 0.5 INCHES OR GREATER WITHIN A 24-HOUR PERIOD.
- ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN TWENTY FOUR (24) HOURS AFTER THE INSPECTION.
- BUILT-UP SEDIMENT SHALL BE REMOVED FROM THE SILT FENCE WHEN IT HAS REACHED ONE-THIRD (1/3) THE HEIGHT OF THE SILT FENCE.
- TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS AND HEALTHY GROWTH.
- A MAINTENANCE INSPECTION REPORT SHALL BE MADE PROMPTLY AFTER EACH INSPECTION BY THE CONTRACTOR AND A COPY SHALL BE SUBMITTED TO THE ENGINEER NO LATER THAN ONE WEEK FROM THE DATE OF THE INSPECTION.
- SILT SCREEN OR FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, OR RIPS TO VERIFY THAT THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS OR CONCRETE SLAB AND TO VERIFY THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. THE BOTTOM OF THE SILT SCREEN OR FENCE SHALL BE INSPECTED AND VERIFIED THAT IT IS BURIED A MINIMUM OF 6 INCHES BELOW THE EXISTING GROUND.
- THE CONTRACTOR SHALL SUBMIT THE NAME OF A SPECIFIC INDIVIDUAL DESIGNATED RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT THE INSPECTION MAINTENANCE REPORT.
- THE CONTRACTOR SHALL CONTAIN, REMOVE, AND DISPOSE SLURRY GENERATED FROM SAW CUTTING OF PAVEMENT IN ACCORDANCE WITH APPROVED BMP PRACTICES. PAYMENT FOR CONFINEMENT, REMOVAL, AND DISPOSAL OF SLURRY SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.
- PERSONNEL SELECTED FOR THE INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE TRAINING FROM THE CONTRACTOR. THEY SHALL BE TRAINED IN ALL INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

D. GOOD HOUSEKEEPING, BEST MANAGEMENT PRACTICES:

- MATERIALS POLLUTION PREVENTION PLAN
 - APPLICABLE MATERIALS OR SUBSTANCES LISTED BELOW ARE ANTICIPATED TO BE PRESENT ONSITE DURING CONSTRUCTION. OTHER MATERIALS AND SUBSTANCES NOT LISTED BELOW SHALL BE ADDED TO THE INVENTORY AS APPLICABLE: CONCRETE, PETROLEUM BASED PRODUCTS AND TAR.
 - MATERIAL MANAGEMENT PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF. AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT AS IS REQUIRED TO DO THE JOB.
 - ALL METRIALS STORED ONSITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
 - PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL ATTACHED.
 - SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
 - WHENEVER POSSIBLE, A PRODUCT SHALL BE USED UP COMPLETELY BEFORE DISPOSING OF THE CONTAINER.
 - MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
 - THE CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON SITE.
- HAZARDOUS MATERIAL POLLUTION PREVENTION PLAN
 - PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
 - ORIGINAL LABELS AND MATERIALS, SAFETY, DATA SHEETS (MSDS) SHALL BE RETAINED.
 - SURPLUS PRODUCTS SHALL BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND/OR LOCAL AND STATE RECOMMENDED METHODS.
- ONSITE AND OFFSITE PRODUCT SPECIFIC PLAN
 - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ONSITE:
 - PETROLEUM BASED PRODUCTS:

ALL ONSITE VEHICLES, MACHINERY AND EQUIPMENT SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION. THE REFUELING AND SERVICING OF HEAVY EQUIPMENT SHOULD BE DONE IN A DESIGNATED AREA. CARE SHALL BE USED IN THE REFUELING PROCESS TO PREVENT OVERFLOW AND SPILLAGE.
 - CONCRETE TRUCKS:

CONCRETE TRUCKS SHALL BE ALLOWED TO WASH OUT OR DISCHARGE DRUM WASH WATER ONLY AT A DESIGNATED SITE. WATER SHALL NOT BE DISCHARGED IN THE HIGHWAY DRAINAGE SYSTEM OR WATERS OF THE UNITED STATES. THE CONTRACTOR SHALL CONTACT DRINKING WATER BRANCH, DEPARTMENT OF HEALTH AT (808) 586-4258 TO RECEIVE PERMISSION TO DESIGNATE A DISPOSAL SITE. THE CONTRACTOR SHALL CLEAN DISPOSAL SITE AS REQUIRED OR AS REQUESTED BY THE OWNER'S REPRESENTATIVE.
- SPILL CONTROL PLAN
 - A SPILL PREVENTION PLAN SHALL BE POSTED TO INCLUDE MEASURES TO PREVENT AND CLEAN UP EACH SPILL.
 - THE CONTRACTOR SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR SHALL DESIGNATE AT LEAST THREE SITE PERSONNEL WHO SHALL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS SHALL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL SHALL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.
 - MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
 - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE.
 - ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
 - THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

E. PERMIT REQUIREMENTS:

- IF A NPDES PERMIT FOR CONSTRUCTION IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN THE PERMIT FROM THE DEPARTMENT OF HEALTH, CLEAN WATER BRANCH.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL PERMIT CONDITIONS. PERMITS MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
 - NPDES PERMIT FOR CONSTRUCTION ACTIVITIES.
 - NPDES FOR HYDROTESTING WATERS.
 - WATER QUALITY CERTIFICATION.

BMP NOTES

GENERAL:

- THE BMPS SHALL BE APPLIED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORK AND SHALL NOT BE REMOVED UNTIL CONSTRUCTION IS COMPLETE.
- THE CONTRACTOR SHALL COORDINATE HIS STAGING AREA WITH THE COUNTY AND ALL INTERESTED AND REGULATING PARTIES. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION INGRESS/EGRESS TO HIS STAGING AREA CONSISTING OF AN 8"-THICK CRUSHED ROCK LAYER AND OF DIMENSIONS ADEQUATE TO CONTROL EROSION AND EARTH DISPLACEMENT NUISANCE AT ADJOINING AREAS. THE CONTRACTOR SHALL INSTALL PROPER SECONDARY CONTAINMENT STRUCTURES, SUCH AS, GRAVEL BERMS AND SILT FENCES AROUND THE DESIGNATED AREA TO PREVENT STORMWATER CARRYING CONTAMINANTS INTO STREAMS. THE RAINWATER ACCUMULATED WITHIN THE DESIGNATED AREA SHALL BE NATURALLY EVAPORATED OR INFILTRATED INTO THE GROUND.
- MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY WORK IS INITIATED.
- TEMPORARY BMPS SHALL BE MONITORED PERIODICALLY AND AFTER EVERY SIGNIFICANT RAINFALL FOR STRUCTURAL INTEGRITY AND SEDIMENT BUILD-UP. DAMAGED OR IMPROPERLY FUNCTIONING BMPS SHALL BE REPAIRED OR REPLACED (PAID FOR BY THE CONTRACTOR) AND SEDIMENT/DEBRIS ACCUMULATION SHALL BE REMOVED. FLUSHING THE STREAM IS PROHIBITED.
- IF ANY WASH DOWN OF CONSTRUCTION EQUIPMENT OR VEHICLES IS NECESSARY AT THE SITE, THE WASH WATER WILL BE TREATED BEFORE DISCHARGE OR WILL NOT BE ALLOWED TO FLOW OFF-SITE.
- DUST GENERATION SHALL BE CONTROLLED SO AS TO PREVENT NUISANCE TO NEARBY PROPERTIES.
- EXCAVATED, DEMOLISHED, CLEARED & GRUBBED MATERIAL NOT SUITABLE FOR REUSE SHALL BE HAULED OFF SITE FOR DISPOSAL.
- THE CONTRACTOR SHALL CLEAN THE PROJECT SITE OF DEBRIS AT THE END OF EACH WORKDAY.
- AT THE CONCLUSION OF ALL PROJECT WORK, ALL BEST MANAGEMENT PRACTICES SHALL BE REMOVED AND THE AREA SHALL BE RESTORED TO ITS ORIGINAL CONDITION, OR BETTER, UPON ACCEPTANCE OF THE PROJECT BY THE COUNTY.

ROAD & UTILITY REHABILITATION POLLUTION CONTROL:

- EXPOSED TRENCHED AREAS SHALL BE PROTECTED FROM RUNOFF AND WIND EROSION WITH STEEL PLATE COVERS UNTIL REPAVING CAN BE ACCOMPLISHED. EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS BACKFILL HAS BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL BACKFILLING HAS BEEN COMPLETED. BACKFILLING SHALL BE CONTINUOUS AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.
- A HOE RAM, OR SIMILAR EQUIPMENT, SHALL BE USED TO BREAK DEMOLISHED MATERIAL INTO PARTICLES AS LARGE AS PRACTICAL FOR LOADING INTO THE WASTE TRANSPORT TRUCK IN A MANNER NOT CAUSING EXCESSIVE DUST OR FINE DEBRIS. SMALLER DEBRIS SHALL BE REMOVED BY HAND.

STANDARD TRAFFIC NOTES (WITHIN COUNTY RIGHT OF WAY)



- ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AND AS AMENDED, APPLICABLE SECTIONS OF PART 5 OF THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION", DATED SEPTEMBER 1984, AND THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005 EDITION", AND AS AMENDED, UNLESS OTHERWISE SPECIFIED ON THE PLANS, SPECIFICATIONS, OR THE STANDARD TRAFFIC NOTES.
- THE CONTRACTOR SHALL INSTALL PERMANENT OR TEMPORARY PAVEMENT MARKERS, STRIPING AND "HAWAII STANDARD SPECIFICATIONS MARKINGS AS REQUIRED BY SECTION(S) 629 AND 755.05 OF THE AND AS AMENDED. TO ENSURE PROPER LANE FOR ROAD AND BRIDGE CONSTRUCTION, 2005 EDITION", WIDTHS AND THE SAFE FLOW OF TRAFFIC, TEMPORARY STRIPING SHALL BE INSTALLED AS CLOSELY AS POSSIBLE TO THE FINAL STRIPING PLAN, BUT NOT IN A MANNER THAT WOULD OBSTRUCT PERMANENT STRIPING LAYOUT OPERATIONS.

THE CONTRACTOR SHALL COORDINATE AND HIRE SPECIAL DUTY POLICE OFFICER(S) AS NEEDED TO PROVIDE TRAFFIC CONTROL WHILE WORKING WITHIN THE COUNTY RIGHT OF WAY.
- THE CONTRACTOR SHALL INFORM THE TRAFFIC DIVISION AT LEAST SIX (6) WORKING DAYS PRIOR TO ANY WORK ON PAVEMENT MARKINGS OPERATIONS AND/OR SIGN INSTALLATIONS TO SCHEDULE A REVIEW AND APPROVAL OF THE STRIPING AND/OR SIGNING PLANS.
- THE APPROVED STRIPING PLAN SHALL BE LAYED OUT USING THINNED-OUT PAINT OR OTHER APPROVED METHODS. FIELD ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE ENGINEER BEFORE THE FINAL MARKINGS ARE APPLIED.
- ALL PAVEMENT MARKINGS THAT BECOME INAPPLICABLE SHALL BE REMOVED BY THE CONTRACTOR AT HIS OWN EXPENSE. REMOVAL SHALL BE BY ERADICATION OR BY OTHER METHODS APPROVED BY THE ENGINEER BEFORE THE NEW PAVEMENT MARKINGS ARE APPLIED. EXCESSIVE GOUGING OF THE PAVEMENT IS NOT ACCEPTABLE AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- ALL PAVEMENT STRIPING SHALL BE WITH ALKYD BASED REFLECTIVE THERMOPLASTIC COMPOUND PAVEMENT MARKING AS SPECIFIED IN SECTION(S) 629 AND 755.05 OF THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2005 EDITION", AND AS AMENDED, ON ALL ROADWAYS. THE CONTRACTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE CERTIFYING THAT THE THERMOPLASTIC MATERIALS TO BE USED MEET THE CURRENT AASHTO M-247 AND AASHTO M-249 SPECIFICATIONS.
- ON CONCRETE PAVEMENTS, PRE-STRIPE APPLICATION AREA WITH BINDER MATERIAL, PRIMER, OR PRIME SEAL COAT RECOMMENDED BY PAVEMENT MARKER MANUFACTURER.
- HEAT APPLIED PRE-FORMED THERMOPLASTIC PAYMENT MARKING TAPE WITH VISIBLE TEMPERATURE INDICATORS, OR AN EQUAL PAVEMENT MARKING TAPE THAT IS APPROVED BY THE TRAFFIC DIVISION MAY BE USED FOR CROSSWALKS, STOPLINES, PAVEMENT ARROWS, ALPHABETS, AND SYMBOLS IN LIEU OF THERMOPLASTIC COMPOUND.
- REFLECTORIZED RAISED PAVEMENT MARKERS SHALL BE THE REGULAR SIZED MARKERS WITH APPROXIMATE DIMENSIONS OF 4" BY 4" BY 0.7". THE CONTRACTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE CERTIFYING THAT THE RAISED PAVEMENT MARKERS TO BE USED MEETS AND/OR EXCEEDS THE CURRENT STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
- ALL TRAFFIC SIGNS AND POSTS SHALL MEET THE REQUIREMENTS OF THE COUNTY OF HAWAII STANDARD DETAIL T-1. EXCEPT THAT FLANGED CHANNEL POSTS AND OCTAGONAL POSTS WILL NOT BE ACCEPTABLE. SIGNS SHALL BE ON ALUMINUM SHEETING OF 0.080-INCH MINIMUM THICKNESS. SIGNPOST SHALL BE 2" SQUARE TELESAPR TUBING NO. 20 F12 OR EQUIVALENT WITH 2 1/4" SQUARE TELESAPR ANCHOR POST.

STANDARD TRAFFIC NOTES (WITHIN COUNTY RIGHT OF WAY) (CONT.)

- ALL TRAFFIC SIGNS SHALL BE COMPLETELY REFLECTORIZED WITH TYPE III OR TYPE IV HIGH INTENSITY RETROREFLECTIVE SHEETING. OVERHEAD STREET NAME SIGNS SHALL BE HIGH INTENSITY.
- THE 2 1/4" SQUARE ANCHOR POST FOR SIGNS SHALL BE DRIVEN INTO THE GROUND, A.C. PAVEMENT OR CONCRETE SIDEWALK IN ACCORDANCE WITH THE PLANS. ALL DAMAGES TO THE SURROUNDING AREA SHALL BE REPAIRED TO ITS ORIGINAL CONDITION OR BETTER, BEFORE DRIVING INTO CONCRETE, A NEAT HOLE OF APPROXIMATELY 3 INCH DIAMETER SHALL BE DRILLED THROUGH THE CONCRETE PRIOR TO THE INSTALLATION OF THE ANCHOR POST. IF DRIVING INTO THE CONCRETE OR A.C. PAVEMENT IS NOT POSSIBLE WITHOUT DAMAGE TO THE SURROUNDING CONCRETE OR A.C. PAVEMENT, A 12" SHALL BE SAW-CUT AND REMOVED PRIOR TO THE INSTALLATION OF THE ANCHOR POST AND THEN PATCHED, WITH HOT MIX TO MATCH THE EXISTING A.C. PAVEMENT, OR CONCRETE TO MATCH THE EXISTING CONCRETE SIDEWALK.
- UPON COMPLETION OF ALL CONSTRUCTION WORK, INCLUDING; BUT NOT LIMITED TO THE FINAL PAVING OF THE ENTIRE PROJECT AREA AND OFF-SITE CONSTRUCTION, THE CONTRACTOR SHALL RE-STRIPE ALL PAVEMENT MARKINGS WITHIN THE CONSTRUCTION AREA AND ADJACENT ROADWAY PAVEMENTS UP TO 300 FEET BEYOND THE CONSTRUCTION LIMITS IN ACCORDANCE WITH ITEM 6 OF THE CURRENT STANDARD TRAFFIC NOTES. THE CONTRACTOR SHALL MAINTAIN ALL TEMPORARY PAVEMENT MARKINGS, PERMANENT PAVEMENT MARKINGS AND ALL TRAFFIC SIGNS AND POSTS UNTIL SUCH TIME THE PROJECT IS ACCEPTED BY THE COUNTY OF HAWAII.

ALL TRAFFIC SIGNS AND POSTS WITHIN THE CONSTRUCTION LIMITS AND ADJACENT AREAS THAT HAVE BEEN DAMAGED, REMOVED, OR ADVERSELY AFFECTED BY THE CONSTRUCTION WORK SHALL BE REPLACED BY THE CONTRACTOR ACCORDING TO ITEM(S) 10, 11, AND 12 OF THE CURRENT STANDARD TRAFFIC NOTES AT NO COST TO THE COUNTY.
- ALL DEDICATED STREETS MUST HAVE STREET NAMES WHICH HAVE BEEN APPROVED BY RESOLUTION BEFORE ACCEPTANCE OF THE STREET BY THE COUNTY OF HAWAII.
- INSTALL PRIVATE ROAD SIGN(S) ON ALL PRIVATE ROAD(S). SIGN SHALL BE ON 18" WIDE BY 12" ALUMINUM PLATE WITH 4" BLACK LETTERING ON WHITE REFLECTORIZED SHEETING WITH BORDER.
- ALL SIGNS AND MARKINGS FOR PRIVATE ROADWAYS SHALL BE MAINTAINED BY THE PRIVATE OWNERS.

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<div><div></div><div>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakoa Street, Sixth Floor Honolulu, Hawaii</div></div>			
<div><div>LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-00603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77</div></div>			
GENERAL NOTES – 3			
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED: <div><div></div><div>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12</div></div>			

SOLID WASTE CONSTRUCTION NOTES

1.

UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER HANDLING, STORAGE AND/OR DISPOSAL OF ALL WASTE GENERATED BY THIS CONSTRUCTION, INCLUDING GRUBBING AND EXCESS EXCAVATED MATERIAL. ANY MATERIAL BROUGHT TO THE COUNTY LANDFILLS WILL BE SUBJECTED TO THE INSTITUTED TIPPING FEE SYSTEM, WITH NO EXCEPTIONS OR EXEMPTIONS.
2.

ALL WASTES GENERATED BY CONSTRUCTION, INCLUDING GRUBBING, DEMOLITION AND EXCESS EXCAVATION MATERIAL MAY BE BROUGHT TO THE WEST HAWAII OR THE HILO LANDFILL. THE CONTRACTOR SHALL CHECK WITH THE SOLID WASTE DIVISION FOR DISCLOSURE OF THE CURRENT LANDFILL FEE AND CONSIDERATION OF THAT FEE SHALL BE INCLUDED IN THE CONTRACTOR'S BID SUM.
3.

CONSTRUCTION, DEMOLITION AND GRUBBING MATERIAL SHALL NOT BE DEPOSITED AT AND OF THE COUNTY TRANSFER STATIONS, BUT SHALL BE TRANSPORTED FOR DISPOSAL TO EITHER THE WEST HAWAII OR HILO LANDFILL.
4.

ASBESTOS MATERIAL MUST BE SEPARATED, DOUBLE BAGGED AND LANDFILLED IN ACCORDANCE WITH REGULATIONS OF THE SOLID WASTE DIVISION, DEPARTMENT OF PUBLIC WORKS. INFORMATION MAY BE OBTAINED BY CALLING THE DIVISION AT (808) 961-8339 BETWEEN 7:00 A.M. AND 4:00 P.M. MONDAY THROUGH FRIDAY.

ARCHAEOLOGICAL NOTES

1.

IF DURING CONSTRUCTION, ANY PREVIOUSLY UNIDENTIFIED SITES OR REMAINS (SUCH AS ARTIFACTS, SHELL, BONE OR CHARCOAL DEPOSITS, HUMAN BURIALS, ROCK OR CORAL ALIGNMENTS, PAVING, OR WALLS) ARE ENCOUNTERED, THE APPLICANT SHALL STOP WORK AND CONTACT THE STATE DLNR HISTORIC SITES OFFICE AT (808) 548-7460 IMMEDIATELY. WORK IN THE IMMEDIATE AREA SHALL BE STOPPED UNTIL THE OFFICE IS ABLE TO ASSESS THE IMPACT AND MAKE FURTHER RECOMMENDATIONS FOR MITIGATIVE ACTIVITY.
2.

IN THE EVENT THAT A PREVIOUSLY UNKNOWN ARCHAEOLOGICAL FEATURE IS EXPOSED BY CONSTRUCTION, CEASE WORK IN THE VICINITY OF THE NEW FEATURE AND NOTIFY THE DEPARTMENT OF HAWAIIAN HOME LANDS, THE SHPD, AND THE HAWAII COUNTY PLANNING DEPARTMENT OF THE NEW DISCOVERY.
3.

IN THE EVENT THAT PREVIOUSLY UNKNOWN HUMAN REMAINS ARE EXPOSED BY CONSTRUCTION, CEASE ALL WORK IN THE AREA OF THE REMAINS, AND PROTECT THE AREA WITH AN APPROPRIATE MATERIAL. NOTIFY THE DEPARTMENT OF HAWAIIAN HOME LANDS AND THE SHPD.

COMPACTION TESTING

THE CONTRACTOR SHALL HIRE AN INDEPENDENT TESTING LAB TO CONDUCT COMPACTION TESTS. COMPACTION TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS. COMPACTION TESTS SHALL BE TAKEN ACCORDING TO SECTION 207.1, SPECIAL INSTRUCTIONS OF FIELD COMPACTION TESTING, HDOT TECHNICAL MANUAL ON MATERIAL QUALITY CONTROL, AS FOLLOWS:

- A. SUBBASE: ONE (1) COMPACTION TEST PER LIFT, PER 300 LINEAR FEET.
- B. BASE COURSE: ONE (1) COMPACTION TEST PER LIFT, PER 200 LINEAR FEET.
- C. ONE (1) COMPACTION TEST PER LIFT, PER 500 LINEAR FEET OF TRENCH.

UIC - DRYWELL NOTE

1.

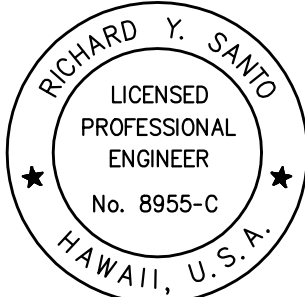
THE SUBDIVIDER SHALL BE INFORMED THAT IF DRYWELLS ARE INCLUDED IN THE SUBJECT SUBDIVISION IMPROVEMENTS, CHAPTER 23, UNDERGROUND INJECTION CONTROL (UIC), ADMINISTRATIVE RULES, DEPARTMENT OF HEALTH, PROHIBITS ANY PERSON FROM OPERATING, CONSTRUCTING OR MODIFYING AN INJECTION WELL (DRYWELL) UNLESS AUTHORIZED BY A PERMIT ISSUED BY THE DIRECTOR OF HEALTH, STATE OF HAWAII. FURTHERMORE, SHOULD DEDICATION OF ROADWAYS INCLUDING DRYWELLS BE CONTEMPLATED, THE DEPARTMENT OF PUBLIC WORKS WILL NOT APPROVE DEDICATION ROADWAYS PRIOR TO COMPLIANCE WITH CHAPTER 23, UIC, ADMINISTRATIVE RULES.

DEPARTMENT OF HEALTH NOTE

1.

OWNER SHALL OBTAIN PERMIT TO CONSTRUCT AND OPERATE INJECTION WELL(S) IN COMPLIANCE WITH CHAPTER 23, UNDERGROUND INJECTION CONTROL (UIC), ADMINISTRATIVE RULES, DEPARTMENT OF HEALTH.

LEGEND	
	RECONSTRUCTION AREAS
	LEVELING AREAS
	COLD PLANING AREA
	RESURFACING LIMITS
	EXISTING ELECTRICAL LINE
	NEW ELECTRICAL LINE
	EXISTING JOINT POLE
	EXISTING POWER POLE
	EXISTING ELECTRIC MANHOLE
	ADJUSTED ELEC. MH FRAME/COVER
	NEW ELECTRIC MANHOLE
	EXISTING TELEPHONE LINE
	NEW TELEPHONE LINE
	EXISTING TELEPHONE POLE
	EXISTING TELEPHONE MANHOLE
	EXISTING TELEPHONE PULLBOX
	ADJUSTED TELEPHONE MH FRAME/COVER
	NEW TELEPHONE MANHOLE
	EXISTING SIGNAL CORPS LINE
	NEW SIGNAL CORPS LINE
	EXISTING TV CABLE
	NEW TV CABLE
	EXISTING 12" WATER LINE
	NEW 12" WATER LINE
	EXISTING WATER MANHOLE
	ADJUSTED WATER MH FRAME/COVER
	NEW WATER MANHOLE
	EXISTING WATER AIR VALVE
	ADJUSTED WATER AIR VALVE
	NEW WATER AIR VALVE
	EXISTING WATER VALVE BOX
	ADJUSTED WATER VALVE BOX
	NEW WATER VALVE BOX
	EXISTING WATER METER
	ADJUSTED WATER METER
	NEW WATER METER
	EXISTING FIRE HYDRANT
	NEW FIRE HYDRANT
	EXISTING WATER BACKFLOW PREVENTER
	EXISTING SEWER LINE
	NEW 12" SEWER LINE
	EXISTING SEWER MANHOLE
	ADJUSTED SEWER MH FRAME/COVER
	NEW SEWER MANHOLE
	EXISTING 6" GAS LINE
	NEW 6" GAS LINE
	EXISTING GAS VALVE BOX
	ADJUSTED GAS VALVE BOX
	NEW GAS VALVE BOX
	EXISTING GAS MANHOLE
	ADJUSTED GAS MH FRAME/COVER
	NEW GAS MANHOLE
	EXISTING MONUMENT
	ADJUSTED MONUMENT
	NEW MONUMENT
	EXISTING 24" DRAIN LINE
	NEW 24" RCP DRAIN LINE
	EXISTING STORM DRAIN MANHOLE
	ADJUSTED STORM DRAIN MH FRAME/COVER
	NEW STORM DRAIN MANHOLE
	EXISTING GRATED DROP INLET
	EXISTING CATCH BASIN
	EXISTING TRAFFIC SIGN WITH 1 POST
	NEW TRAFFIC SIGN WITH 1 POST
	EXISTING TRAFFIC SIGN WITH 2 POSTS
	NEW TRAFFIC SIGN WITH 2 POSTS
	EXISTING TRAFFIC SIGN WITH 3 POSTS
	NEW TRAFFIC SIGN WITH 3 POSTS
	EXISTING HIGHWAY LIGHTING STANDARD
	EXISTING SINGLE METAL GUARDRAIL
	NEW SINGLE METAL GUARDRAIL
	EXISTING DOUBLE METAL GUARDRAIL
	NEW DOUBLE METAL GUARDRAIL
	EXISTING FENCE
	NEW FENCE
	EXISTING TRAFFIC SIGNAL POLE
	EXISTING TRAFFIC SIGNAL BOX
	EXISTING STREET LAMP PULLBOX



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REVISION DATE

DESCRIPTION

MADE BY

APPROVED

Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
7100 Alakea Street, Sixth FloorHonolulu, Hawaii

LALAMILO HOUSING
PHASE 2A, INCREMENT 1
WAIMEA, SOUTH KOHALA, HAWAII
SUBD. FILE NO. SUB-07-000603
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (3) 6-6-01:10 & 77

GENERAL NOTES - 4

DRAWN BY:LYTENGINEER: FJC

CHECKED BY: RYS

APPROVED:

FILEPOCKETFOLDERNO.

DWG. NO. **C-4** SHEET 5 of 70 SHEETS

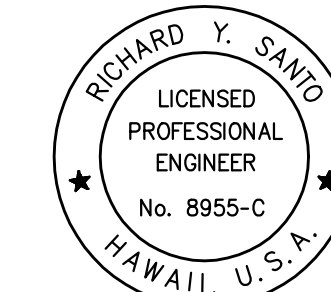
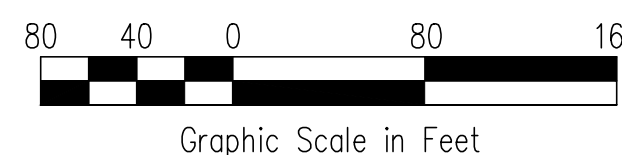
WATER PRESSURE ZONE LEGEND

- LOW PRESSURE ZONE BETWEEN THE 2155.0' TO 2421.0' ELEVATIONS
- HIGH PRESSURE ZONE ABOVE THE 2421.0' ELEVATION

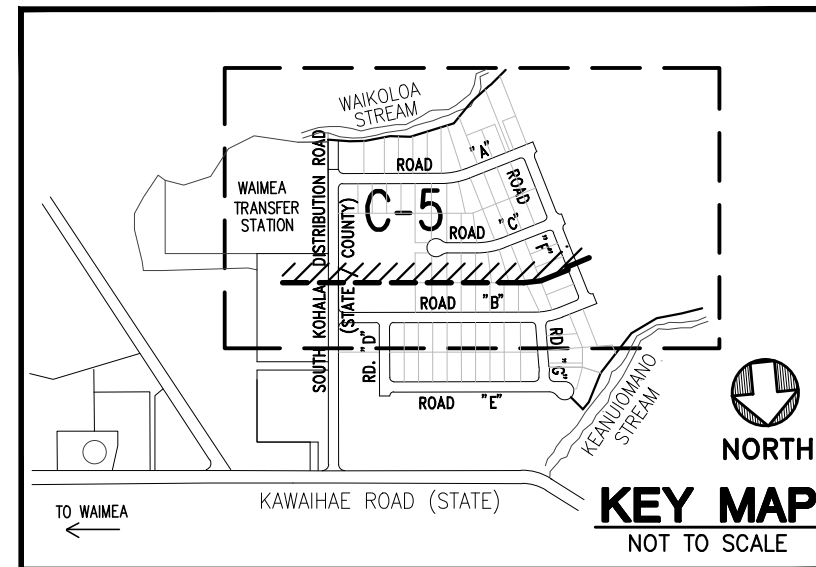
REFERENCE: LALAMILO SUBDIVISION WATER MASTER PLAN (APPROVED), DATED JUNE 2007

GENERAL LAYOUT PLAN - 1

SCALE: 1"=80'



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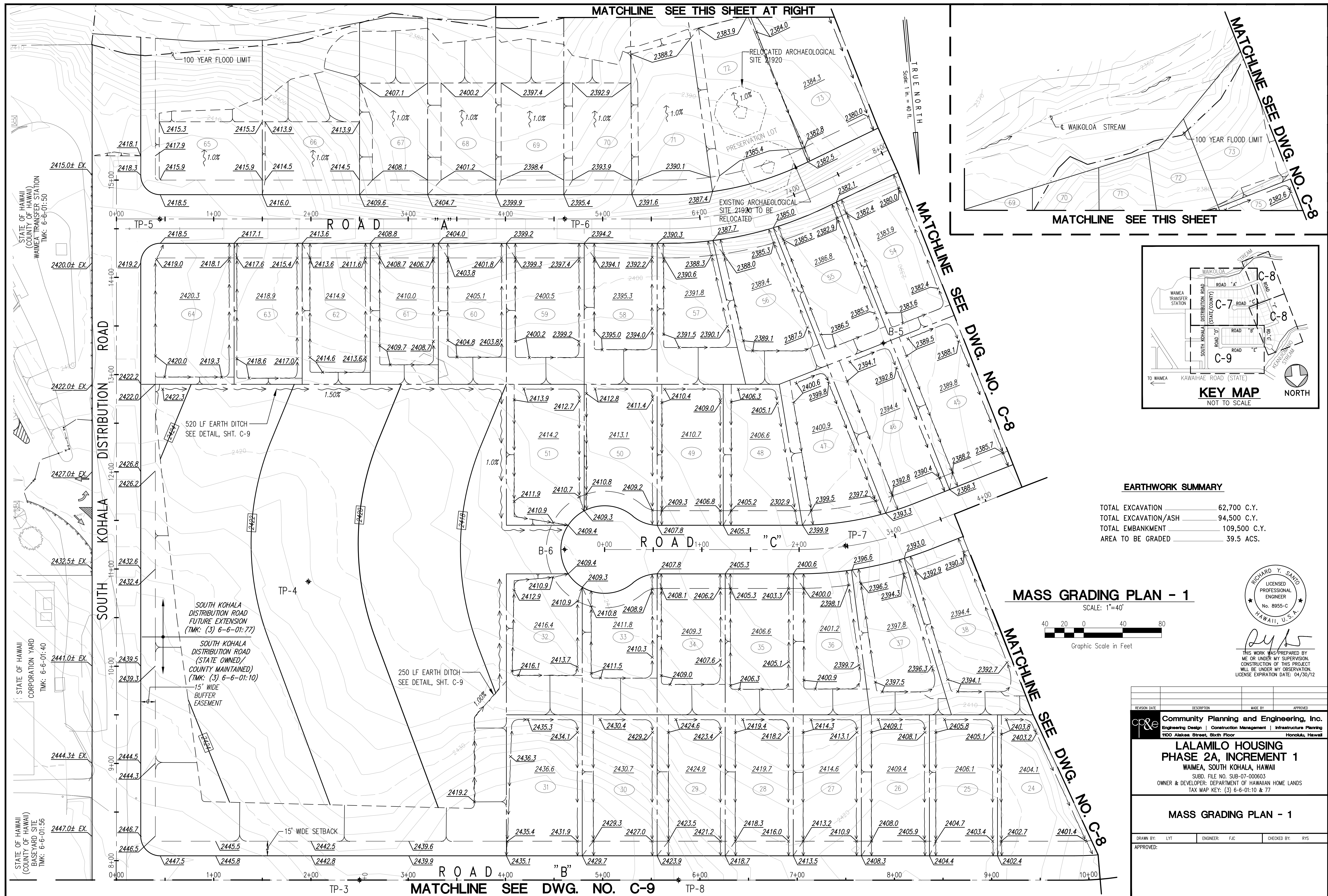
LEGEND

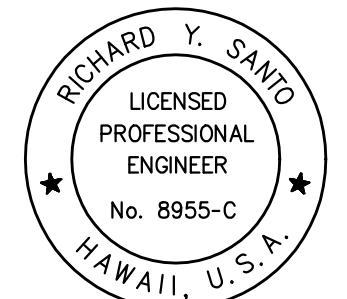
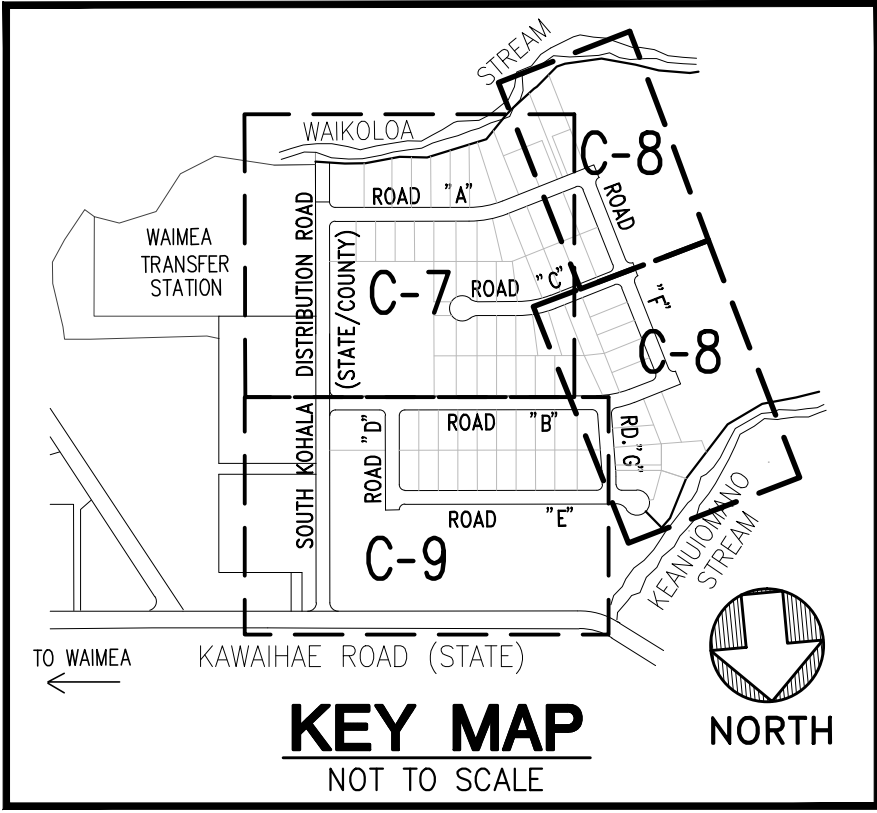
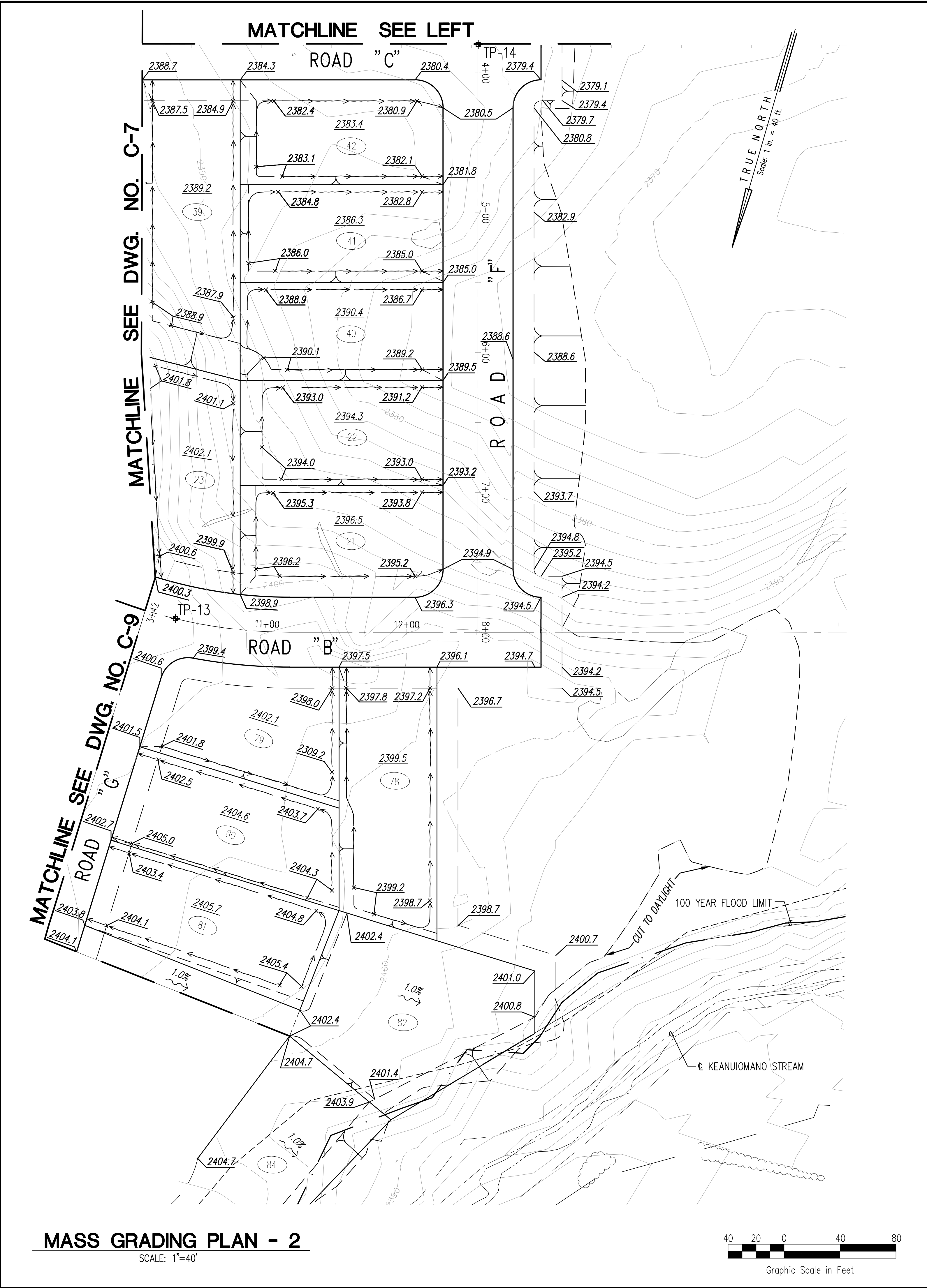
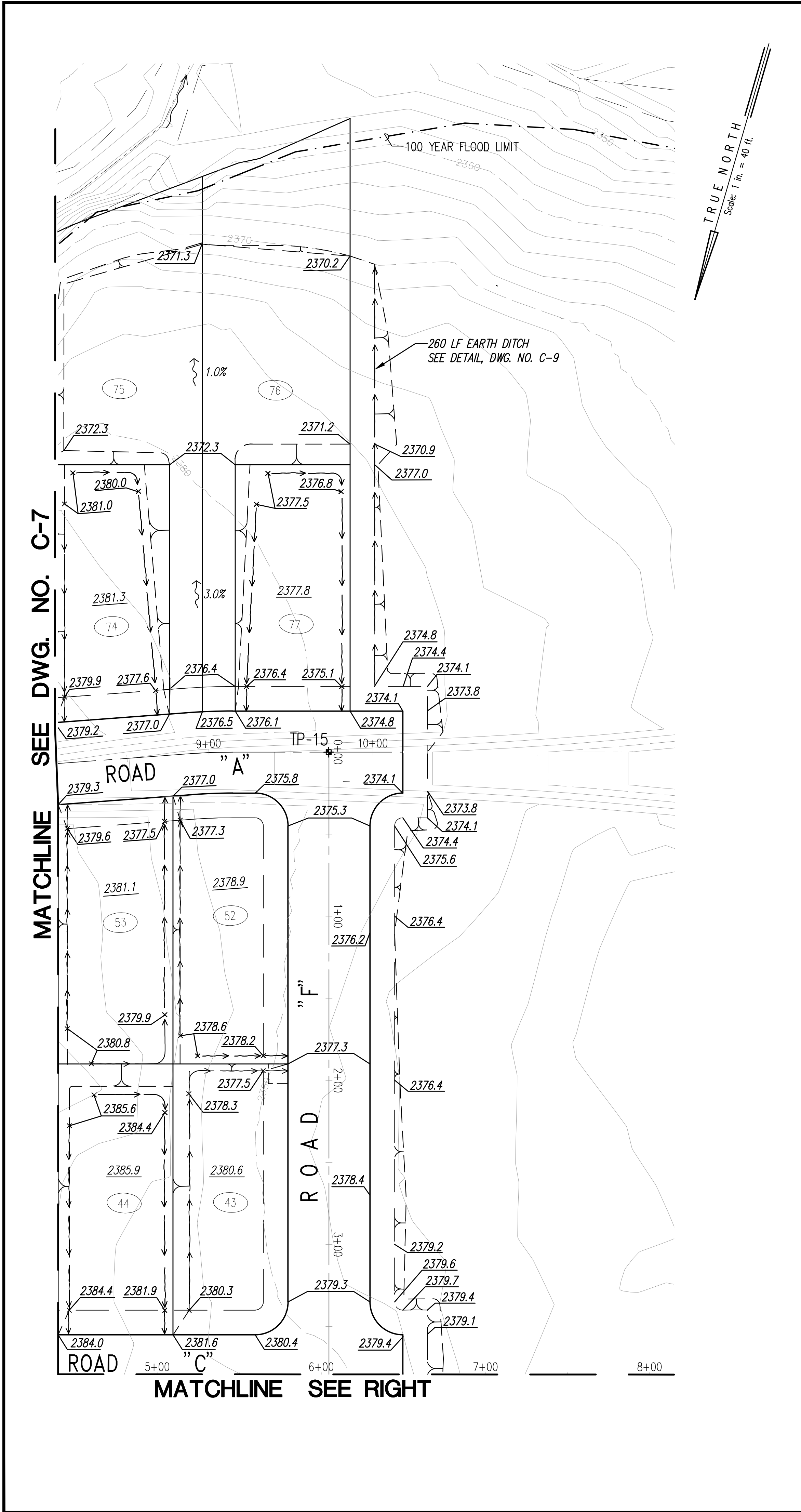
- DI = DRAIN INLET
- DW = DRYWELL
- CB = CATCH BASIN
- MH = MANHOLE
- HDPE = HIGH DENSITY PIPE
- DIP = DUCTILE IRON PIPE
- LP = LOW PRESSURE
- HP = HIGH PRESSURE

NOTE:

- CONTRACTOR TO VERIFY DRAINAGE CAPACITY FOR EACH DEEP DRYWELL EXCEEDING 6 CFS. 36" DIAMETER DRILLED HOLE REQUIRED IF CONTRACTOR IS NOT ABLE TO PROVIDE CAPACITY DURING DRYWELL TESTING.
- FOR CATTLE ISSUES WITHIN THE PROJECT SITE, CONTRACTOR SHALL CONTACT JEFFREY FUJIMOTO, DHHL AT (808)620-9724.

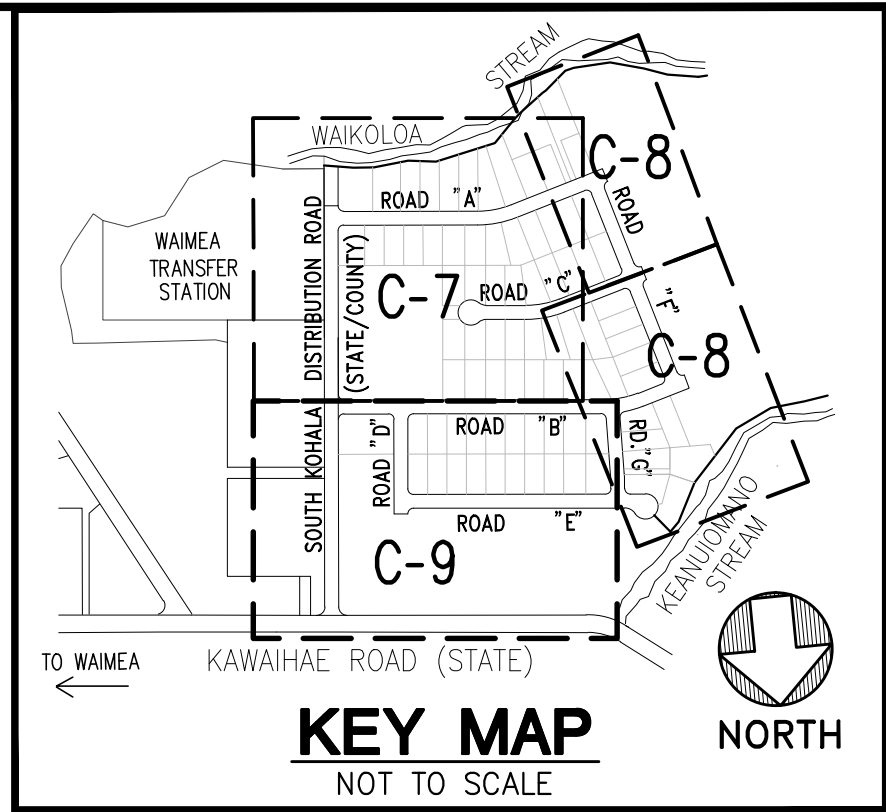
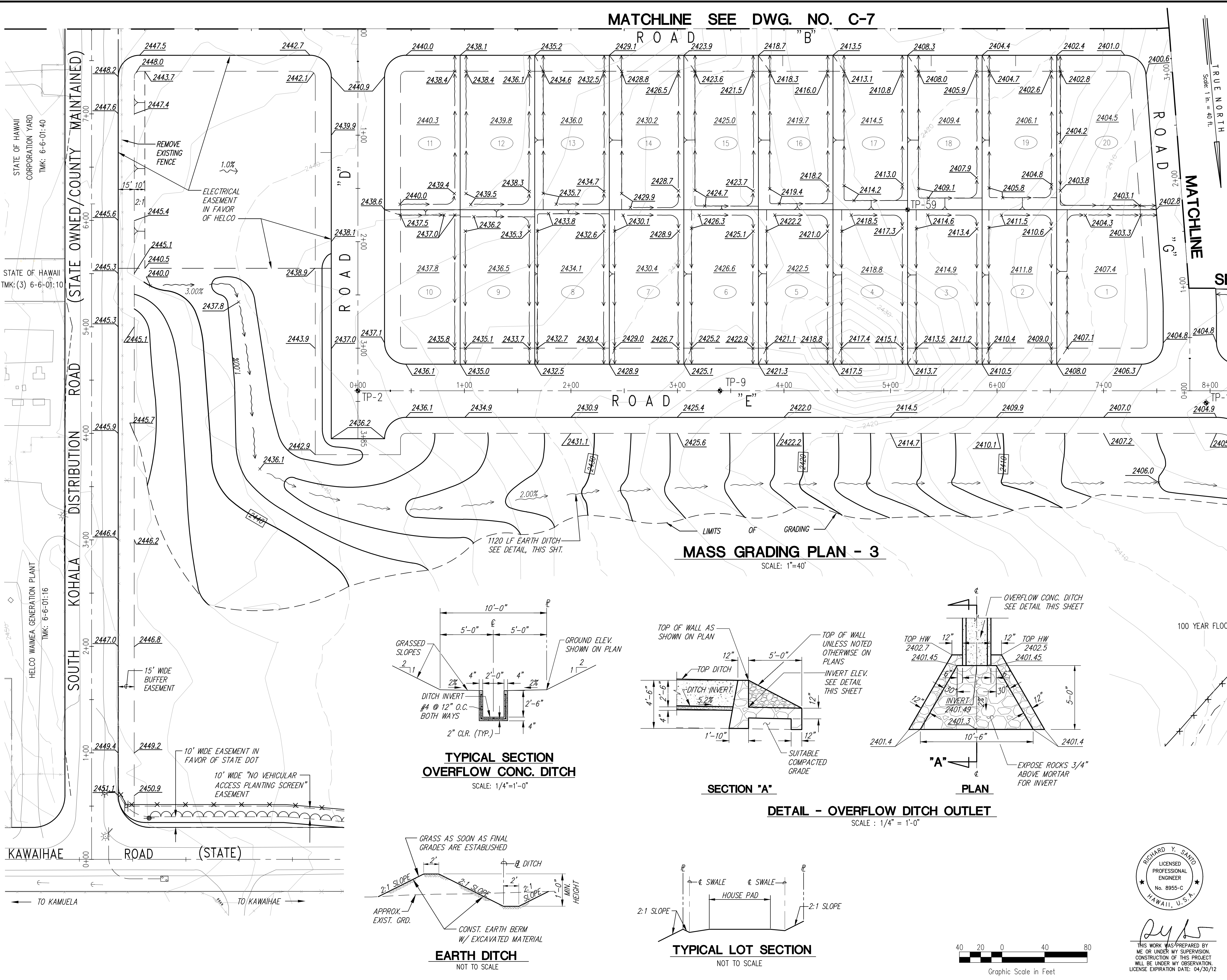
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
GENERAL LAYOUT - 1			
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			





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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc.			
Engineering Design Construction Management Infrastructure Planning			
7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING			
PHASE 2A, INCREMENT 1			
WAIMEA, SOUTH KOHALA, HAWAII			
SUBD. FILE NO. SUB-07-000603			
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS			
TAX MAP KEY: (3) 6-6-01:10 & 77			
MASS GRADING PLAN - 2			
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			

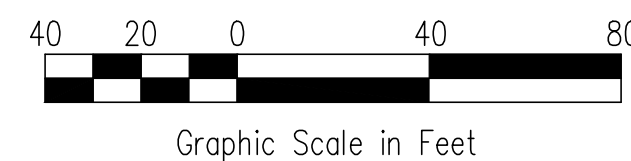


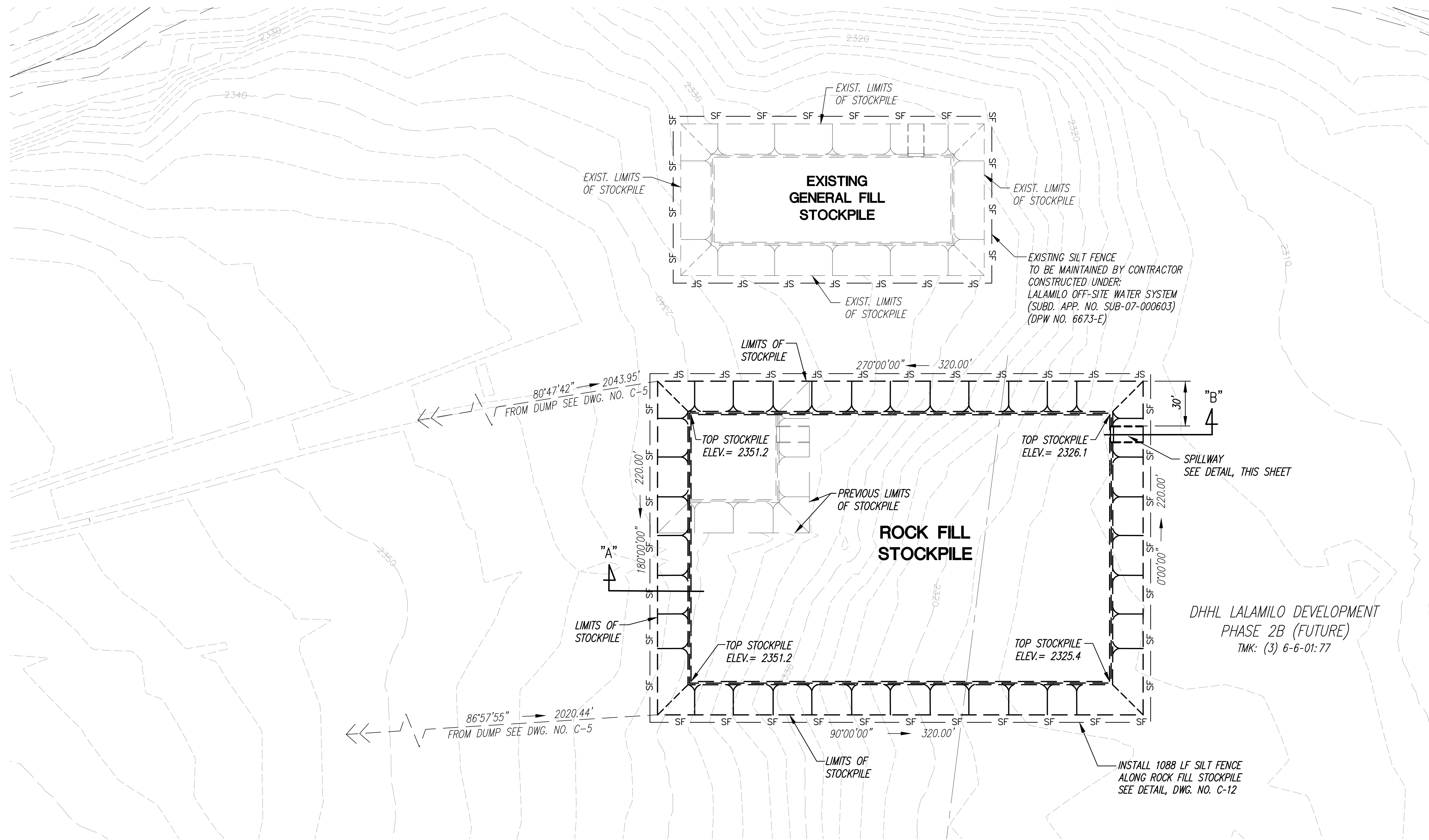
SEE DWG. NO. C-8

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
04/30/12	Engineering Design Construction Management Infrastructure Planning 1100 Alakoa Street, Sixth Floor Honolulu, Hawaii		
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
MASS GRADING PLAN - 3			
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS	APPROVED:



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LICENSE EXPIRATION DATE: 04/30/12





TRUE NORTH
Scale 1 in. = 20 ft.

STOCKPILE SUMMARY

EXISTING GENERAL FILL STOCKPILE
AREA OF STOCKPILE _____ 0.46 ACS.
MAX. STOCKPILE CAPACITY _____ 5,330 C.Y.

EXISTING ROCK FILL STOCKPILE
AREA OF STOCKPILE _____ 0.23 ACS.
MAX. STOCKPILE CAPACITY _____ 2,370 C.Y.

REVISED ROCK FILL STOCKPILE
AREA OF STOCKPILE _____ 1.38 ACS.
MAX. STOCKPILE CAPACITY _____ 26,070 C.Y.

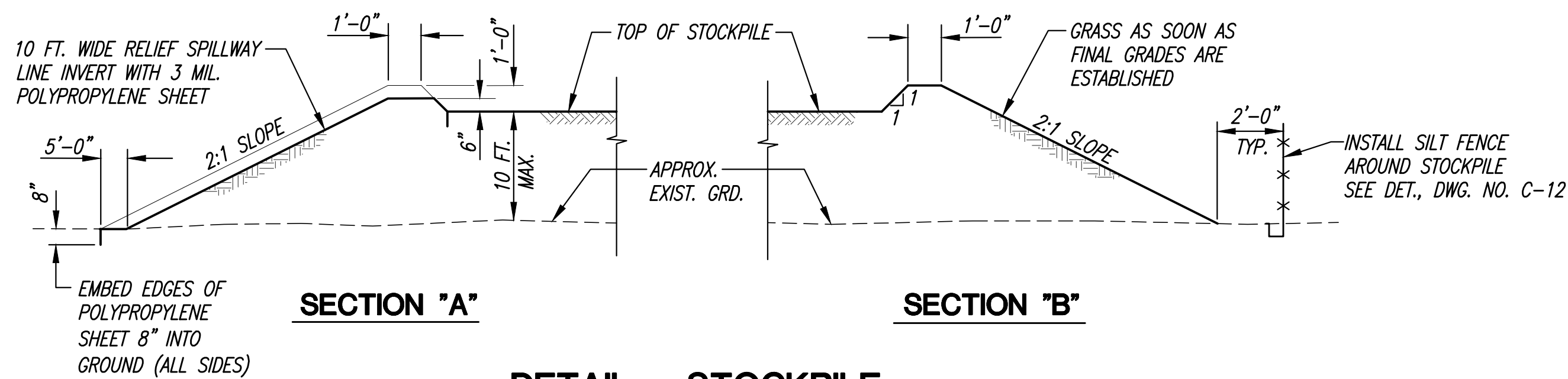
LEGEND

2400 SUBGRADE ELEVATION
2400 FINISH SPOT ELEVATION
--- EXISTING PROPERTY LINE
--- LIMITS OF STOCKPILE
--- SF SILT FENCE

NOTE:
SEE DWG. NO. C-11 FOR OVERALL
LOCATION OF STOCKPILE

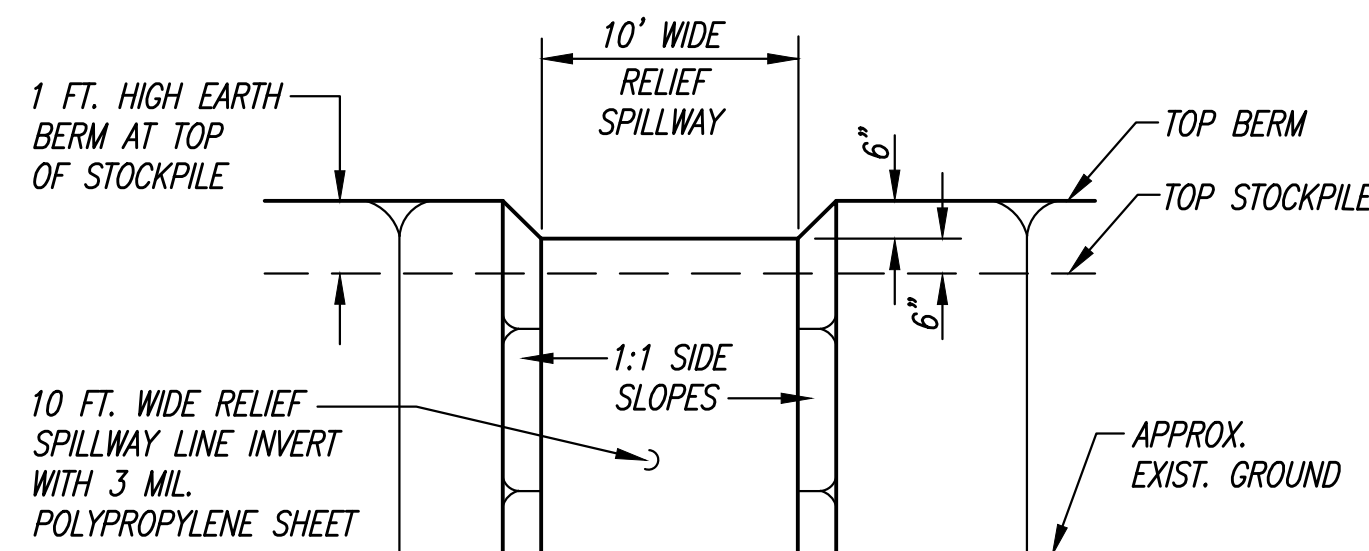
STOCKPILE PLAN

SCALE: 1"=20'



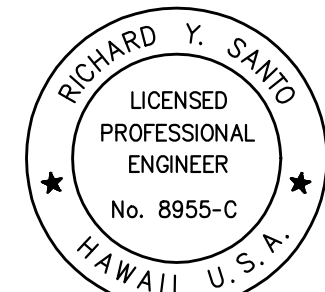
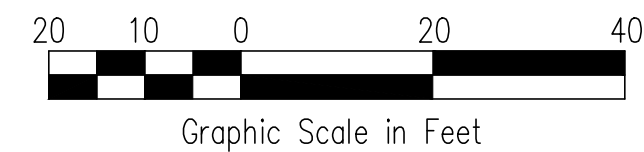
DETAIL - STOCKPILE

NOT TO SCALE



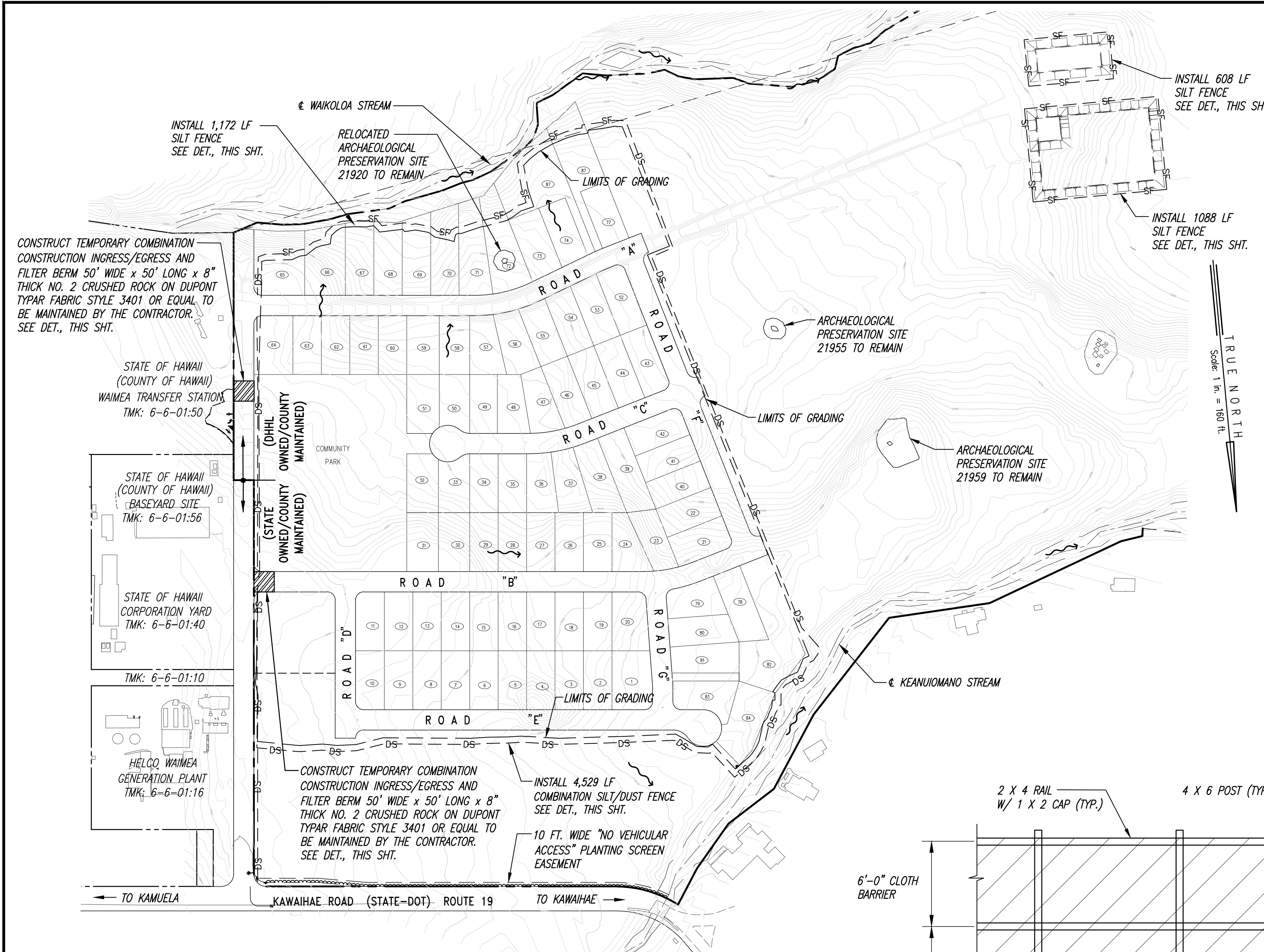
ELEVATION - SPILLWAY

NOT TO SCALE



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LICENSE EXPIRATION DATE: 04/30/12

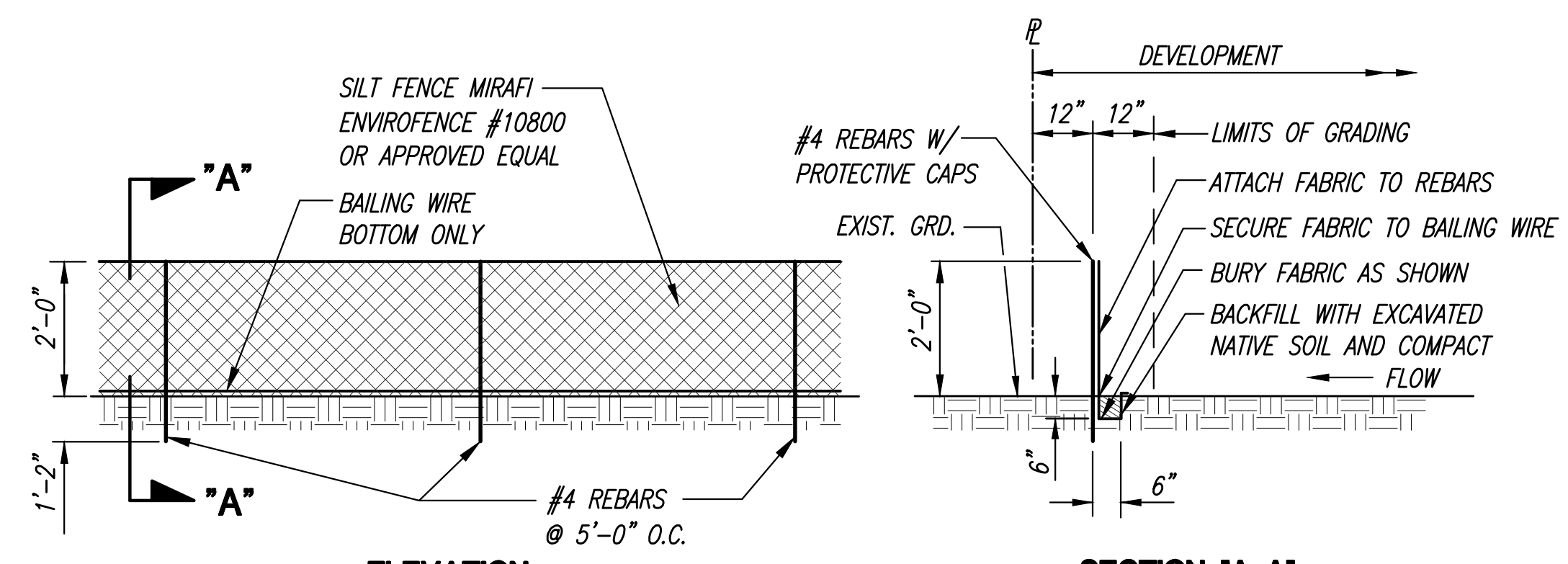
REVISION DATE		DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii				
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77				
STOCKPILE PLAN				
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS		



NOTE:
FOR STOCKPILE PLAN,
SEE DWG. NO. C-10.

EROSION CONTROL PLAN

SCALE: 1"=160'

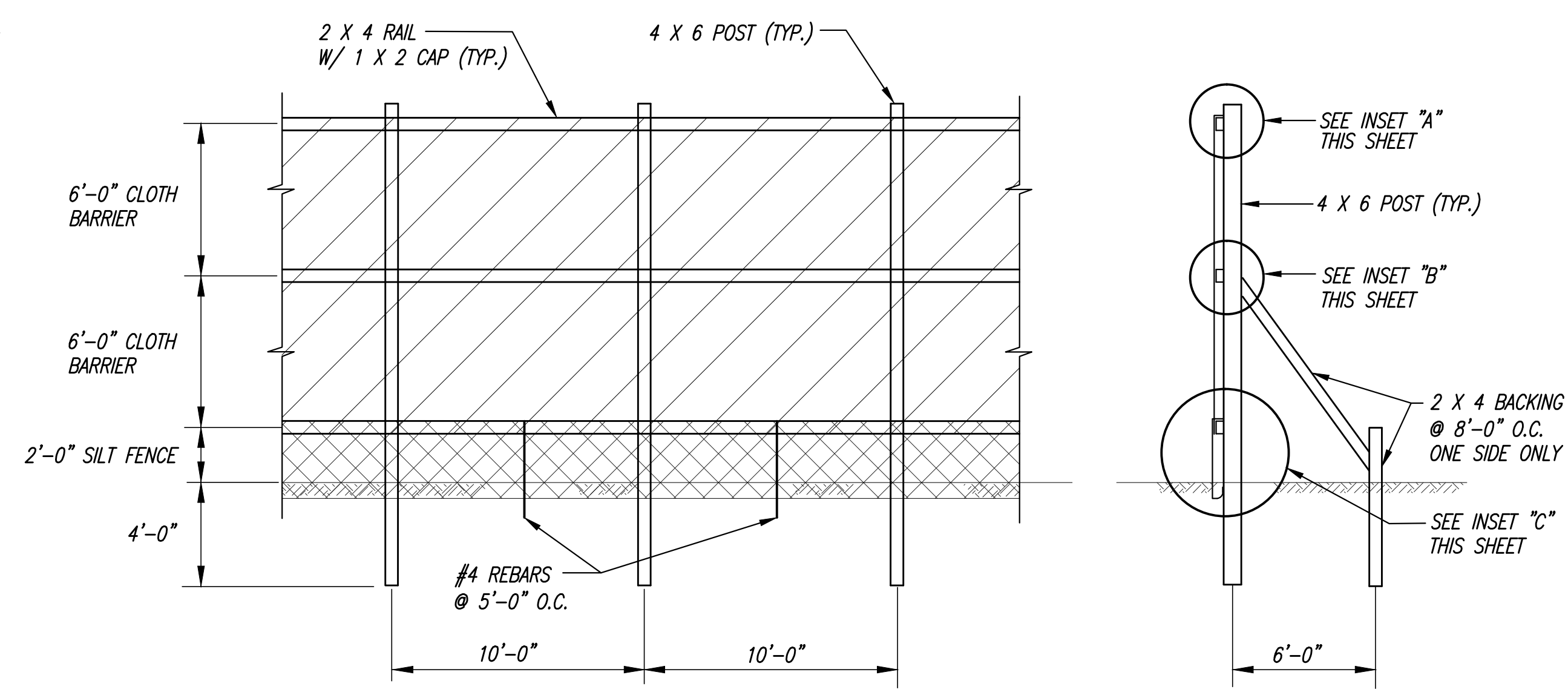


ELEVATION

SECTION "A-A"

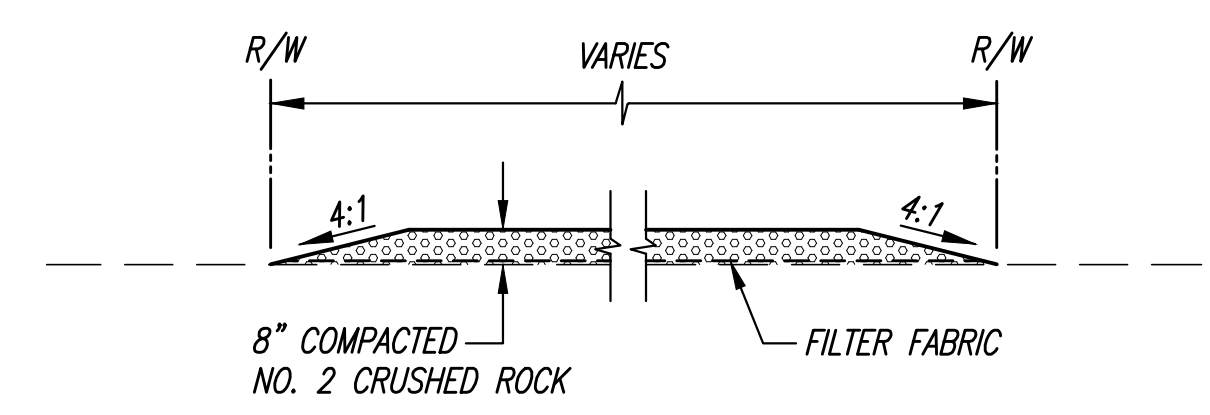
DETAIL - SILT FENCE

NOT TO SCALE



DETAIL - SILT / DUST FENCE

NOT TO SCALE



NOTE:
SEE CONSTRUCTION BMPs NOTE NO. 1.A.5., THIS SHEET

DETAIL - COMBINATION INGRESS/EGRESS AND FILTER BERM

NOT TO SCALE

CONSTRUCTION BMPs

1. THE FOLLOWING SPECIAL CONDITIONS APPLY TO ALL LAND DISTURBANCE WORK CONDUCTED UNDER THE GENERAL PERMIT:

A. CONSTRUCTION MANAGEMENT TECHNIQUES INCLUDE:

- CLEARING AND GRUBBING SHALL BE HELD TO THE MINIMUM NECESSARY FOR GRADING AND EQUIPMENT OPERATION.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN AND SHALL BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT SHALL BE REPLACED AT THE END OF THE WORK DAY.
- ALL CONTROL MEASURES SHALL BE CHECKED AND REPAIRED, AS NECESSARY, WEEKLY IN DRY PERIODS AND WITHIN 24-HOUR PERIOD. DURING PROLONGED RAINFALL, DAILY CHECKING IS NECESSARY. THE PERMITTEE SHALL MAINTAIN RECORDS OF CHECKS AND REPAIRS.
- A SPECIFIC INDIVIDUAL SHALL BE DESIGNATED TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON EACH PROJECT SITE.
- THE CONTRACTOR SHALL HAVE PERSONNEL INSPECT, REPAIR AND MAINTAIN THE INGRESS/EGRESS FILTER BERM FOR THE DURATION OF THE PROJECT. THIS SHALL INCLUDE BUT NOT BE LIMITED TO ANY SWEEPING OF GRAVEL, SAND AND DUST THAT MAY DISPERSE FROM THE BERM WITH AN INSPECTION AT THE BEGINNING OF THE DAY AND A FINAL INSPECTION AT THE END OF THE DAY.

B. VEGETATION CONTROLS INCLUDE:

- PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 20 CALENDAR DAYS PRIOR TO SITE DISTURBANCE.
- TEMPORARY SOIL STABILIZATION WITH APPROPRIATE VEGETATION SHALL BE APPLIED ON AREAS THAT WILL REMAIN UNFINISHED FOR MORE THAN 30 CALENDAR DAYS.
- PERMANENT SOIL STABILIZATION WITH PERENNIAL VEGETATION SHALL BE APPLIED AS SOON AS PRACTICABLE AFTER FINAL GRADING.

C. STRUCTURAL CONTROLS INCLUDE:

- ALL SURFACE WATER FLOWING TOWARD THE CONSTRUCTION AREA SHALL BE DIVERTED BY USING BERMS, CHANNELS, SEDIMENT TRAPS, AND OTHER APPROPRIATE CONTROL MEASURES, AS PRACTICAL.
- EROSION CONTROL MEASURES SHALL BE DESIGNED ACCORDING TO THE SIZE OF DISTURBED OR DRAINAGE AREAS, TO DETAIN RUNOFF AND TRAP SEDIMENT.
- WATER MUST BE DISCHARGED THROUGH A PIPE OR LINED CHANNEL SO THAT THE DISCHARGE DOES NOT CAUSE EROSION.
- STORM DRAIN INLET PROTECTION.

NPDES NOTES

1. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- THE CONTRACTOR SHALL INSPECT THE EROSION AND SEDIMENT CONTROL MEASURES AT LEAST ONCE A WEEK OR AFTER 0.5 INCHES OF RAINFALL.
- THE CONTRACTOR SHALL MAINTAIN THE EROSION AND SEDIMENT CONTROL MEASURES DURING THE PROJECT. IF A REPAIR IS NECESSARY, THE CONTRACTOR SHALL INITIATE THE REPAIRS WITHIN TWENTY-FOUR (24) HOURS AFTER THE INSPECTION SUCH AS:

- WHEN SEDIMENT BUILDUP REACHES ONE-THIRD (1/3) THE HEIGHT OF THE SILT FENCE, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SEDIMENT BUILDUP FROM THE SILT FENCE.
- WHEN THE DEPTH OF THE SEDIMENT BASIN REACHES TEN PERCENT (10%) OF THE DESIGN CAPACITY, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SEDIMENT BUILDUP.
- WHEN TEARS ARE FOUND ON THE SILT FENCE, THE CONTRACTOR SHALL REPLACE THE FABRIC.
- THE CONTRACTOR SHALL CHECK TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
- THE CONTRACTOR SHALL INSPECT THE DIVERSION DIKE AND REPAIR THE BREACHES.
- THE CONTRACTOR SHALL INSPECT TEMPORARY AND PERMANENT SEEDING AND PLANTING FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.

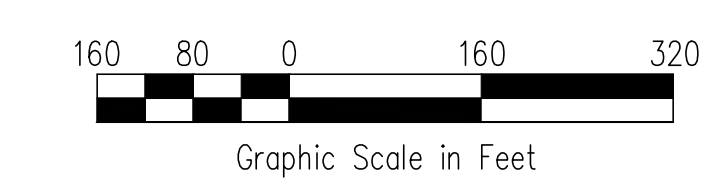
C. THE CONTRACTOR SHALL HAVE ITS PERSONNEL MAKE A MAINTENANCE INSPECTION REPORT PROMPTLY AFTER EACH INSPECTION. THE CONTRACTOR SHALL SELECT A MINIMUM OF THREE (3) PERSONNEL WHO WILL BE RESPONSIBLE FOR INSPECTION, MAINTENANCE, REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT. PERSONNEL SELECTED FOR THE INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE CONTRACTOR. THE CONTRACTOR SHALL TRAIN THESE PERSONNEL IN THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT USED ON-SITE ACCORDING TO THE CONTRACT.

2. SUBMITTAL REQUIREMENTS

A. CONSTRUCTION ACTIVITIES DEWATERING AND/OR HYDROTESTING WATER.

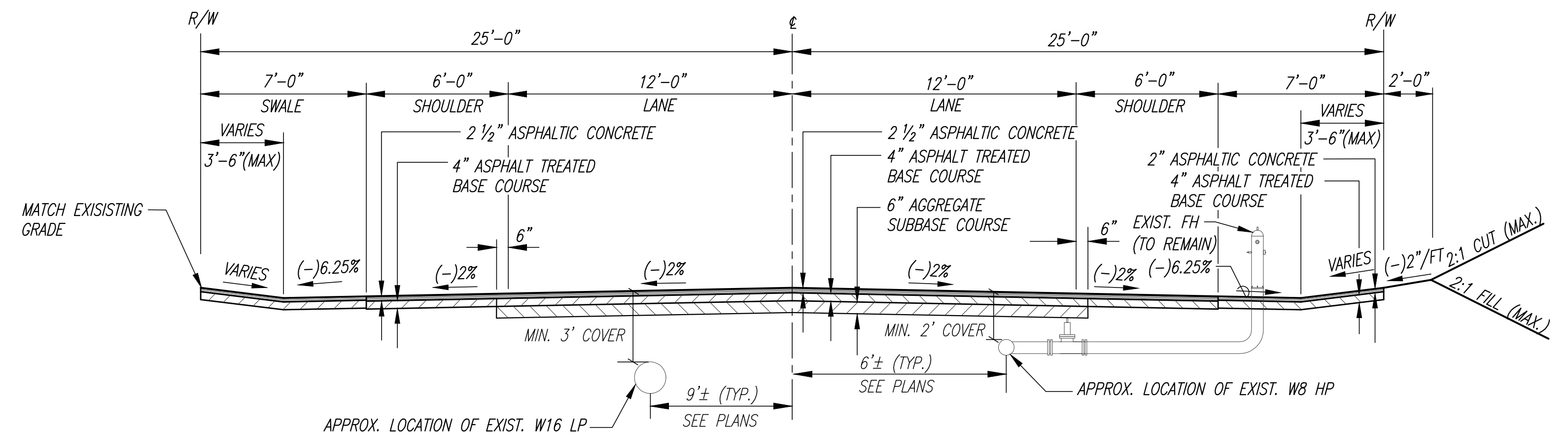
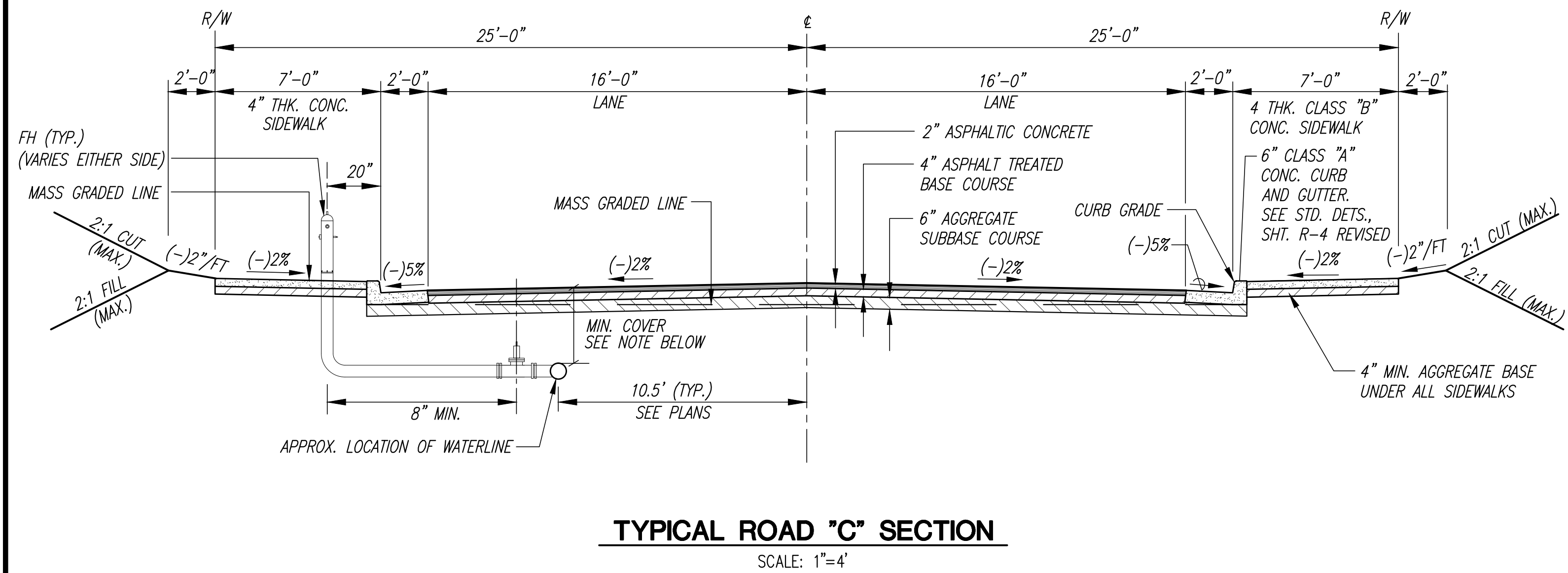
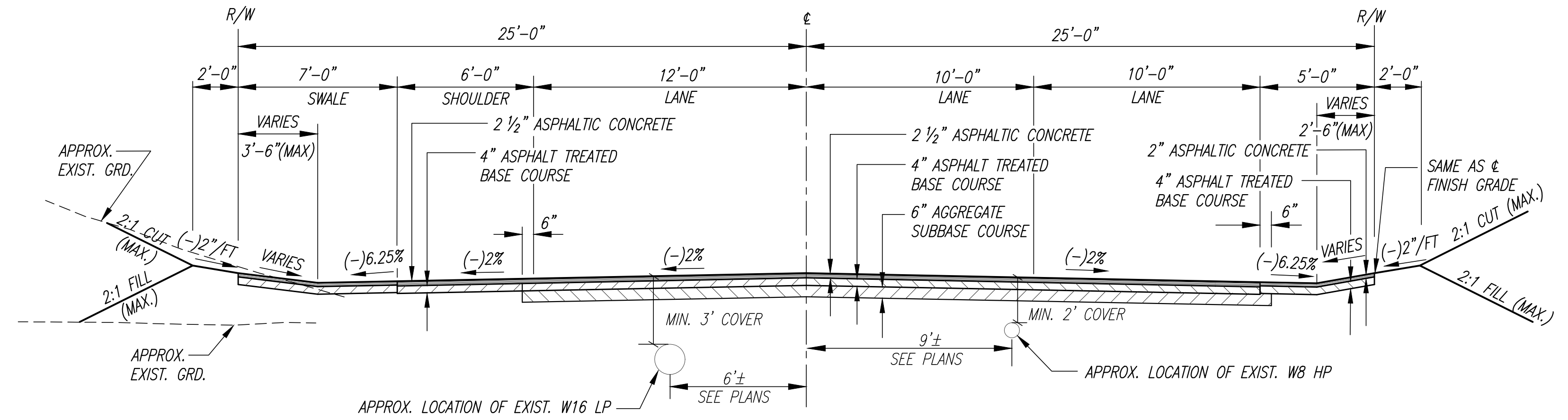
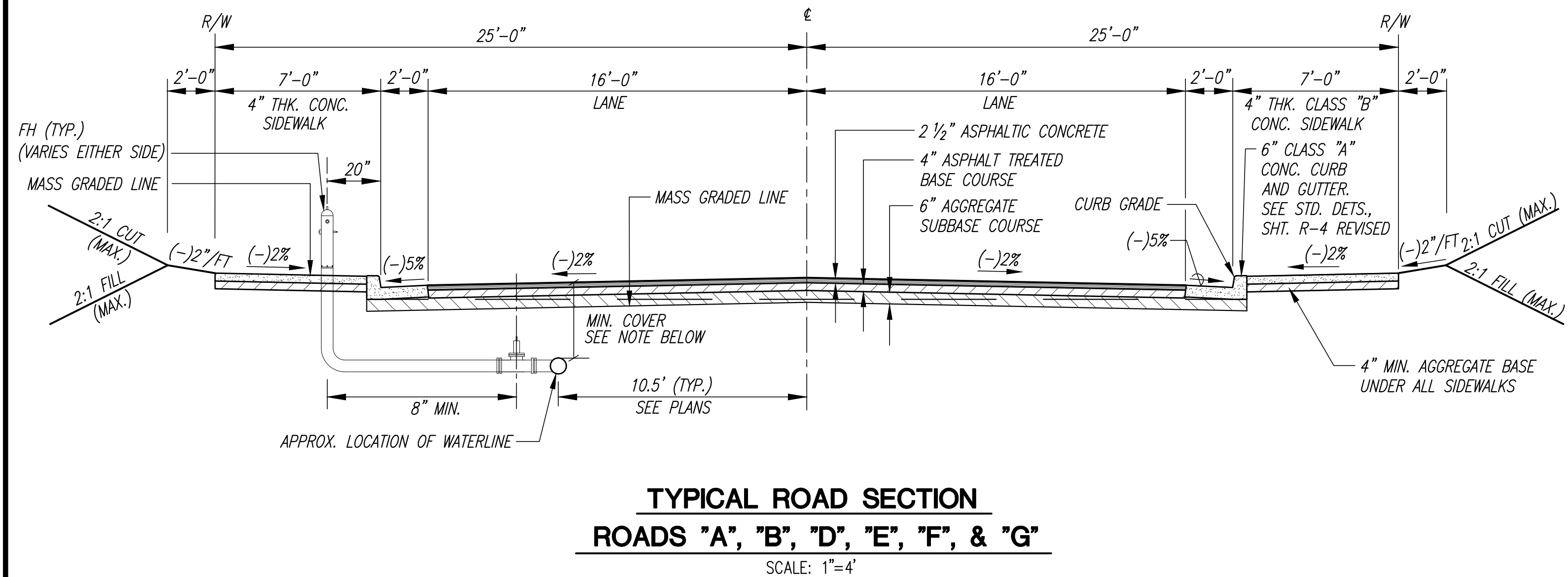
- DISCHARGES INTO STATE WATERS DUE TO DEWATERING AND/OR HYDROTESTING ACTIVITIES WILL REQUIRE NPDES PERMIT(S) FROM DOH. IF THE CONTRACTOR OPTIONS TO DISCHARGE DEWATERING AND/OR HYDROTESTING EFFLUENT INTO STATE WATER, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACTING OFFICER FOUR (4) SETS OF SITE-SPECIFIC DEWATERING AND/OR HYDROTESTING BMP, AND FOUR (4) COPIES OF THE QUALITY OF DISCHARGE TEST RESULTS. THE PLANS AND TEST RESULTS SHALL BE SUBMITTED NO LATER THAN THIRTY (30) CALENDAR DAYS AFTER THE AWARD OF CONTRACT.
- NO DEWATERING AND/OR HYDROTESTING ACTIVITIES WILL BE AUTHORIZED UNTIL THE RECEIPT OF THE NPDES PERMIT(S) FROM THE DOH.

- LEGEND**
- DS COMBINATION DUST/SILT FENCE
 - SF SILT FENCE
 - LIMITS OF GRADING
 - ~ SURFACE WATER FLOW



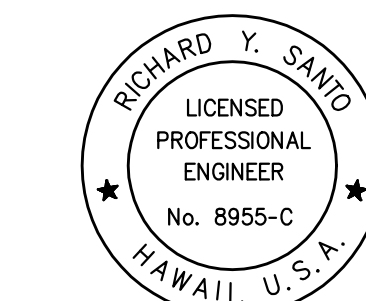
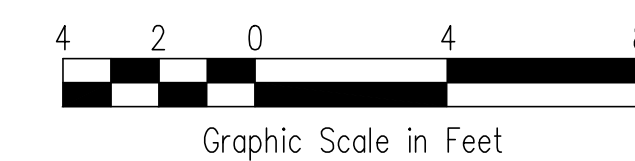
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakoa Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
EROSION CONTROL PLAN			
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS	APPROVED:



NOTE:

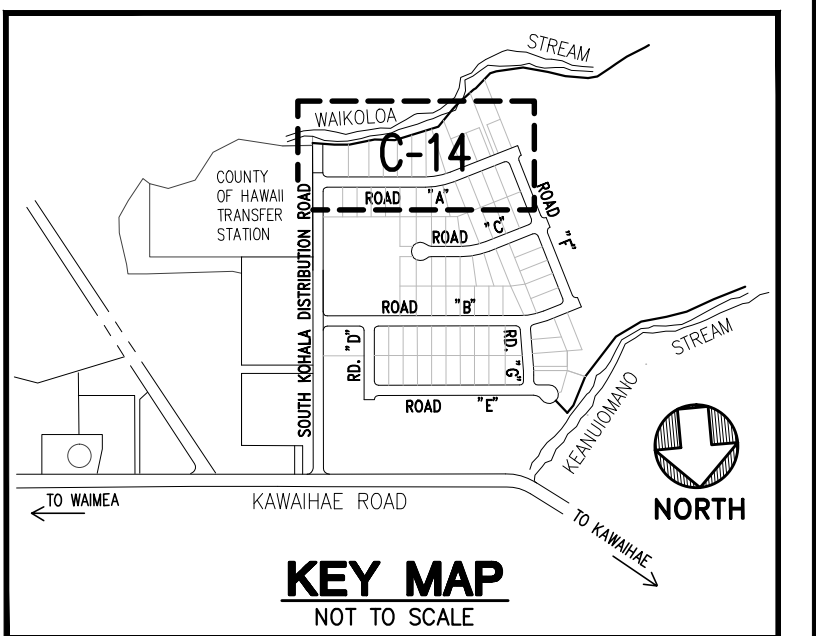
COVER FOR WATER LINES (FEET)					
PIPE SIZE	4"	6"	8"	12"	> 12"
MIN. COVER	2.0'	2.0'	2.0'	2.5'	3.0'

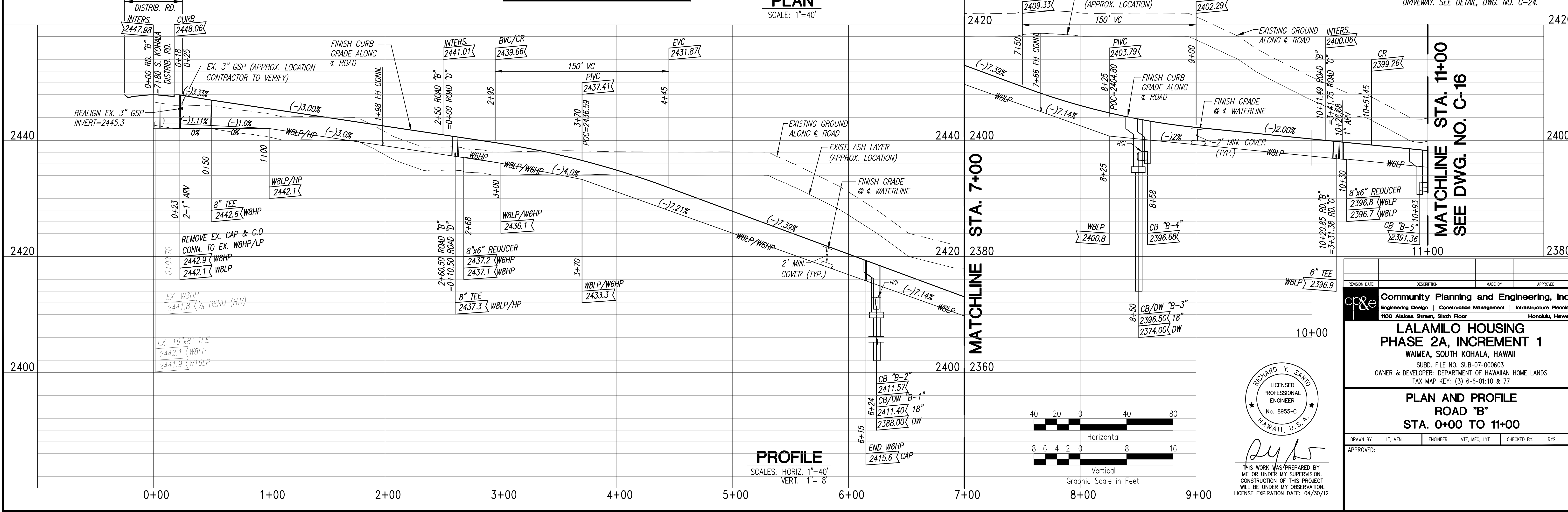
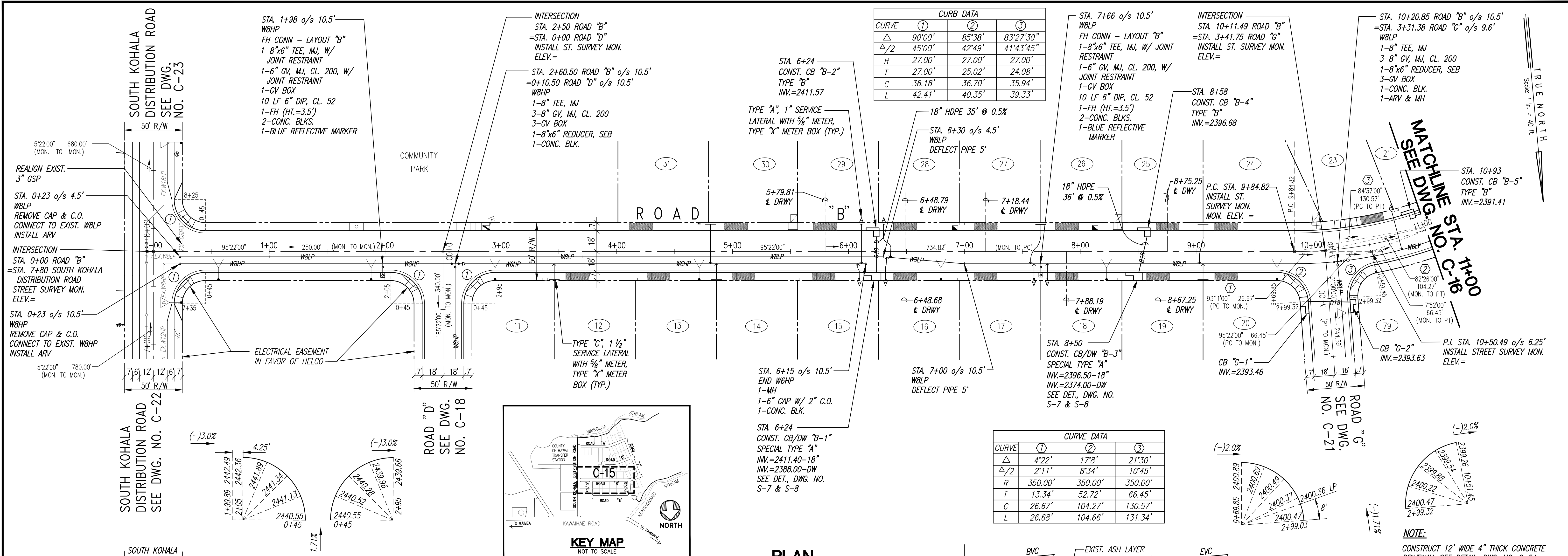


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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
TYPICAL ROAD SECTIONS AND DRIVEWAYS			
DRAWN BY: LYT	ENGINEER: FJC	CHECKED BY: RYS	APPROVED:

CURB DATA	
CURVE	①
Δ	90°00'
$\Delta/2$	45°00'
R	27.00'
T	27.00'
C	38.18'
L	42.41'





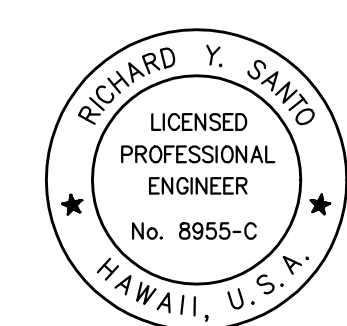
REVISION DATE	DESCRIPTION	MADE BY	APPROVED

Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
1100 Alakea Street, Sixth Floor | Honolulu, Hawaii

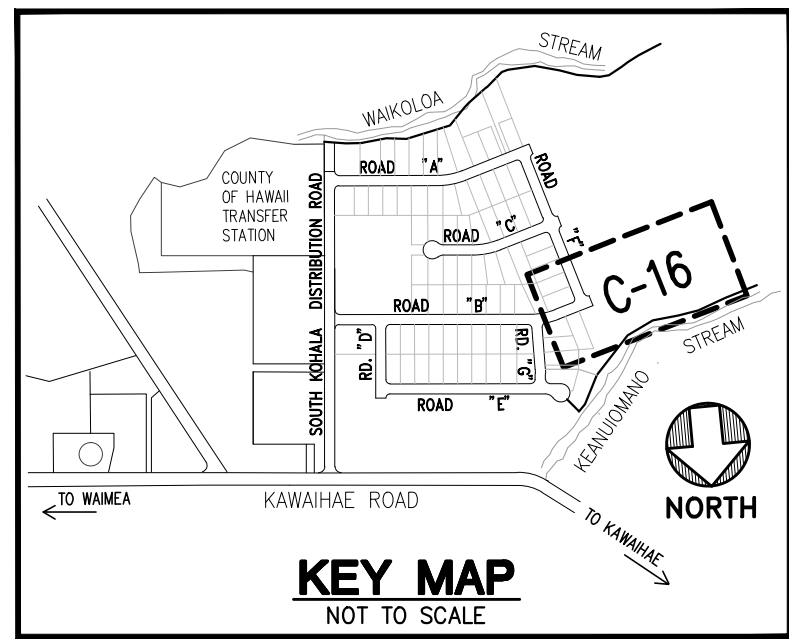
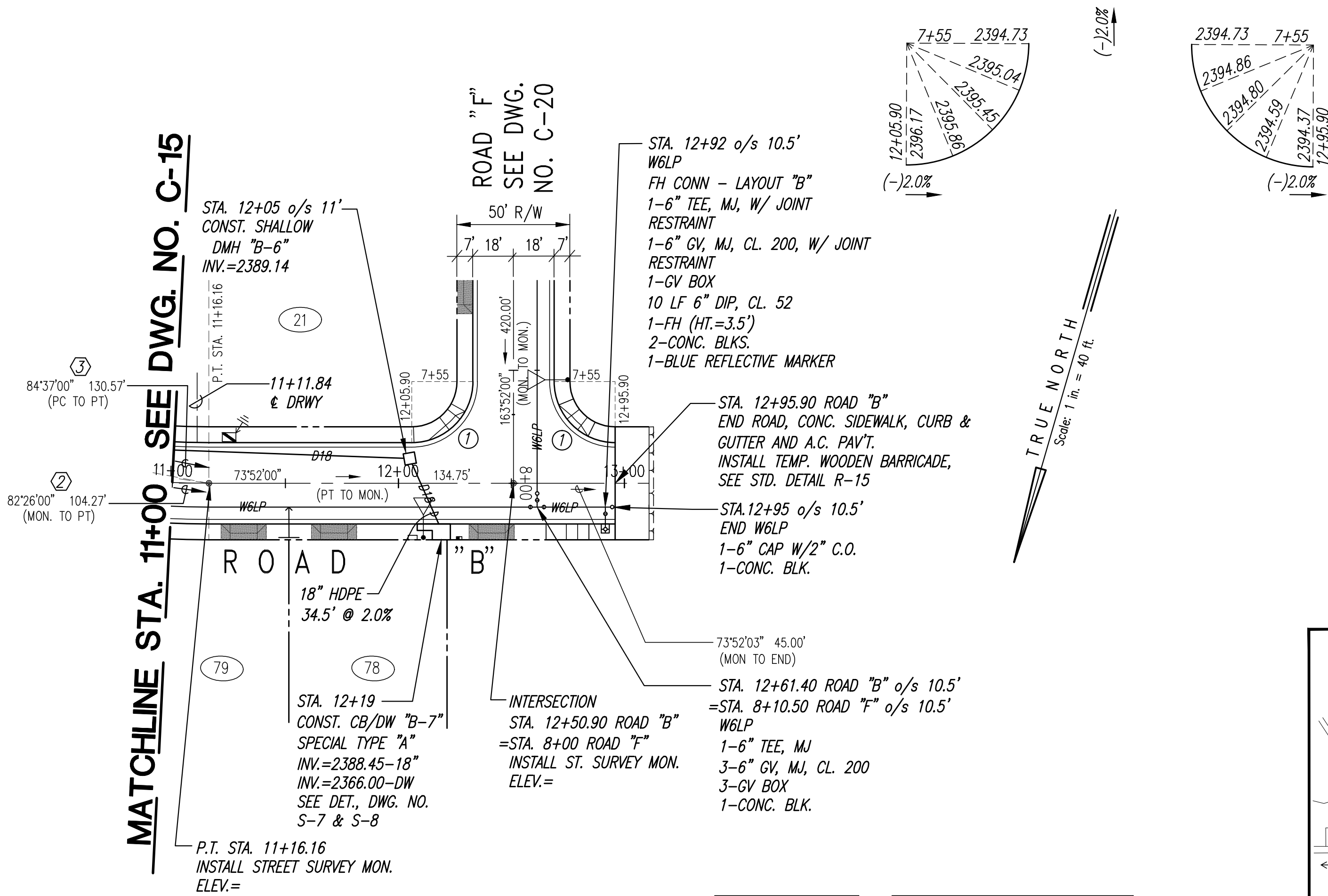
**LALAMLO HOUSING
PHASE 2A, INCREMENT 1**
WAIMEA, SOUTH KOHALA, HAWAII
SUBD. FILE NO. SUB-07-000603
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (3) 6-6-01:10 & 77

**PLAN AND PROFILE
ROAD "B"
STA. 0+00 TO 11+00**

DRAWN BY: LT, MFM ENGINEER: VTF, MFC, LYT CHECKED BY: RYS
APPROVED:



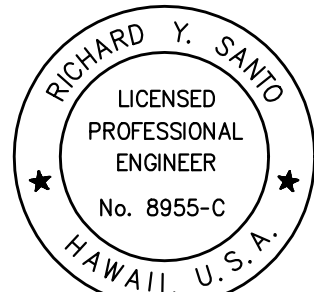
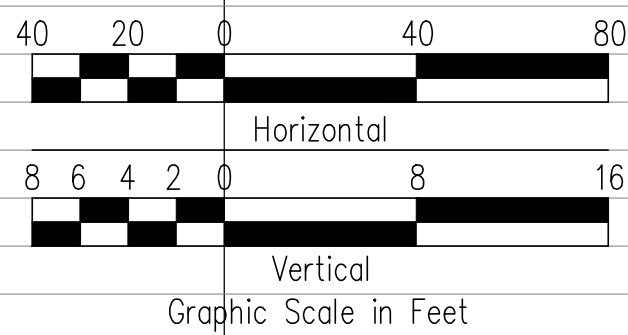
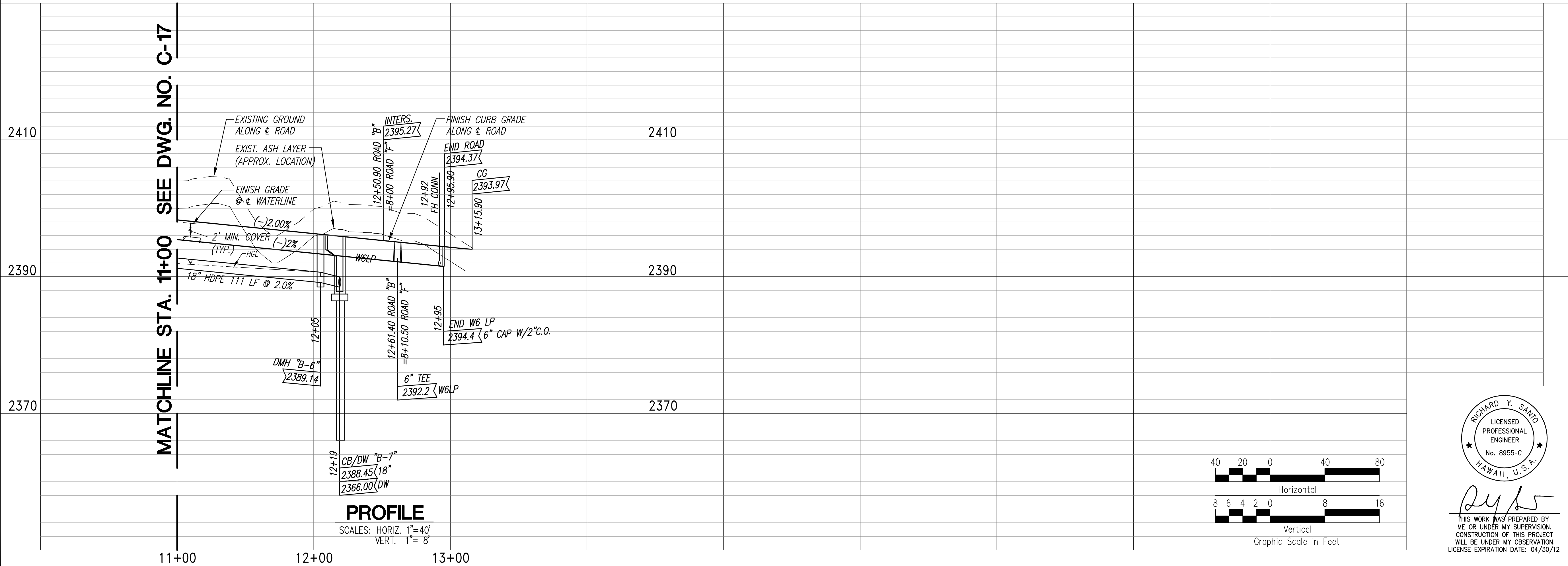
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12



NOTE:

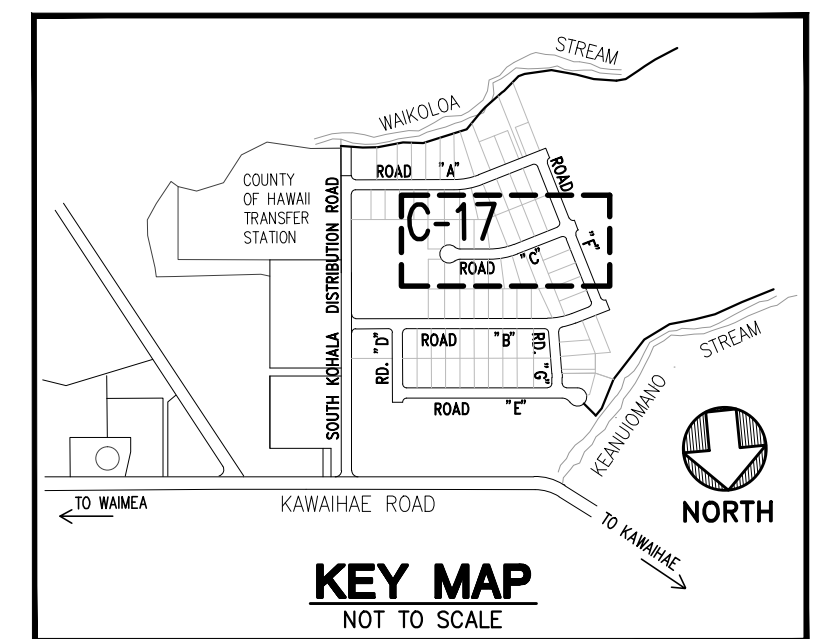
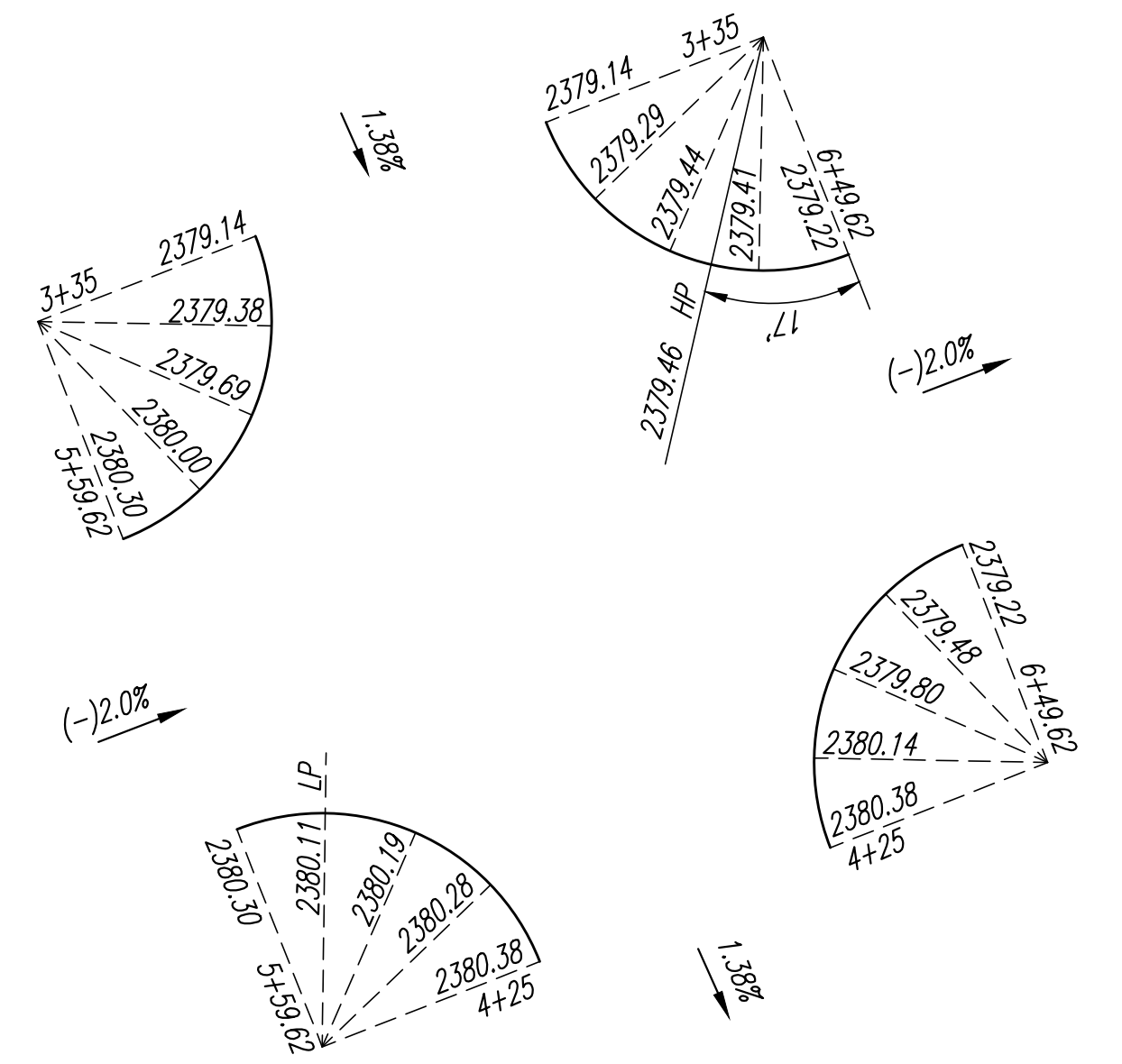
CONSTRUCT 12' WIDE 4" THICK CONCRETE DRIVEWAY. SEE DETAIL, DWG. NO. C-24.

MATCHLINE STA. 11+00 SEE DWG. NO. C-17

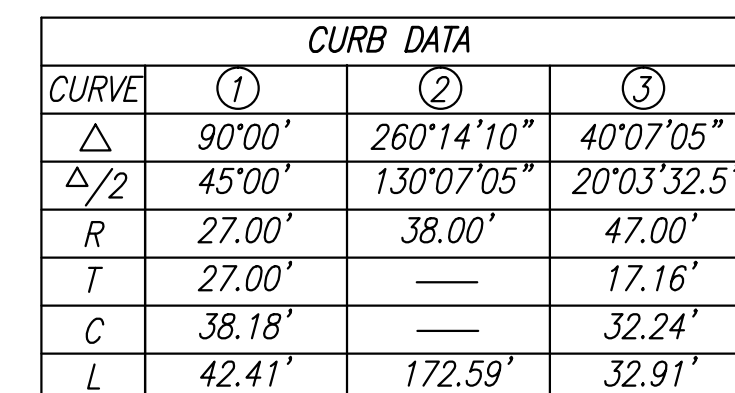


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

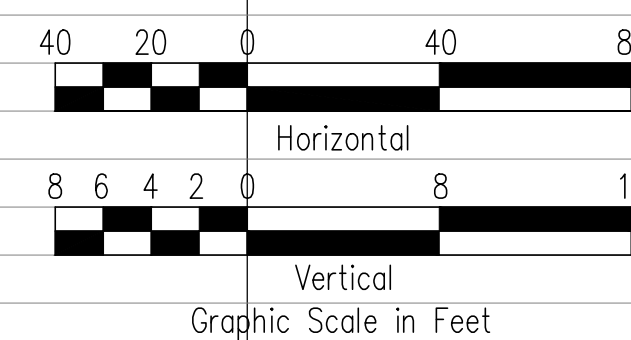
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc.			
Engineering Design Construction Management Infrastructure Planning			
7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING			
PHASE 2A, INCREMENT 1			
WAIMEA, SOUTH KOHALA, HAWAII			
SUBD. FILE NO. SUB-07-00603			
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS			
TAX MAP KEY: (3) 6-6-01:10 & 77			
PLAN AND PROFILE			
ROAD "B"			
STA. 11+00 TO END			
DRAWN BY:	LT, MFM	ENGINEER:	VTF, MFC, LYT
CHECKED BY:	RYS		
APPROVED:			



NOTE:
CONSTRUCT 12' WIDE 4" THICK CONCRETE
DRIVEWAY. SEE DETAIL, DWG. NO. C-24.



CURVE DATA	
CURVE	①
Δ	21°30'00"
$\Delta/2$	10°45'00"
R	350.00'
T	66.45'
C	130.57'
L	131.33'



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ME OR UNDER MY SUPERVISION.
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/102

COMMUNITY PARK

0+10.50 ROAD "D" o/s 10.5'
=STA. 2+60.50 ROAD "B" o/s 10.5'
W8HP
FOR CALLOUTS, SEE DWG. NO. C-15

INTERSECTION
STA. 0+00 ROAD "D"
=STA. 2+50 ROAD "B"
STREET SURVEY MON.
ELEV.=

ROAD "B"
SEE DWG. NO. C-15

STA. 1+40
CONST. CB "D-1"
TYPE "B"
INV.=2432.66

TYPE "A",
1" SERVICE LATERAL
WITH 5/8" METER (TYP.)
ELECTRICAL EASEMENT
IN FAVOR OF HELCO

STA. 3+29.50 ROAD "D" o/s 10.5'
=STA. 0+10.50 ROAD "E" o/s 10.5'
W8HP
1-8" TEE, MJ
3-8" GV, MJ, CL. 200
1-CONC. BLK.

ROAD "E"
SEE DWG. NO. C-19

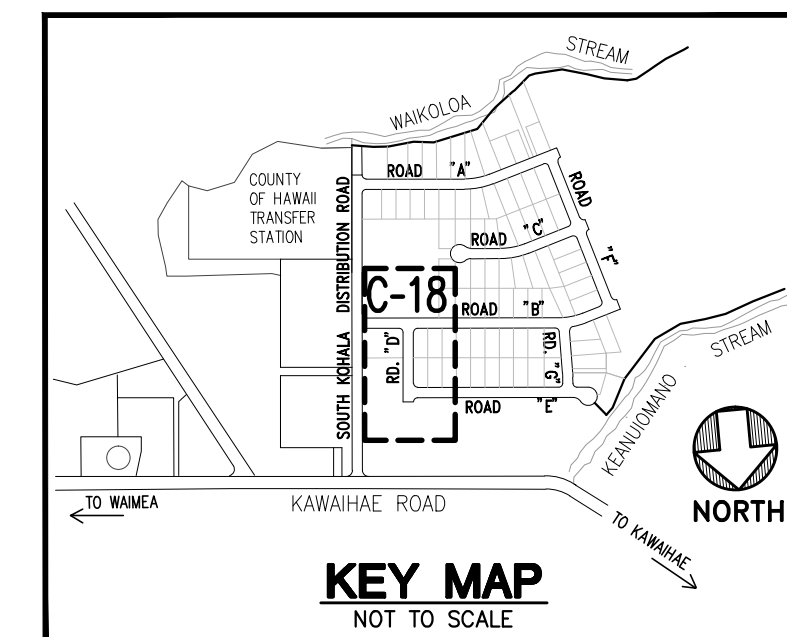
STA. 3+80 o/s 10.5'
END W8HP
1-8" CAP W/ 2" C.O.
1-CONC. BLK.
1-MH

STA. 3+85 ROAD "D"
END ROAD CONC. SIDEWALK, CURB AND GUTTER
AND A.C. PAVT.
INSTALL TEMP. WOODEN BARRICADE HEADER
SEE STD. DET. R-15

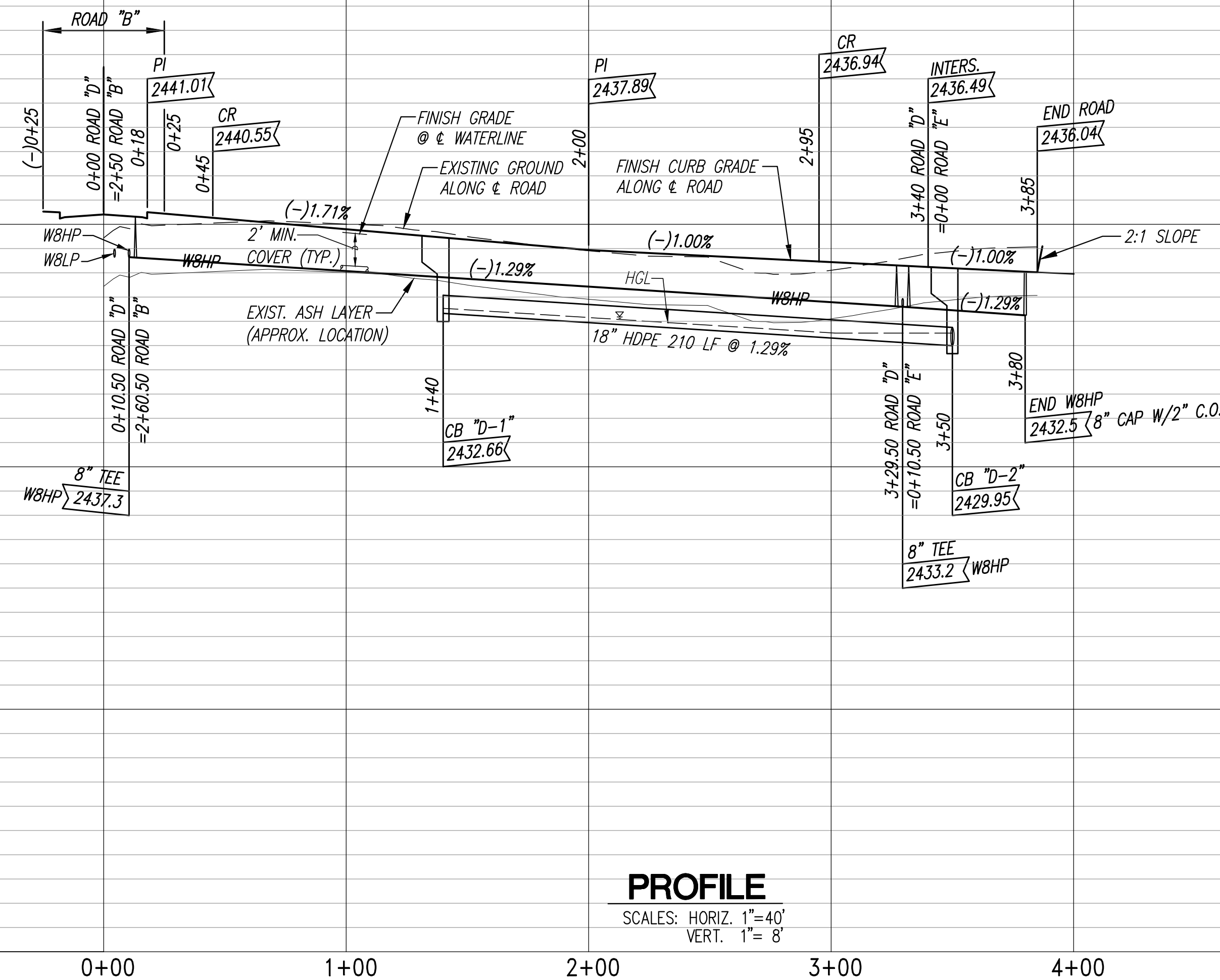
STA. 3+50
CONST. CB "D-2"
TYPE "B"
INV.=2429.95
INTERSECTION
STA. 3+40 ROAD "D"
=STA. 0+00 ROAD "E"
INSTALL ST. SURVEY MON.
ELEV.=

PLAN
SCALE: 1"=40'

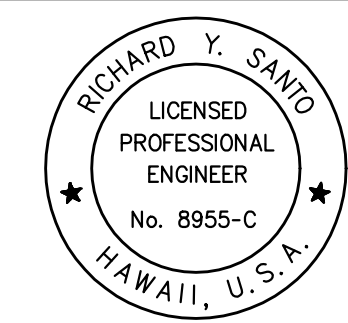
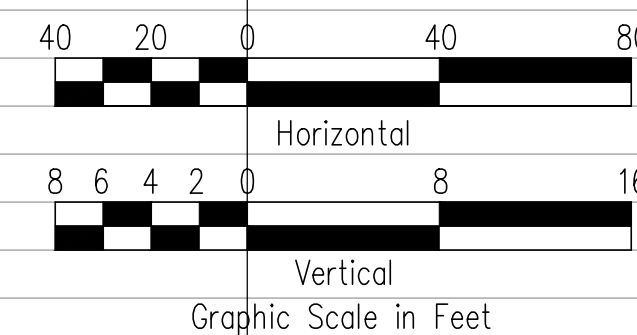
CURB DATA	
CURVE	(1)
△	90°00'
△/2	45°00'
R	27.00'
T	27.00'
C	38.18'
L	42.41'



NOTE:
CONSTRUCT 12' WIDE 4" THICK CONCRETE
DRIVEWAY. SEE DETAIL, DWG. NO. C-24.



PROFILE
SCALES: HORIZ. 1"=40'
VERT. 1"= 8'



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WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
PLAN AND PROFILE ROAD "D" STA. 0+00 TO END			
DRAWN BY: LT, MFM	ENGINEER: VTF, MFC, LYT	CHECKED BY: RYS	APPROVED:

CURB DATA

CURVE	①	②	③
Δ	90°00'	56°15'04"	236°15'04"
Δ/2	45°00'	28°07'32"	118°07'32"
R	27.00'	52.00'	38.00'
T	27.00'	27.80'	—
C	38.18'	49.03'	—
L	42.41'	51.05'	156.69'

ROAD "D"
SEE DWG. NO. C-18

ROAD "E"
SEE DWG. NO. C-18

ROAD "G"
SEE DWG. NO. C-21

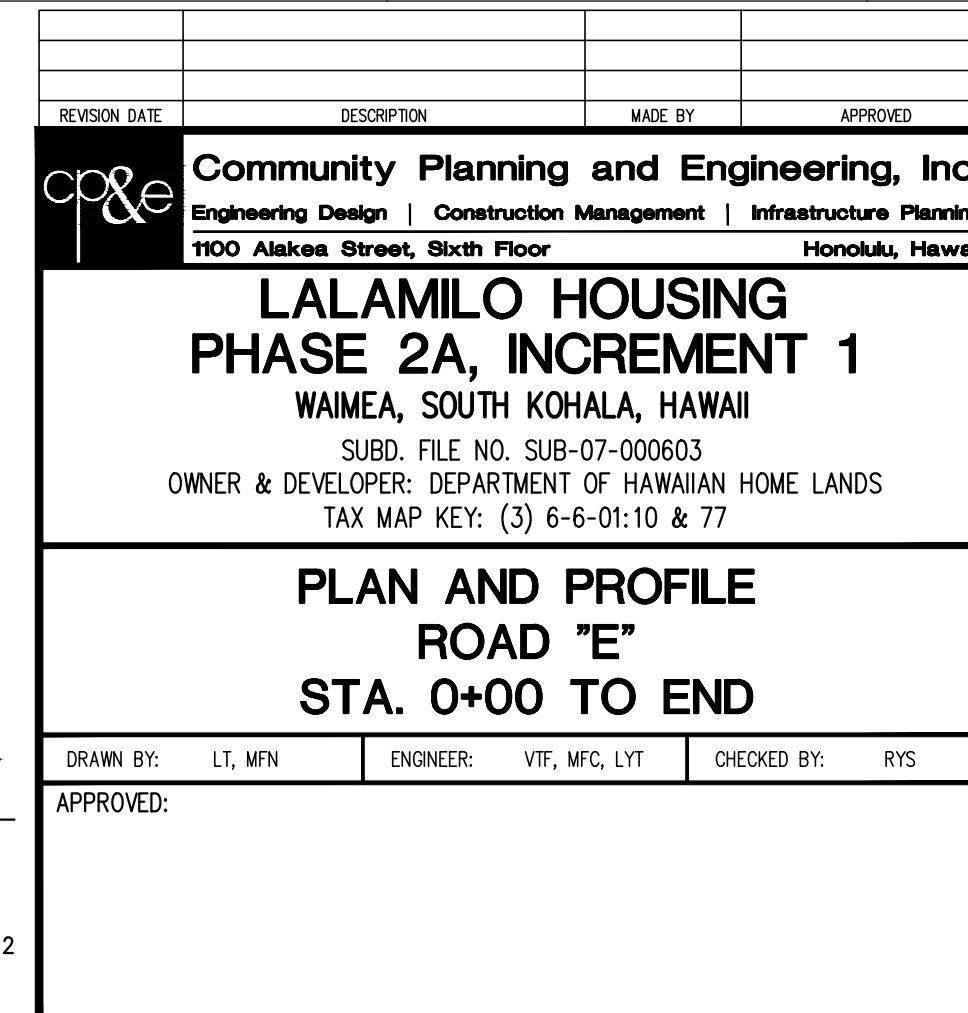
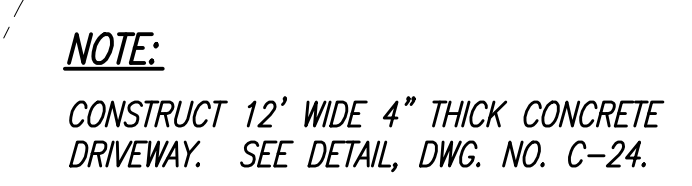
STATIONING AND CURVES:

- STA. 0+10.50 ROAD "E" o/s 10.5' = STA. 3+29.50 ROAD "D" o/s 10.5'
- STA. 2+33 CONST. CB/DW "E-2" SPECIAL TYPE "A" INV.=2400.00-DW SEE DET., DWG. NO. S-7 & S-8
- STA. 3+36 o/s 10.5' WBHP 1-8"x6" REDUCER, MJ W/ JOINT RESTRAINT
- STA. 3+81 o/s 10.5' END WBHP 1-6" CAP W/ 2" C.O. 1-MH 1-CONC. BLK.
- STA. 5+14 CONST. CB "E-3" TYPE "A" INV.=2406.73
- STA. 7+33.50 CONST. CB "E-5a" TYPE "A" INV.=2399.39
- STA. 7+91.46 ROAD "E" o/s 10.5' = STA. 0+10.50 ROAD "G" o/s 10.5'
- STA. 8+37 o/s 10.5' WBHP 1-8"x6" REDUCER, MJ W/ JOINT RESTRAINT
- STA. 8+80.79 o/s 10.5' END WBHP 1-6" CAP W/ 2" C.O. 1-MH 1-CONC. BLK.
- STA. 8+80.79 INSTALL ST. SURVEY MON. ELEV.=
- STA. 8+93 o/s 14' CONST. SHALLOW DMH "E-6" INV.=2395.63
- STA. 9+04.50 o/s 54.0' CONST. CB/DW "E-7" SPECIAL TYPE "A" INV.=2370.00-DW SEE DET., DWG. NO. S-7 & S-8


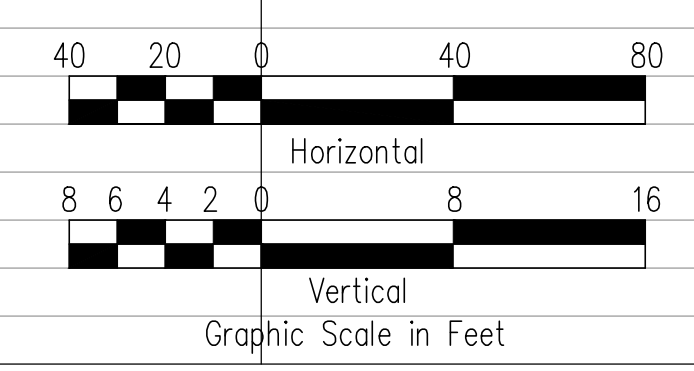
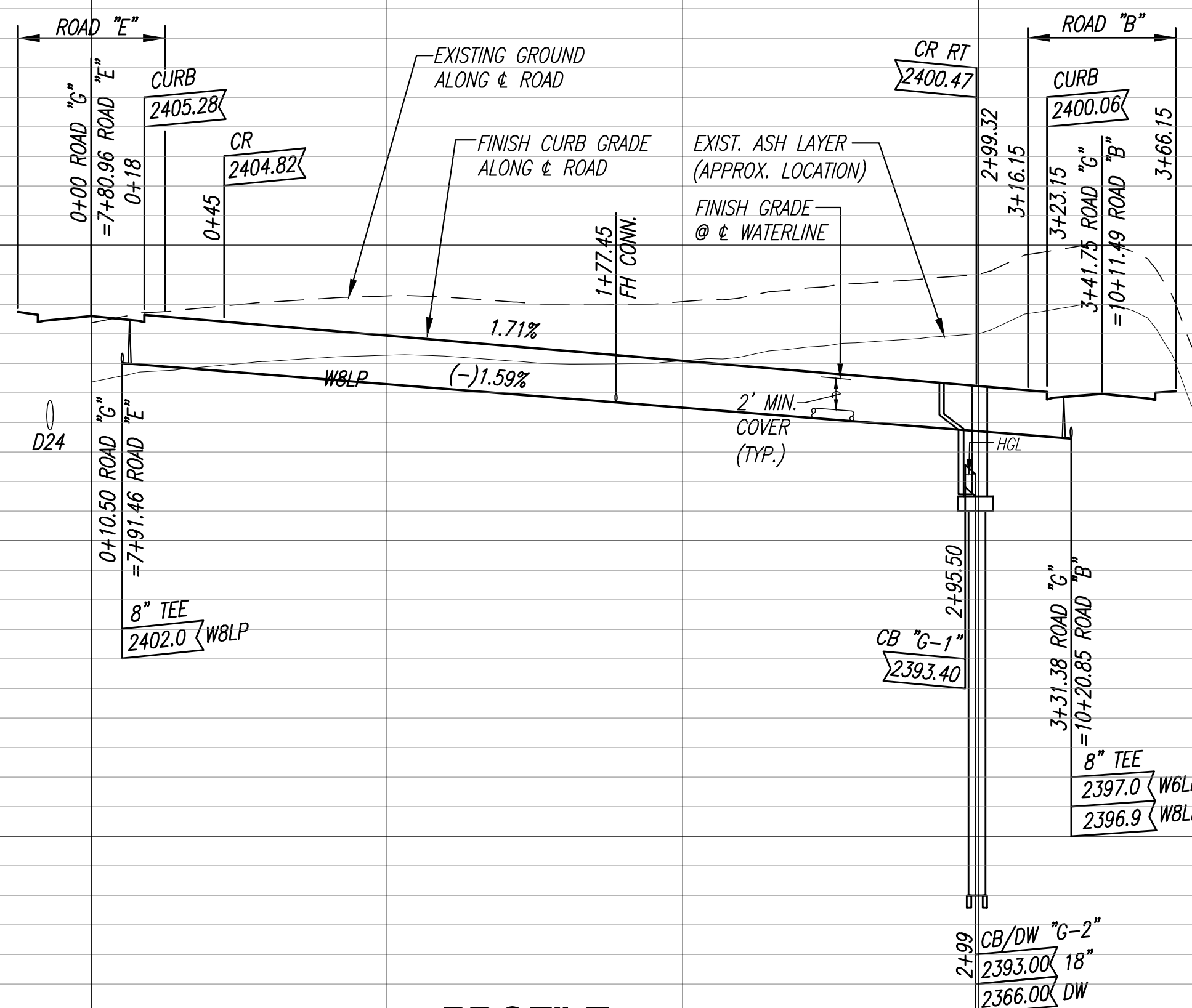
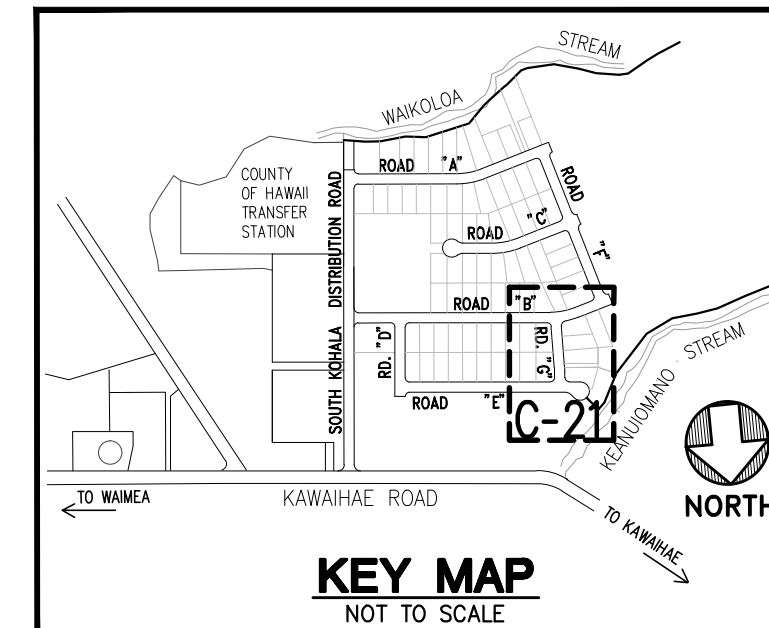
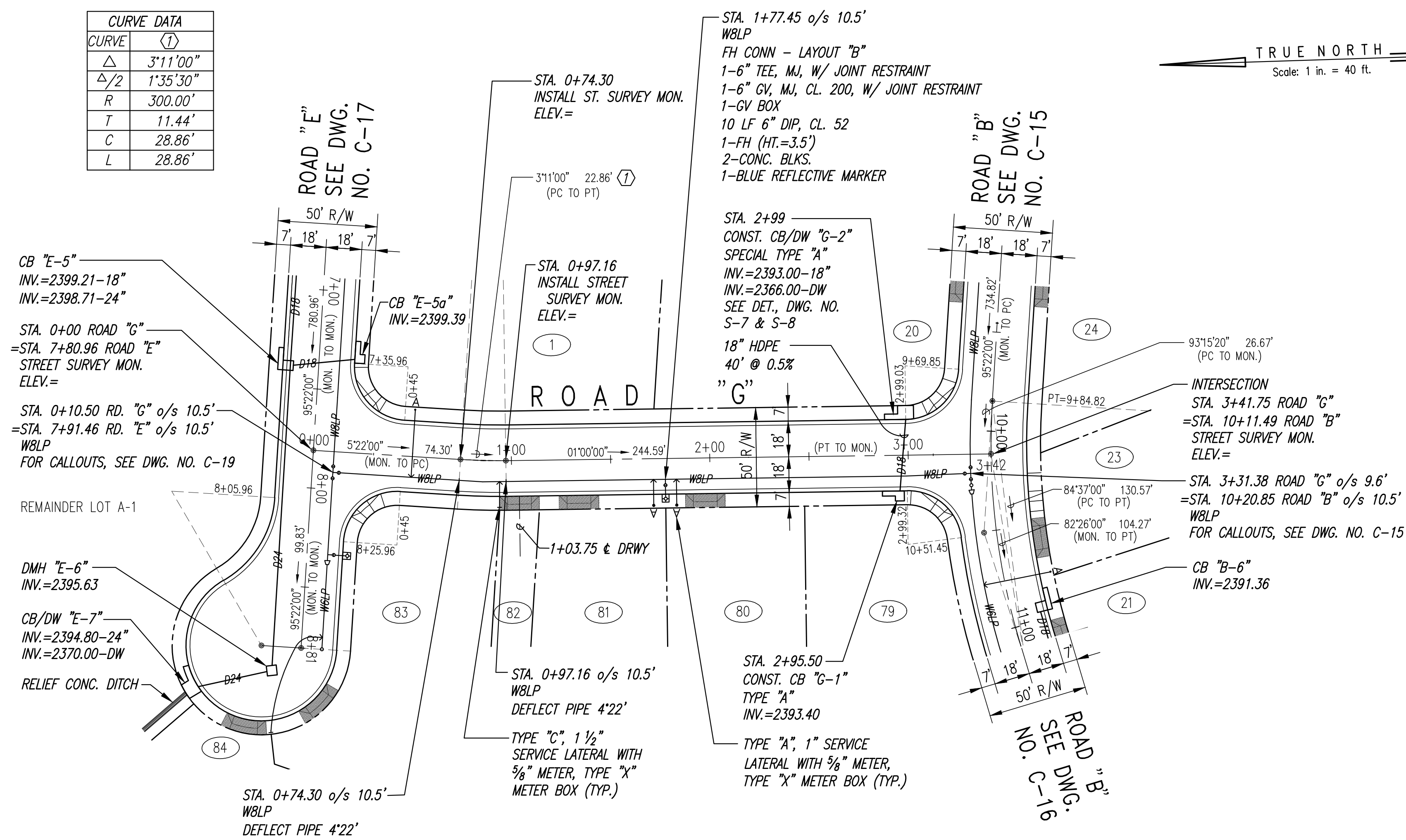
INFRASTRUCTURE AND NOTES:

- 18" HDPE 35' @ 0.5%
- 18" HDPE 32' @ 4.5%
- 18" HDPE 35.5' @ 3.0%
- 18" HDPE 41.5' @ 2.0%
- 100 YEAR FLOOD LIMIT
- OVERFLOW CONCRETE DITCH FOR DETAILS, SEE DWG. C-9
- REMAINDER LOT A-1
- 10 LF 6" DIP, CL. 52
- 1-FH (HT.=3.5')
- 2-CONC. BLKS.
- 1-BLUE REFLECTIVE MARKER
- 1-6" TEE, MJ, W/ JOINT RESTRAINT
- 1-6" GV, MJ, CL. 200, W/ JOINT RESTRAINT
- 1-GV BOX
- 1-CONC. BLK.
- 1-6" CAP W/ 2" C.O.
- 1-MH
- 1-CONC. BLK.
- 1-8"x6" REDUCER, MJ
- 1-6" TEE, MJ, W/ JOINT RESTRAINT
- 1-6" GV, MJ, CL. 200, W/ JOINT RESTRAINT
- 1-GV BOX
- 10 LF 6" DIP, CL. 52
- 1-FH (HT.=3.5')
- 2-CONC. BLKS.
- 1-BLUE REFLECTIVE MARKER

TRUE NORTH
Scale: 1 in. = 40 ft.



CURVE DATA	
CURVE	$\langle T \rangle$
Δ	$3^{\circ}11'00''$
$\Delta/2$	$1^{\circ}35'30''$
R	$300.00'$
T	$11.44'$
C	$28.86'$
L	$28.86'$



RICHARD Y. SANTO
LICENSED
PROFESSIONAL
ENGINEER
No. 8955-C
HAWAII, U.S.A.

Ry Santo

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

Community Planning and Engineering, Inc.

Engineering Design | Construction Management | Infrastructure Planning

1100 Alakea Street, Sixth Floor Honolulu, Hawaii

LALAMILO HOUSING

PHASE 2A, INCREMENT 1

WAIMEA, SOUTH KOHALA, HAWAII

SUBD. FILE NO. SUB-07-000603

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS

TAX MAP KEY: (3) 6-6-01:10 & 77

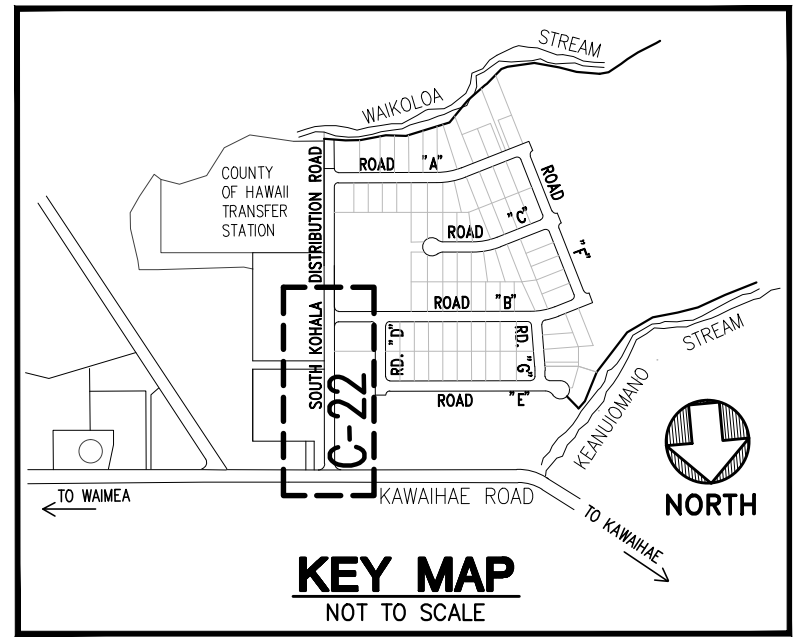
PLAN AND PROFILE


ROAD "G"

STA. 0+00 TO END

DRAWN BY: LT, MFN	ENGINEER: VTF, MFC, LYT	CHECKED BY: RYS
-------------------	-------------------------	-----------------

APPROVED: _____



- | | | | |
|---------------|-------------|---------|----------|
| | | | |
| | | | |
| | | | |
| REVISION DATE | DESCRIPTION | MADE BY | APPROVED |
- 

Community Planning and Engineering, Inc.

Engineering Design | Construction Management | Infrastructure Planning

1100 Alakea Street, Sixth Floor Honolulu, Hawaii

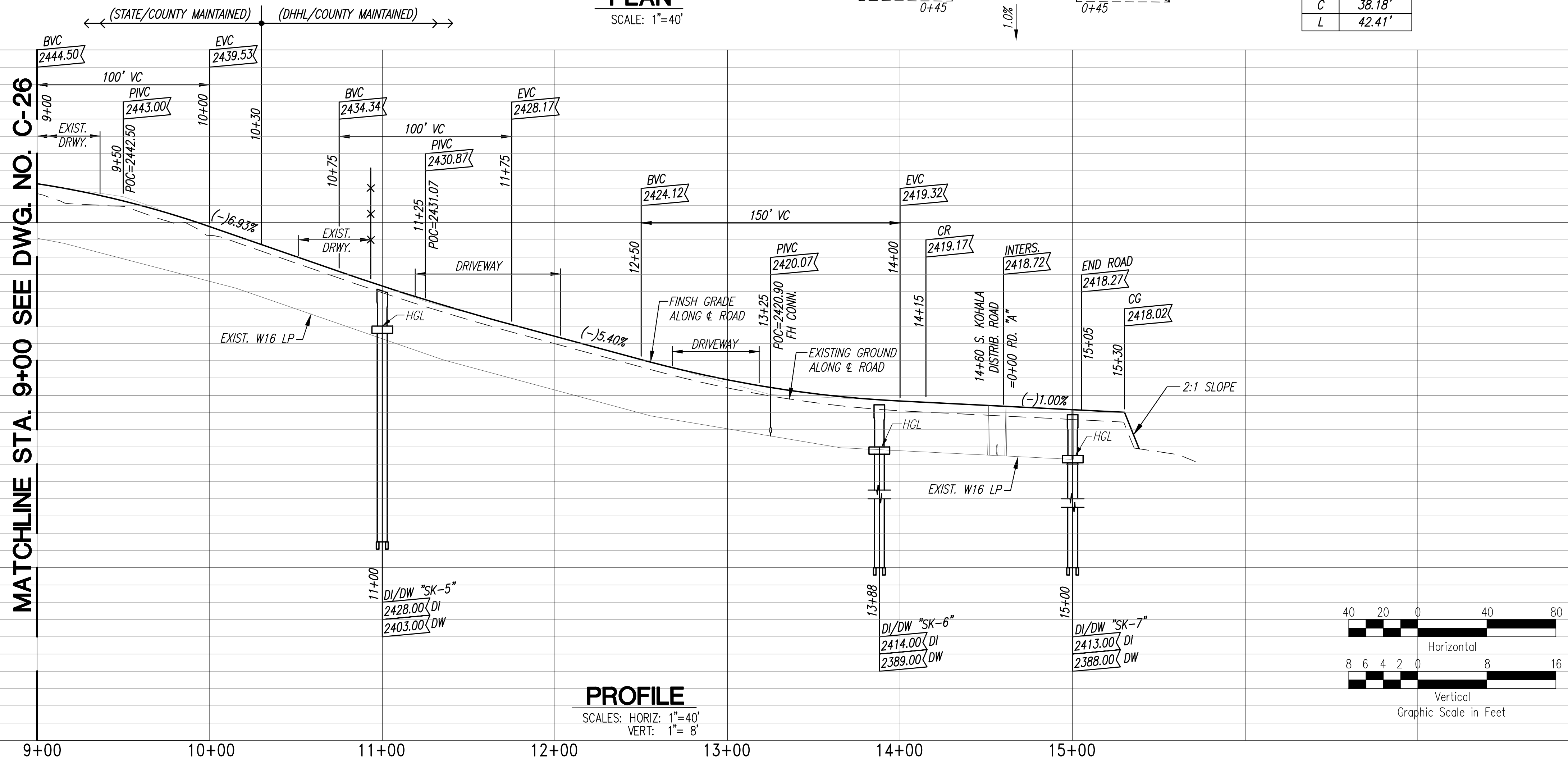
SUBD. FILE NO. SUB-07-000603
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (3) 6-6-01:10 & 77

DRAWN BY: LT, MFN	ENGINEER: VTF, MFC, LYT	CHECKED BY: RYS
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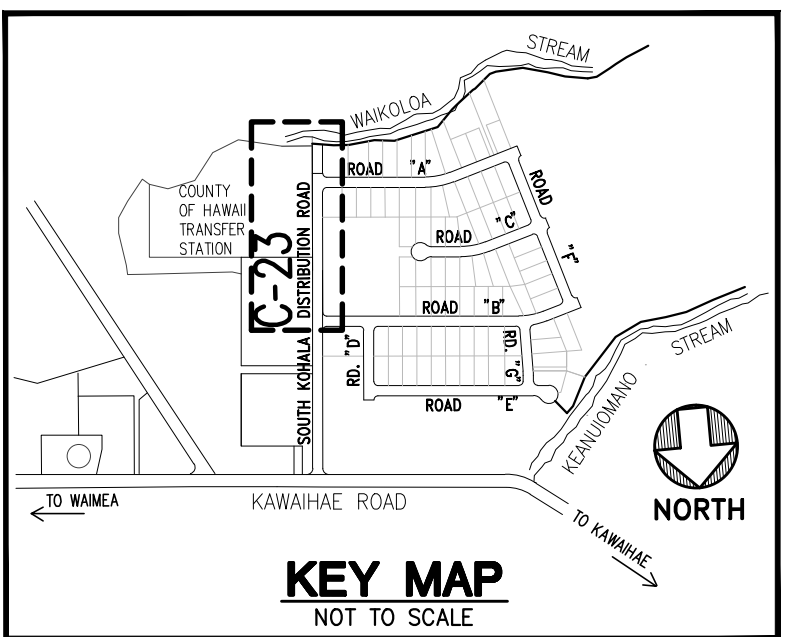
APPROVED: _____

FILE	POCKET	FOLDER	NO.


MATCHLINE STA. 9+00 SEE DWG. NO. C-26



	CURB DATA
CURVE	(1)
Δ	90°00'
$\Delta/2$	45°00'
R	27.00'
T	27.00'
C	38.18'
L	42.41'



- NOTES:**
1. RAISE EXIST. ARV AND VALVE BOX FRAME AND COVER ALONG EX. W16LP TO MATCH NEW FINISHED GRADE.
 2. SAWCUT ALL EXISTING PAVED DRIVEWAYS PRIOR TO ANY EXCAVATION WORK, PROVIDE SMOOTH RIDING PAVED CONNECTION, COORDINATE AND PROVIDE VEHICLE ACCESS TO PROPERTY DURING CONSTRUCTION.
 3. FOR TRANSFER STATION PLAN, SEE DWG. NO. C-30.

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
 Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
PLAN AND PROFILE SOUTH KOHALA DISTRIBUTION ROAD STA. 9+00 TO END			
DRAWN BY:	LT, WFN	ENGINEER:	VTF, MFC, LYT
		CHECKED BY:	RYS
APPROVED:			

FILE	POCKET	FOLDER	NO.

NOTES:

6" BED COURSE

- WHERE UTILITIES ARE WITHIN THE WATER TABLE, USE SIZE #67 (AASHTO M43).
- FOR ALL OTHER AREAS, BED COURSE MATERIAL SHALL BE TRENCH BACKFILL MATERIAL "A".

TRENCH BACKFILL MATERIAL "A"

- SAND EQUIVALENT (S.E.) ≥ 20
- 8" MAXIMUM LIFTS
- 95% COMPACTION

TRENCH BACKFILL MATERIAL "B"

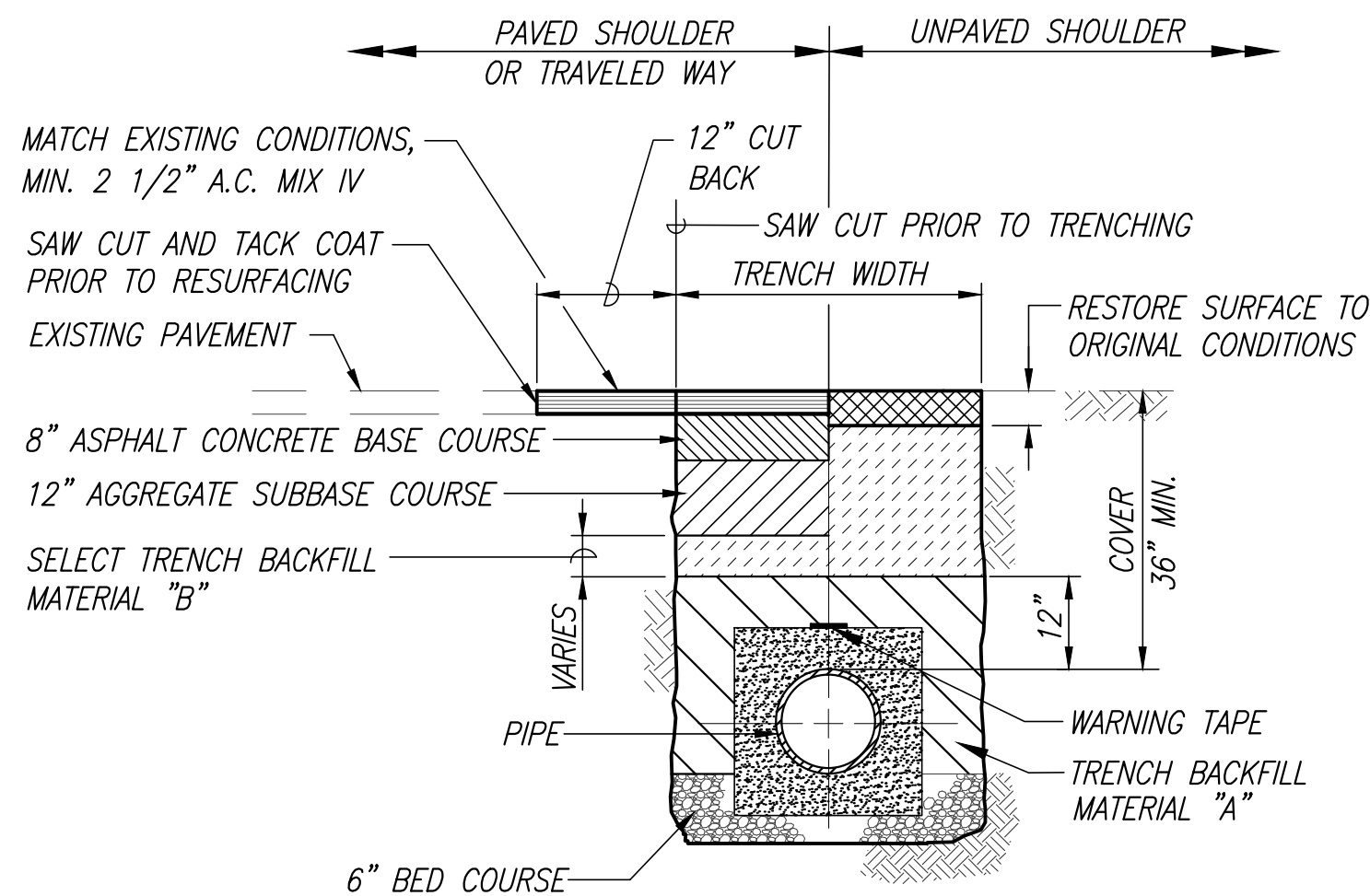
- S.E. MUST NOT BE LESS THAN THE AREA BEING FILLED AND IN NO CASE SHALL THE S.E. BE < 2 REGARDLESS OF WHERE IT IS USED.
- 8" MAXIMUM LIFTS
- 95% COMPACTION

SUBBASE COURSE

- S.E. ≥ 25
- 8" MAXIMUM LIFTS
- 95% COMPACTION

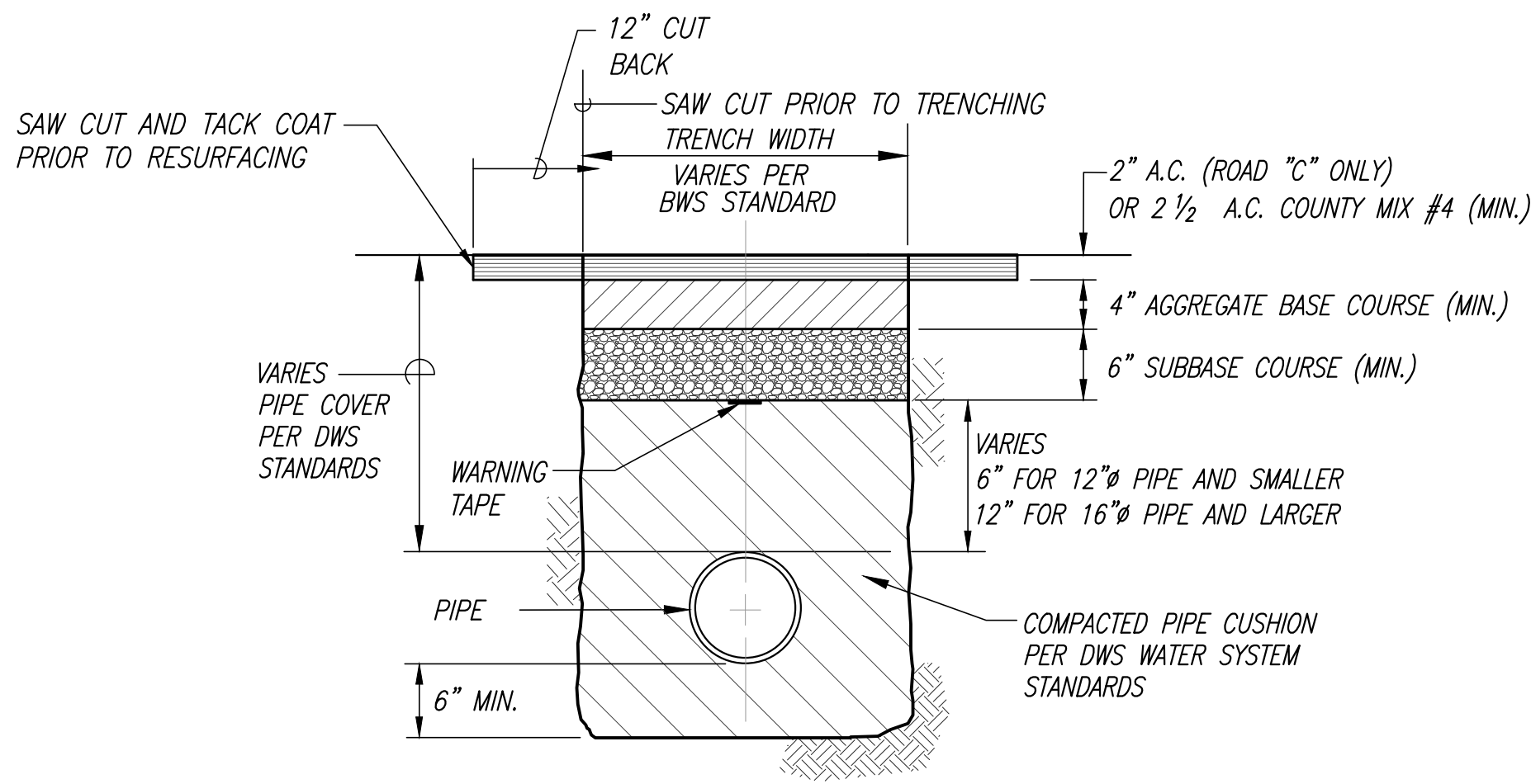
WATER SERVICE LATERAL CUSHION MATERIAL

- PROVIDE 6" MINIMUM CUSHION MATERIAL AROUND WATER SERVICE LATERALS.
- CUSHION MATERIAL SHALL BE NO. 4 SAND OR OTHER MATERIAL APPROVED BY THE COUNTY OF HAWAII, DEPARTMENT OF WATER SUPPLY.



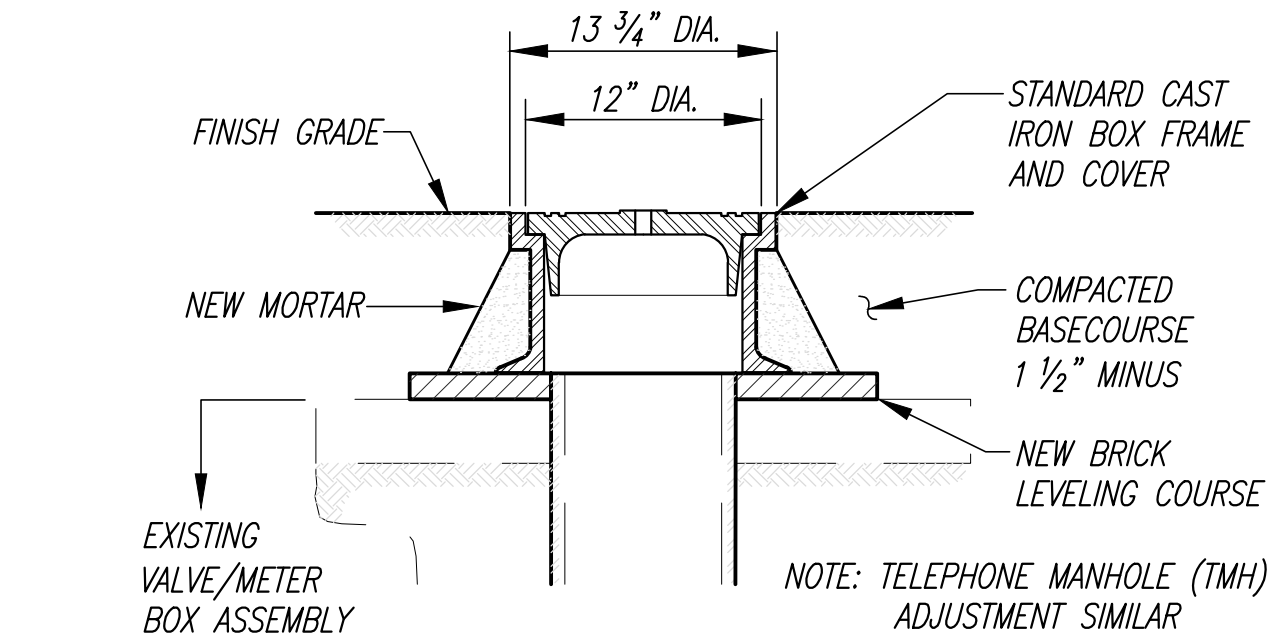
TYPICAL TRENCH AND PAVEMENT REPAIR DETAIL (STATE HIGHWAYS)

NOT TO SCALE



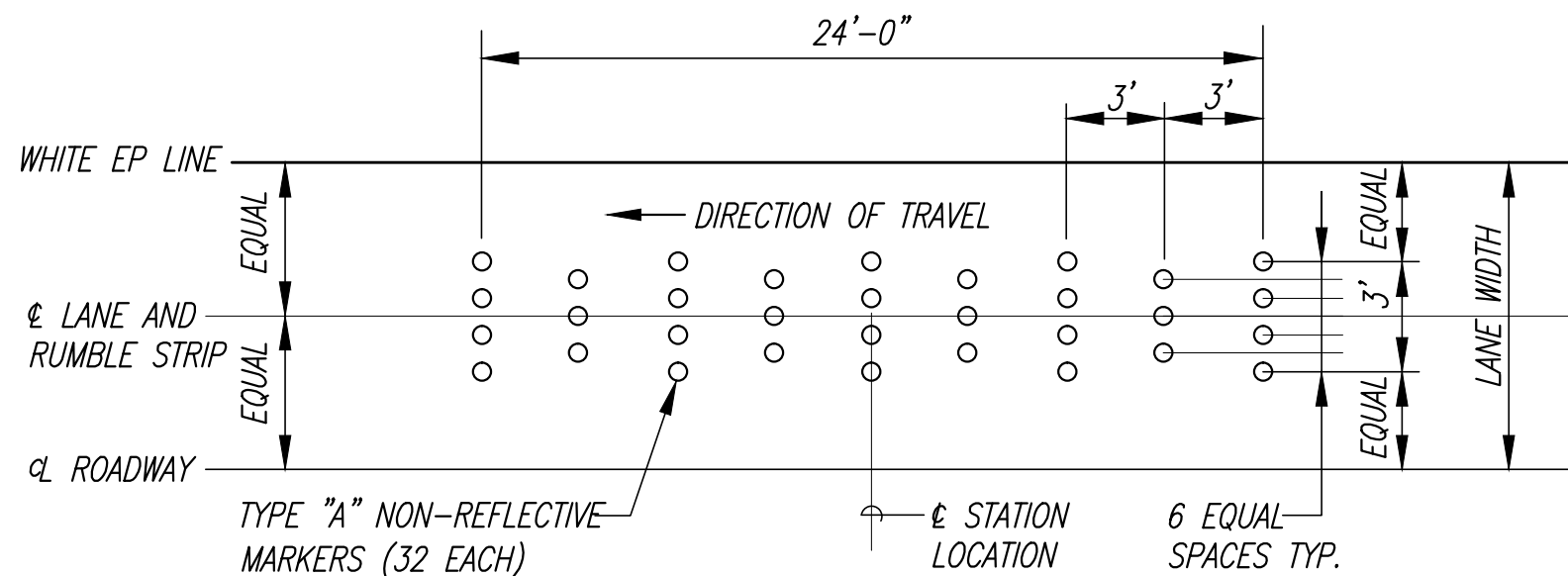
**ROADWAY TRENCH AND RESTORATION DETAIL
WITHIN COUNTY OF HAWAII ROW**

NOT TO SCALE



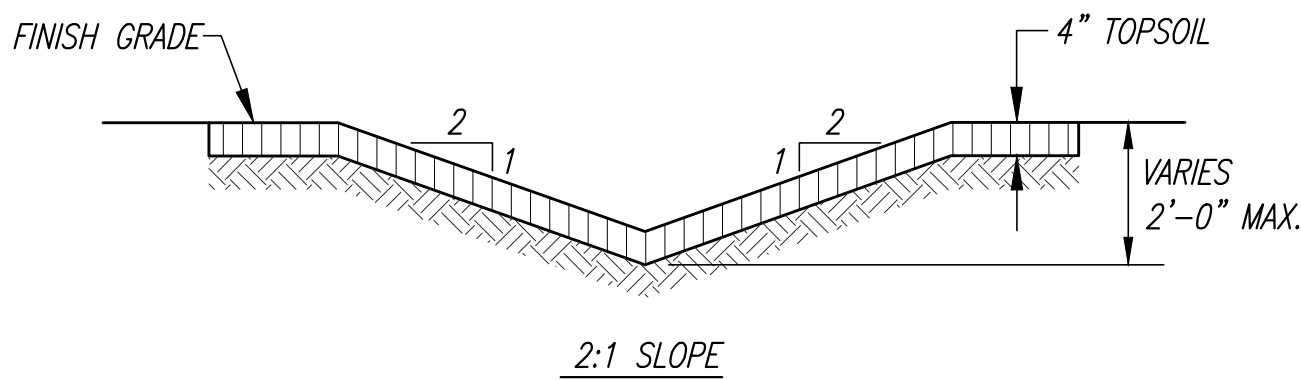
VALVE / METER BOX ADJUSTMENT

NOT TO SCALE



RUMBLE STRIP DETAIL

NOT TO SCALE

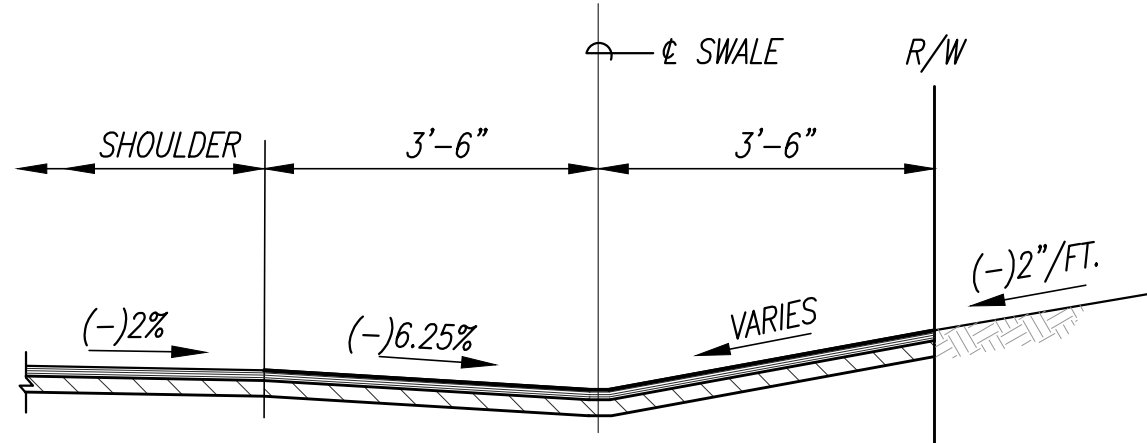


**TYPICAL GRASSED SWALE SECTION
FOR LOT DRAINAGE**

NOT TO SCALE

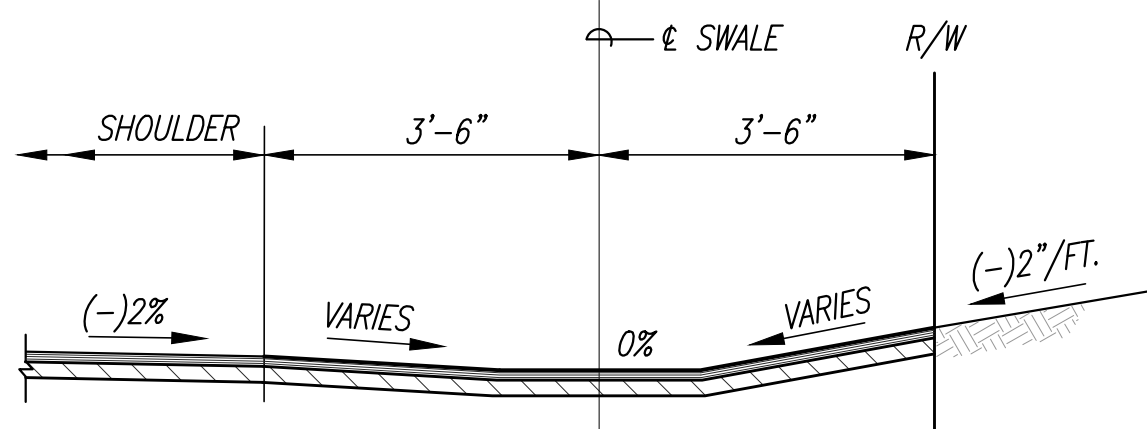
NOTES:

- WHERE AN EXISTING DRIVEWAY IS UNPAVED, THE DRIVEWAY SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING DRIVEWAY.
- CONTRACTOR SHALL NOTIFY THE OWNER OF THE DRIVEWAY 48 HOURS BEFORE THE COMMENCEMENT OF ANY WORK.
- AREAS WITH PAVEMENT/GEOTEXTILE FABRIC SHALL BE RESTORED AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS.
- EXCEPT FOR TRENCHING PERPENDICULAR TO THE CENTERLINE, THE CONTRACTOR SHALL RESURFACE THE ENTIRE LANE OF ANY TRAVELED LANE TRENCHED OR DAMAGED BY THE CONTRACTOR AS A RESULT OF THE PROPOSED WORK. COLD PLANING OF EXISTING PAVEMENT WILL BE REQUIRED BEFORE FINAL PAVEMENT RESTORATION.



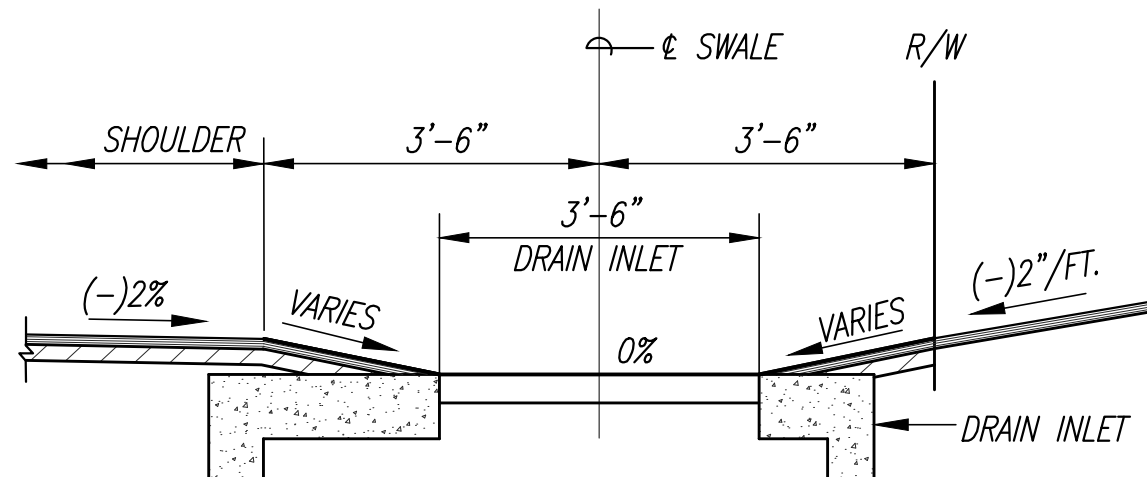
SECTION "A"- "A"

SCALE: 1/2" = 1'-0"



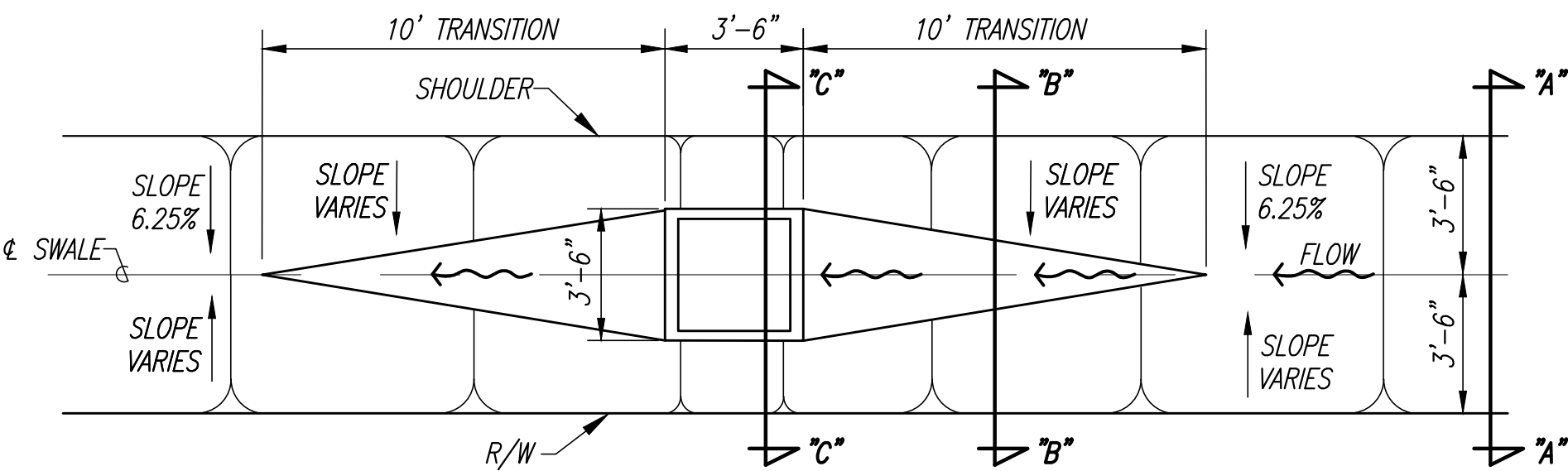
SECTION "B"- "B"

SCALE: 1/2" = 1'-0"



SECTION "C"- "C"

SCALE: 1/2" = 1'-0"

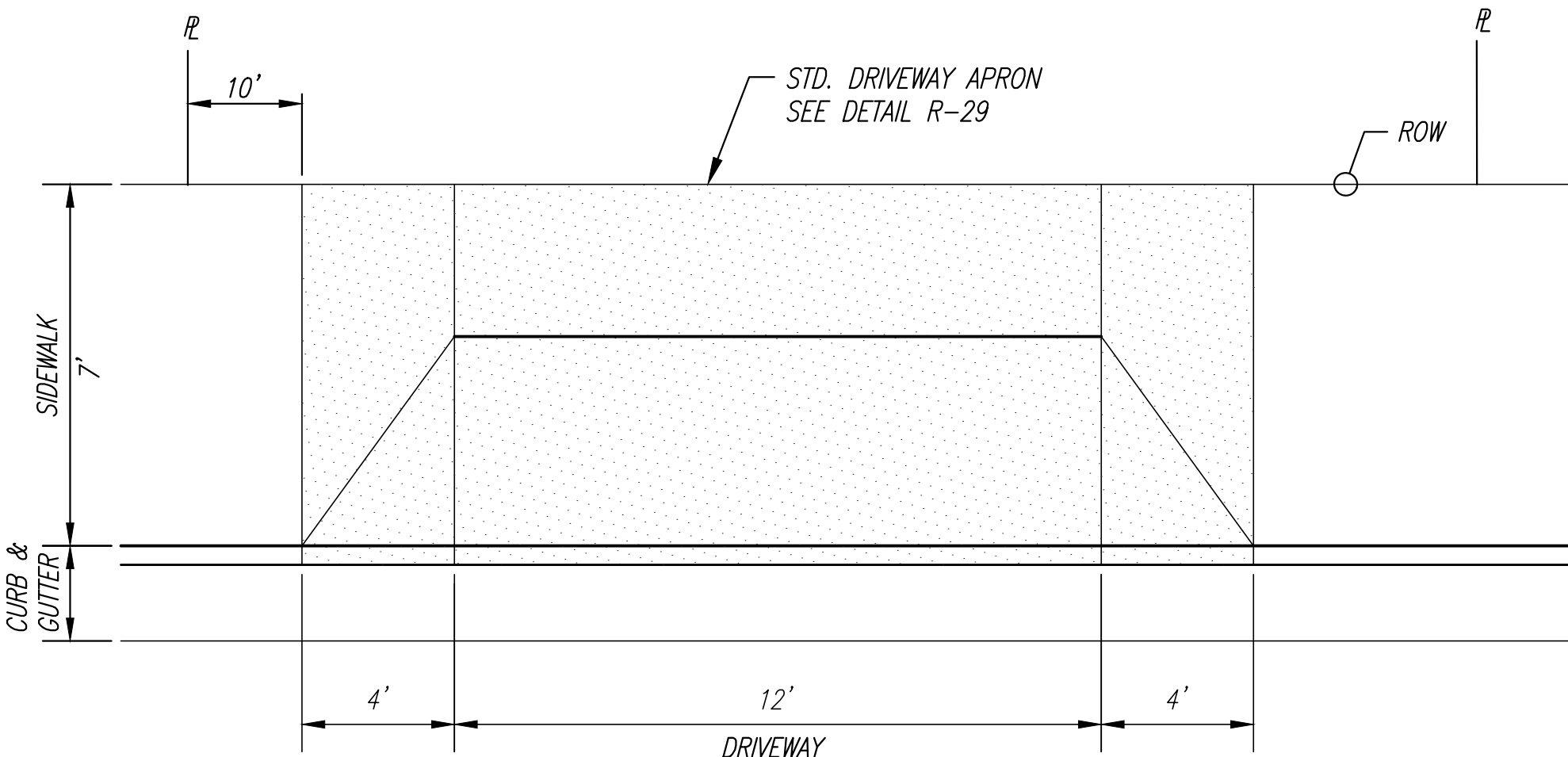


PLAN

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

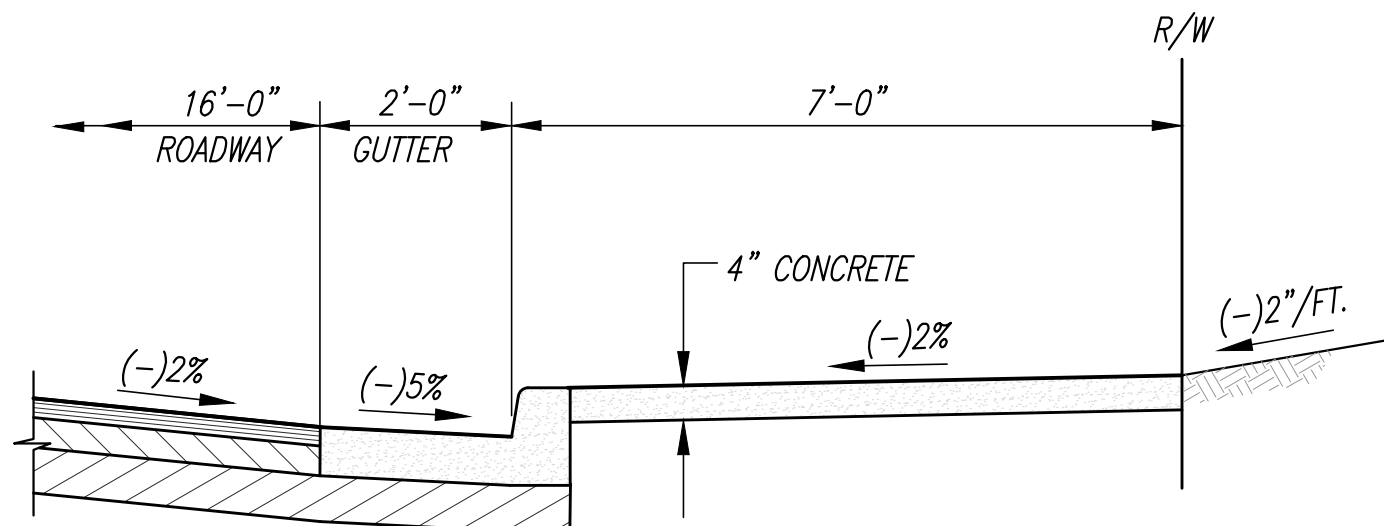
SWALE TRANSITION FOR DRAIN INLET

AS SHOWN



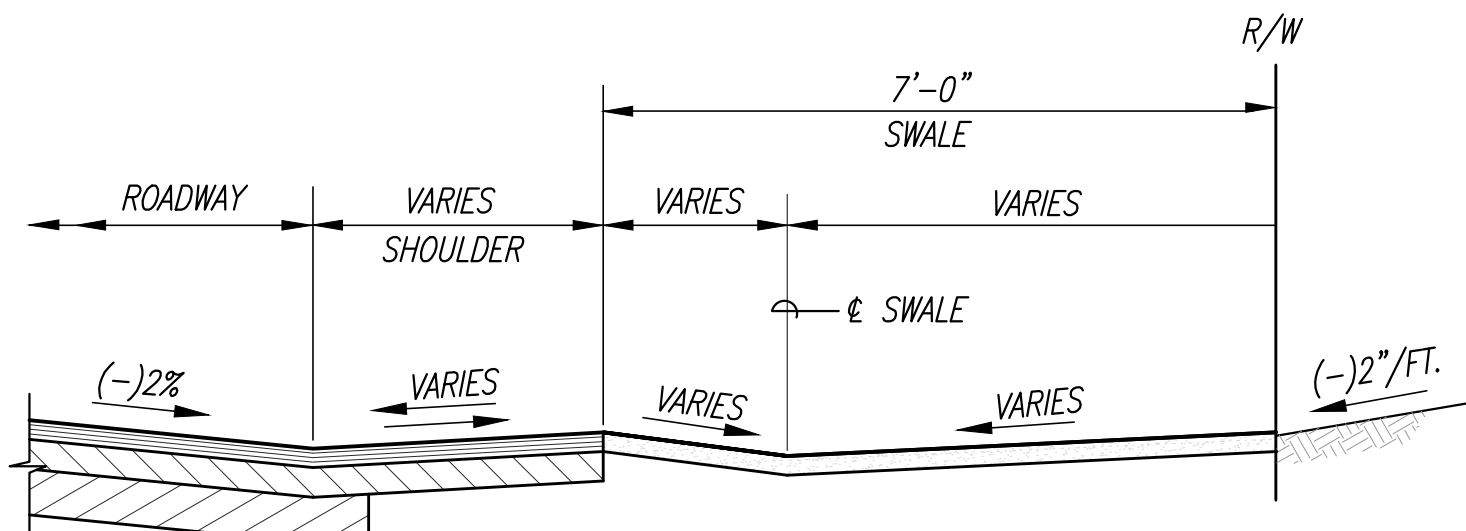
TYPICAL DRIVEWAY DETAIL

NOT TO SCALE



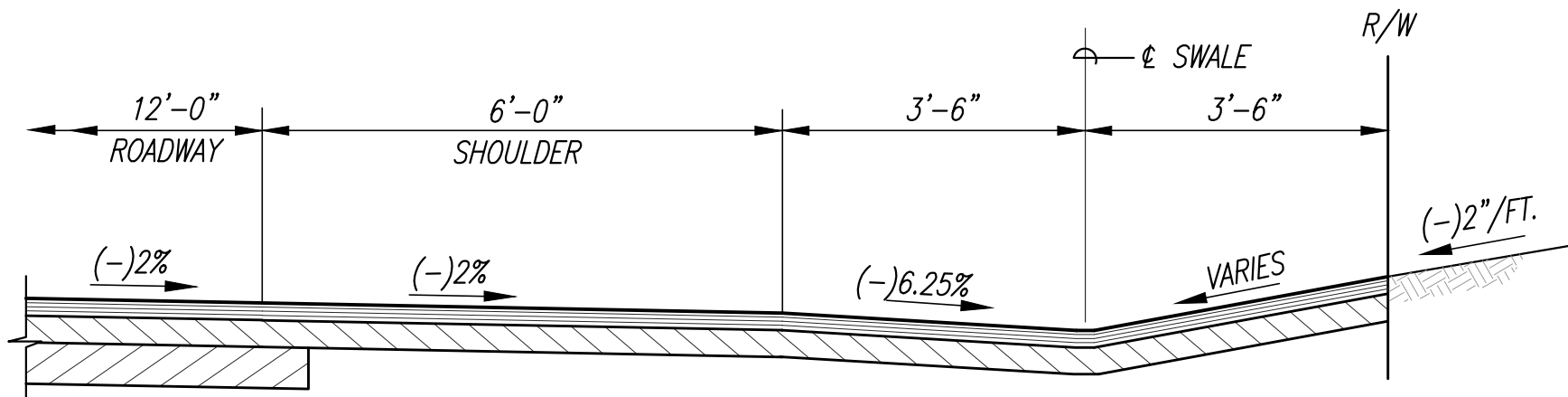
SECTION "D"- "D"

SCALE: 1/2" = 1'-0"



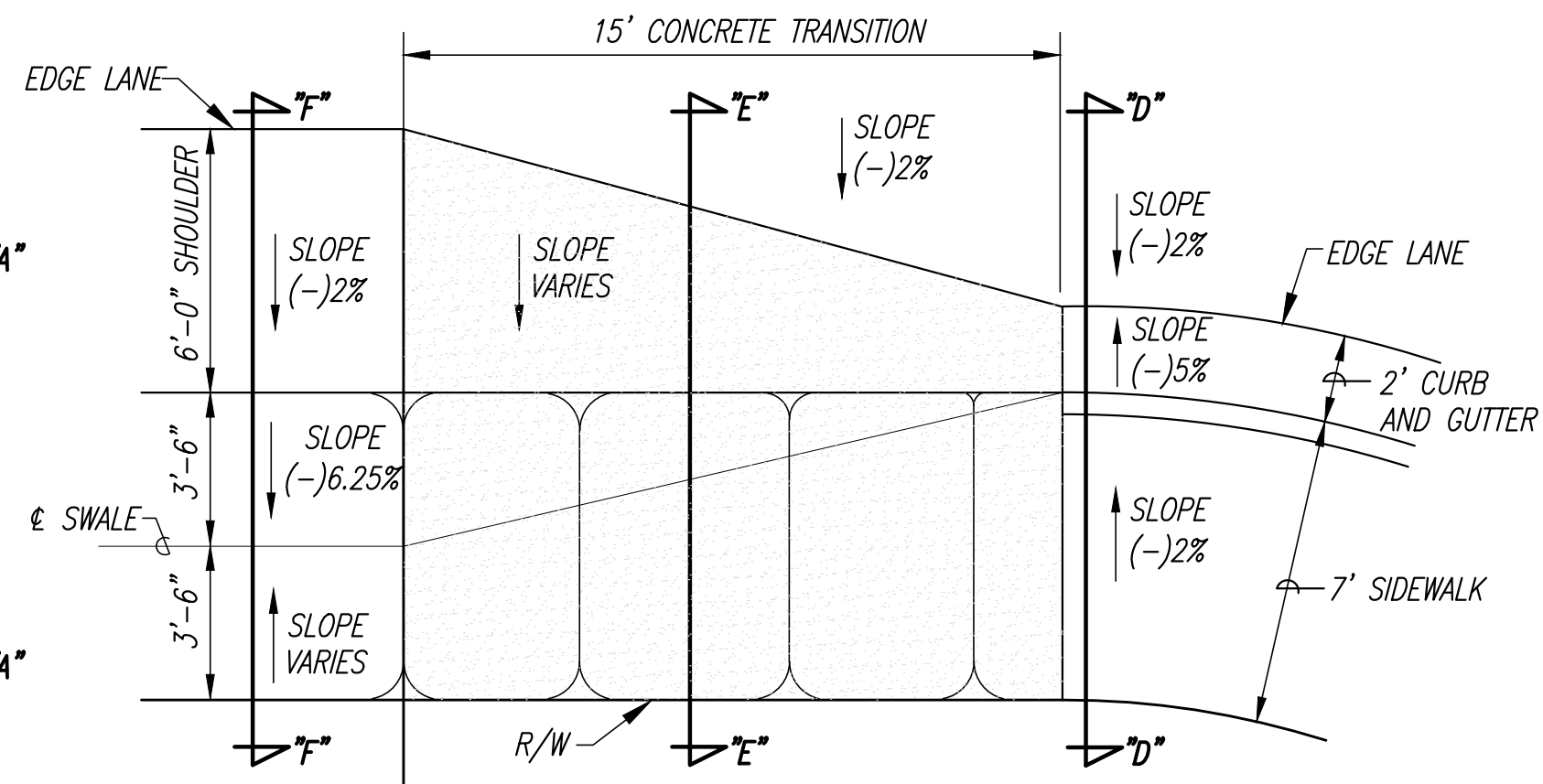
SECTION "E"- "E"

SCALE: 1/2" = 1'-0"



SECTION "F"- "F"

SCALE: 1/2" = 1'-0"



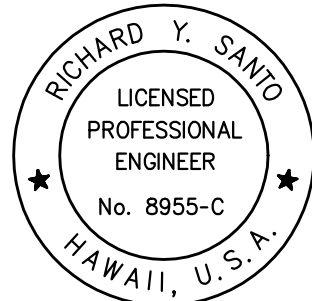
PLAN

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

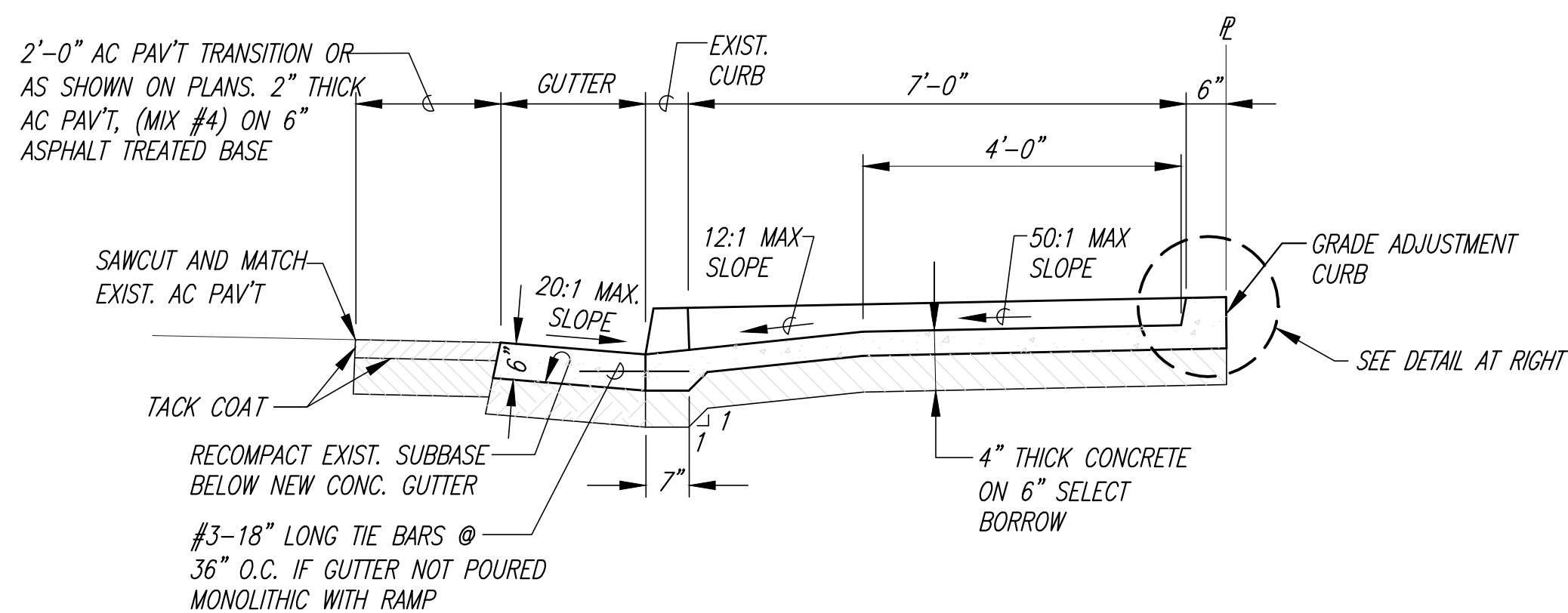
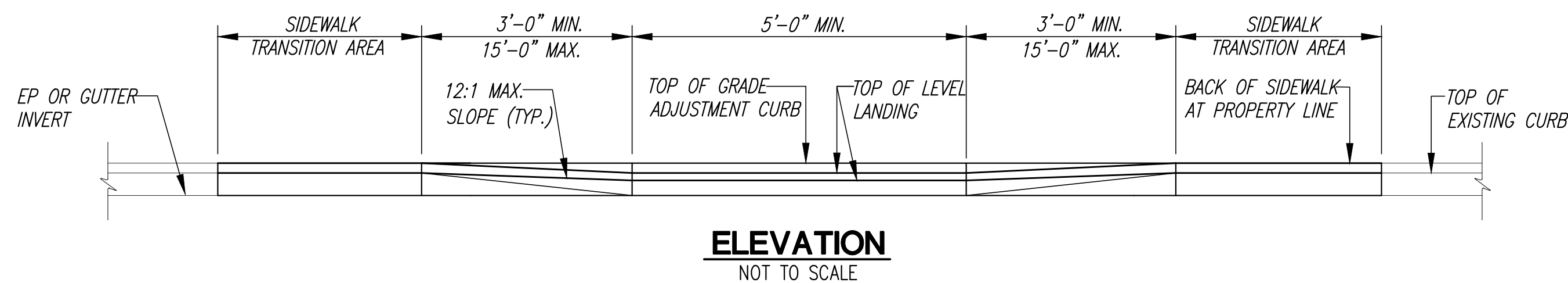
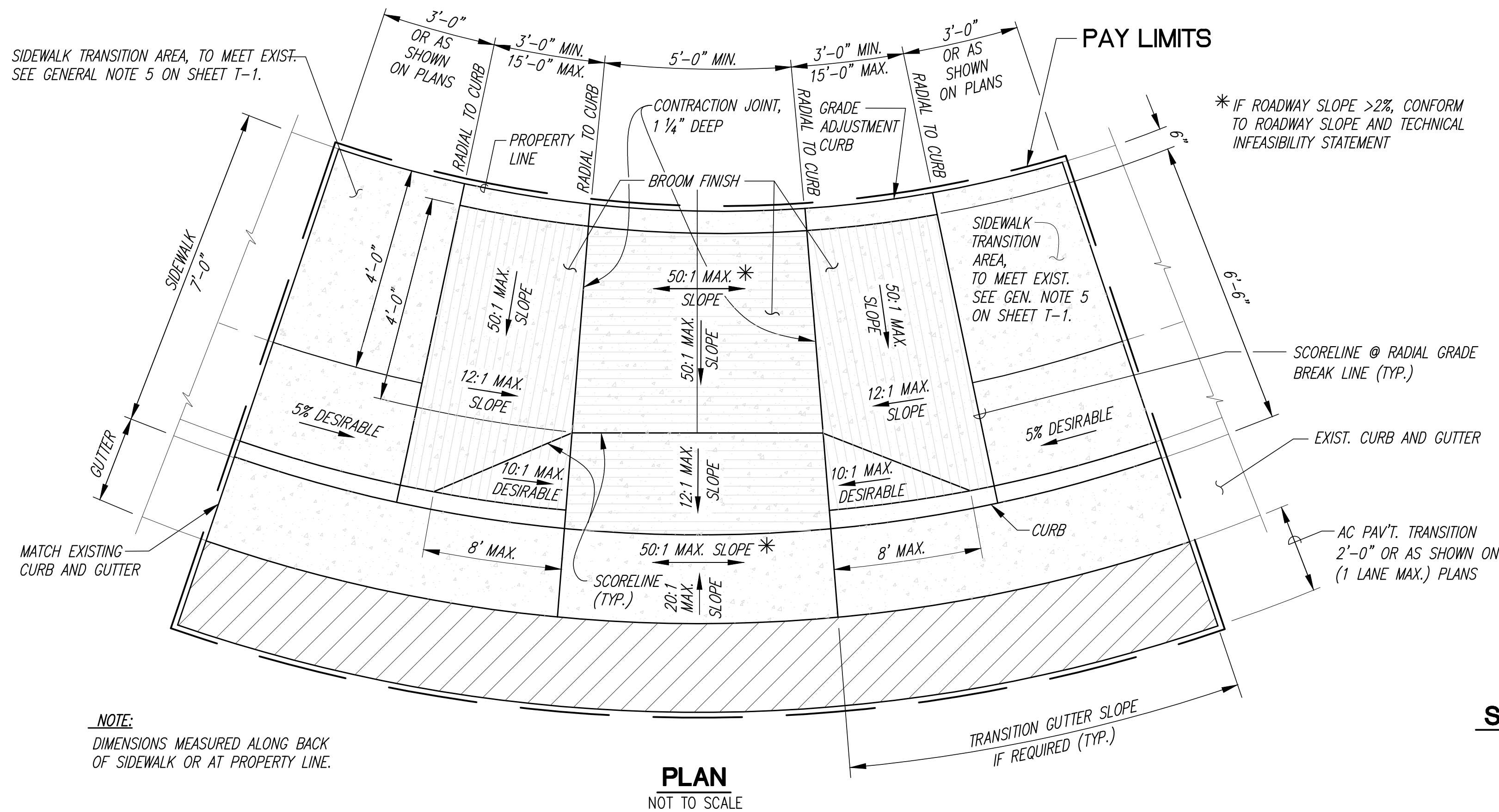
CURB AND GUTTER/ SWALE TRANSITION

AS SHOWN

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
MISCELLANEOUS DETAILS			
DRAWN BY: LT	ENGINEER: LTY	CHECKED BY: RYS	
APPROVED:			

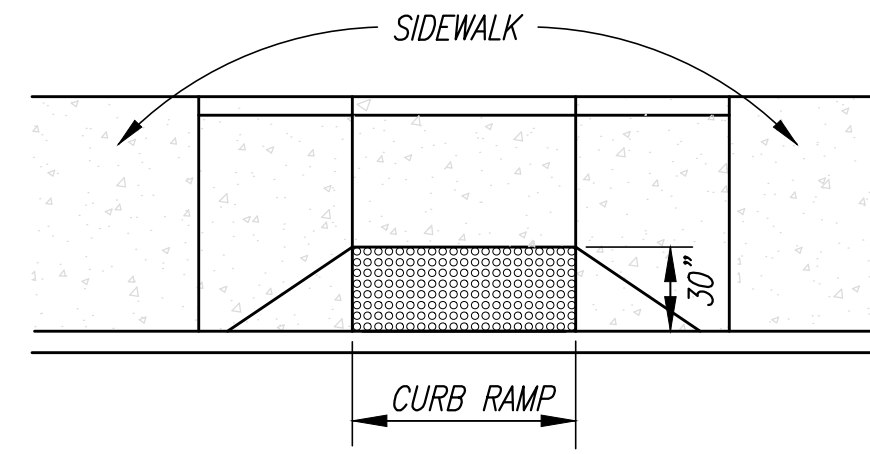


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

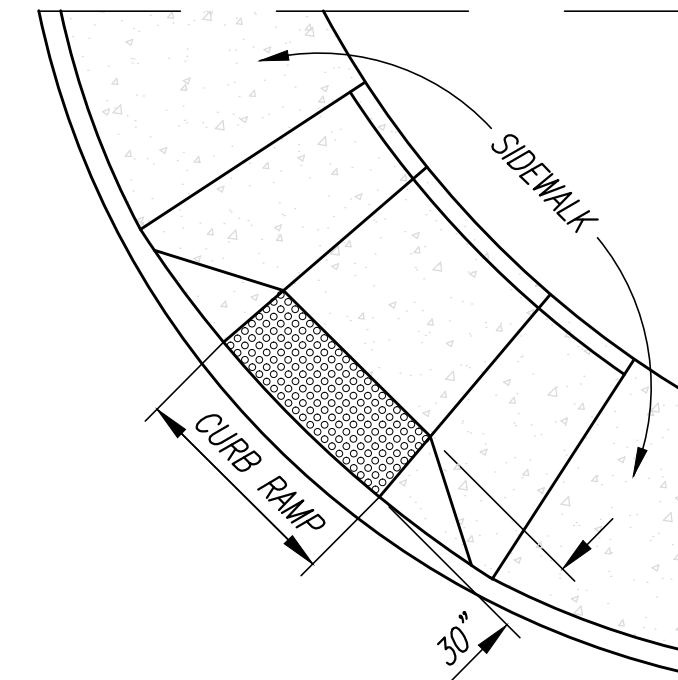


SECTION AT LANDING
NOT TO SCALE

CURB RAMP - TYPE "B" (TRUNCATED)
NOT TO SCALE

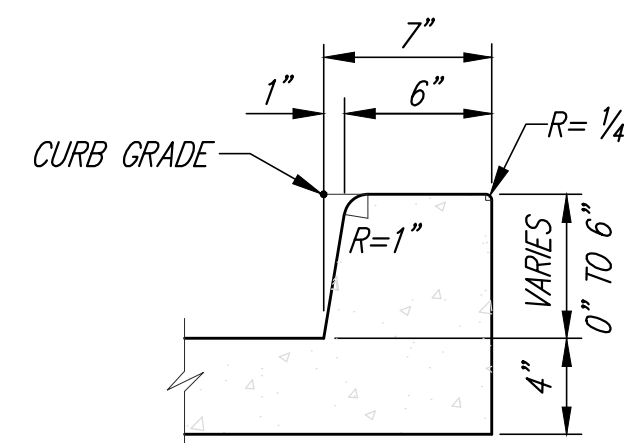


DETECTABLE WARNING AT CURB RAMP
NOT TO SCALE

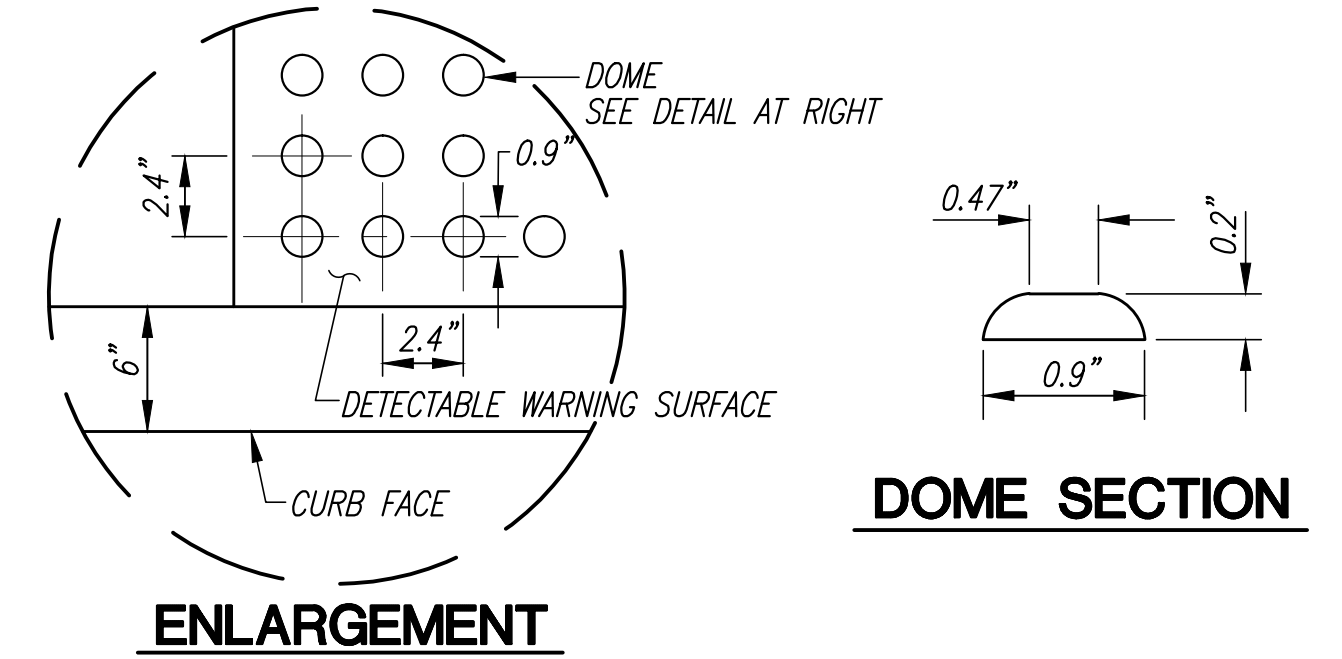


SHARED CURB RAMP WITH DETECTABLE WARNING
NOT TO SCALE

TYPICAL INSTALLATION OF DETECTABLE WARNINGS
NOT TO SCALE



DETAIL - GRADE ADJUSTMENT CURB
NOT TO SCALE



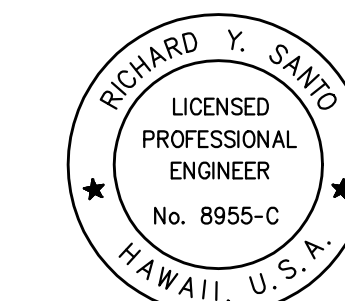
DETECTABLE WARNING DETAIL
NOT TO SCALE

CURB RAMP GENERAL NOTES

- THE CONSTRUCTION TOLERANCES FOR ADA CURB RAMP SLOPES PROVIDED IN THE SP SECTION FOR CURB RAMP SLOPES, WILL BE APPLIED, AS APPLICABLE, TO THE SLOPES REFLECTED ON THE PROJECT'S CURB RAMP DETAILS.
- FOR CURB RAMP AT CURB RETURNS, INSTALL EXPANSION JOINTS PER STANDARD DETAIL R-27, FULL WIDTH SIDEWALK AT CURB RETURN. EXPANSION JOINTS WILL NOT BE MEASURED SEPARATELY FOR PAYMENT. EXPANSION JOINTS SHALL BE CONSIDERED INCIDENTAL TO THE CURB RAMP CONTRACT ITEMS.
- WHEN DIRECTED BY THE ENGINEER, SIDEWALK TRANSITION AREA SHALL BE EXTENDED BEYOND SHOWN PLAN LIMITS TO MATCH THE NEAREST SCORELINE.
- UTILITY BOXES WITHIN CURB RAMP SLOPES SHALL BE REINFORCED PER STANDARD DETAIL R-16, SIDEWALK REINFORCEMENT DETAILS AT UTILITY BOXES OF OPENINGS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS FOR ADJUSTMENT OF EXISTING UTILITIES TO NEW GRADES.

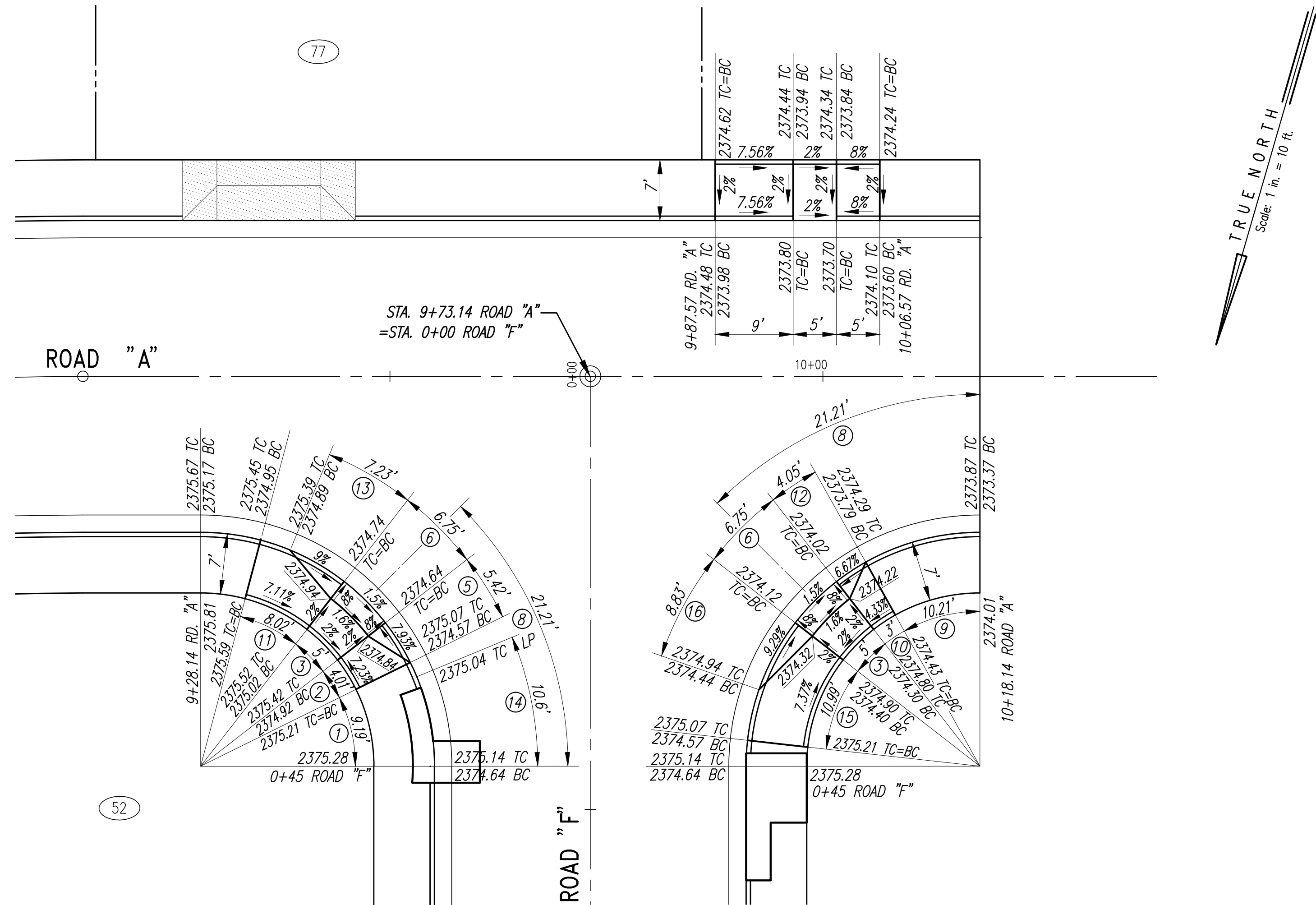
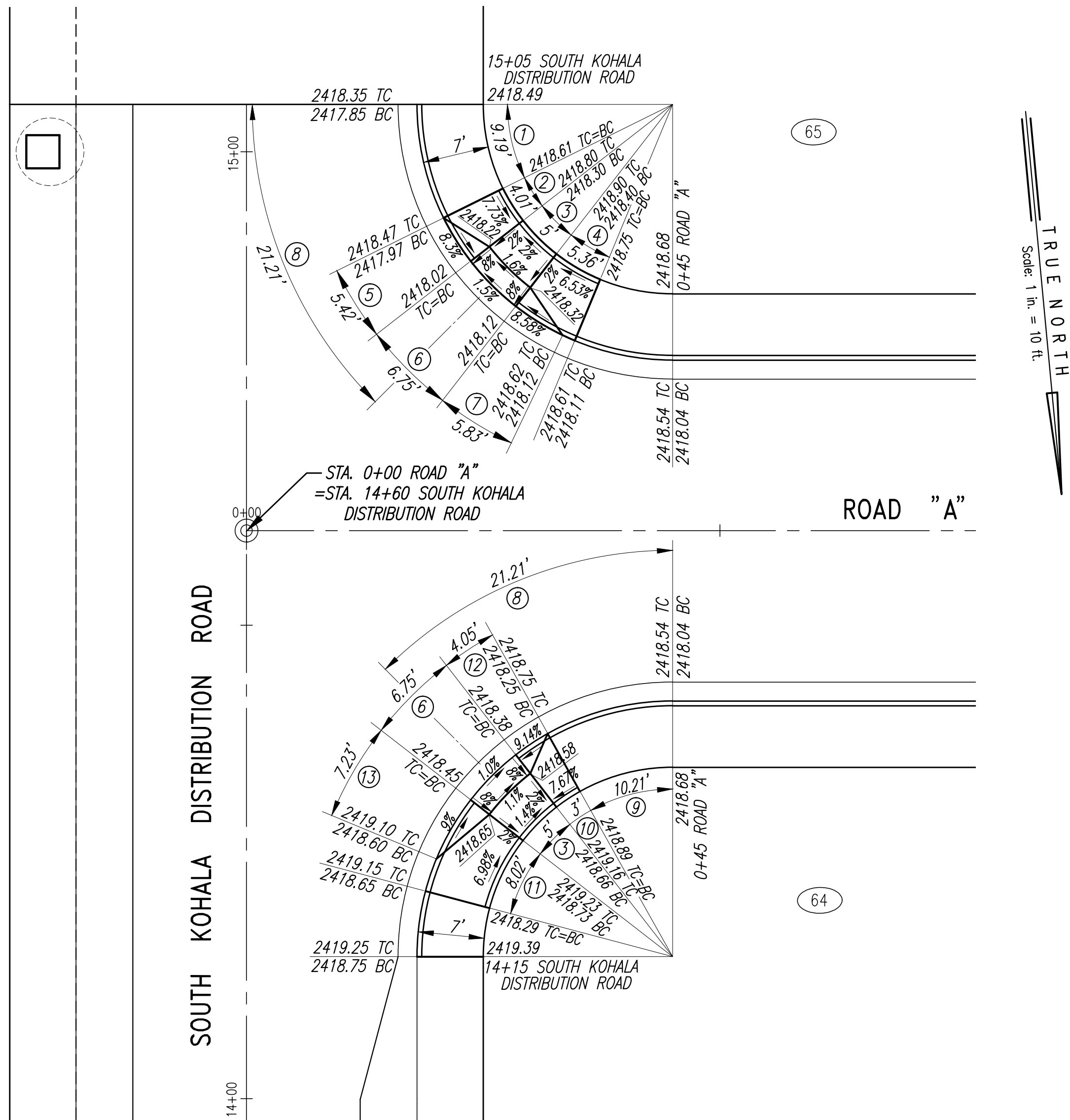
DETECTABLE WARNING NOTES:

- DETECTABLE WARNINGS SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE (DOES NOT INCLUDE FLARES).
- TRUNCATED DOMES SHALL HAVE A DIAMETER OF 0.9 INCH AT THE BOTTOM, A DIAMETER OF 0.4 INCH AT THE TOP, A HEIGHT OF 0.2 INCH AT THE BOTTOM, A DIAMETER OF 2.35 INCHES MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT.
- DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN THE DOMES.
- THERE SHALL BE A MINIMUM OF 70 PERCENT CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE, OR THE DETECTABLE WARNING SHALL BE "SAFETY YELLOW".
- THE MATERIAL USED TO PROVIDE VISUAL CONTRAST SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.
- THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES FROM THE CURBLINE OR OTHER POTENTIAL HAZARD, SUCH AS A REFLECTING POOL EDGE OR THE EDGE OF A TRANSIT PLATFORM.



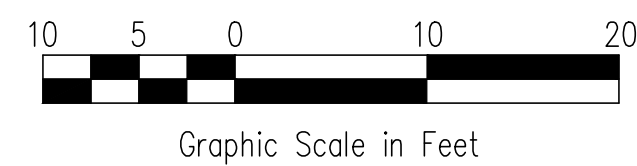
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
08/01/12	PHASE 2A, INCREMENT 1	LT	WFC
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
TYPICAL CURB RAMP DETAILS			
DRAWN BY:	LT, WFN	ENGINEER:	WFC
CHECKED BY:	RYS	APPROVED:	



CURVE DATA									
CURVE	①	②	③	④	⑤	⑥	⑦	⑧	CURVE
Δ	26°19'39"	11°29'16"	14°19'26"	15°21'19"	11°29'16"	14°19'26"	12°22'15"	45°00'00"	Δ
Δ/2	13°09'49.5"	5°44'38"	7°09'43"	7°40'39.5"	5°44'38"	7°09'43"	6°11'07.5"	22°30'00"	Δ/2
R	20.00'	20.00'	20.00'	20.00'	27.00'	27.00'	27.00'	27.00'	R
T	4.68'	2.01'	2.51'	2.70'	2.72'	3.39'	2.93'	11.18'	T
C	9.11'	4.00'	4.99'	5.34'	5.40'	6.73'	5.82'	20.66'	C
L	9.19'	4.01'	5.00'	5.36'	5.42'	6.75'	5.83'	21.21'	L

CURVE DATA									
CURVE	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯	CURVE
Δ	29°14'58"	8°35'40"	22°58'32"	8°35'40"	15°20'33"	22°29'38"	31°29'02"	18°44'09"	Δ
Δ/2	14°37'29"	4°17'50"	11°29'16"	4°17'50"	7°40'16.5"	11°14'49"	15°44'31"	9°22'04.5"	Δ/2
R	20.00'	20.00'	20.00'	27.00'	27.00'	27.00'	20.00'	27.00'	R
T	5.22'	1.50'	4.07'	2.03'	3.64'	5.37'	5.64'	4.54'	T
C	10.10'	3.00'	7.97'	4.05'	7.21'	10.53'	10.85'	8.79'	C
L	10.21'	3.00'	8.02'	4.05'	7.23'	10.60'	10.99'	8.83'	L

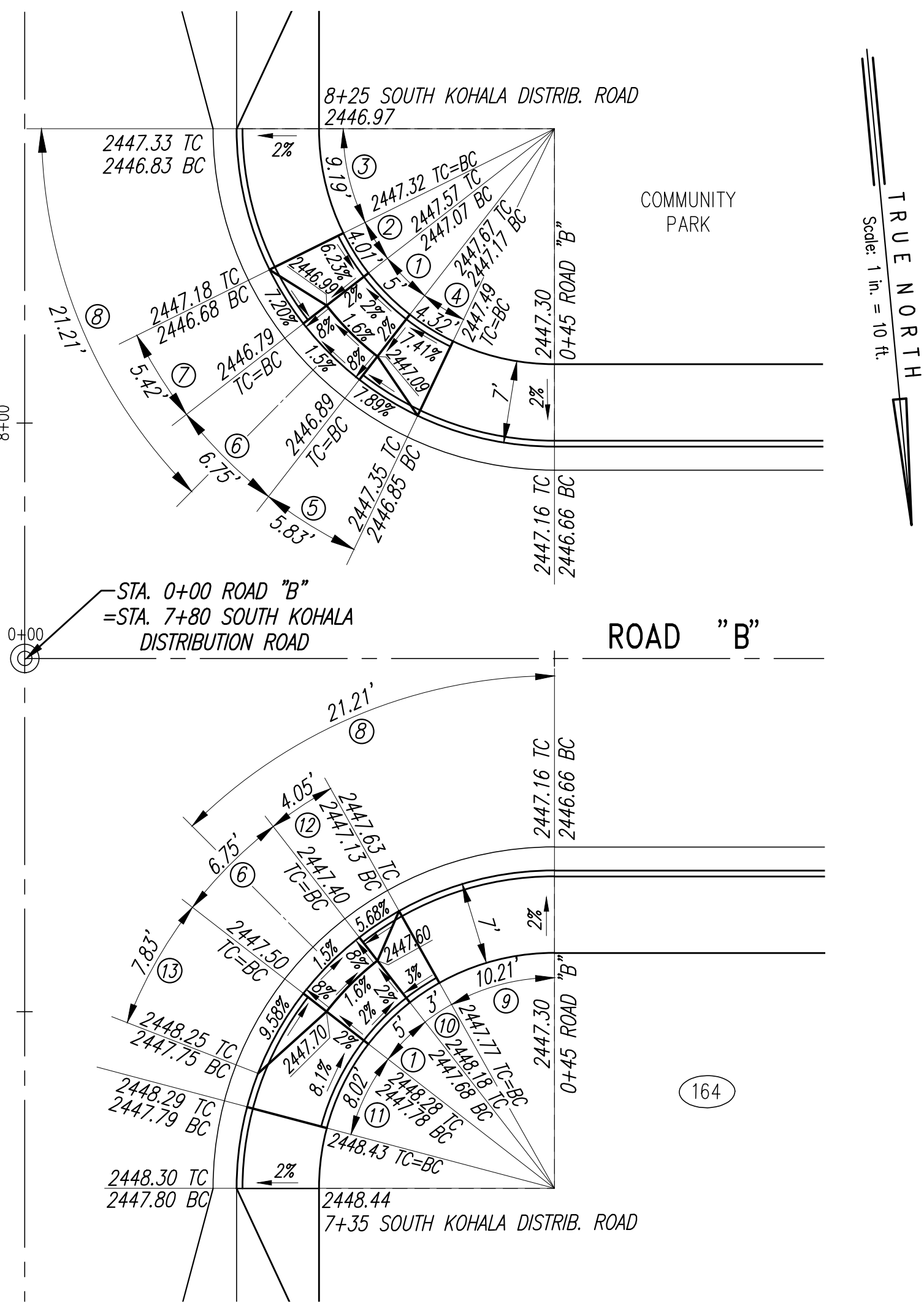


RICHARD Y. SANO
LICENSED
PROFESSIONAL
ENGINEER
No. 8955-C
HAWAII, U.S.A.

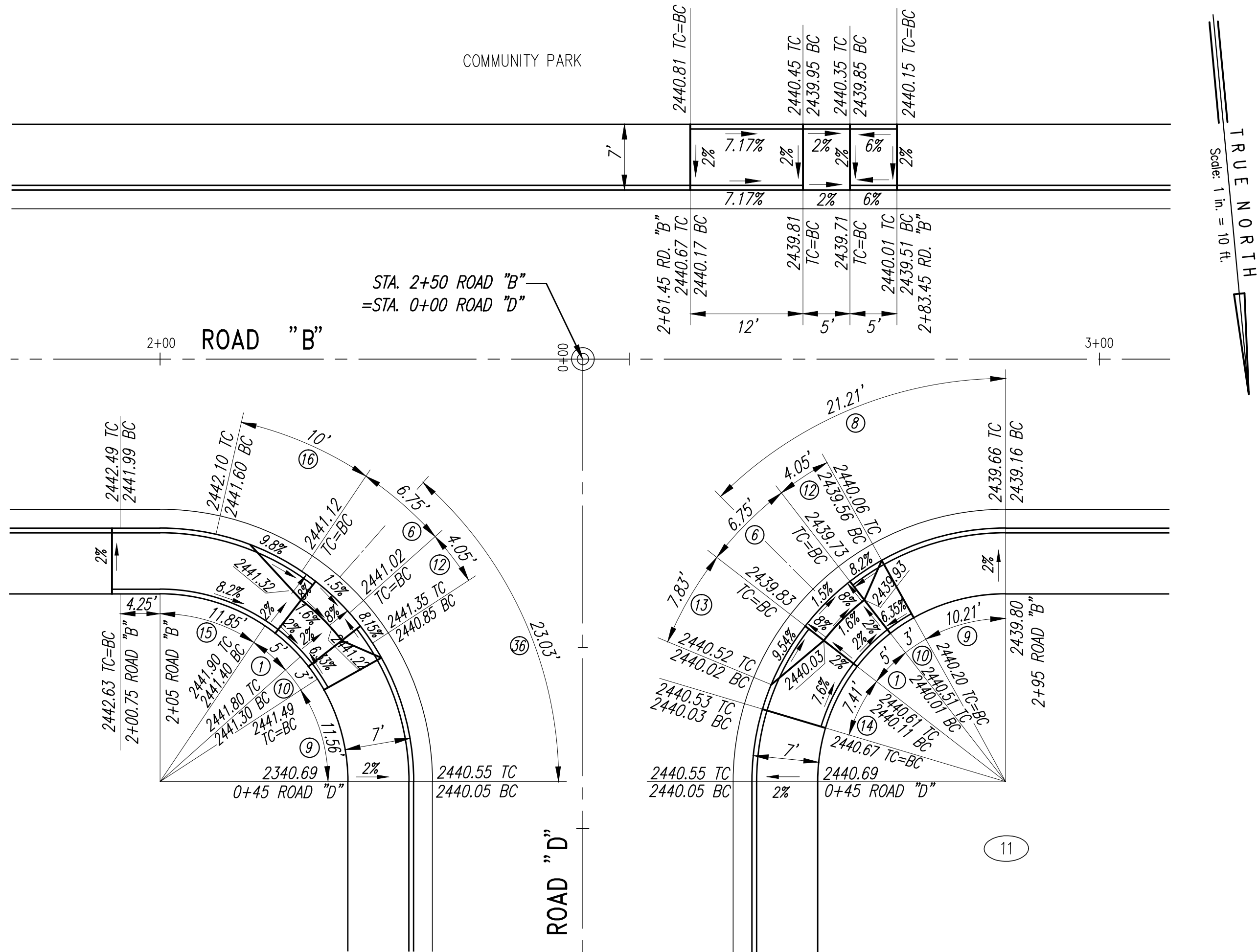
THIS WORK WAS PREPARED BY
ME, OR UNDER MY SUPERVISION,
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
CURB RAMP DETAILS - 1			
DRAWN BY: LT	ENGINEER: MFC	CHECKED BY: RYS	
APPROVED:			

SOUTH KOHALA DISTRIBUTION ROAD



COMMUNITY PARK



CURVE DATA							
CURVE	①	②	③	④	⑤	⑥	⑦
Δ	14°19'26"	11°29'19"	26°19'37"	12°22'29"	12°22'29"	14°19'26"	11°29'19"
Δ/2	7°09'43"	5°44'39.5"	13°09'48.5"	6°11'14.5"	6°11'14.5"	7°09'43"	5°44'39.5"
R	20.00'	20.00'	20.00'	20.00'	20.00'	27.00'	27.00'
T	2.51'	2.01'	4.68'	2.17'	2.93'	3.39'	2.72'
C	4.99'	4.00'	9.11'	4.32'	5.82'	6.73'	5.41'
L	5.00'	4.01'	9.19'	4.32'	5.83'	6.75'	5.42'

CURVE DATA							
CURVE	⑧	⑨	⑩	⑪	⑫	⑬	⑭
Δ	45°00'00"	33°06'59"	8°36'09"	22°58'47"	8°36'09"	16°37'00"	21°13'41"
Δ/2	22°30'00"	16°33'29.5"	4°18'04.5"	11°29'23.5"	4°18'04.5"	8°18'30"	10°36'50.5"
R	27.00'	20.00'	20.00'	20.00'	20.00'	27.00'	20.00'
T	11.18'	5.95'	1.50'	4.07'	2.03'	3.94'	3.75'
C	20.66'	10.40'	3.00'	7.97'	4.05'	7.80'	7.37'
L	21.21'	10.56'	3.00'	8.02'	4.05'	7.83'	7.41'

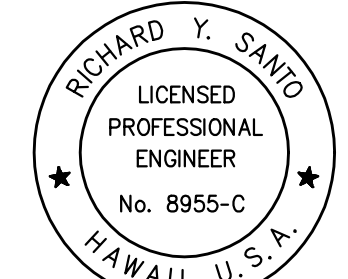
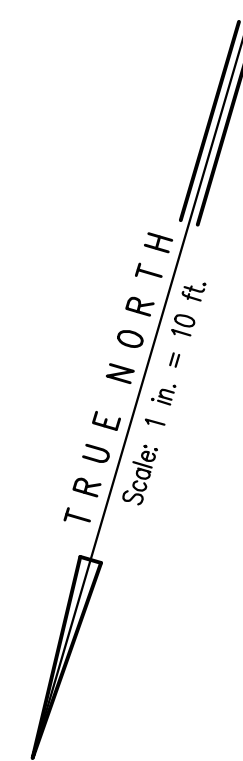
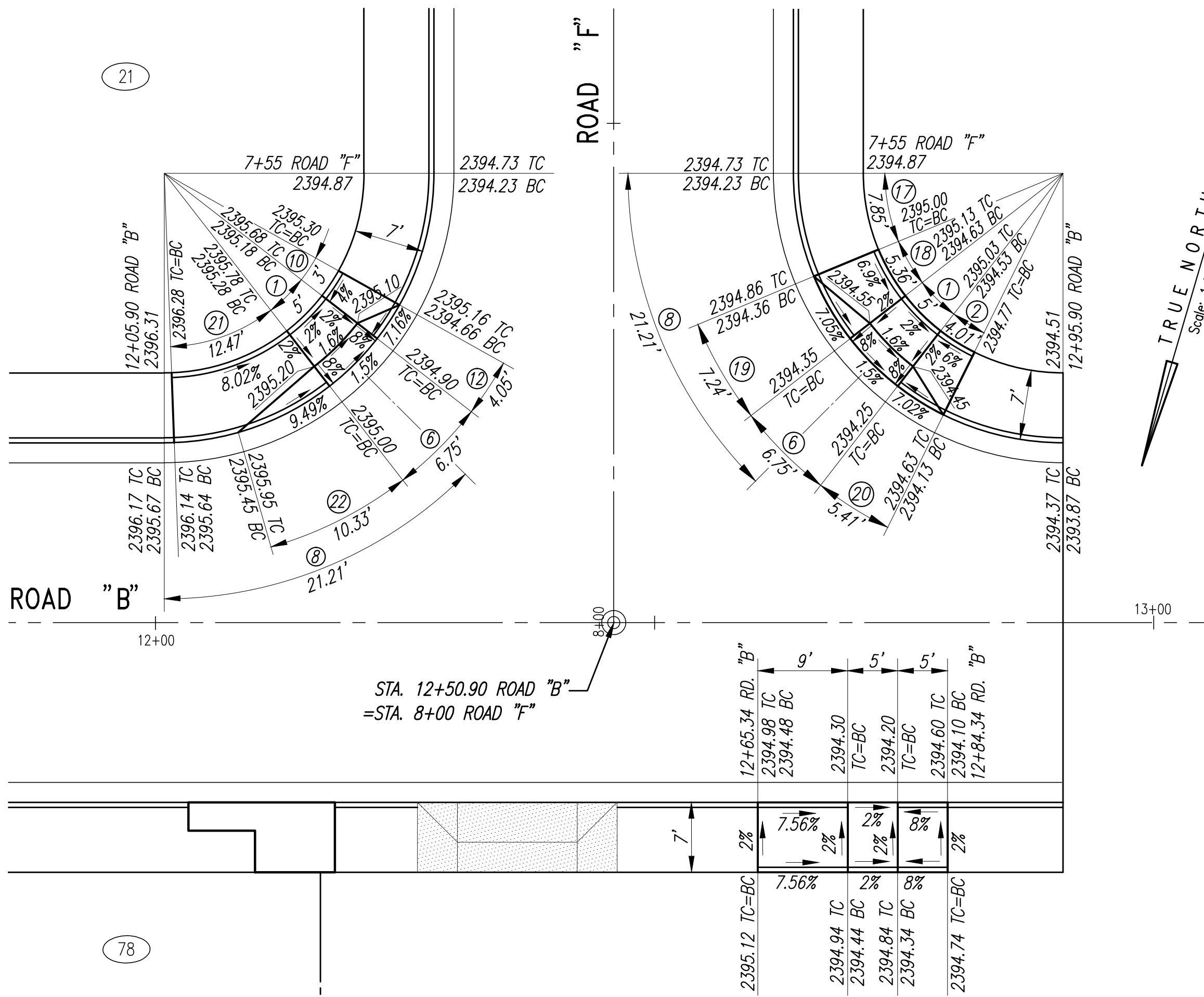
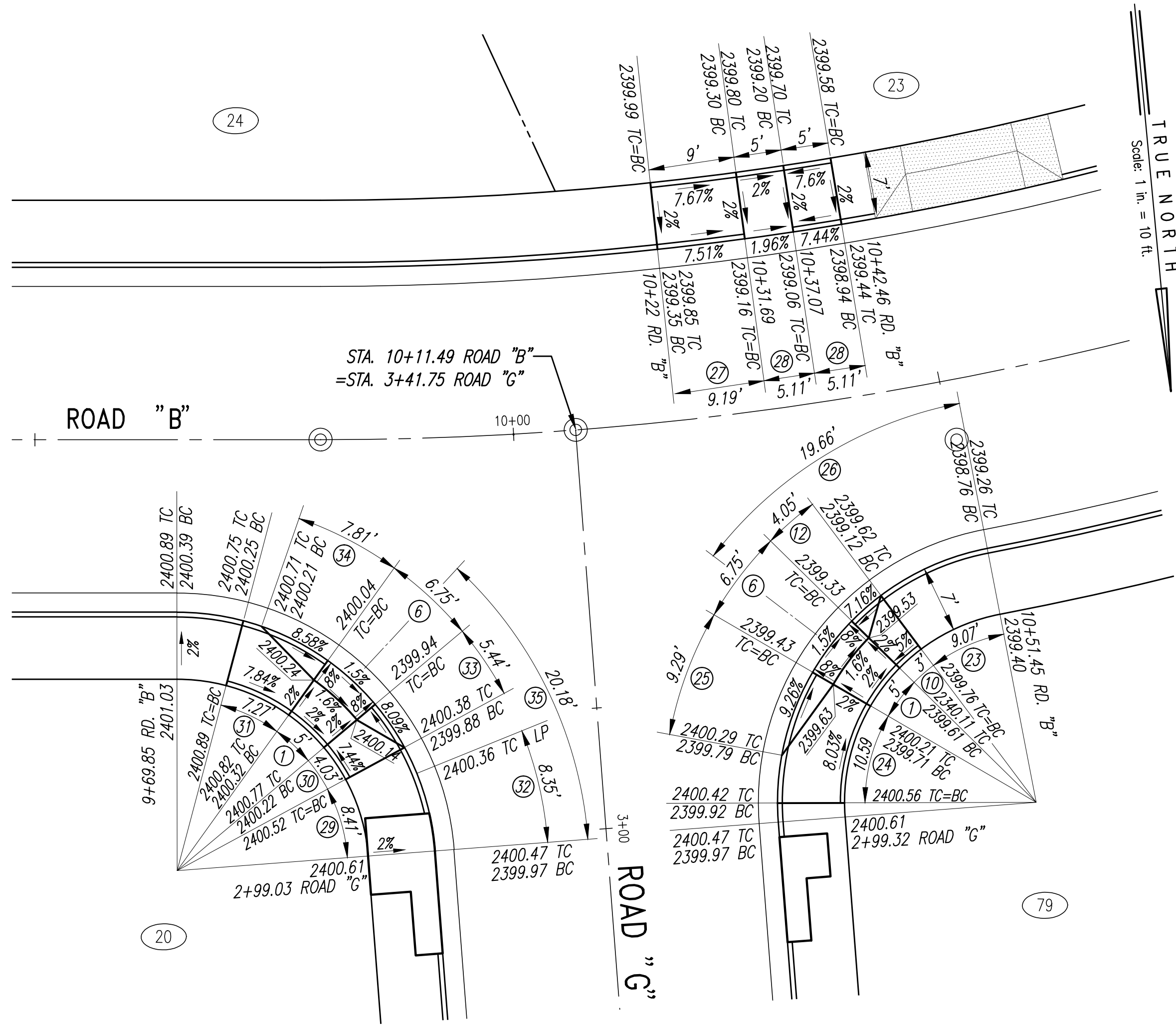
CURVE DATA							
CURVE	⑮	⑯	⑰	⑱	⑲	⑳	㉑
Δ	33°59'55"	21°13'14"	22°29'19"	15°21'19"	15°21'19"	11°29'17"	35°43'27"
Δ/2	16°59'57.5"	10°36'37"	11°14'39.5"	7°40'39.5"	7°40'39.5"	5°44'38.5"	17°51'43.5"
R	20.00'	27.00'	20.00'	20.00'	27.00'	27.00'	20.00'
T	6.11'	5.06'	3.98'	2.70'	3.64'	2.71'	6.45'
C	11.68'	9.94'	7.80'	5.34'	7.21'	5.40'	12.27'
L	11.86'	10.00'	7.85'	5.36'	7.24'	5.41'	12.47'

CURVE DATA							
CURVE	㉒	㉓	㉔	㉕	㉖	㉗	㉘
Δ	21°54'56"	25°59'00"	30°20'17"	19°42'35"	41°43'45"	1°35'20"	0°52'53"
Δ/2	10°57'28"	12°59'30"	15°10'08.5"	9°51'17"	20°51'53"	0°47'40"	0°26'26.5"
R	27.00'	20.00'	20.00'	27.00'	27.00'	332.00'	332.00'
T	5.23'	4.61'	5.42'	4.69'	10.29'	4.60'	2.55'
C	10.26'	9.00'	10.47'	9.24'	19.23'	9.19'	5.11'
L	10.33'	9.07'	10.59'	9.29'	19.66'	9.19'	5.11'

CURVE DATA							
CURVE	㉙	㉚	㉛	㉜	㉝	㉞	㉟
Δ	24°05'35"	11°32'43"	20°49'38"	17°43'10"	11°32'43"	16°35'14"	42°49'00"
Δ/2	12°02'47.5"	5°46'22"	10°24'49"	8°51'35"	5°46'21.5"	8°17'37"	21°24'30"
R	20.00'	20.00'	20.00'	27.00'	27.00'	27.00'	27.00'
T	4.27'	2.02'	3.68'	4.21'	2.73'	3.94'	10.59'
C	8.35'	4.02'	7.23'	8.32'	5.43'	7.79'	19.71'
L	8.41'	4.03'	7.27'	8.35'	5.44'	7.81'	20.18'

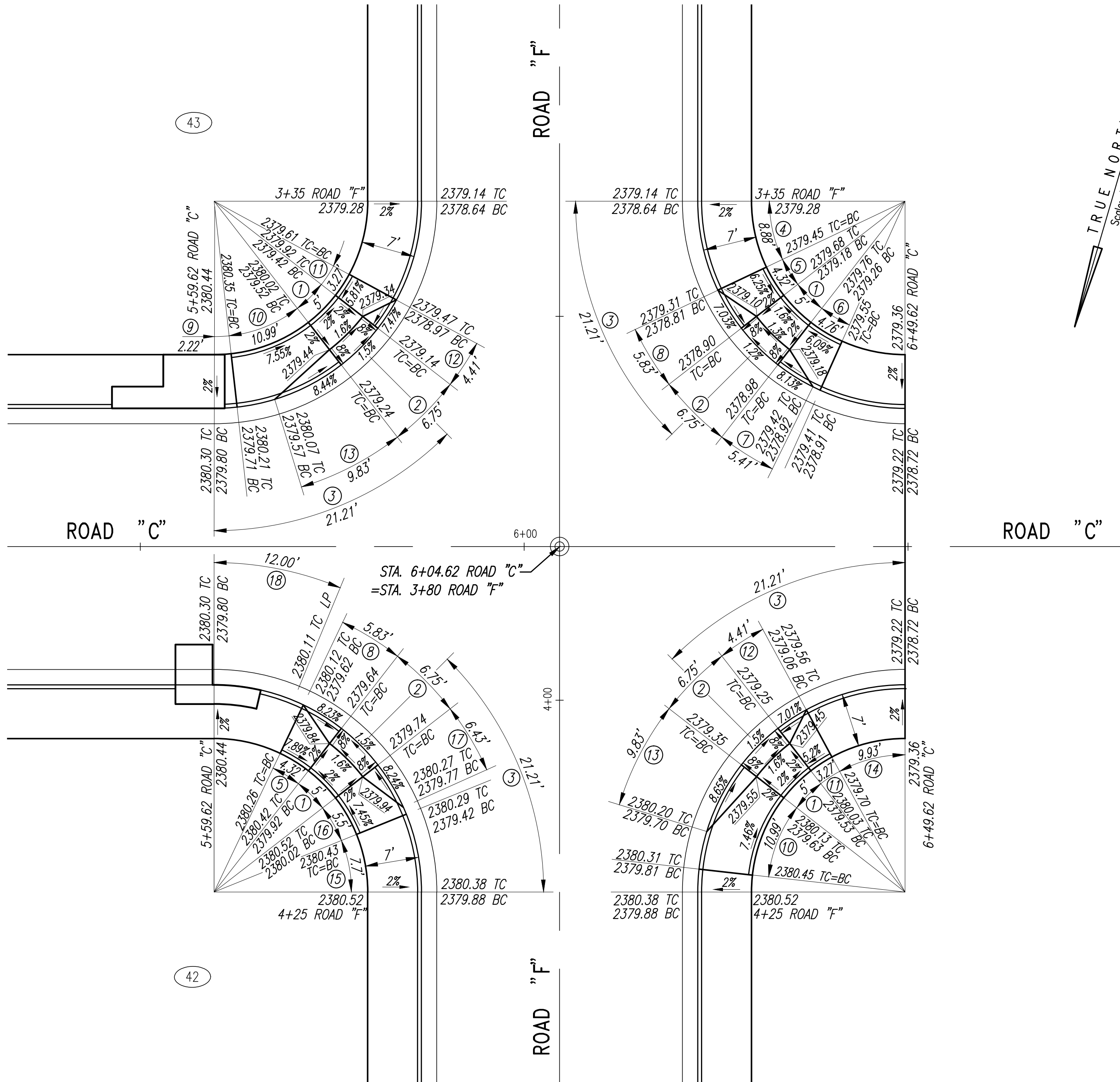
CURVE DATA	
CURVE	㊿
Δ	48°52'22"
Δ/2	24°26'11"
R	27.00'
T	12.27'
C	22.34'
L	23.03'

ROAD "B"



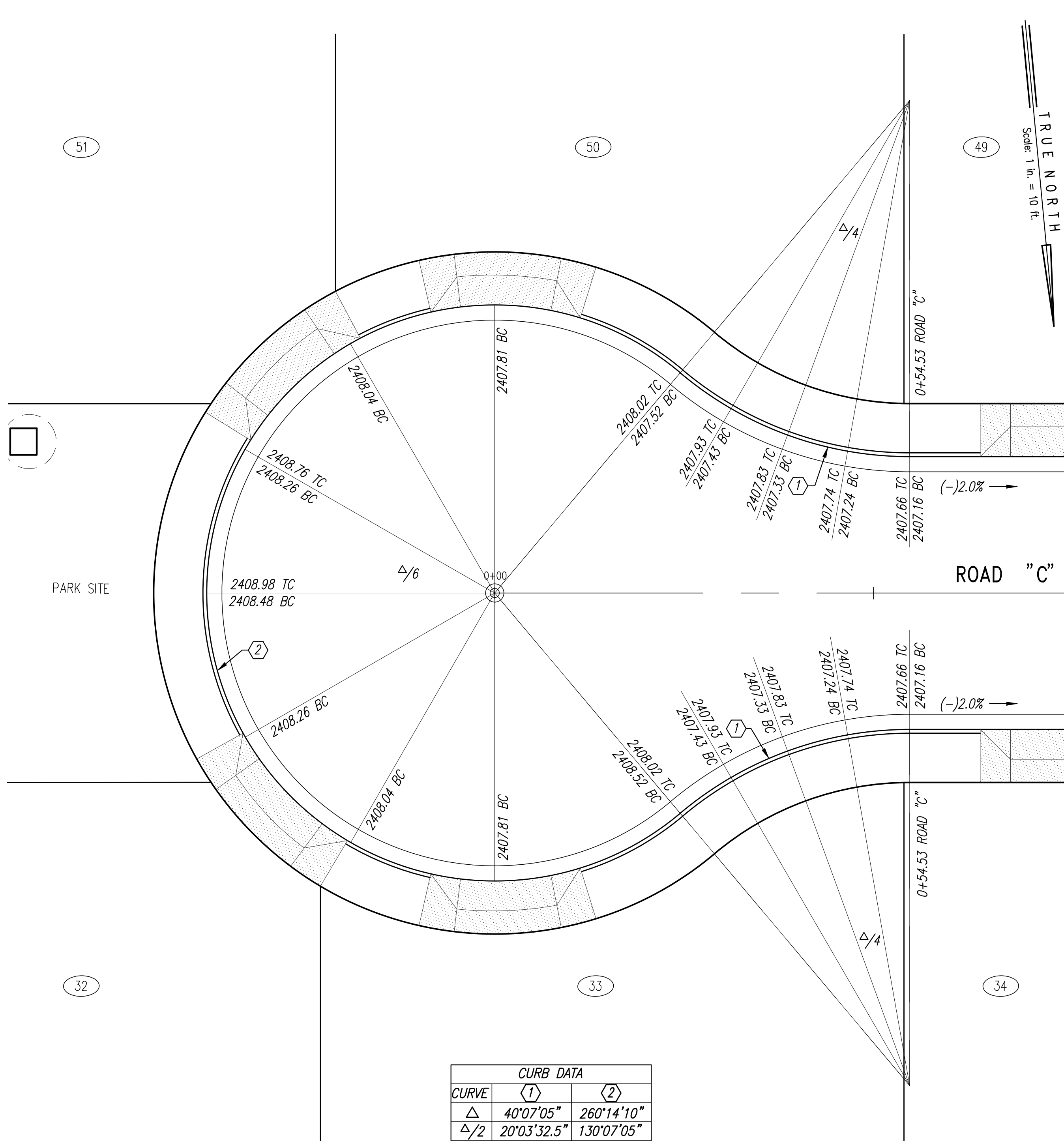
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alaska Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
CURP RAMP DETAILS - 2			
DRAWN BY: LT	ENGINEER: MFC	CHECKED BY: RYS	APPROVED:

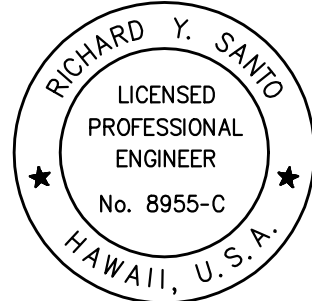
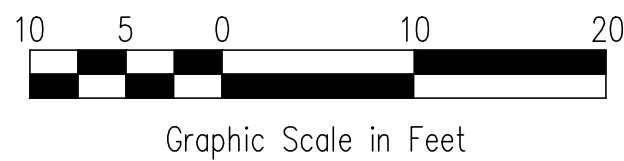


CURVE DATA											
CURVE	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	CURVE
Δ	14°19'26"	14°19'26"	45°00'00"	25°26'22"	12°22'34"	13°38'12"	11°29'17"	12°22'34"	6°21'36"	31°29'02"	Δ
Δ/2	7°09'43"	7°09'43"	22°30'00"	12°43'11"	6°11'17"	6°49'06"	5°44'38"	6°11'17"	3°10'48"	15°44'31"	Δ/2
R	20.00'	27.00'	27.00'	20.00'	20.00'	20.00'	27.00'	27.00'	20.00'	20.00'	R
T	2.51'	3.39'	11.18'	4.51'	2.17'	2.39'	2.72'	2.93'	1.11'	5.64'	T
C	4.99'	6.73'	20.66'	8.81'	4.31'	4.75'	5.40'	5.82'	2.22'	10.85'	C
L	5.00'	6.75'	21.21'	8.88'	4.32'	4.76'	5.41'	5.83'	2.22'	10.99'	L

CURVE DATA											
CURVE	⑪	⑫	⑬	⑭	⑮	⑯	⑰	⑱			CURVE
Δ	9°22'04"	9°22'04"	20°51'06"	28°26'51"	22°03'32"	15°45'23"	13°38'11"	25°28'21"			Δ
Δ/2	4°41'02"	4°41'02"	10°25'33"	14°13'25.5"	11°01'46"	7°52'41.5"	6°49'05.5"	12°44'10.5"			Δ/2
R	20.00'	27.00'	27.00'	20.00'	20.00'	20.00'	27.00'	27.00'			R
T	1.64'	2.21'	4.99'	3.90'	2.77'	3.23'	6.10'				T
C	3.27'	4.41'	9.77'	9.83'	7.65'	5.48'	6.41'	11.91'			C
L	3.27'	4.41'	9.83'	9.93'	7.70'	5.50'	6.43'	12.00'			L

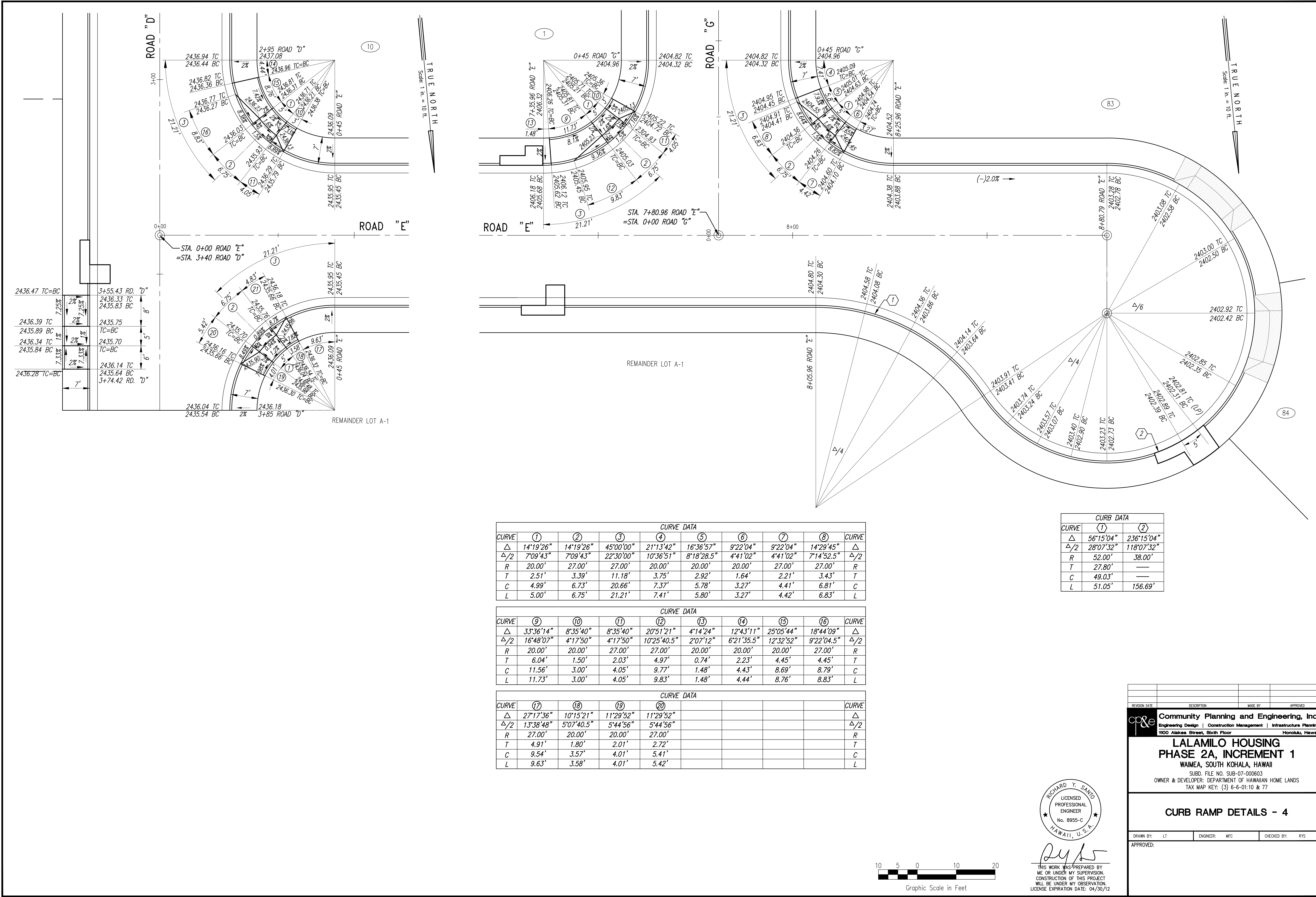


CURB DATA		
CURVE	①	②
Δ	40°07'05"	260°14'10"
Δ/2	20°03'32.5"	130°07'05"
R	47.00'	38.00'
T	17.16'	—
C	32.24'	—
L	32.91'	172.59'



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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
CURB RAMP DETAILS - 3			
DRAWN BY: LT	ENGINEER: MFC	CHECKED BY: RYS	
APPROVED:			

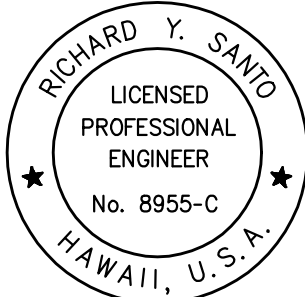


CURVE DATA							
CURVE	①	②	③	④	⑤	⑥	⑦
Δ	14°19'26"	14°19'26"	45°00'00"	21°13'42"	16°36'57"	9°22'04"	9°22'04"
Δ/2	7°09'43"	7°09'43"	22°30'00"	10°36'51"	8°18'28.5"	4°41'02"	4°41'02"
R	20.00'	27.00'	27.00'	20.00'	20.00'	20.00'	27.00'
T	2.51'	3.39'	11.18'	3.75'	2.92'	1.64'	2.21'
C	4.99'	6.73'	20.66'	7.37'	5.78'	3.27'	4.41'
L	5.00'	6.75'	21.21'	7.41'	5.80'	3.27'	4.42'

CURVE DATA							
CURVE	⑨	⑩	⑪	⑫	⑬	⑭	⑮
Δ	33°36'14"	8°35'40"	8°35'40"	20°51'21"	4°14'24"	12°43'11"	25°05'44"
Δ/2	16°48'07"	4°17'50"	4°17'50"	10°25'40.5"	2°07'12"	6°21'35.5"	12°32'52"
R	20.00'	20.00'	27.00'	27.00'	20.00'	20.00'	27.00'
T	6.04'	1.50'	2.03'	4.97'	0.74'	2.23'	4.45'
C	11.56'	3.00'	4.05'	9.77'	1.48'	4.43'	8.69'
L	11.73'	3.00'	4.05'	9.83'	1.48'	4.44'	8.76'

CURVE DATA							
CURVE	⑰	⑱	⑲	⑳			
Δ	27°17'36"	10°15'21"	11°29'52"	11°29'52"			
Δ/2	13°38'48"	5°07'40.5"	5°44'56"	5°44'56"			
R	27.00'	20.00'	20.00'	27.00'			
T	4.91'	1.80'	2.01'	2.72'			
C	9.54'	3.57'	4.01'	5.41'			
L	9.63'	3.58'	4.01'	5.42'			

CURB DATA		
CURVE	①	②
Δ	56°15'04"	236°15'04"
Δ/2	28°07'32"	118°07'32"
R	52.00'	38.00'
T	27.80'	—
C	49.03'	—
L	51.05'	156.69'



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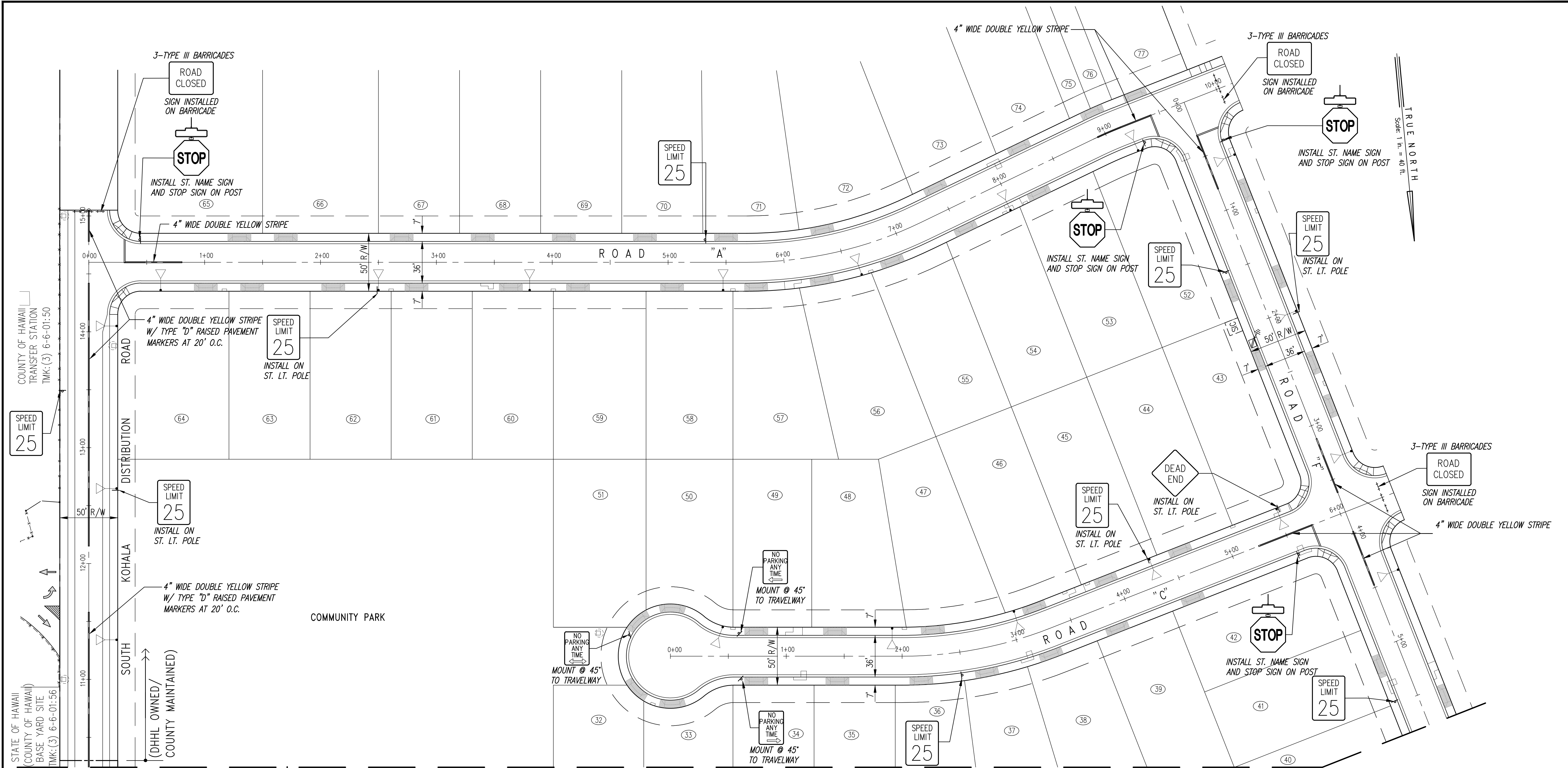
Community Planning and Engineering, Inc.
Engineering Design | Construction Management | Infrastructure Planning
7100 Alakea Street, Sixth Floor Honolulu, Hawaii

**LALAMLO HOUSING
PHASE 2A, INCREMENT 1**
WAIMEA, SOUTH KOHALA, HAWAII
SUBD. FILE NO. SUB-07-000603
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS
TAX MAP KEY: (3) 6-6-01:10 & 77

CURB RAMP DETAILS - 4

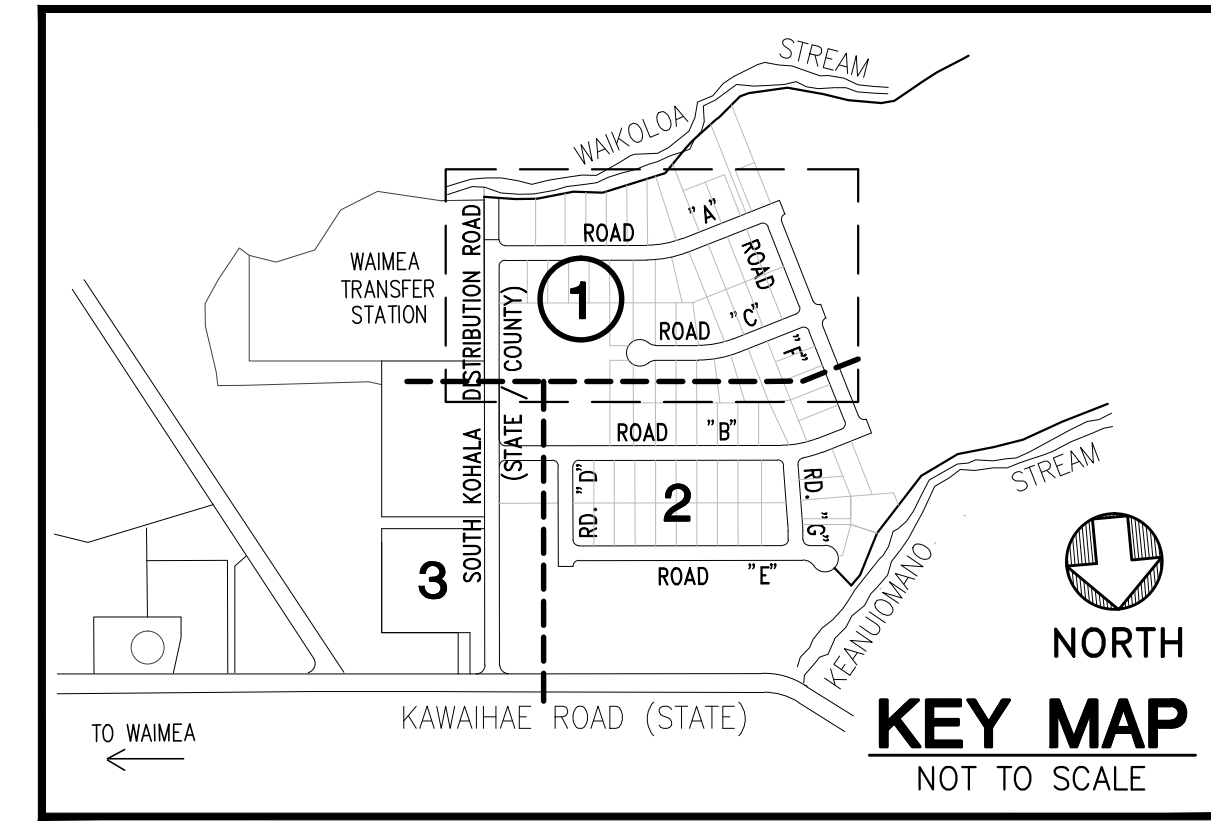
DRAWN BY: LT ENGINEER: MFC CHECKED BY: RYS
APPROVED:

FILE	POCKET	FOLDER	NO.



MATCHLINE SEE DWG. NO. C-34

SIGN SCHEDULE			
ROAD CLOSED	R11-2 48"x30"	SPEED LIMIT 25	R2-1(25) 24"x30"
DEAD END	W14-1 30"x30"	NO PARKING ANY TIME	R7-1(R) 18"x24"
STOP	R1-1 30"x30"	NO PARKING ANY TIME	R7-1(L) 18"x24"
		NO PARKING ANY TIME	R7-1(DEL) 18"x24"



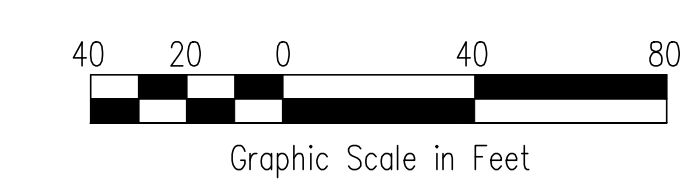
TRAFFIC SIGNS AND PAVEMENT MARKING PLAN - 1

SCALE: 1"=40'

- NOTES:**
- SEE TRAFFIC SIGNS AND PAVEMENT MARKING DETAIL, SEE DWG. NO. C-35, FOR "STOP" SIGN LOCATION.
 - TYPE "DB" RAISED PAVEMENT MARKER IS REQUIRED AT EACH FIRE HYDRANT LOCATION, SEE WATER SYSTEM STANDARDS STANDARD DETAIL FH12.



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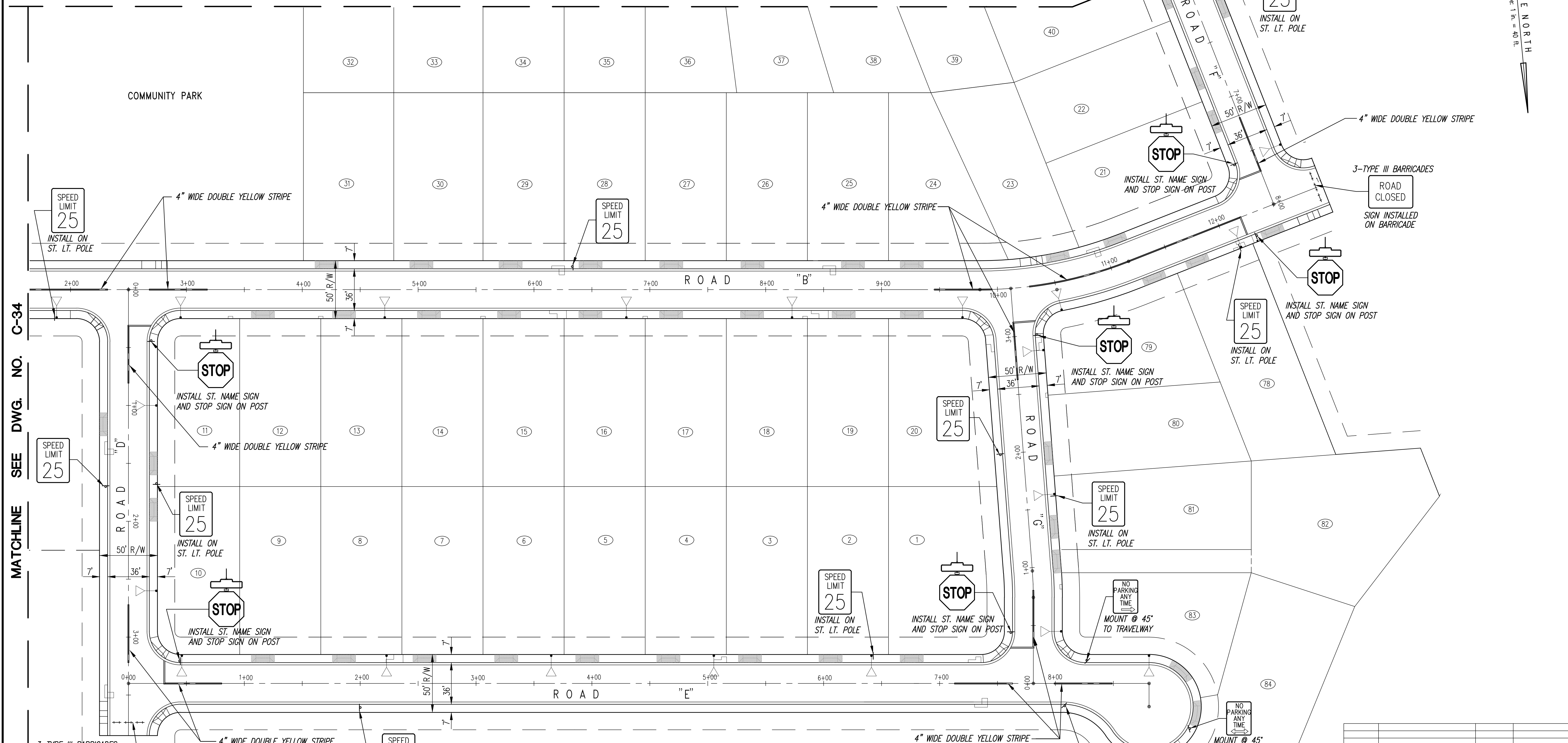


REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakoa Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
TRAFFIC SIGNS AND PAVEMENT MARKING PLAN - 1			
DRAWN BY: LT	ENGINEER: VTF	CHECKED BY: RYS	
APPROVED:			

MATCHLINE SEE DWG. NO. C-34

MATCHLINE SEE DWG. NO. C-32

TRUE NORTH
Scale: 1 in. = 40 ft.

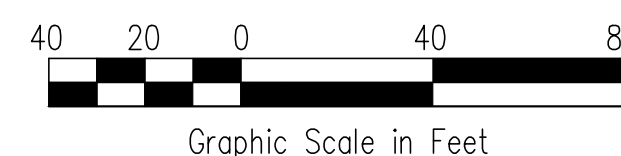
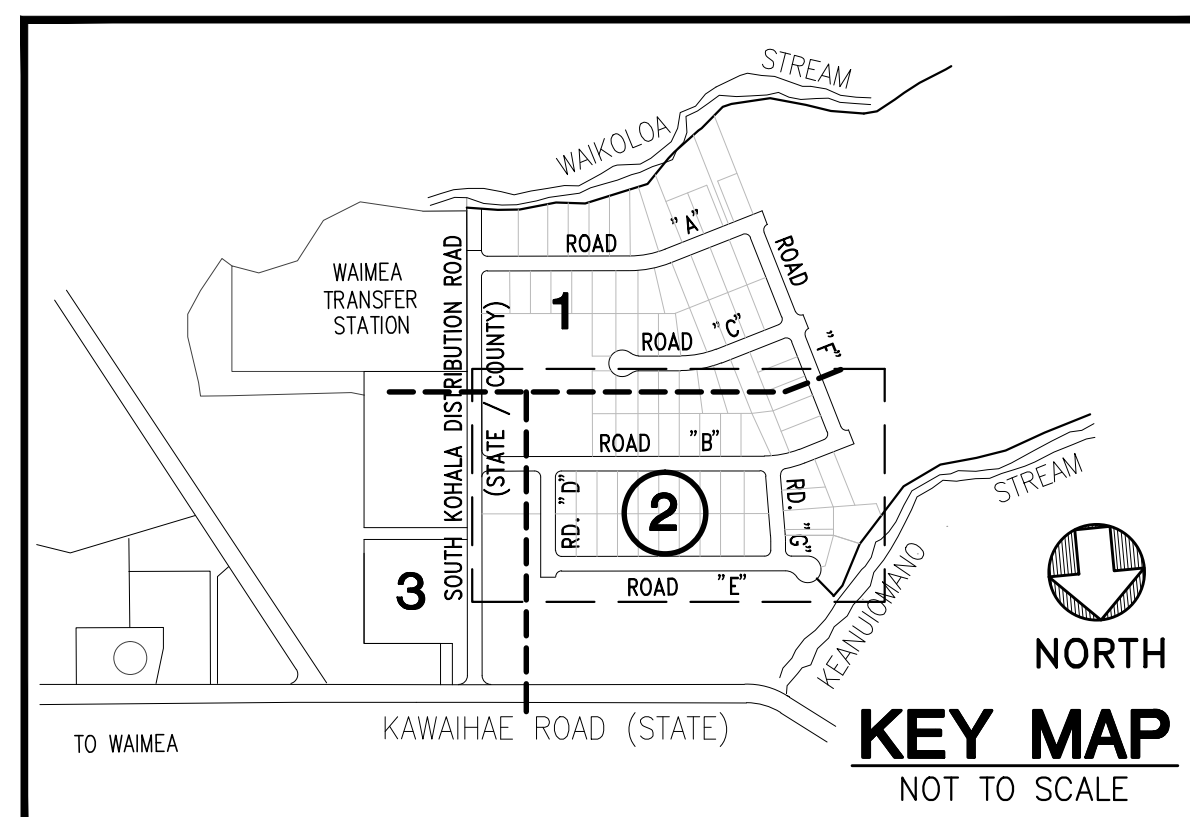


TRAFFIC SIGNS AND PAVEMENT MARKING PLAN - 2

SCALE: 1"=40'

SIGN SCHEDULE			
	W14-1 30"x30"		R7-1(R) 18"x24"
	R1-1 30"x30"		R7-1(L) 18"x24"
	R2-1(25) 24"x30"		R7-1(DEL) 18"x24"
	R11-2 48"x30"		

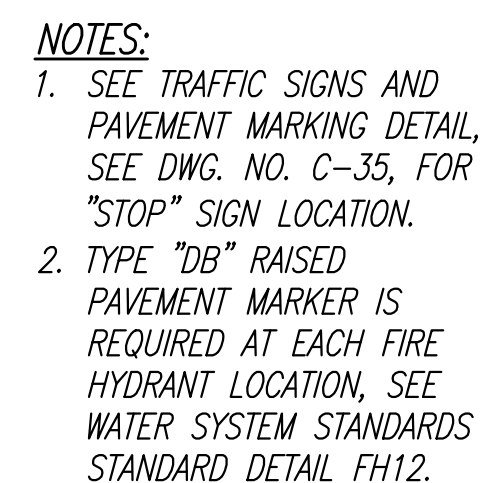
- NOTES:
- SEE TRAFFIC SIGNS AND PAVEMENT MARKING DETAIL, SEE DWG. NO. C-35, FOR "STOP" SIGN LOCATION.
 - TYPE "DB" RAISED PAVEMENT MARKER IS REQUIRED AT EACH FIRE HYDRANT LOCATION, SEE WATER SYSTEM STANDARDS STANDARD DETAIL FH12.



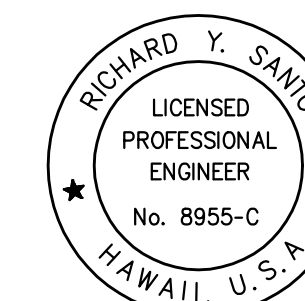
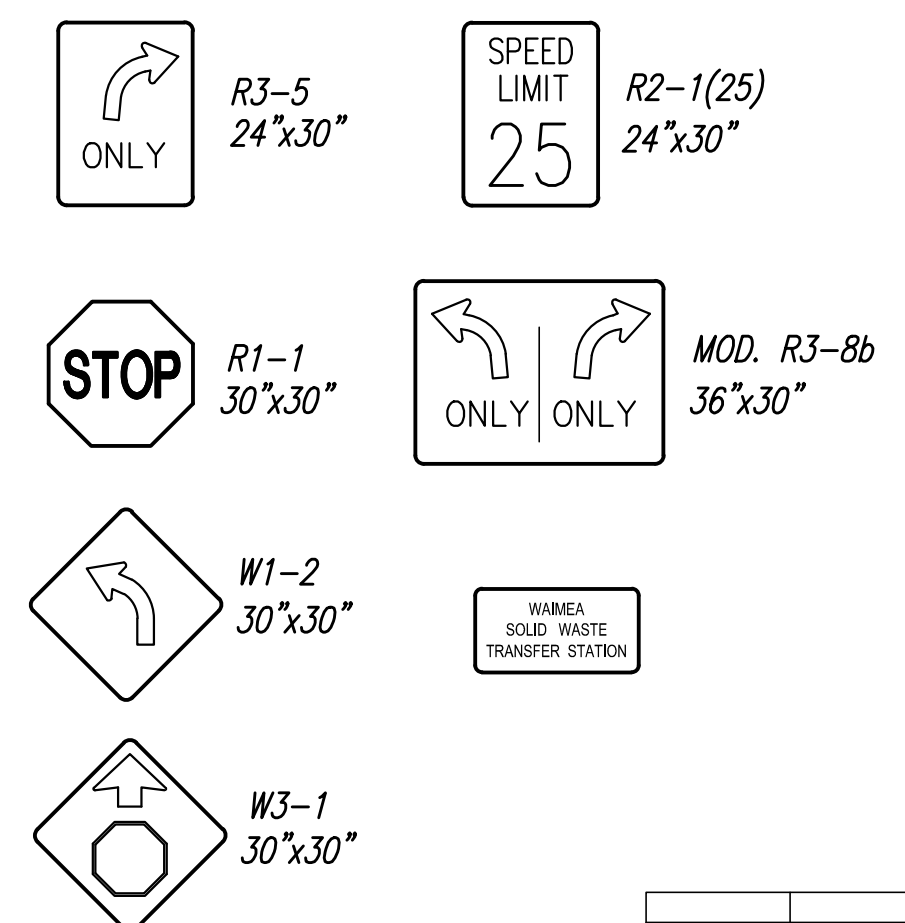
RICHARD Y. SANO
LICENSED PROFESSIONAL ENGINEER
No. 8955-C
HAWAII, U.S.A.

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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
TRAFFIC SIGNS AND PAVEMENT MARKING PLAN - 2			
DRAWN BY: LT	ENGINEER: VTF	CHECKED BY: RYS	
APPROVED:			



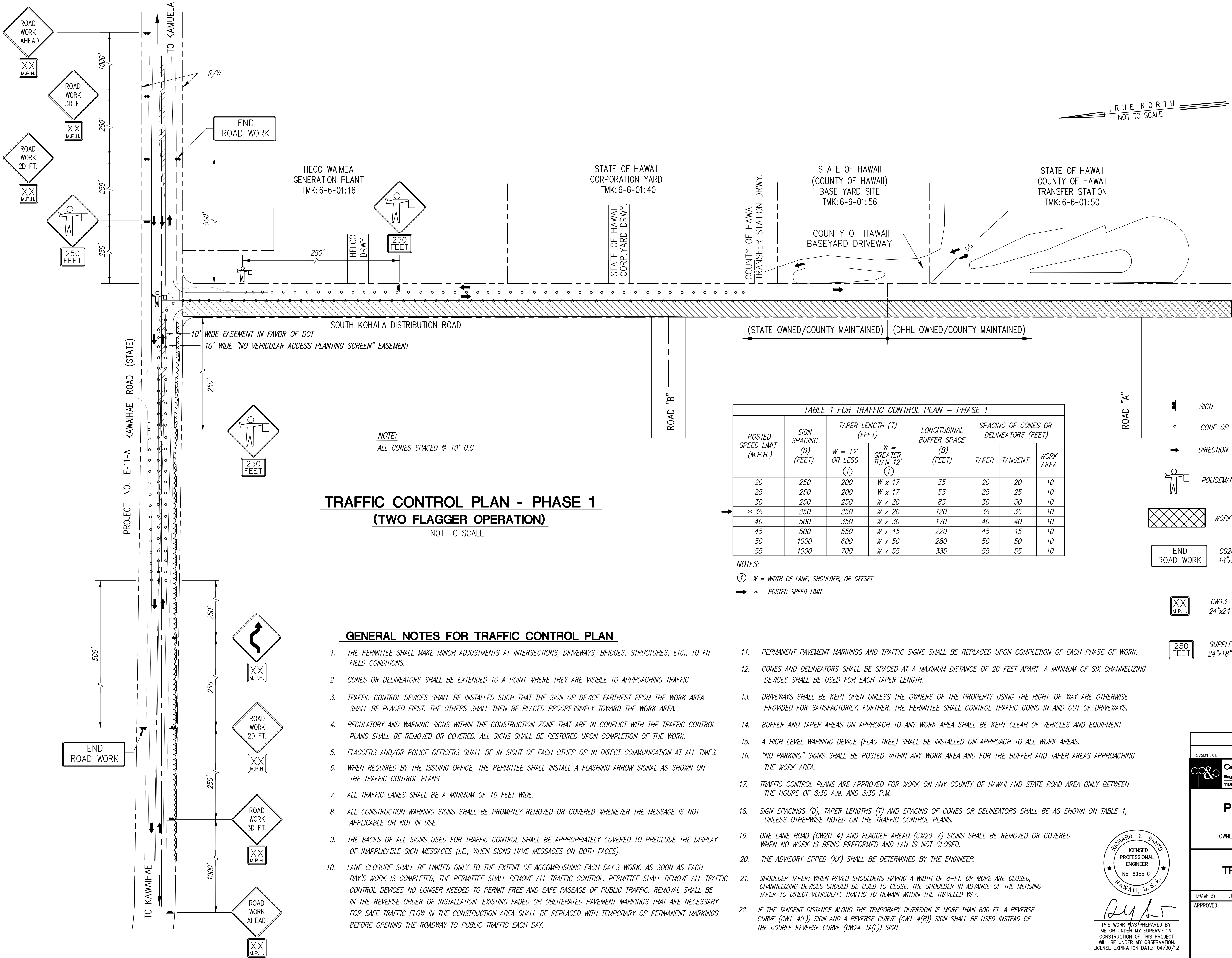
SCALE: 1"=40'



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CONSTRUCTION OF THIS PROJECT
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LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
 Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Aleksee Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
TRAFFIC SIGNS AND PAVEMENT MARKING PLAN - 3			
DRAWN BY: LT		ENGINEER: MFC	CHECKED BY: RYS
APPROVED:			

FILE	POCKET	FOLDER	NO.



TRAFFIC CONTROL PLAN - PHASE 1
(TWO FLAGGER OPERATION)
NOT TO SCALE

TABLE 1 FOR TRAFFIC CONTROL PLAN - PHASE 1							
POSTED SPEED LIMIT (M.P.H.)	SIGN SPACING (D) (FEET)	TAPER LENGTH (T) (FEET)		LONGITUDINAL BUFFER SPACE (B) (FEET)	SPACING OF CONES OR DELINEATORS (FEET)		
		W = 12' OR LESS ①	W = GREATER THAN 12' ①		TAPER	TANGENT	WORK AREA
20	250	200	W x 17	35	20	20	10
25	250	200	W x 17	55	25	25	10
30	250	250	W x 20	85	30	30	10
* 35	250	250	W x 20	120	35	35	10
40	500	350	W x 30	170	40	40	10
45	500	550	W x 45	220	45	45	10
50	1000	600	W x 50	280	50	50	10
55	1000	700	W x 55	335	55	55	10

- NOTES:**
- ① W = WIDTH OF LANE, SHOULDER, OR OFFSET
- * POSTED SPEED LIMIT

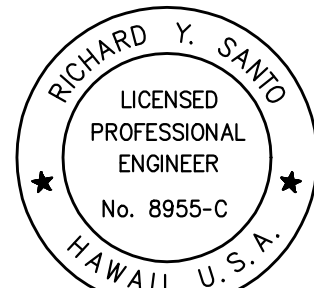
LEGEND

- SIGN
- CONE OR DELINEATOR
- DIRECTION OF TRAFFIC
- POLICEMAN OR FLAGMAN
- WORK AREA
- END ROAD WORK
- XX M.P.H.
- 250 FEET
- CW24-1A(L) 48"x48"
- CW20-1A(2D) 48"x48"
- CW20-1A(3D) 48"x48"
- CW20-1Ad 48"x48"
- CW13-1(XX)-A 24"x24"
- W20-7a(D) 48"x48"

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

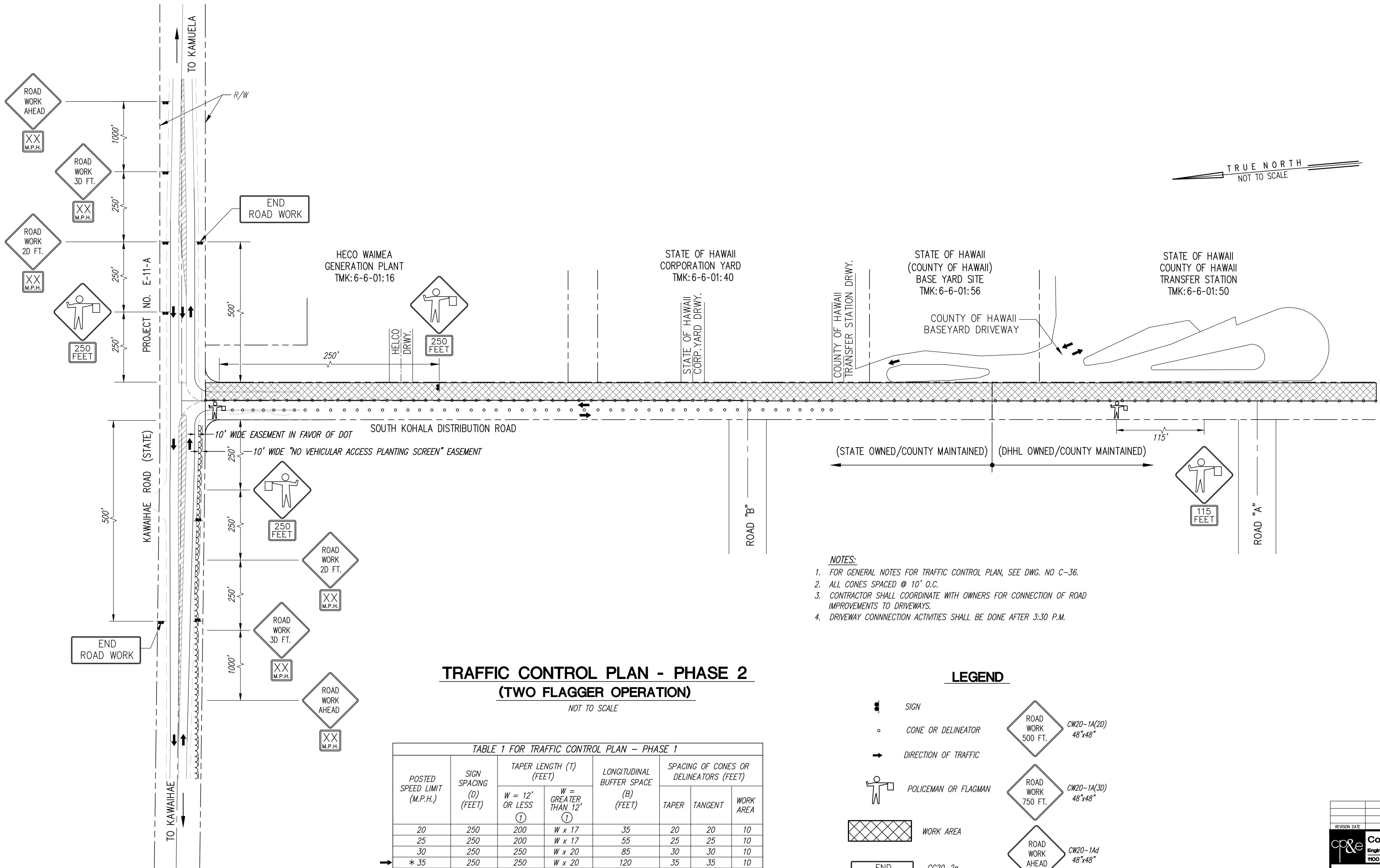
- THE PERMITTEE SHALL MAKE MINOR ADJUSTMENTS AT INTERSECTIONS, DRIVEWAYS, BRIDGES, STRUCTURES, ETC., TO FIT FIELD CONDITIONS.
- CONES OR DELINEATORS SHALL BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
- TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SUCH THAT THE SIGN OR DEVICE FARTHEST FROM THE WORK AREA SHALL BE PLACED FIRST. THE OTHERS SHALL THEN BE PLACED PROGRESSIVELY TOWARD THE WORK AREA.
- REGULATORY AND WARNING SIGNS WITHIN THE CONSTRUCTION ZONE THAT ARE IN CONFLICT WITH THE TRAFFIC CONTROL PLANS SHALL BE REMOVED OR COVERED. ALL SIGNS SHALL BE RESTORED UPON COMPLETION OF THE WORK.
- FLAGGERS AND/OR POLICE OFFICERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES.
- WHEN REQUIRED BY THE ISSUING OFFICE, THE PERMITTEE SHALL INSTALL A FLASHING ARROW SIGNAL AS SHOWN ON THE TRAFFIC CONTROL PLANS.
- ALL TRAFFIC LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
- ALL CONSTRUCTION WARNING SIGNS SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE MESSAGE IS NOT APPLICABLE OR NOT IN USE.
- 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).
- 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 PERMITTEE SHALL REMOVE ALL TRAFFIC CONTROL. PERMITTEE 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.

- PERMANENT PAVEMENT MARKINGS AND TRAFFIC SIGNS SHALL BE REPLACED UPON COMPLETION OF EACH PHASE OF WORK.
- CONES AND DELINEATORS SHALL BE SPACED AT A MAXIMUM DISTANCE OF 20 FEET APART. A MINIMUM OF SIX CHANNELIZING DEVICES SHALL BE USED FOR EACH TAPER LENGTH.
- DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THE RIGHT-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY. FURTHER, THE PERMITTEE SHALL CONTROL TRAFFIC GOING IN AND OUT OF DRIVEWAYS.
- BUFFER AND TAPER AREAS ON APPROACH TO ANY WORK AREA SHALL BE KEPT CLEAR OF VEHICLES AND EQUIPMENT.
- A HIGH LEVEL WARNING DEVICE (FLAG TREE) SHALL BE INSTALLED ON APPROACH TO ALL WORK AREAS.
- "NO PARKING" SIGNS SHALL BE POSTED WITHIN ANY WORK AREA AND FOR THE BUFFER AND TAPER AREAS APPROACHING THE WORK AREA.
- TRAFFIC CONTROL PLANS ARE APPROVED FOR WORK ON ANY COUNTY OF HAWAII AND STATE ROAD AREA ONLY BETWEEN THE HOURS OF 8:30 A.M. AND 3:30 P.M.
- SIGN SPACINGS (D), TAPER LENGTHS (T) AND SPACING OF CONES OR DELINEATORS SHALL BE AS SHOWN ON TABLE 1, UNLESS OTHERWISE NOTED ON THE TRAFFIC CONTROL PLANS.
- ONE LANE ROAD (CW20-4) AND FLAGGER AHEAD (CW20-7) SIGNS SHALL BE REMOVED OR COVERED WHEN NO WORK IS BEING PERFORMED AND LAN IS NOT CLOSED.
- THE ADVISORY SPEDD (XX) SHALL BE DETERMINED BY THE ENGINEER.
- SHOULDER TAPER: WHEN PAVED SHOULDERS HAVING A WIDTH OF 8-FT. OR MORE ARE CLOSED, CHANNELIZING DEVICES SHOULD BE USED TO CLOSE THE SHOULDER IN ADVANCE OF THE MERGING TAPER TO DIRECT VEHICULAR TRAFFIC TO REMAIN WITHIN THE TRAVELED WAY.
- IF THE TANGENT DISTANCE ALONG THE TEMPORARY DIVERSION IS MORE THAN 600 FT. A REVERSE CURVE (CW1-4(L)) SIGN AND A REVERSE CURVE (CW1-4(R)) SIGN SHALL BE USED INSTEAD OF THE DOUBLE REVERSE CURVE (CW24-1A(L)) SIGN.



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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
TRAFFIC CONTROL PLAN - 1			
DRAWN BY: LT	ENGINEER: MFC	CHECKED BY: RYS	APPROVED:



- NOTES:
1. FOR GENERAL NOTES FOR TRAFFIC CONTROL PLAN, SEE DWG. NO C-36.
 2. ALL CONES SPACED @ 10' O.C.
 3. CONTRACTOR SHALL COORDINATE WITH OWNERS FOR CONNECTION OF ROAD IMPROVEMENTS TO DRIVEWAYS.
 4. DRIVEWAY CONNECTION ACTIVITIES SHALL BE DONE AFTER 3:30 P.M.

TRAFFIC CONTROL PLAN - PHASE 2
(TWO FLAGGER OPERATION)

NOT TO SCALE

TABLE 1 FOR TRAFFIC CONTROL PLAN – PHASE 1							
POSTED SPEED LIMIT (M.P.H.)	SIGN SPACING (D) (FEET)	TAPER LENGTH (T) (FEET)		LONGITUDINAL BUFFER SPACE (B) (FEET)	SPACING OF CONES OR DELINEATORS (FEET)		
		W = 12' OR LESS	W = GREATER THAN 12'		TAPER	TANGENT	WORK AREA
		①	①				
20	250	200	W x 17	35	20	20	10
25	250	200	W x 17	55	25	25	10
30	250	250	W x 20	85	30	30	10
* 35	250	250	W x 20	120	35	35	10
40	500	350	W x 30	170	40	40	10
45	500	550	W x 45	220	45	45	10
50	1000	600	W x 50	280	50	50	10
55	1000	700	W x 55	335	55	55	10

- NOTES:
- ① W = WIDTH OF LANE, SHOULDER, OR OFFSET
- * POSTED SPEED LIMIT

LEGEND

SIGN

CONE OR DELINEATOR

DIRECTION OF TRAFFIC

POLICEMAN OR FLAGMAN

WORK AREA

END ROAD WORK

CW13-1(XX)-A

24"x24"

250 FEET

SUPPLEMENTAL PLATE

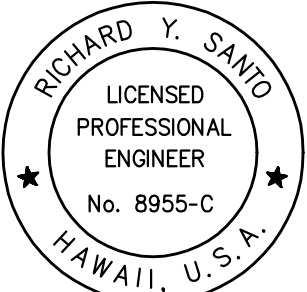
24"x18"

ROAD WORK 500 FT. CW20-1A(20) 48"x48"

ROAD WORK 750 FT. CW20-1A(30) 48"x48"

ROAD WORK AHEAD CW20-1Ad 48"x48"

W20-7a(D) 48"x48"



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LICENSE EXPIRATION DATE: 04/30/12

Community Planning and Engineering, Inc.

Engineering Design | Construction Management | Infrastructure Planning

7100 Alakea Street, Sixth Floor Honolulu, Hawaii

**LALAMLO HOUSING
PHASE 2A, INCREMENT 1**

WAIMEA, SOUTH KOHALA, HAWAII

SUBD. FILE NO. SUB-07-000603

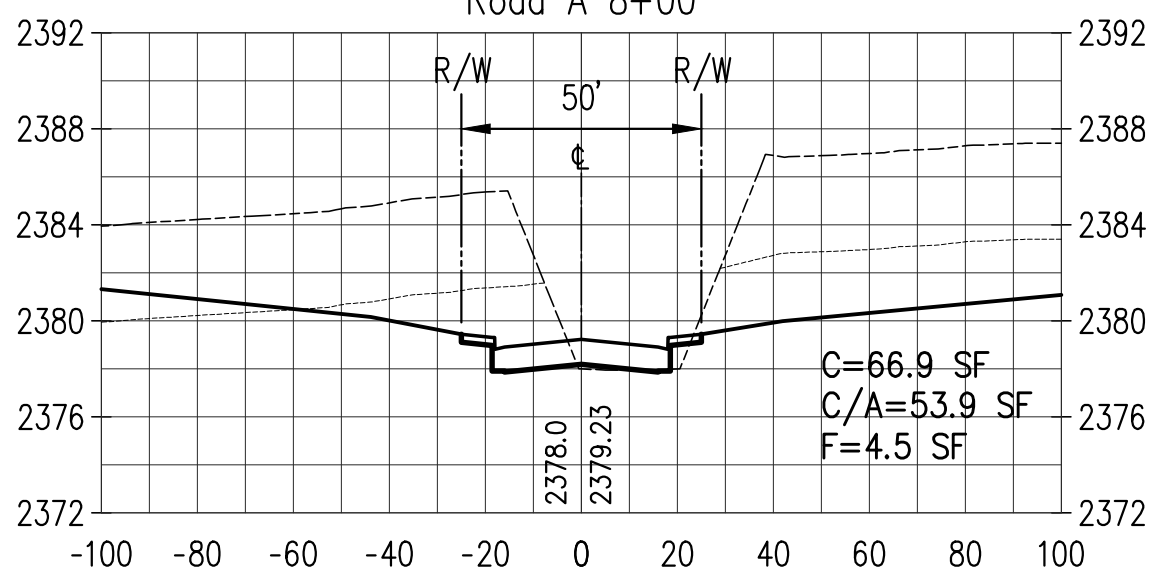
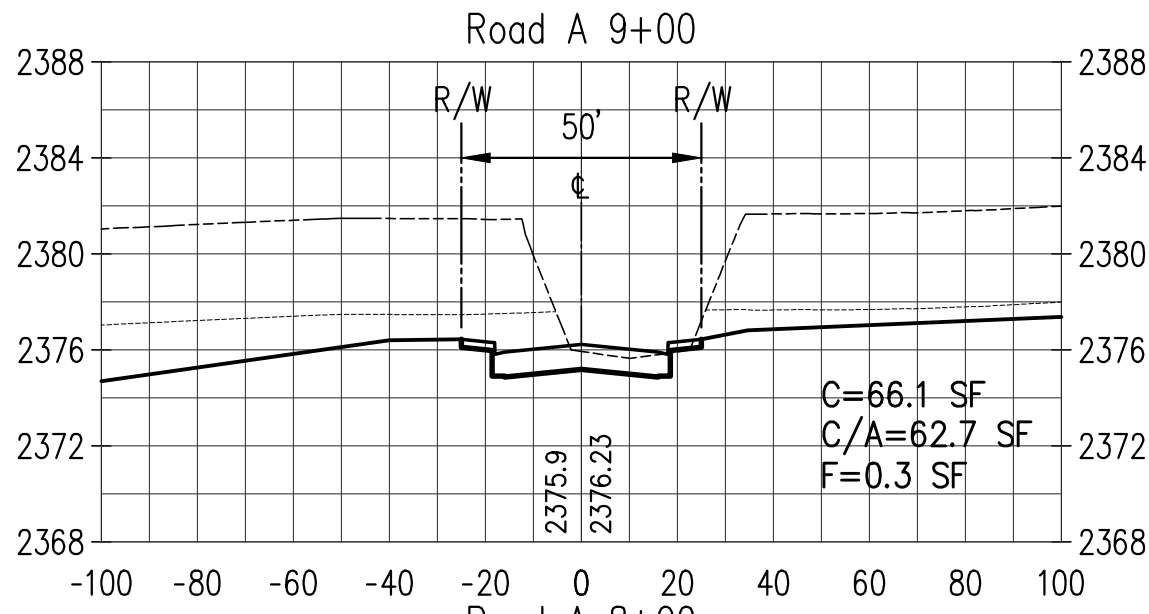
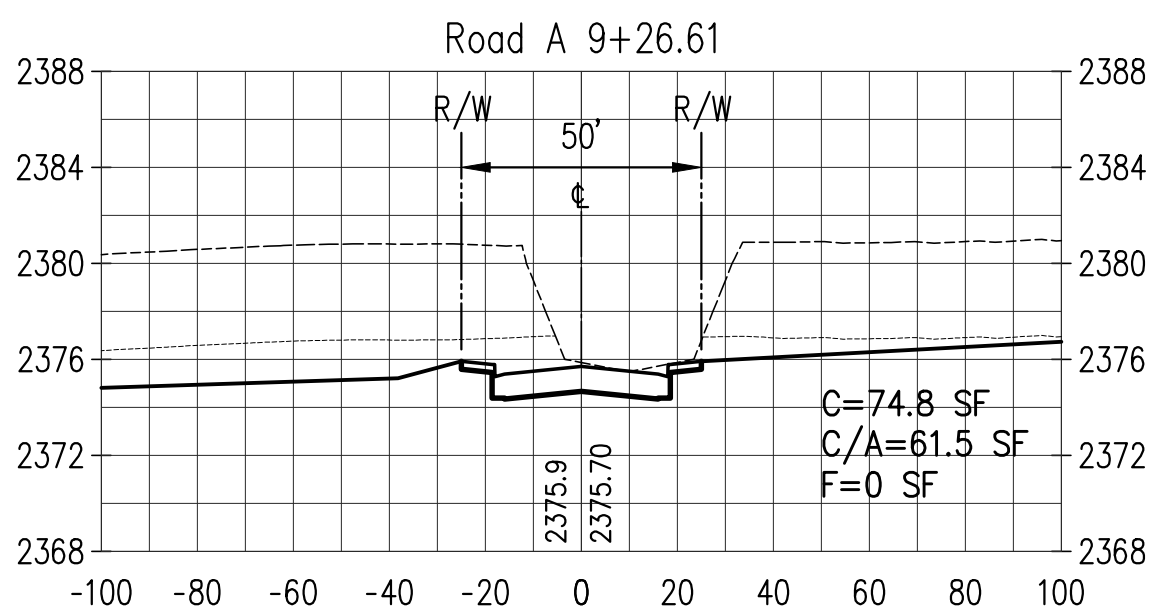
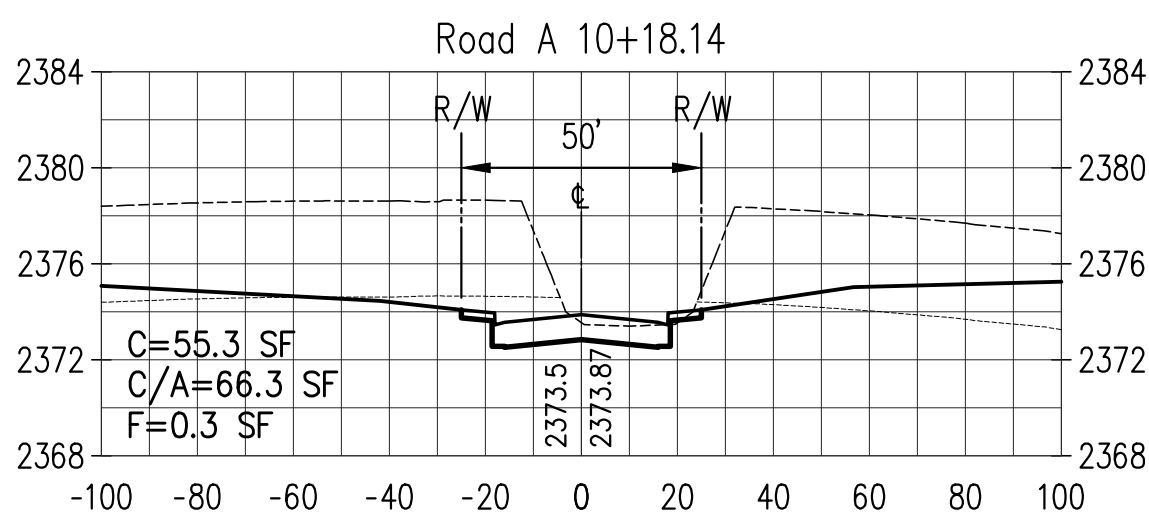
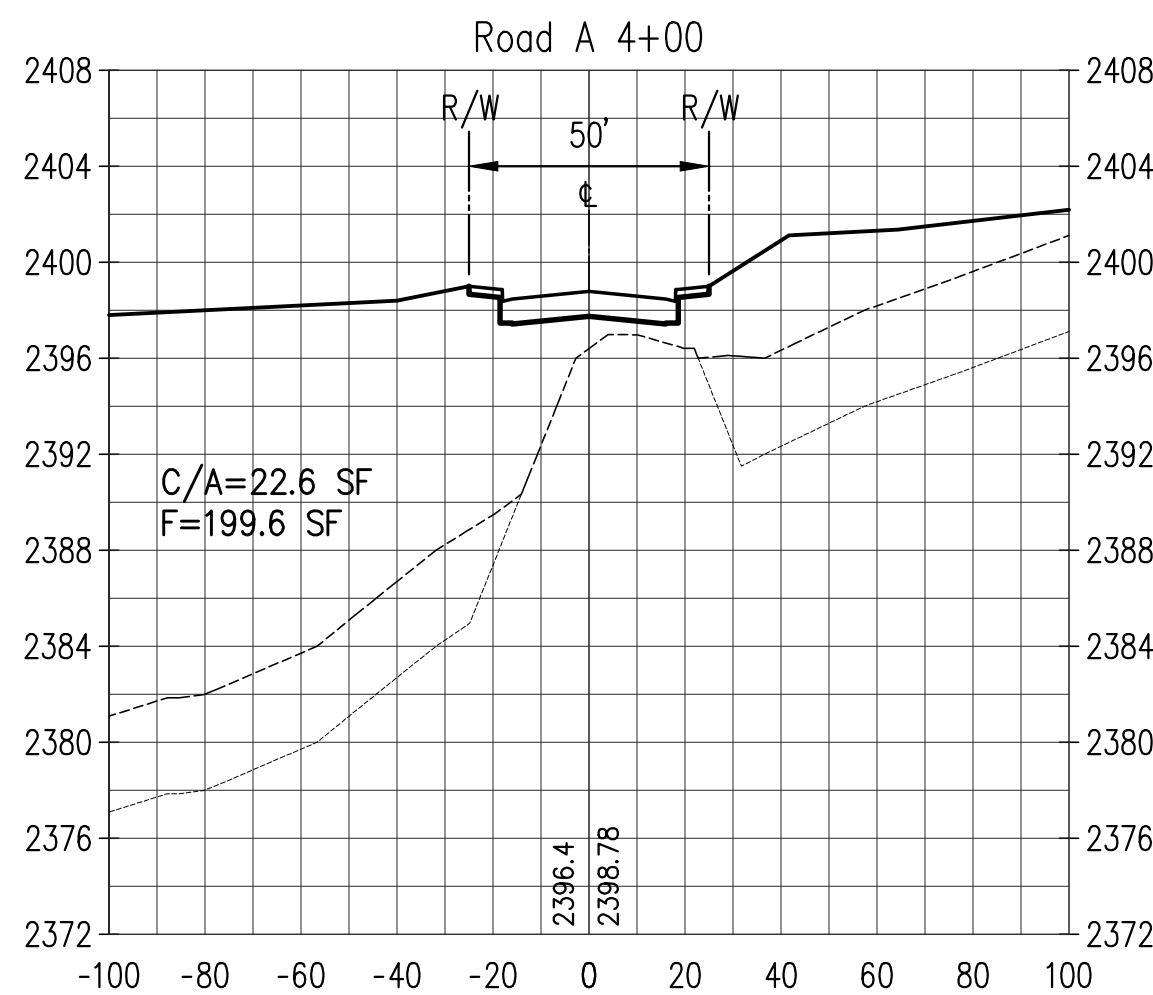
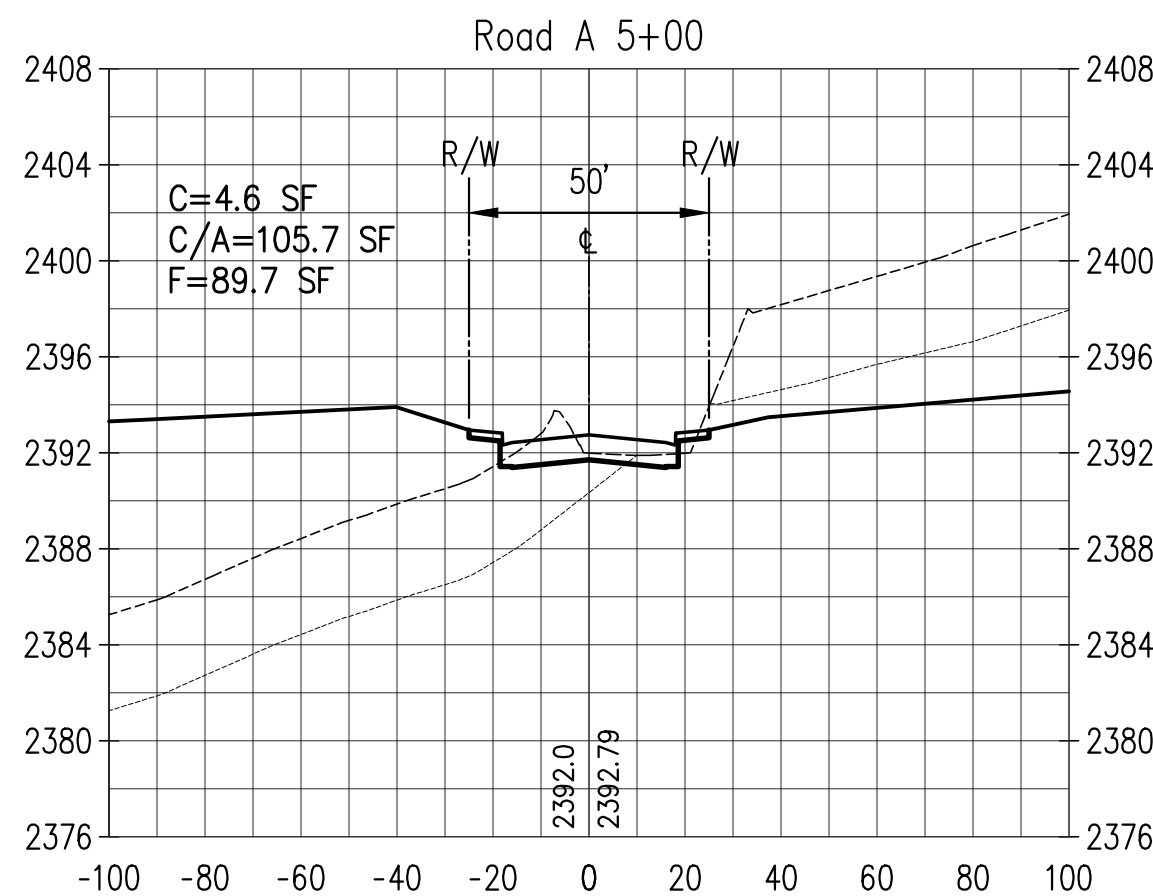
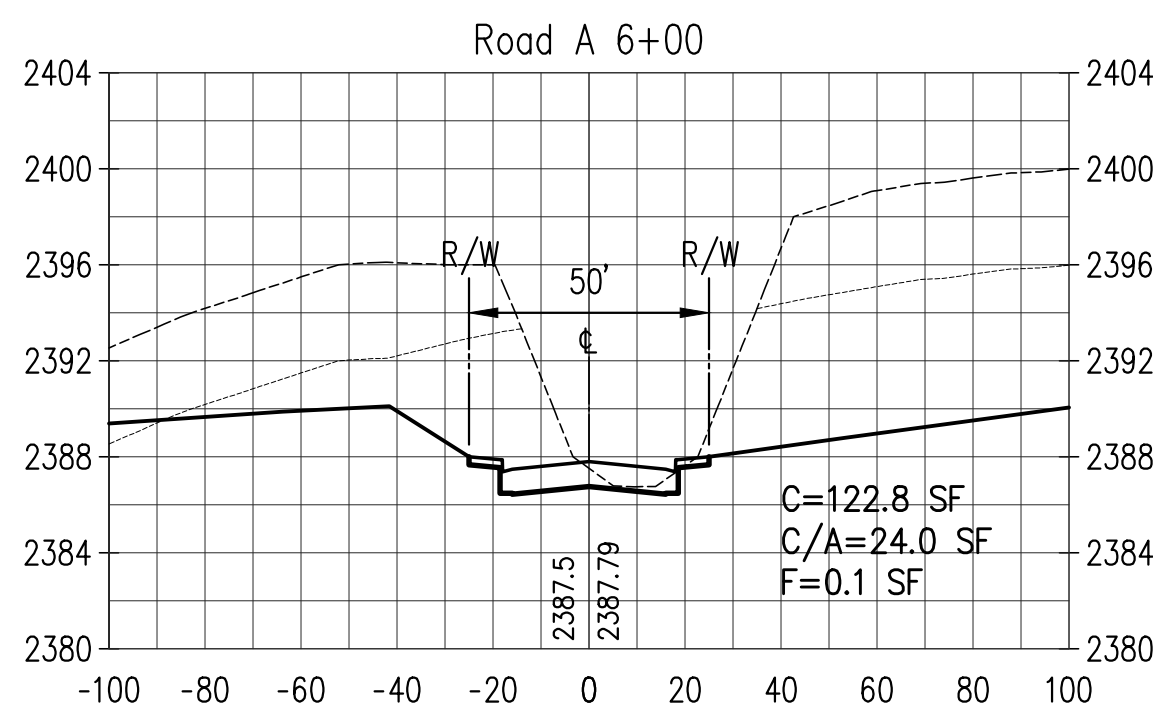
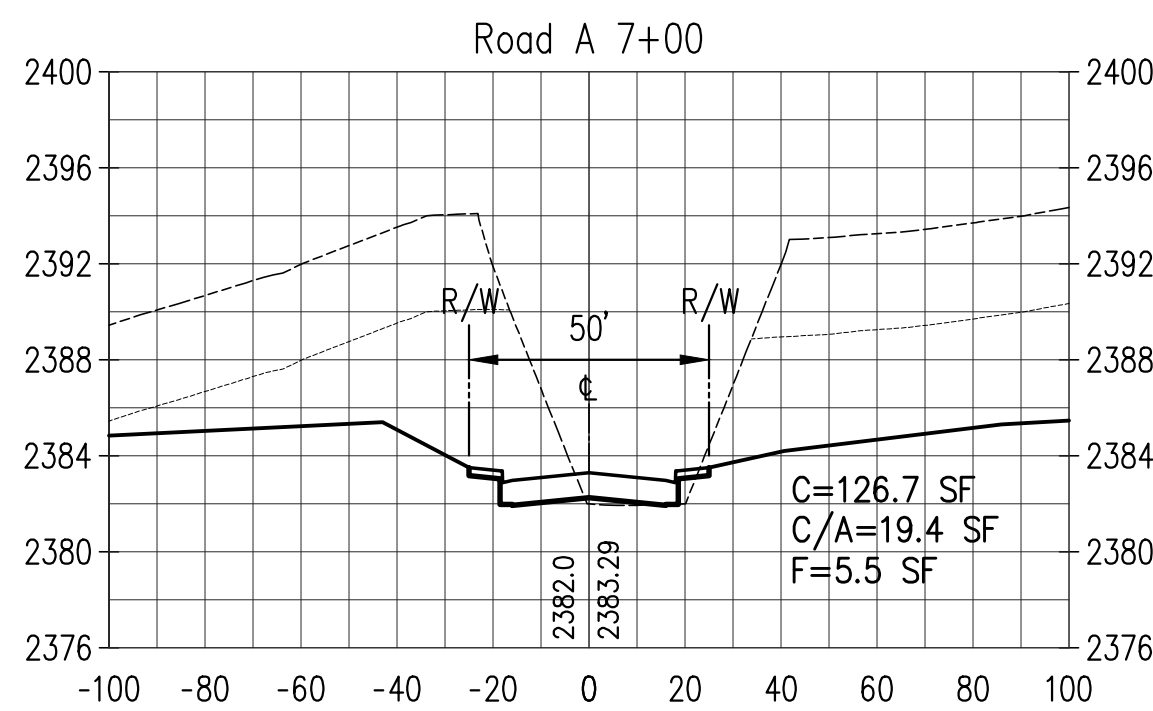
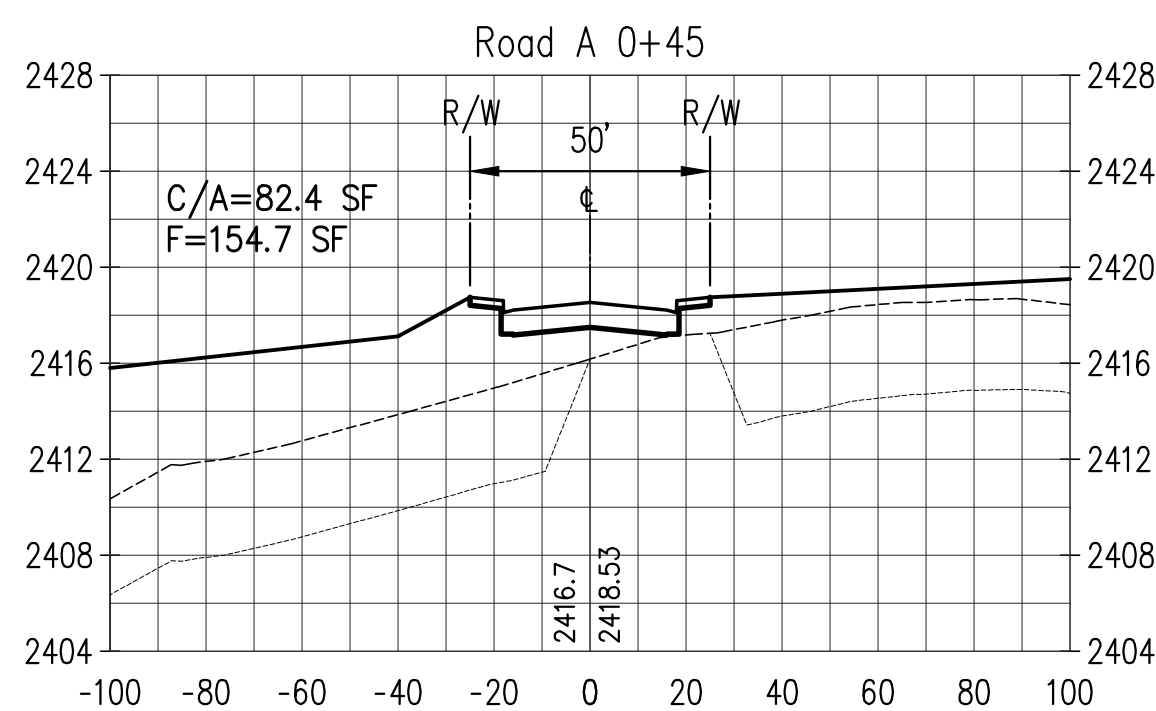
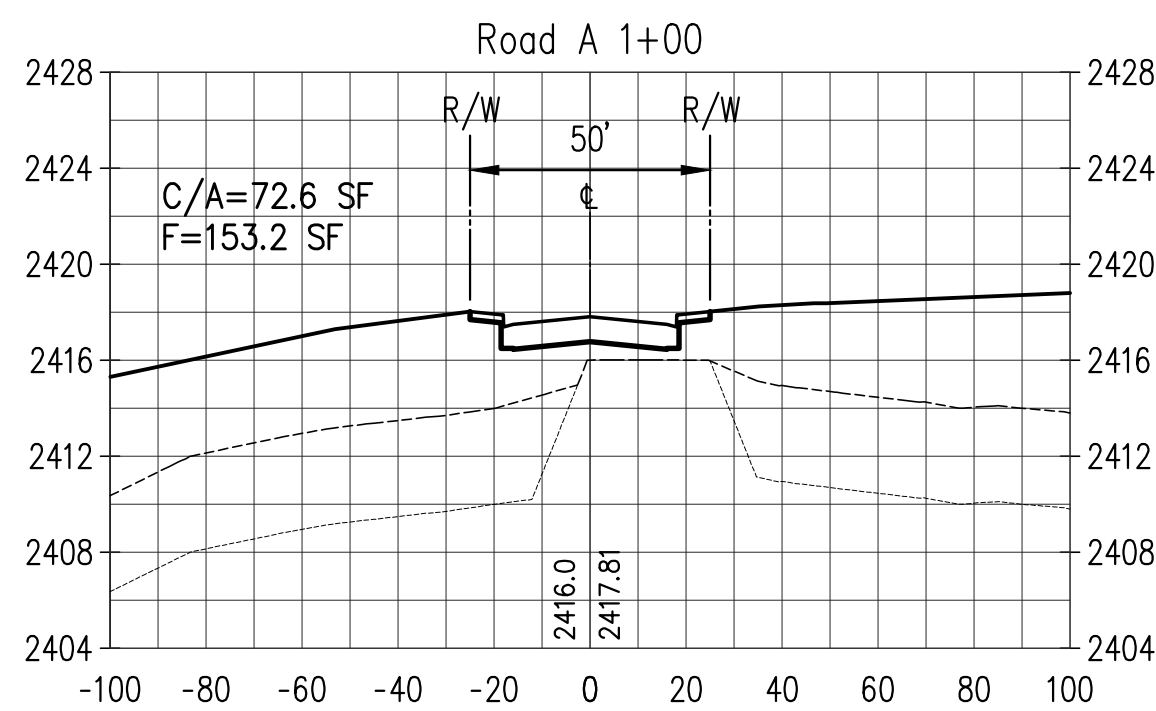
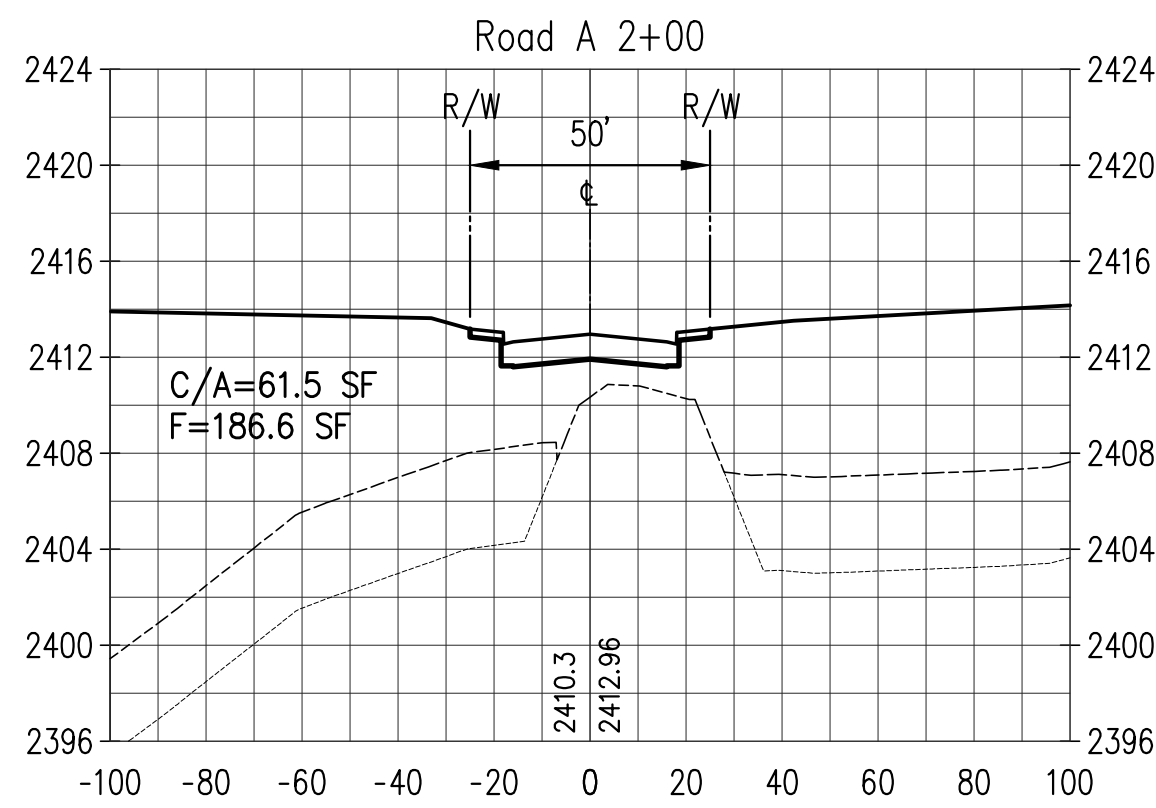
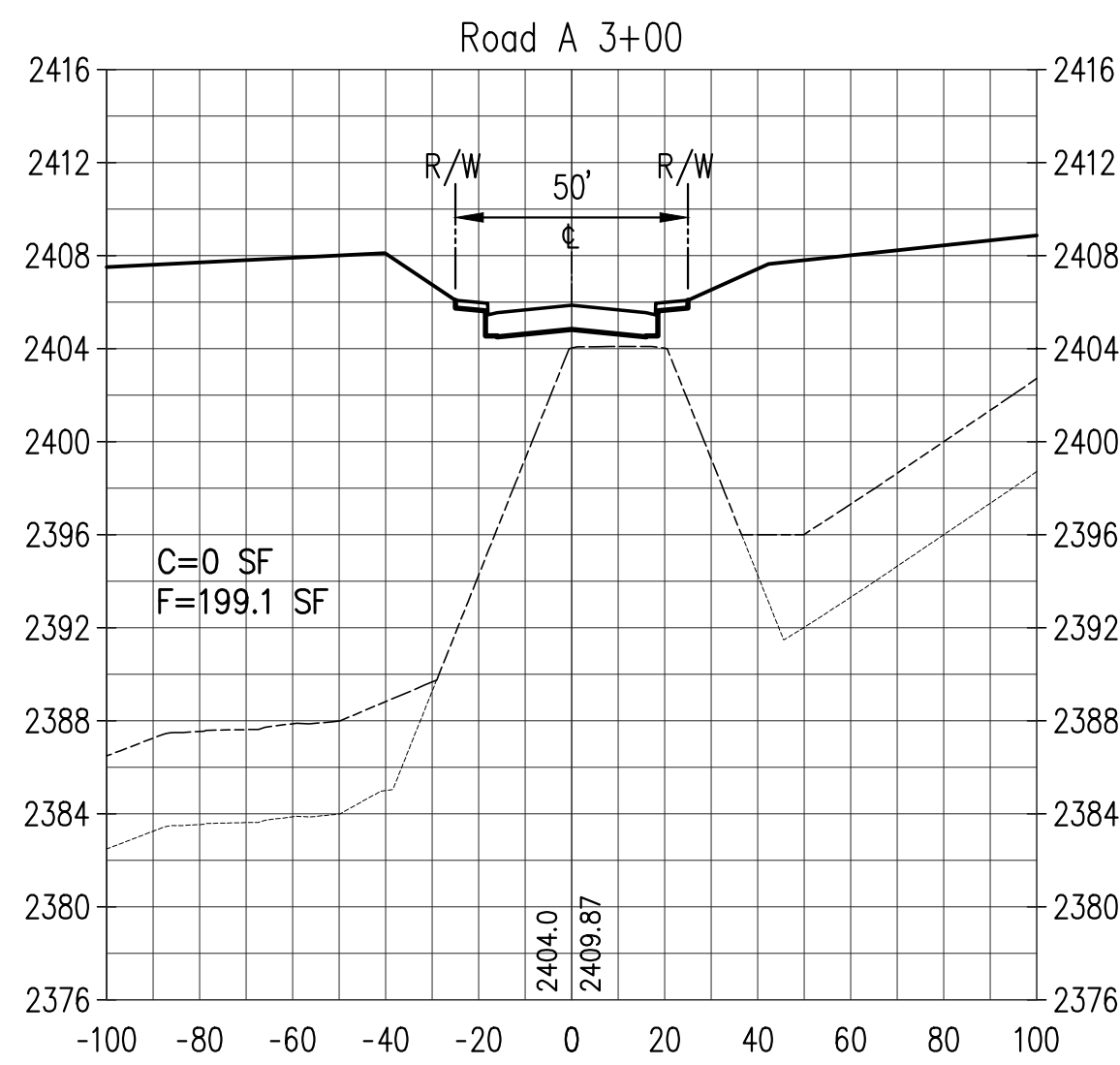
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS

TAX MAP KEY: (3) 6-6-01:10 & 77

TRAFFIC CONTROL PLAN - 2

DRAWN BY: LT ENGINEER: MFC CHECKED BY: RYS

APPROVED:



LEGEND

C CUT QUANTITY IN SF
C/A CUT/ASH QUANTITY IN SF
F FILL QUANTITY IN SF
--- EXISTING GROUND
--- FINISH GRADE
--- ASH LAYER (APPROX. 4 FT. BELOW EXIST. GROUND)

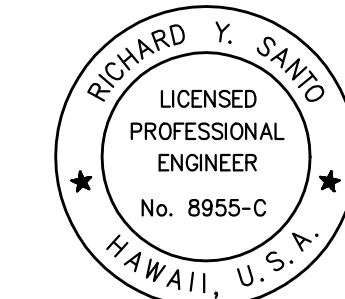
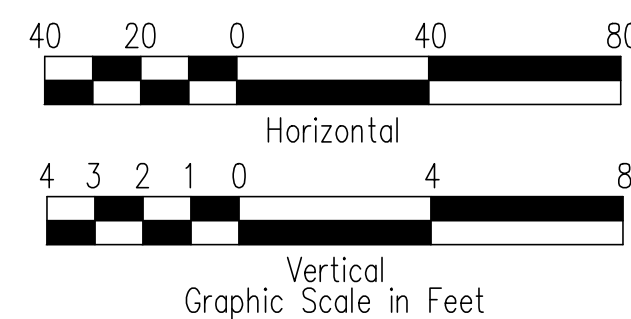
EARTHWORK SUMMARY

ROAD "A"
EXCAVATION = 1,602 CU. YDS.
EXCAVATION/ASH = 1,750 CU. YDS.
EMBANKMENT = 3,136 CU. YDS.

CROSS SECTION - ROAD "A"

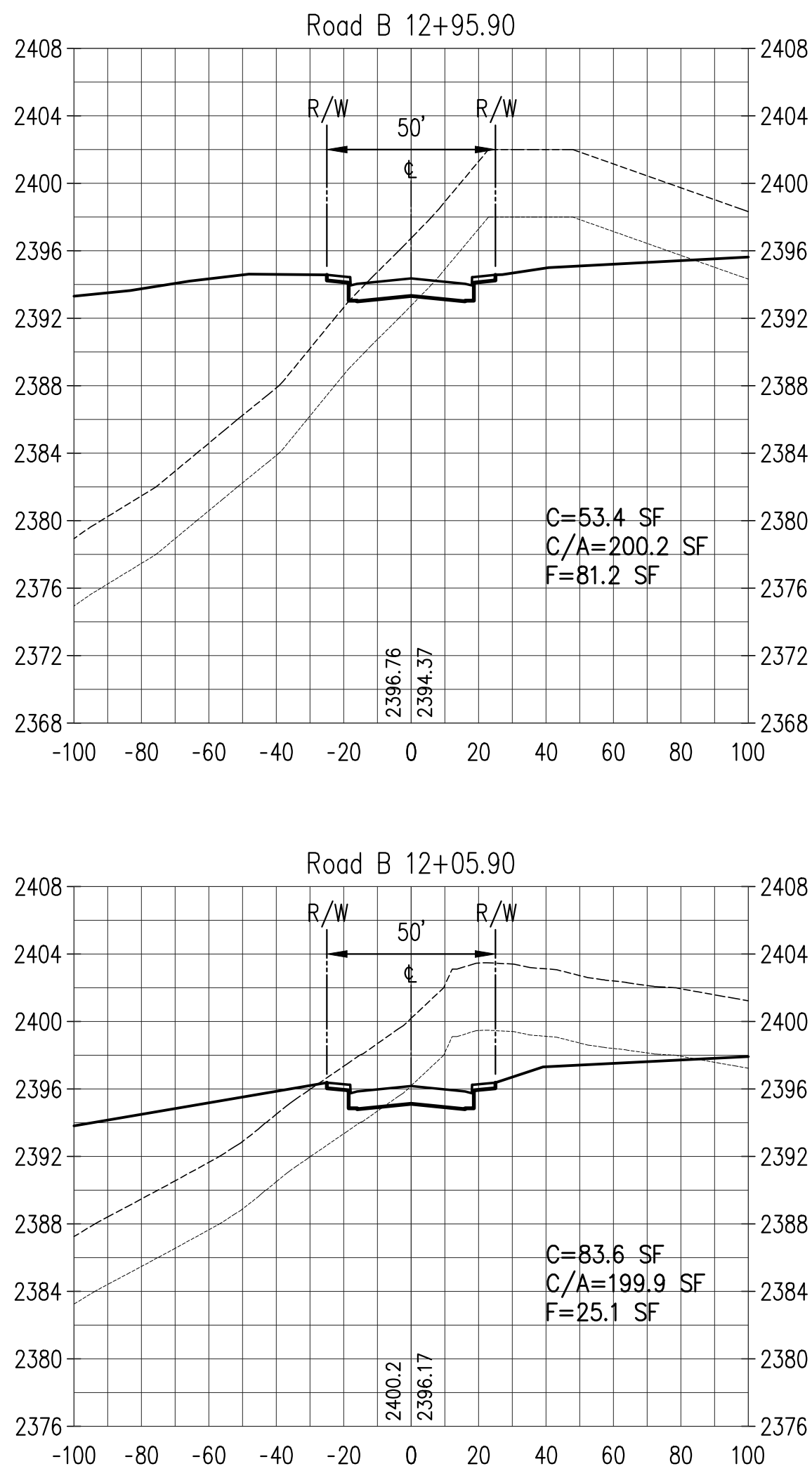
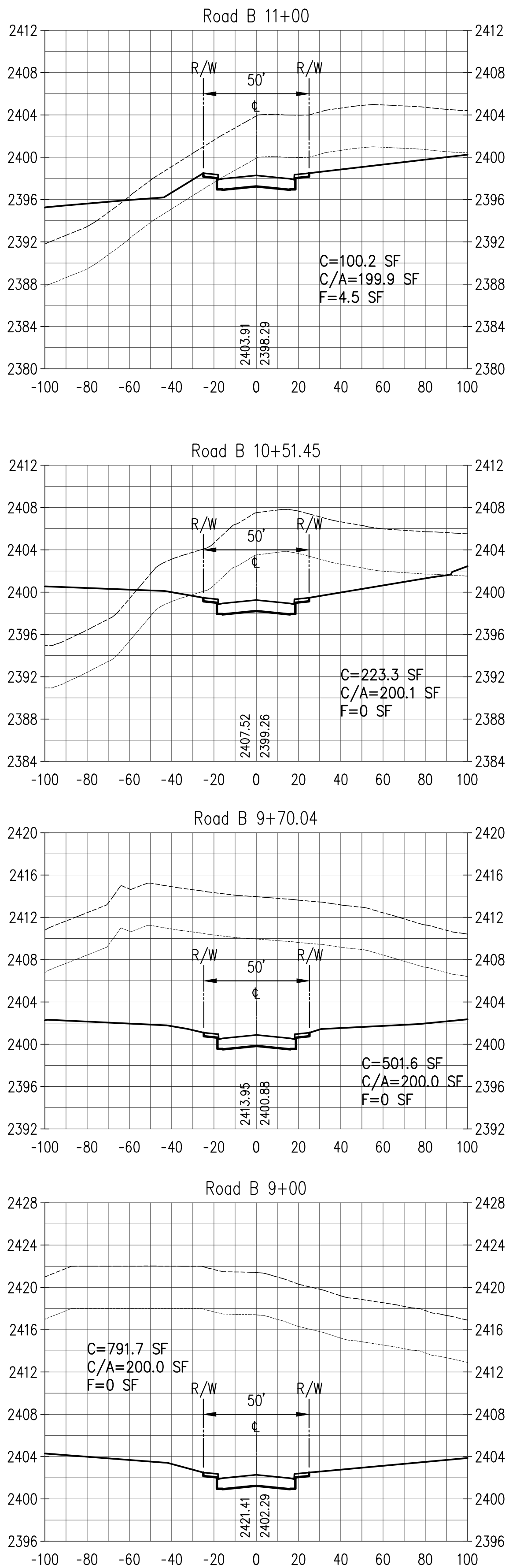
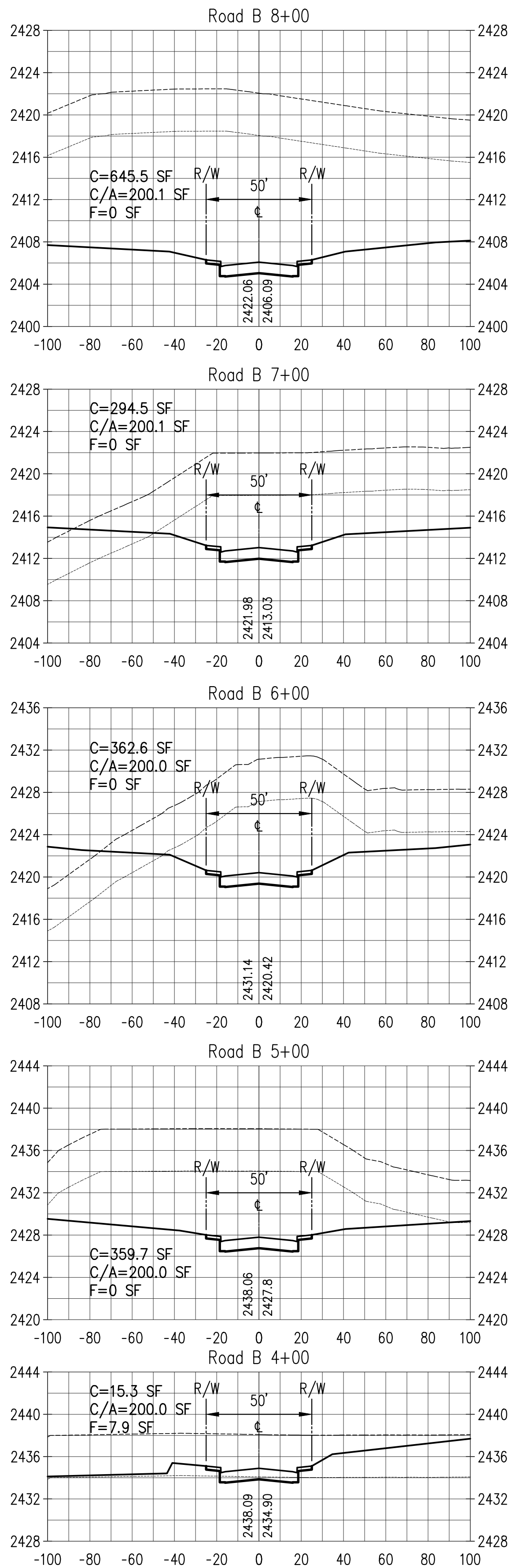
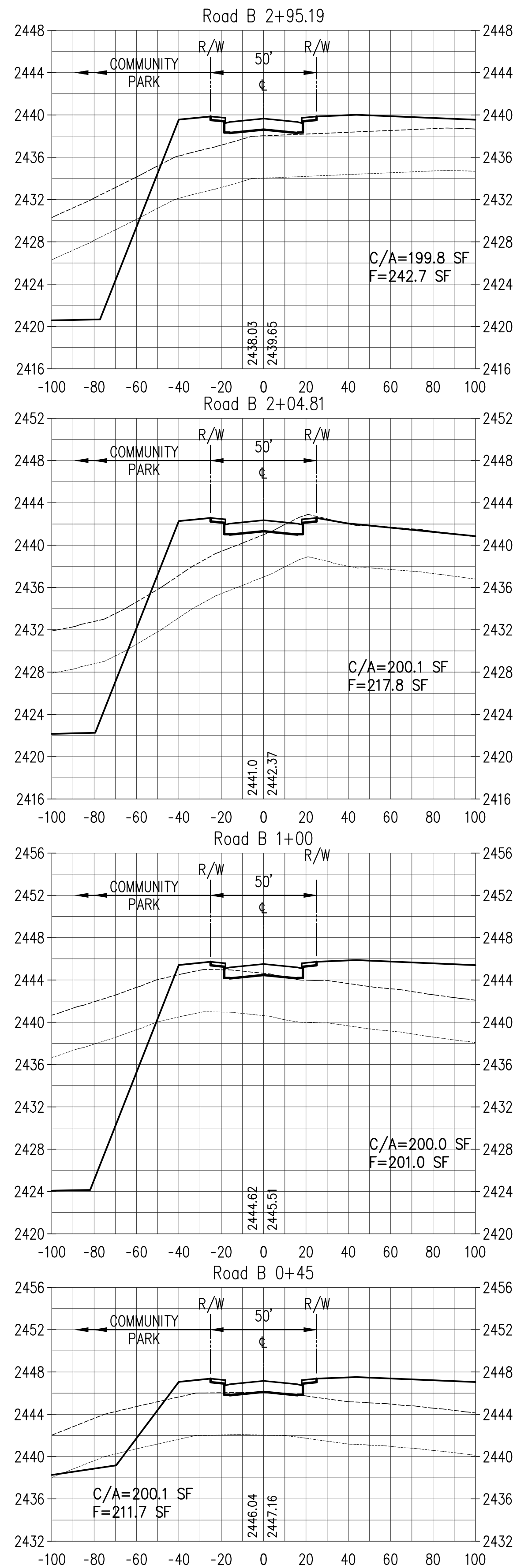
SCALES: HORIZ. 1"=40'
VERT. 1"= 4'

- NOTES:
- THE ROAD PRISM (I.E. A.C. PAVEMENT, BASE COURSE AND SUBBASE COURSE LAYERS) AND ASH LAYER ARE NOT APPLICABLE CUT AND FILL MATERIAL QUANTITIES FOR GRADING WORK.
 - OVER-EXCAVATE THE ASH LAYER (I.E. APPROXIMATELY 2 FEET BELOW EXISTING GROUND). ASH LAYER IS CLASSIFIED AS DISPOSAL MATERIAL.
 - REFER TO DWG. NO. C-13 FOR THE DETAILS OF TYPICAL ROAD SECTIONS.
 - MAXIMUM CUT OR FILL SLOPE IS 2:1.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
ROAD CROSS SECTIONS - 1			
DRAWN BY: MFN	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			



LEGEND

C CUT QUANTITY IN SF
C/A CUT/ASH QUANTITY IN SF
F FILL QUANTITY IN SF
--- EXISTING GROUND
— FINISH GRADE
- - - - - ASH LAYER (APPROX. 4 FT. BELOW EXIST. GROUND)

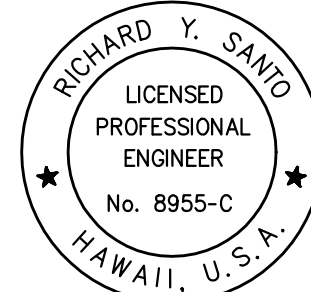
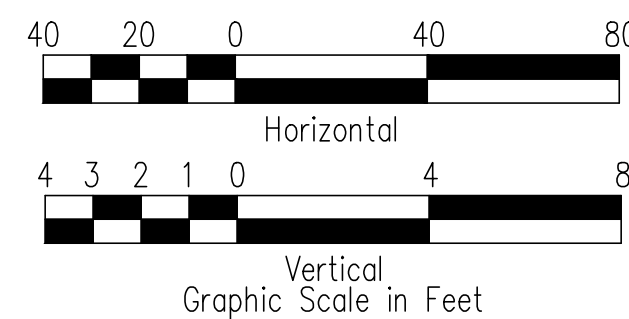
EARTHWORK SUMMARY

ROAD "B"
EXCAVATION = 11,331 CU. YDS.
EXCAVATION/ASH = 8,695 CU. YDS.
EMBANKMENT = 2,745 CU. YDS.

CROSS SECTION - ROAD "B"

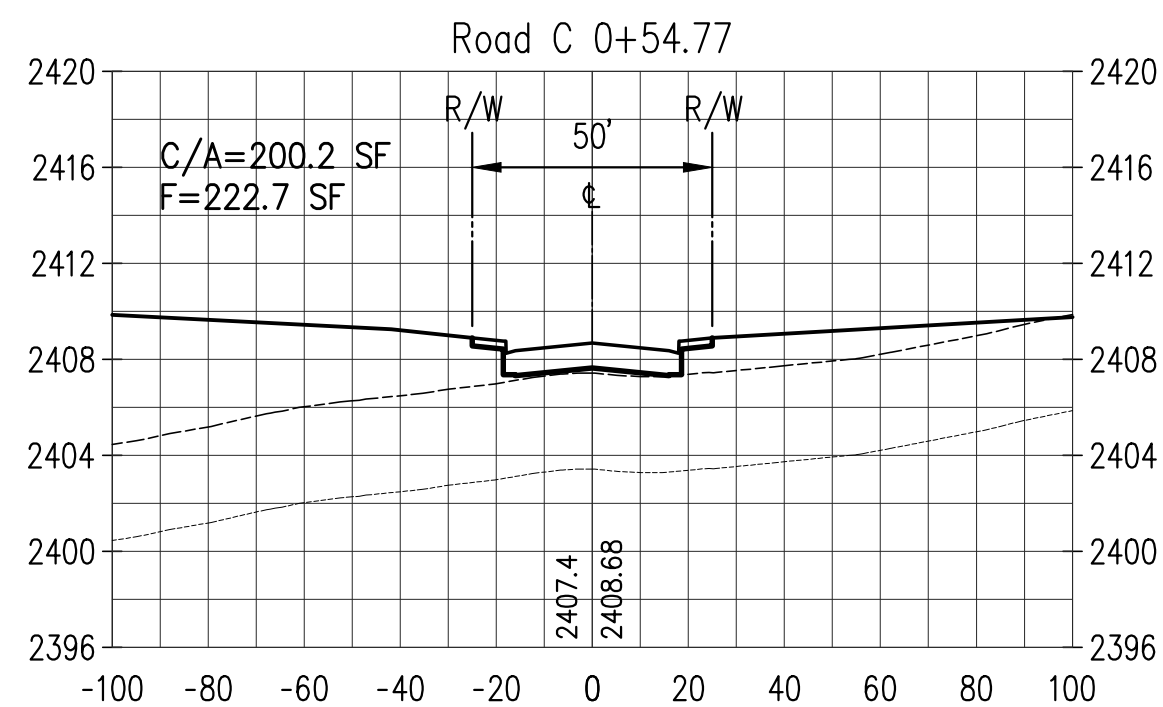
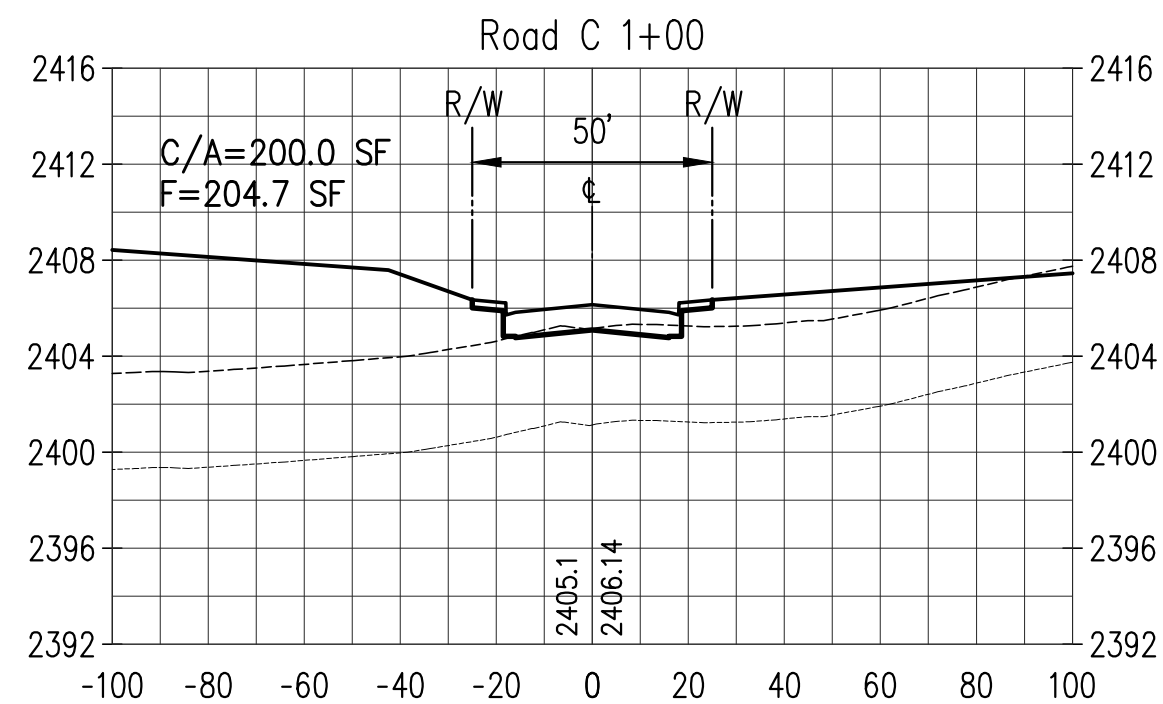
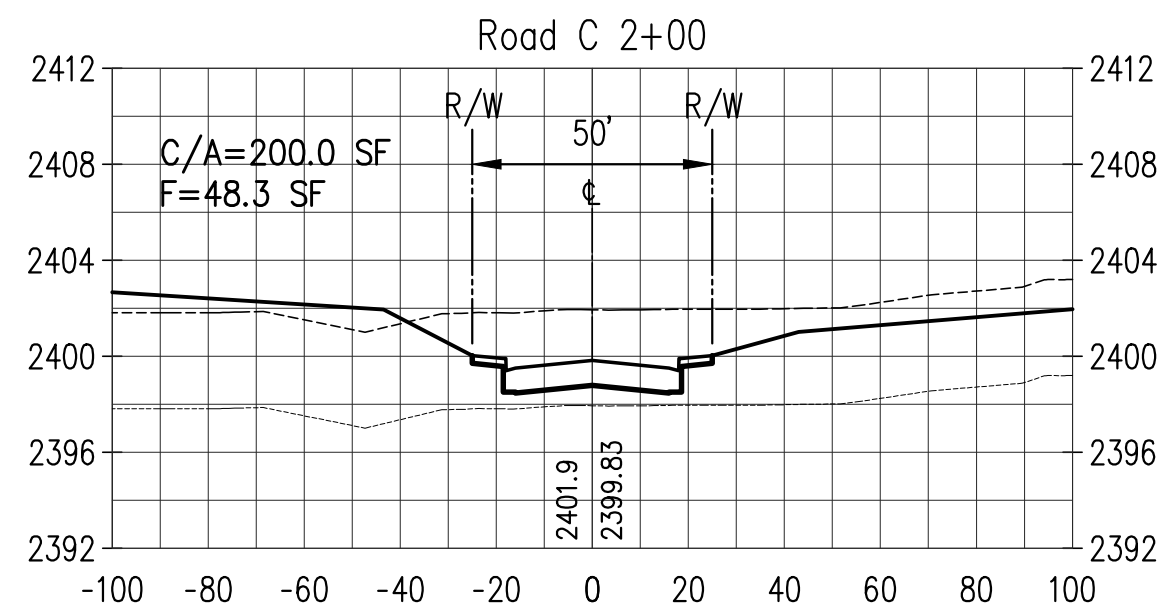
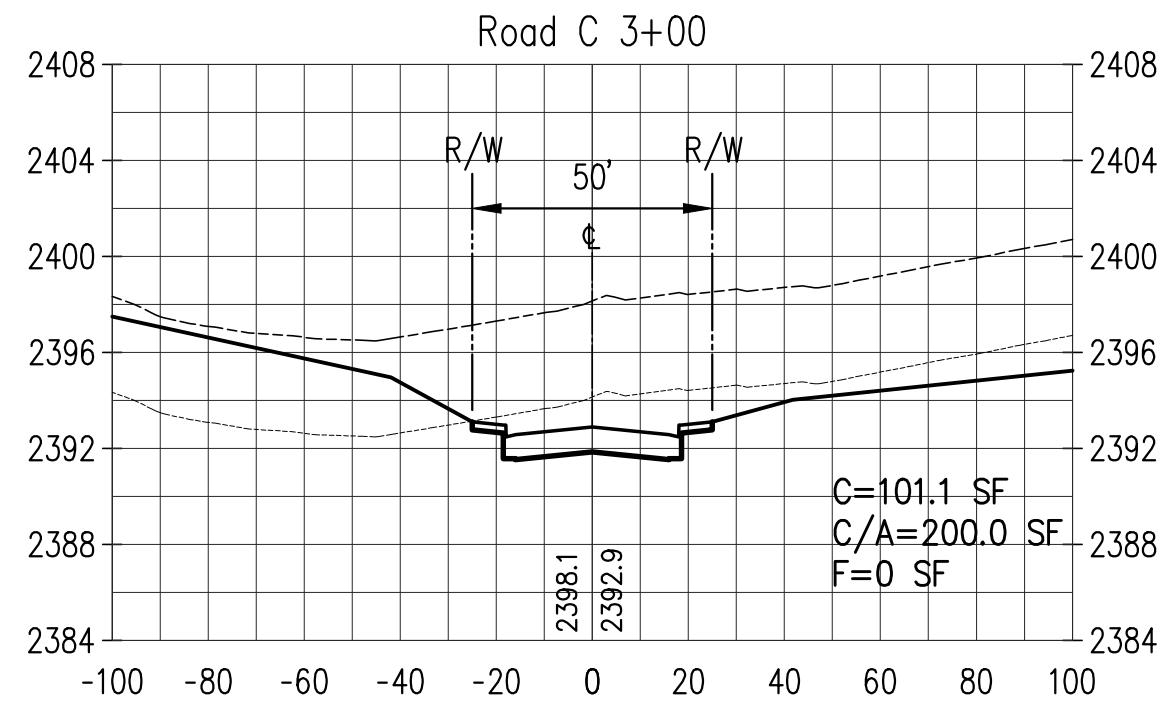
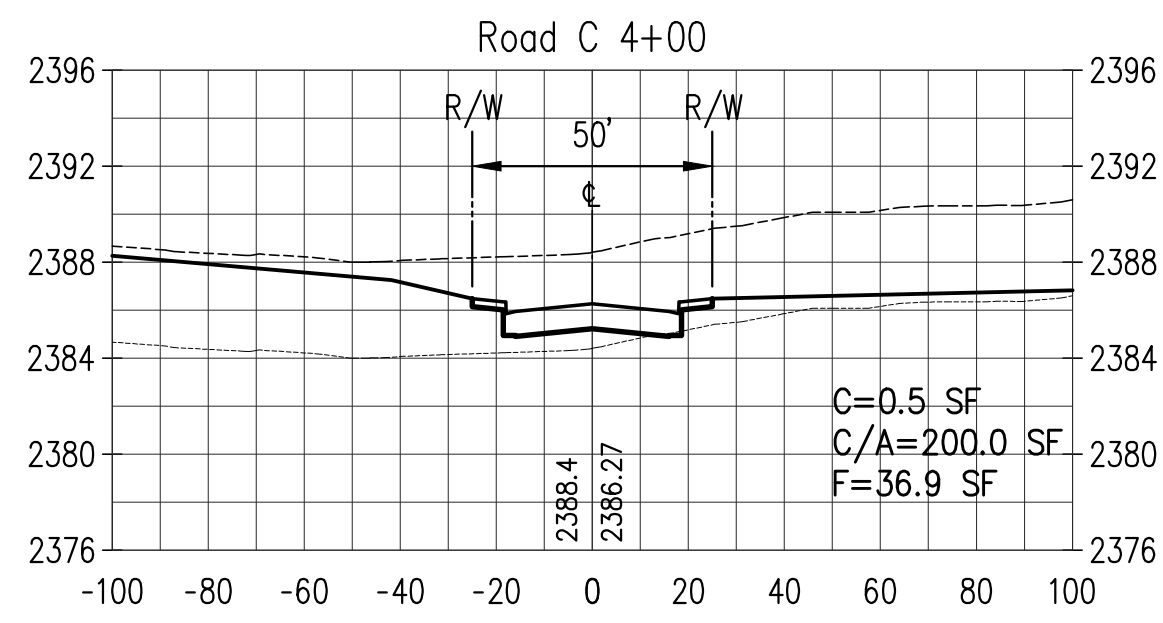
SCALES: HORIZ. 1"=40'
VERT. 1"= 4'

- NOTES:
1. THE ROAD PRISM (I.E. A.C. PAVEMENT, BASE COURSE AND SUBBASE COURSE LAYERS) AND ASH LAYER ARE NOT APPLICABLE CUT AND FILL MATERIAL QUANTITIES FOR GRADING WORK.
 2. OVER-EXCAVATE THE ASH LAYER (I.E. APPROXIMATELY 2 FEET BELOW EXISTING GROUND), ASH LAYER IS CLASSIFIED AS DISPOSAL MATERIAL.
 3. REFER TO DWG. NO. C-13 FOR THE DETAILS OF TYPICAL ROAD SECTIONS.
 4. MAXIMUM CUT OR FILL SLOPE IS 2:1.



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REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
ROAD CROSS SECTIONS - 2			
DRAWN BY: MFM	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			

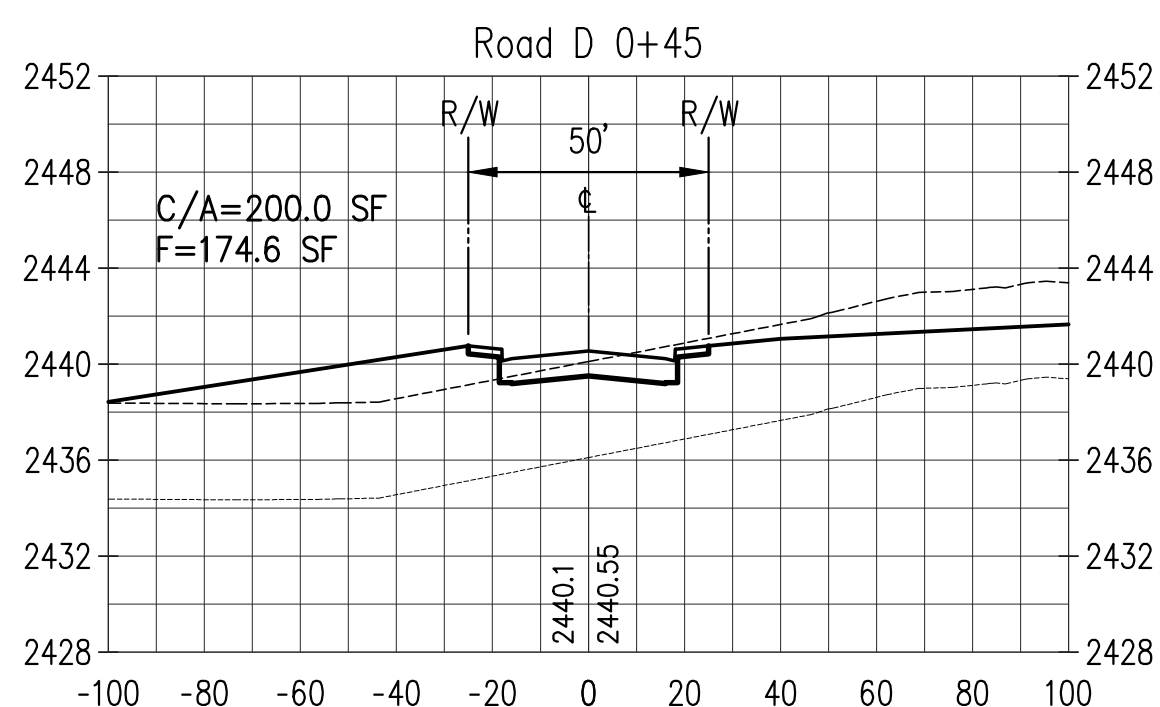
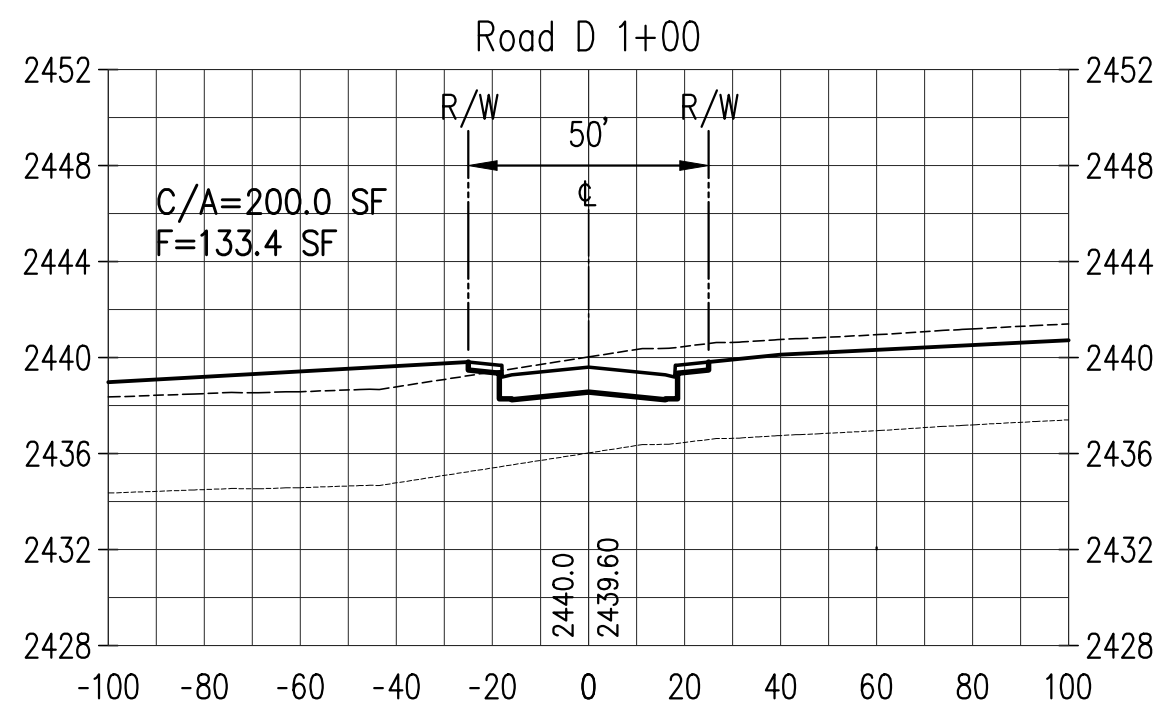
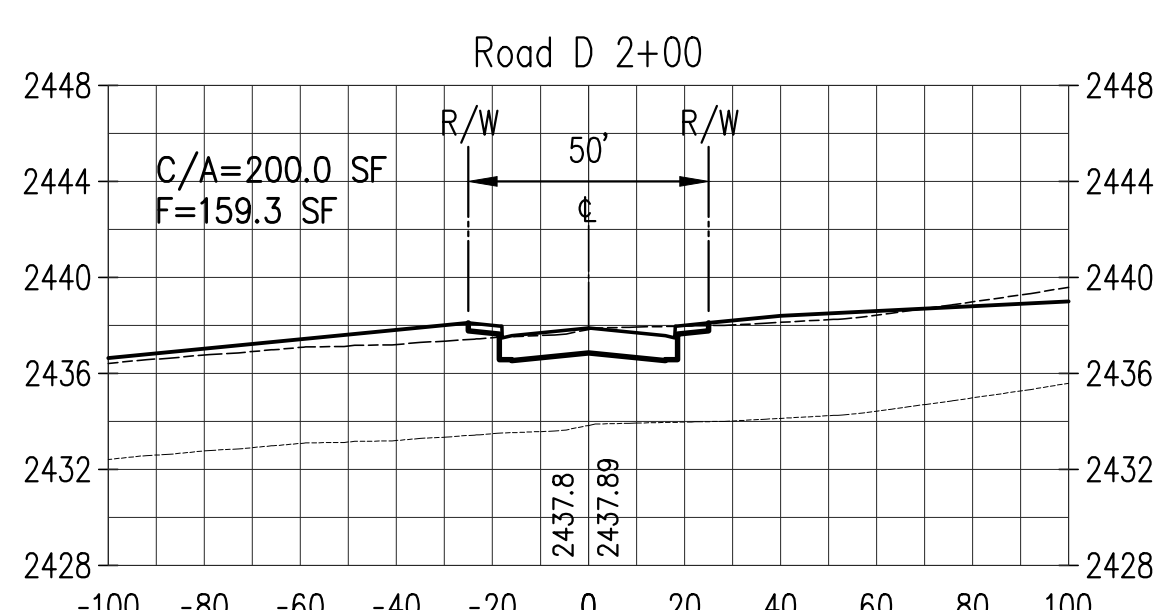
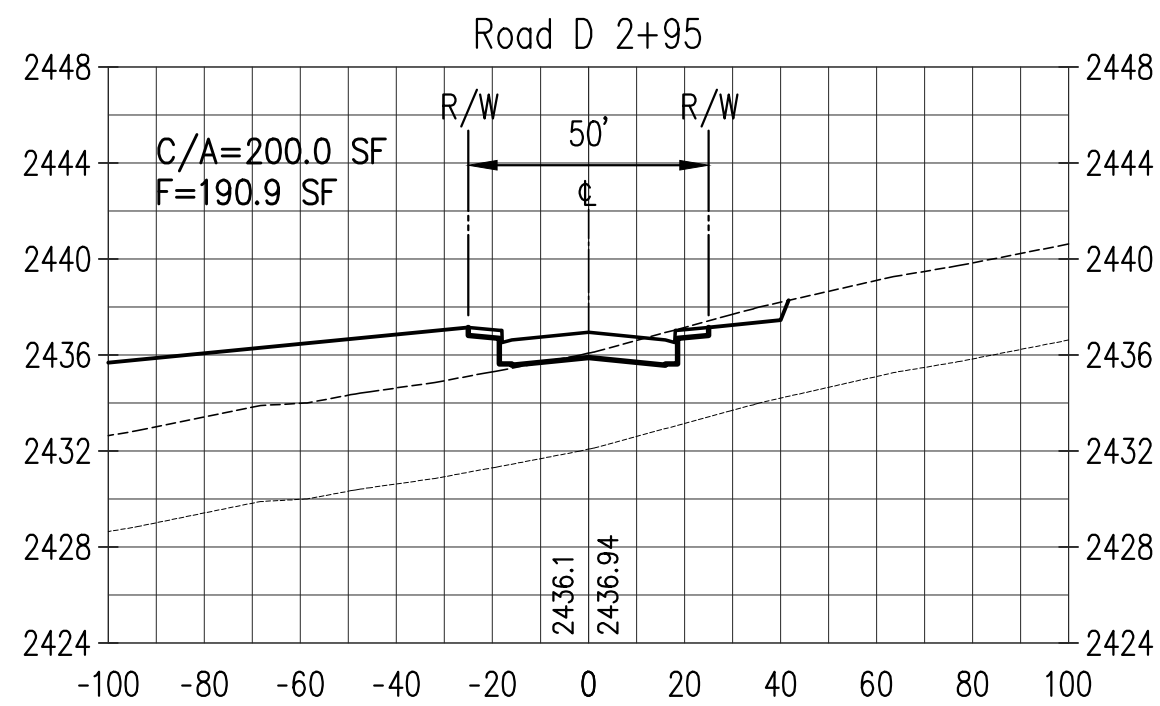
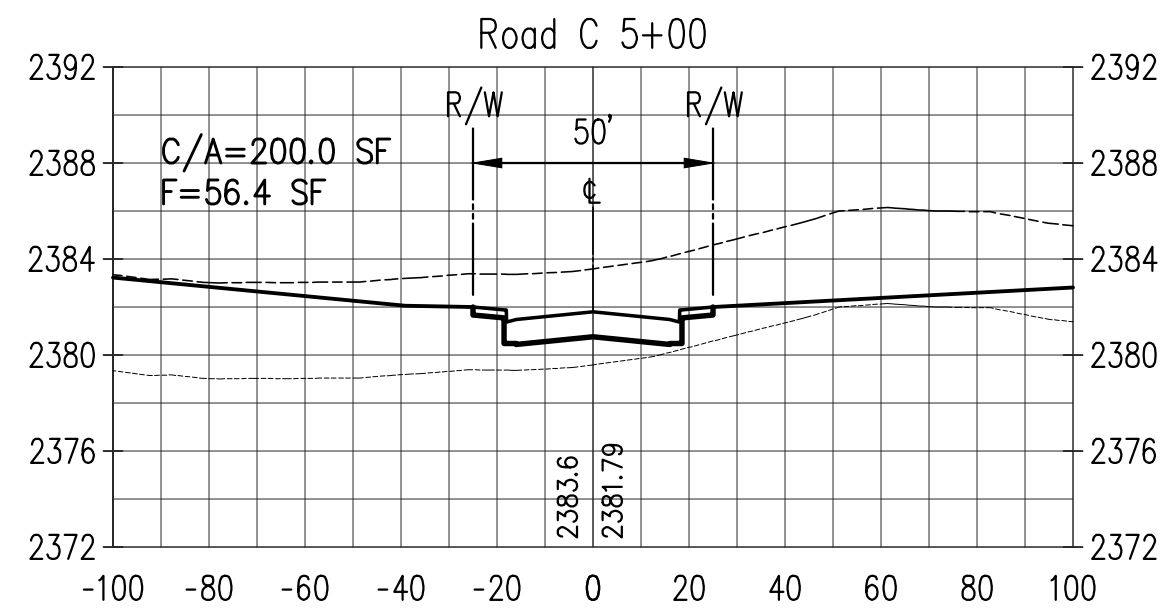
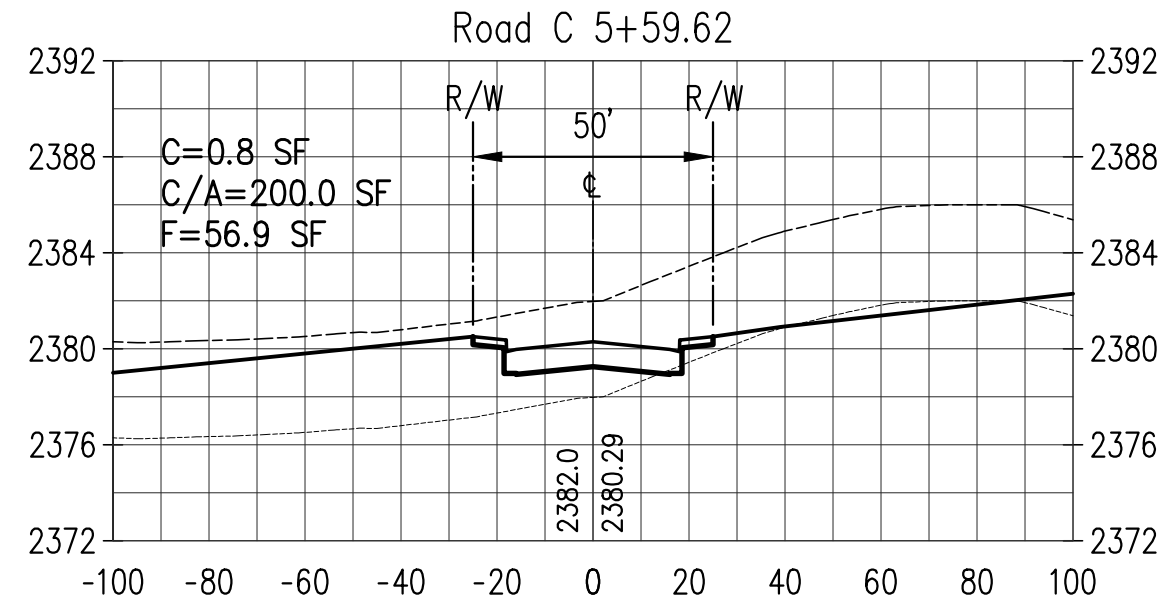
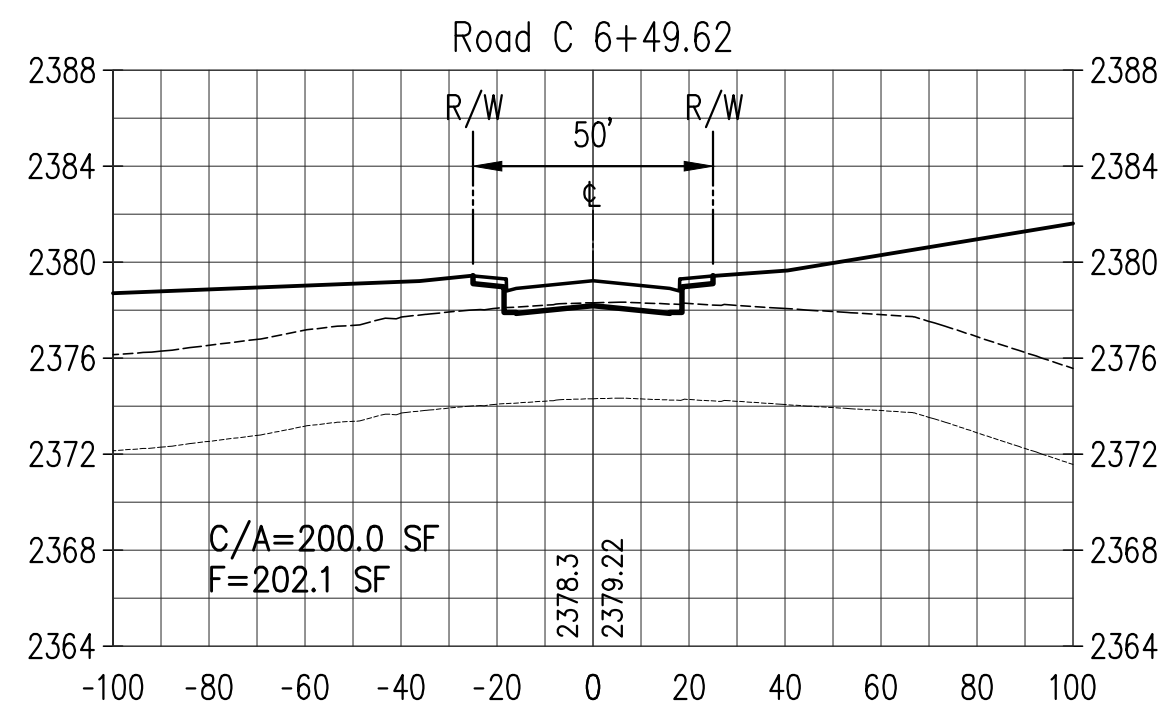


CROSS SECTION - ROAD "C"

SCALES: HORIZ. 1"=40'
VERT. 1"= 4'

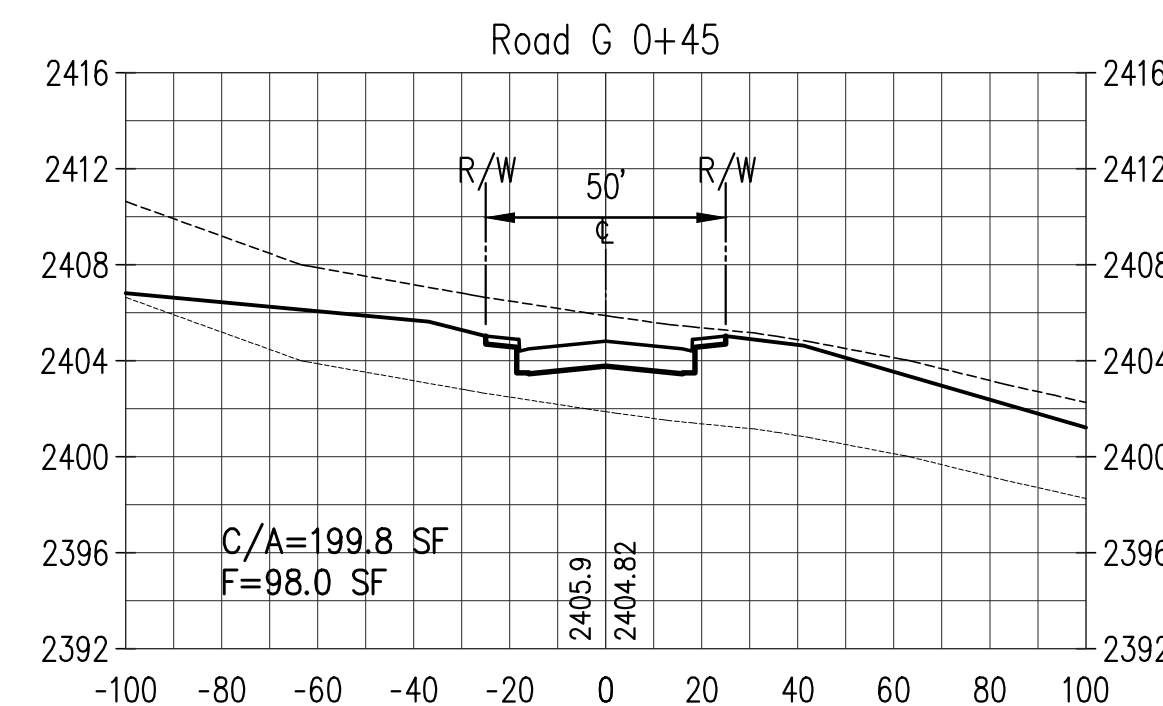
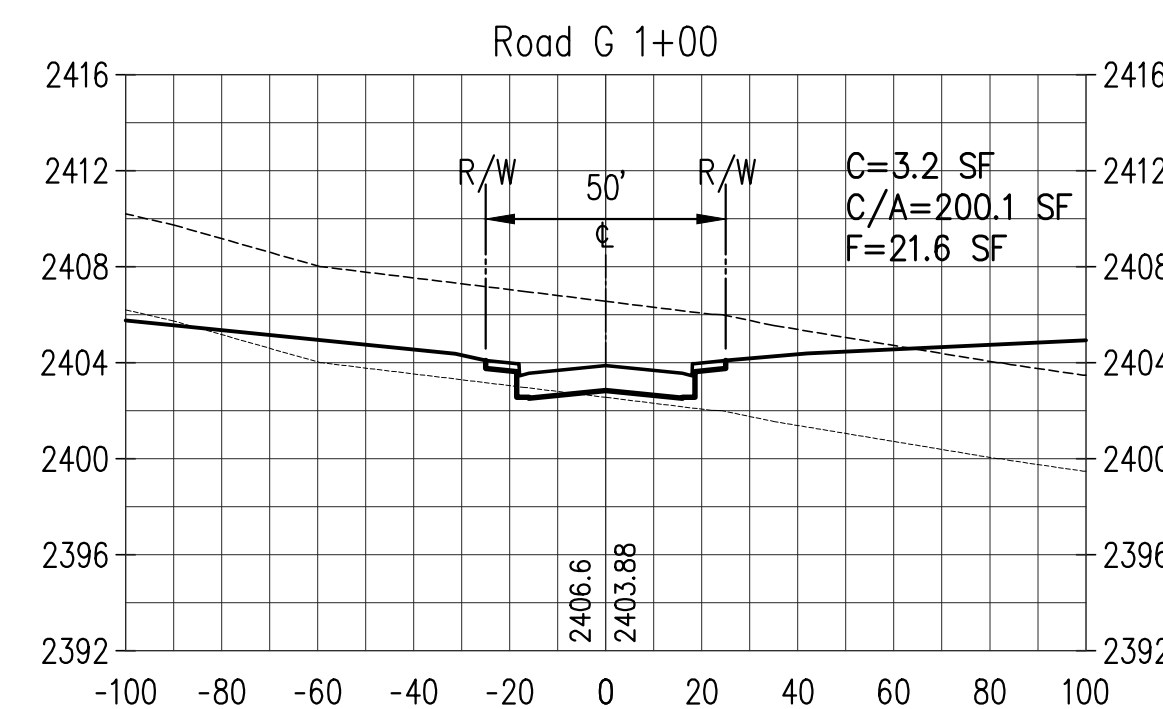
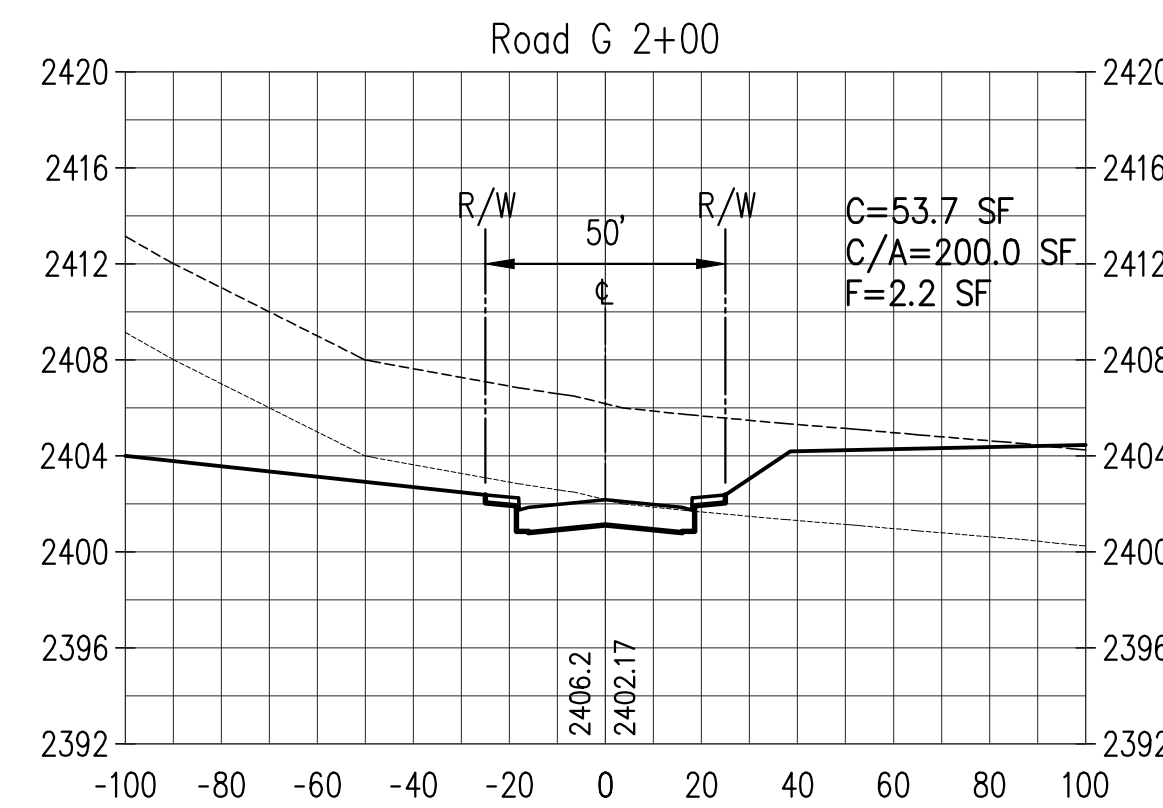
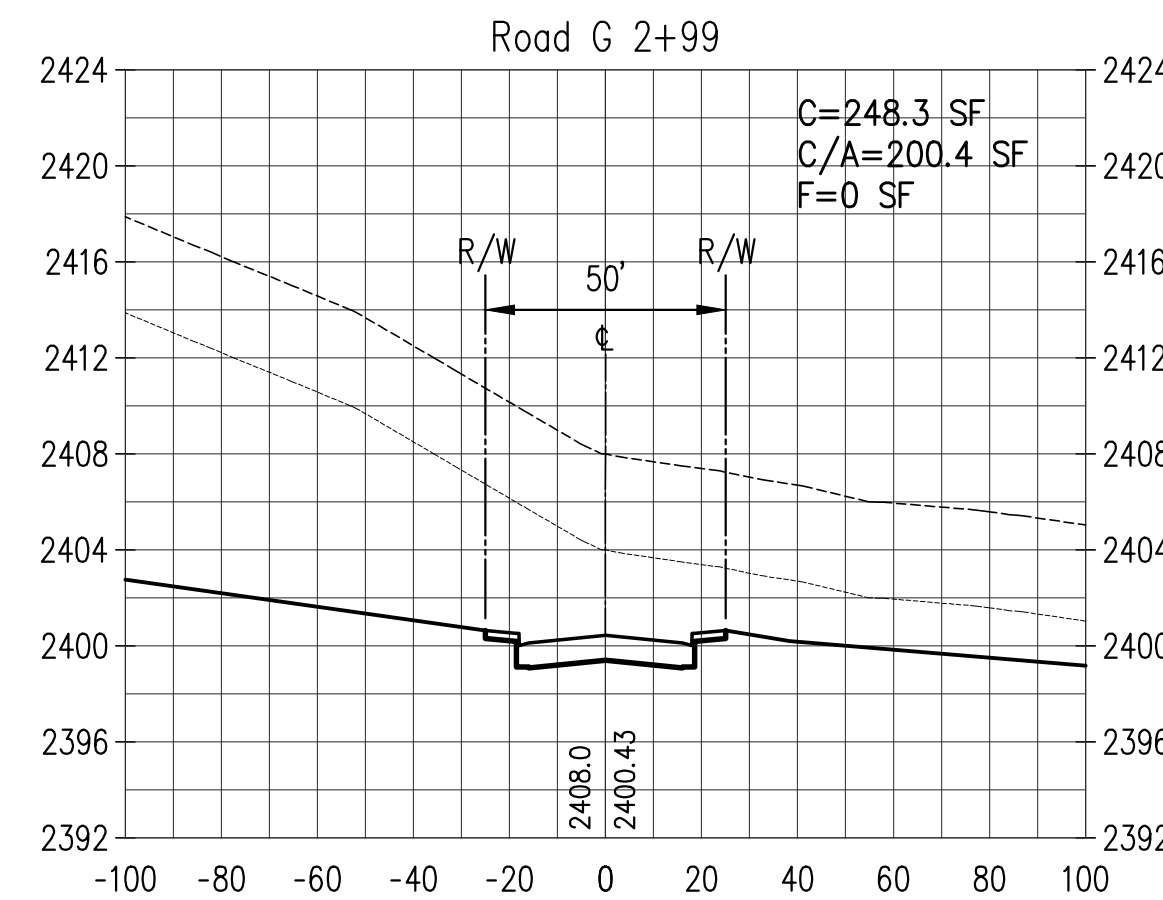
NOTES:

1. THE ROAD PRISM (I.E. A.C. PAVEMENT, BASE COURSE AND SUBBASE COURSE LAYERS) AND ASH LAYER ARE NOT APPLICABLE CUT AND FILL MATERIAL QUANTITIES FOR GRADING WORK.
2. OVER-EXCAVATE THE ASH LAYER (I.E. APPROXIMATELY 2 FEET BELOW EXISTING GROUND), ASH LAYER IS CLASSIFIED AS DISPOSAL MATERIAL.
3. REFER TO DWG. NO. C-13 FOR THE DETAILS OF TYPICAL ROAD SECTIONS.
4. MAXIMUM CUT OR FILL SLOPE IS 2:1.



CROSS SECTION - ROAD "D"

SCALES: HORIZ. 1"=40'
VERT. 1"= 4'



CROSS SECTION - ROAD "G"

SCALES: HORIZ. 1"=40'
VERT. 1"= 4'

LEGEND

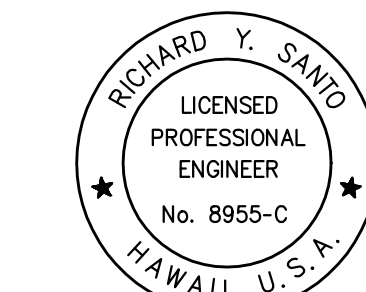
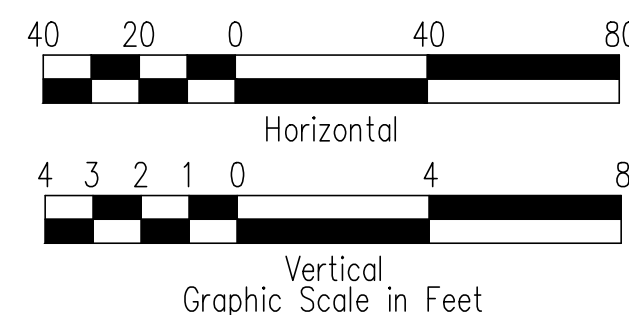
- C CUT QUANTITY IN SF
- C/A CUT/ASH QUANTITY IN SF
- F FILL QUANTITY IN SF
- EXISTING GROUND
- FINISH GRADE
- ... ASH LAYER (APPROX. 4 FT. BELOW EXIST. GROUND)

EARTHWORK SUMMARY

ROAD "C"
EXCAVATION = 379 CU. YDS.
EXCAVATION/ASH = 4,407 CU. YDS.
EMBANKMENT = 1,547 CU. YDS.

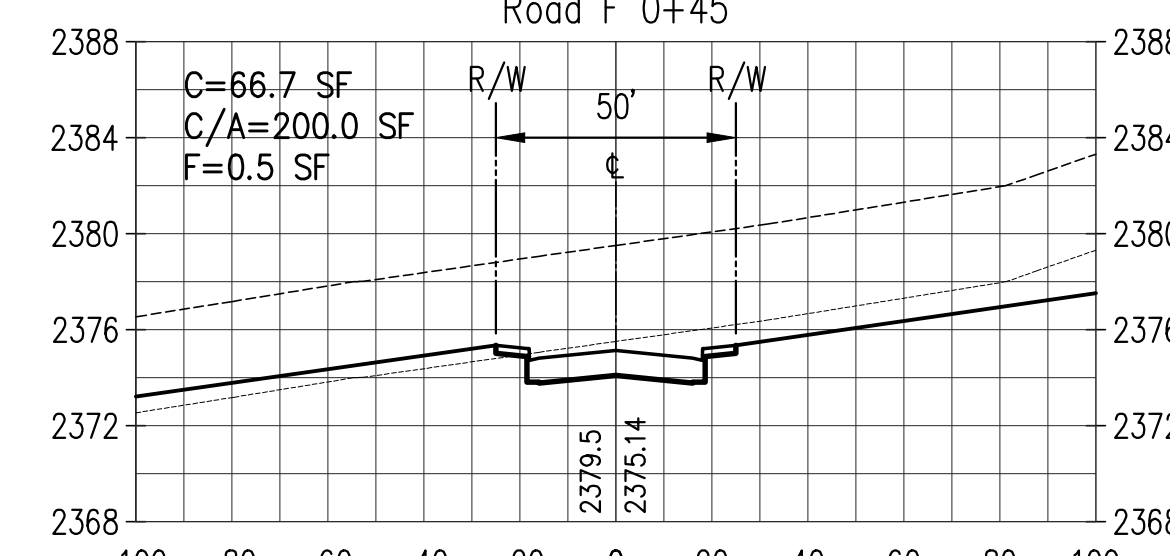
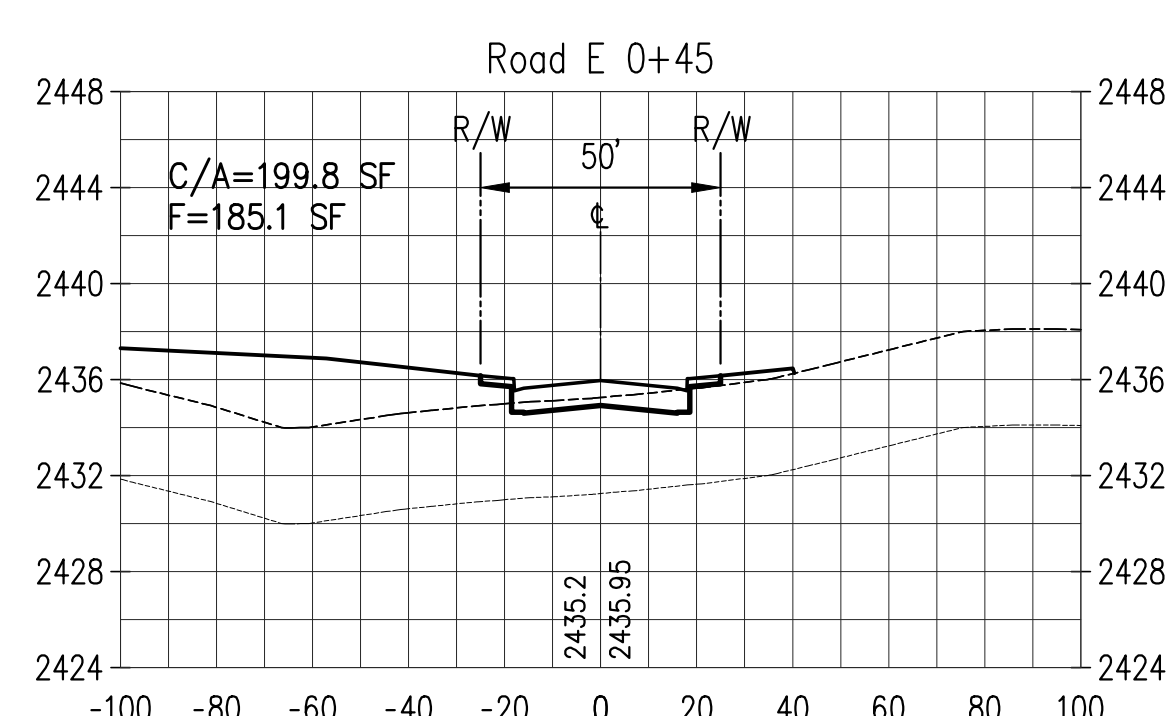
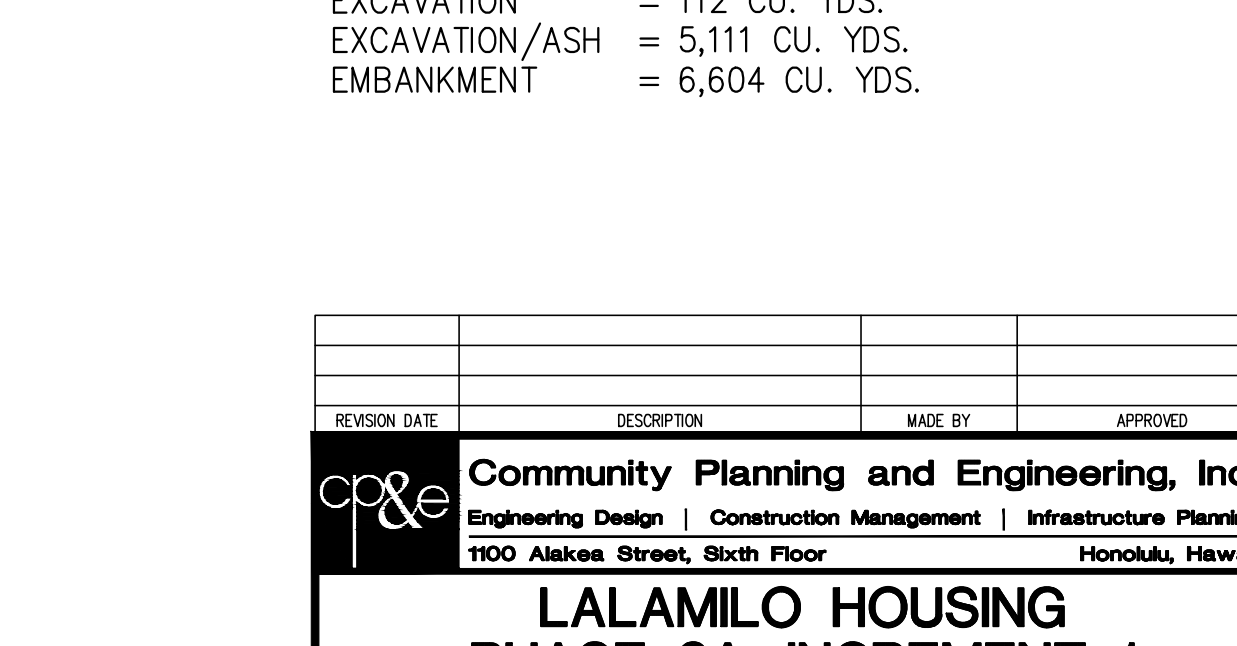
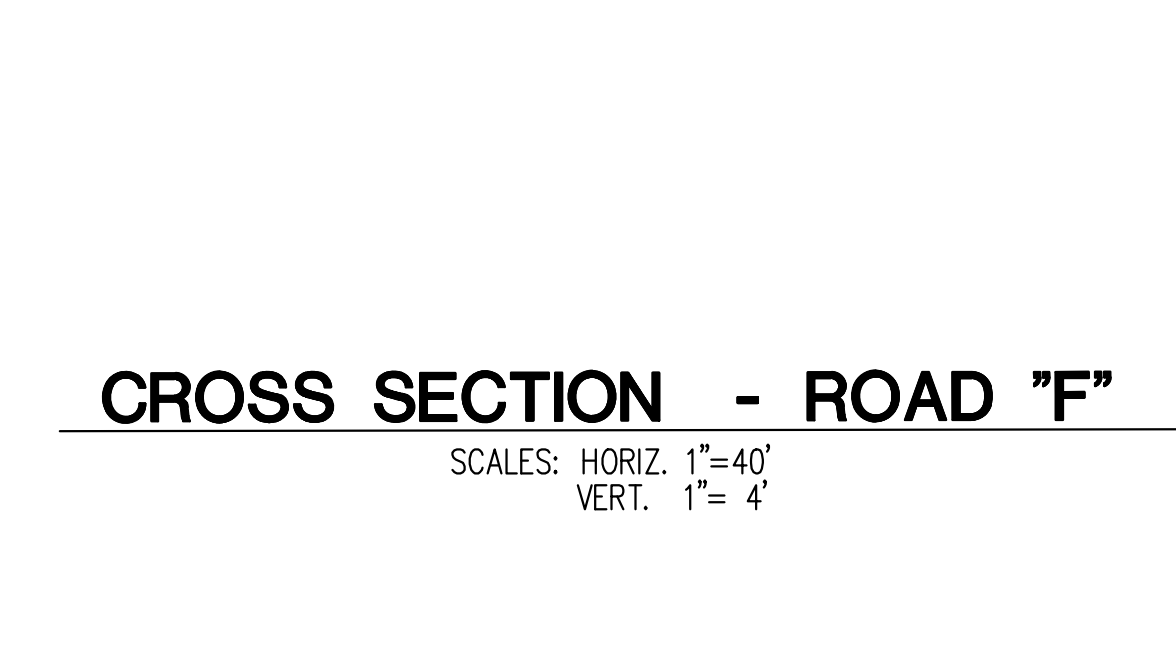
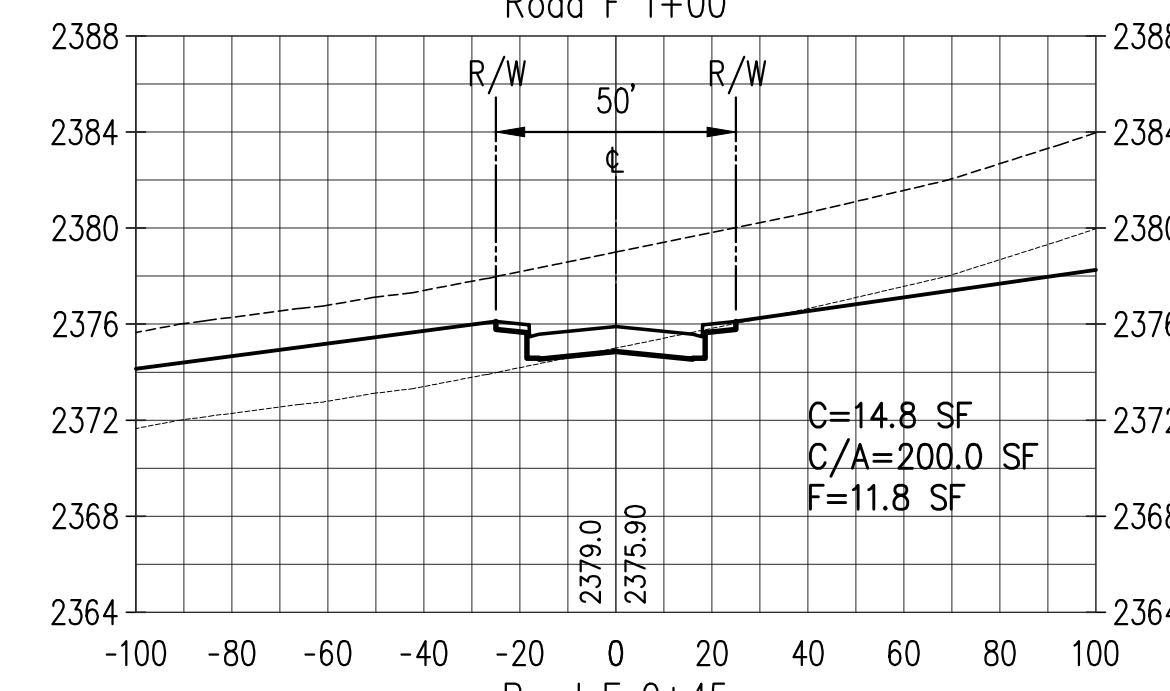
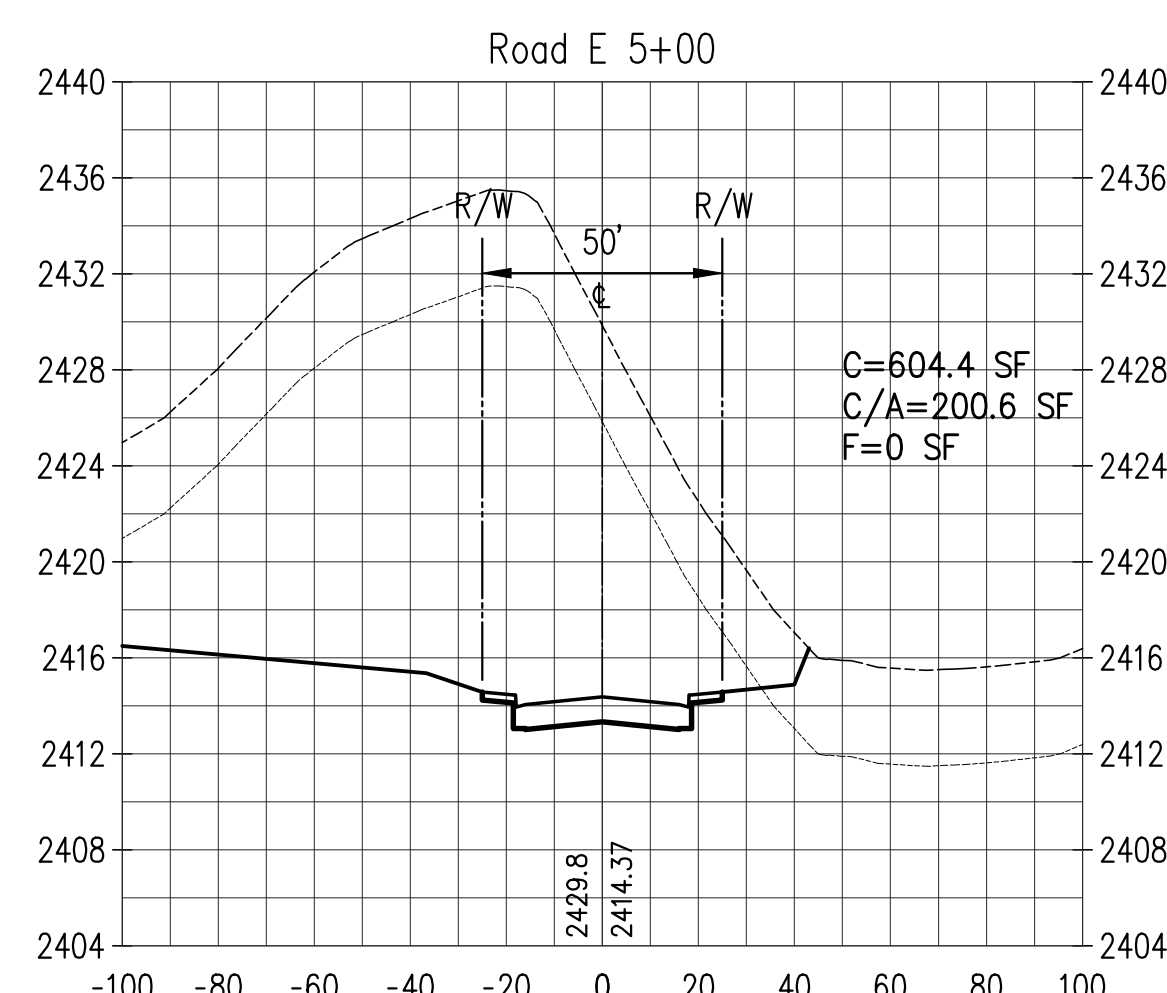
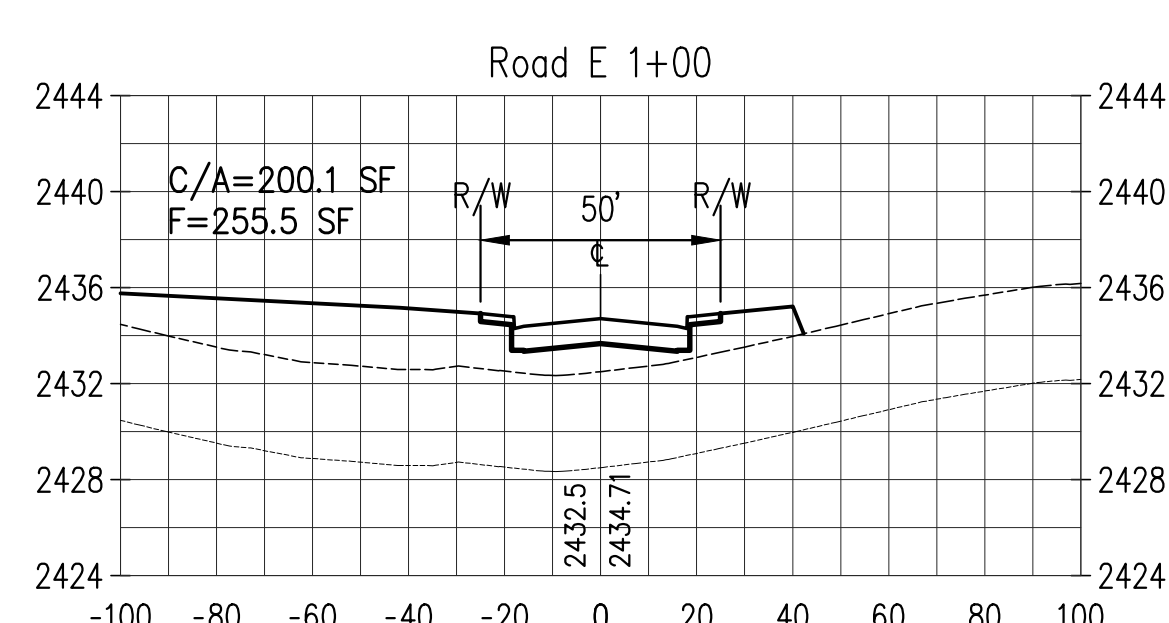
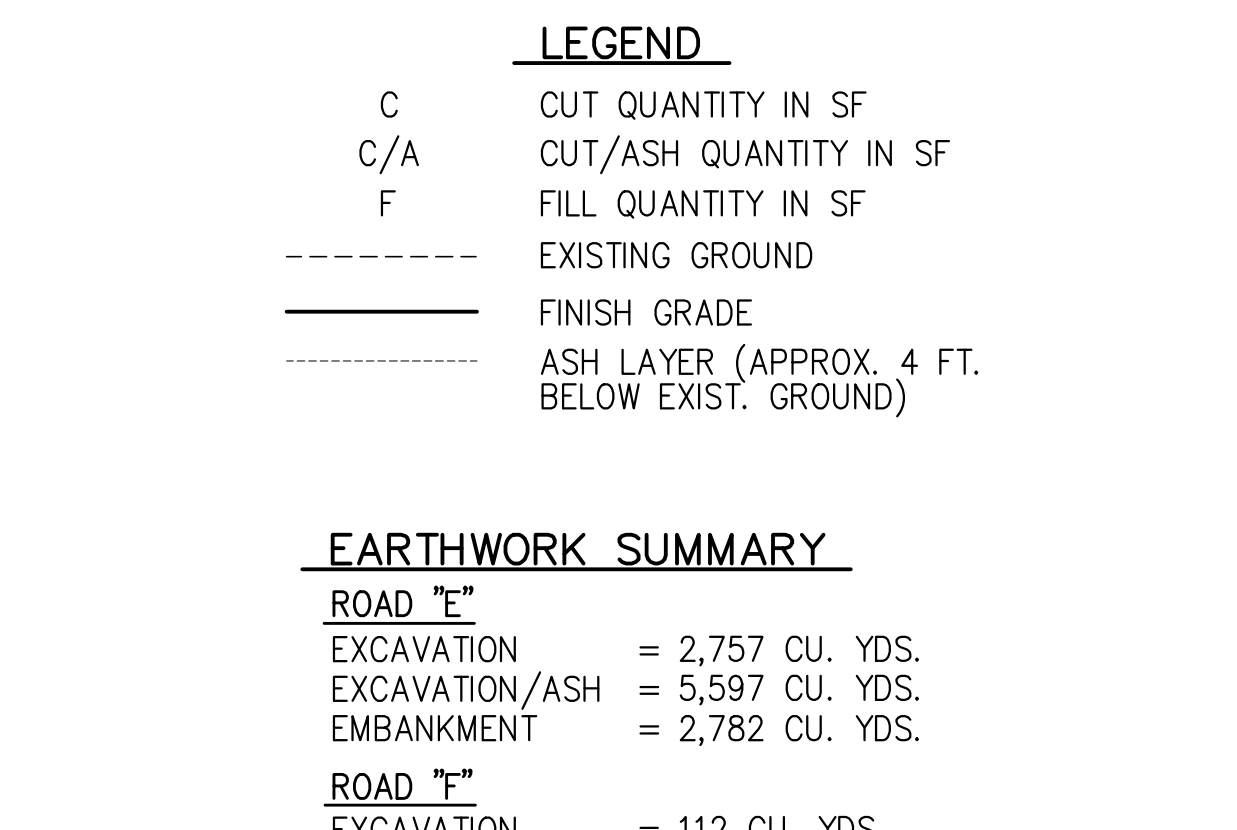
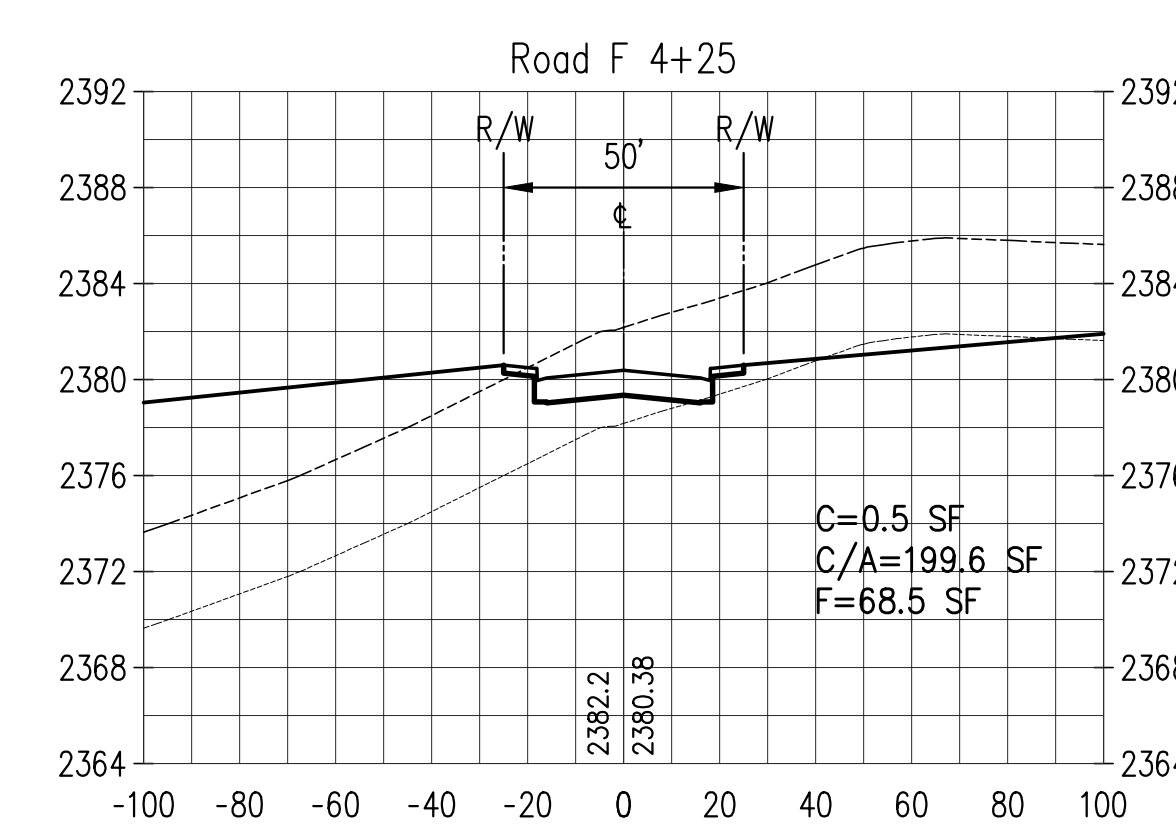
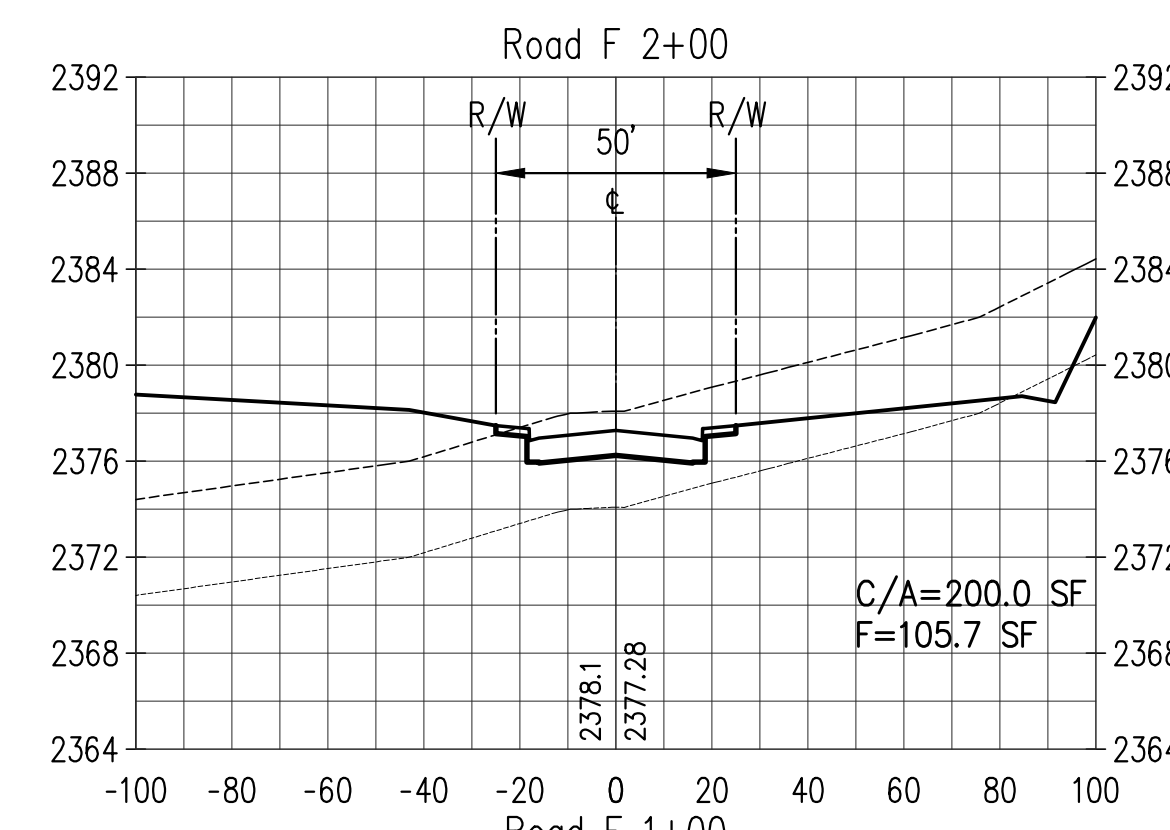
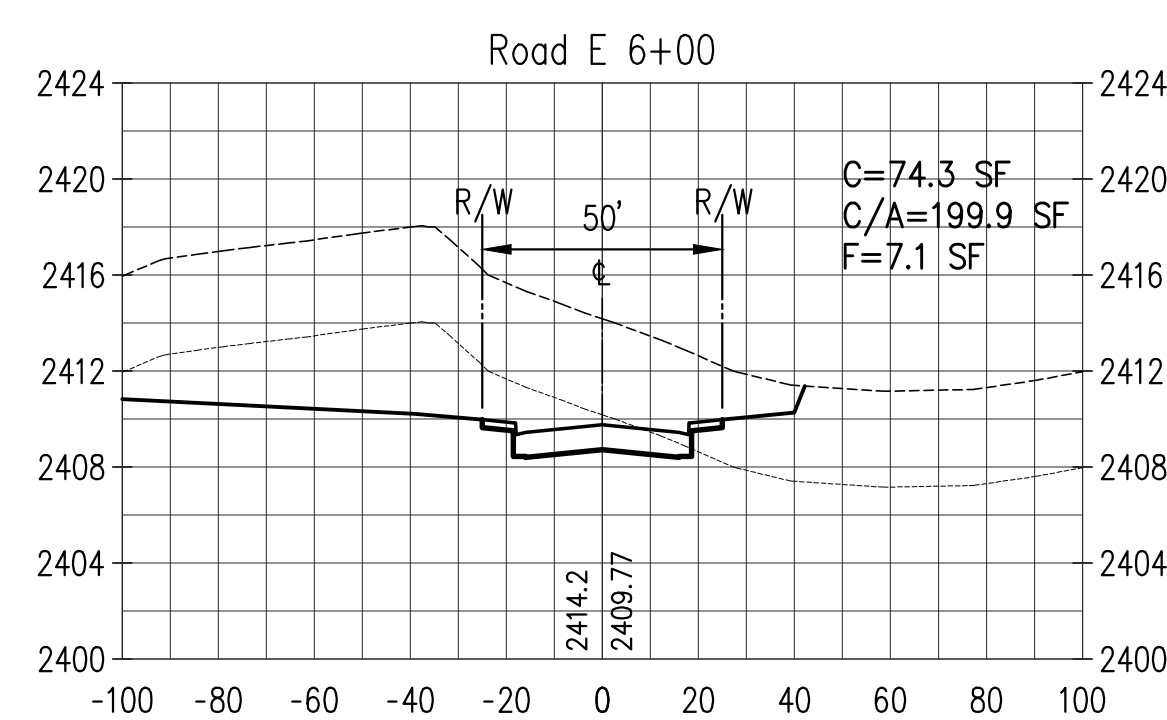
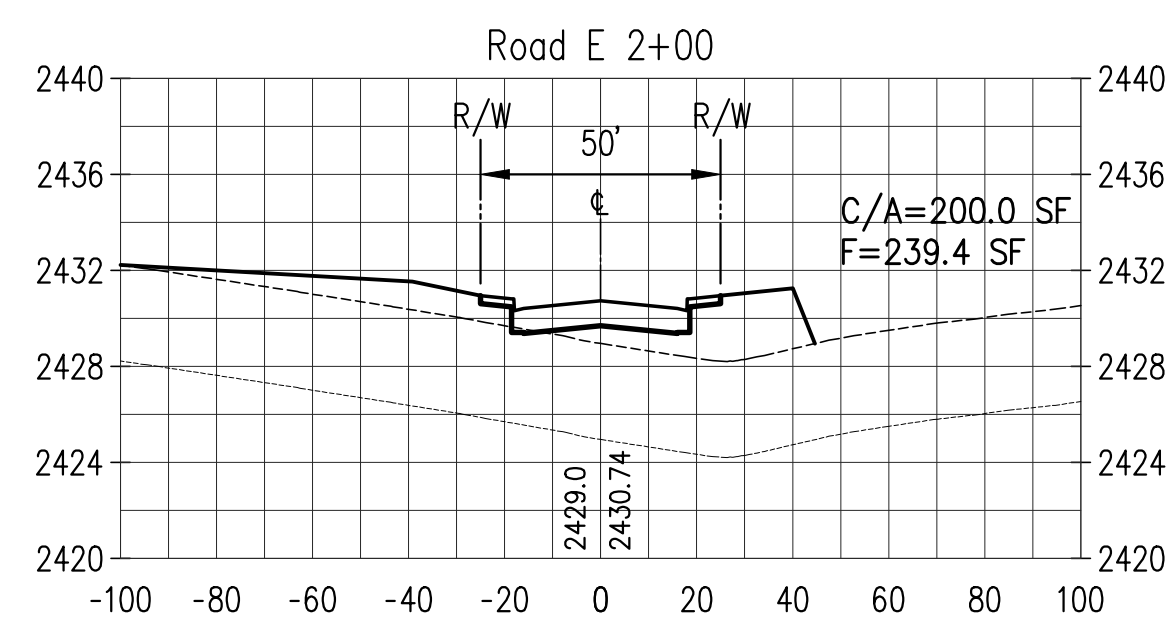
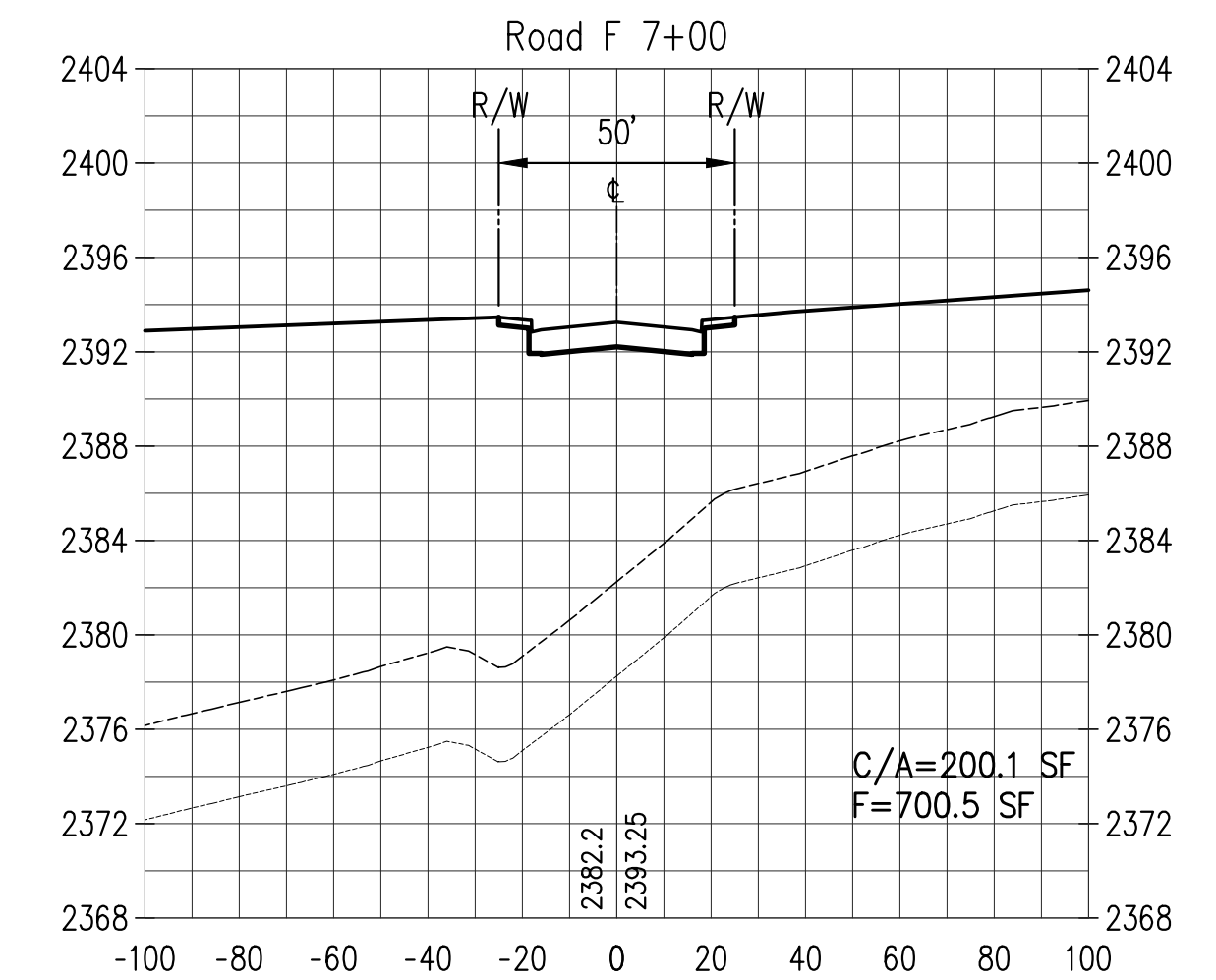
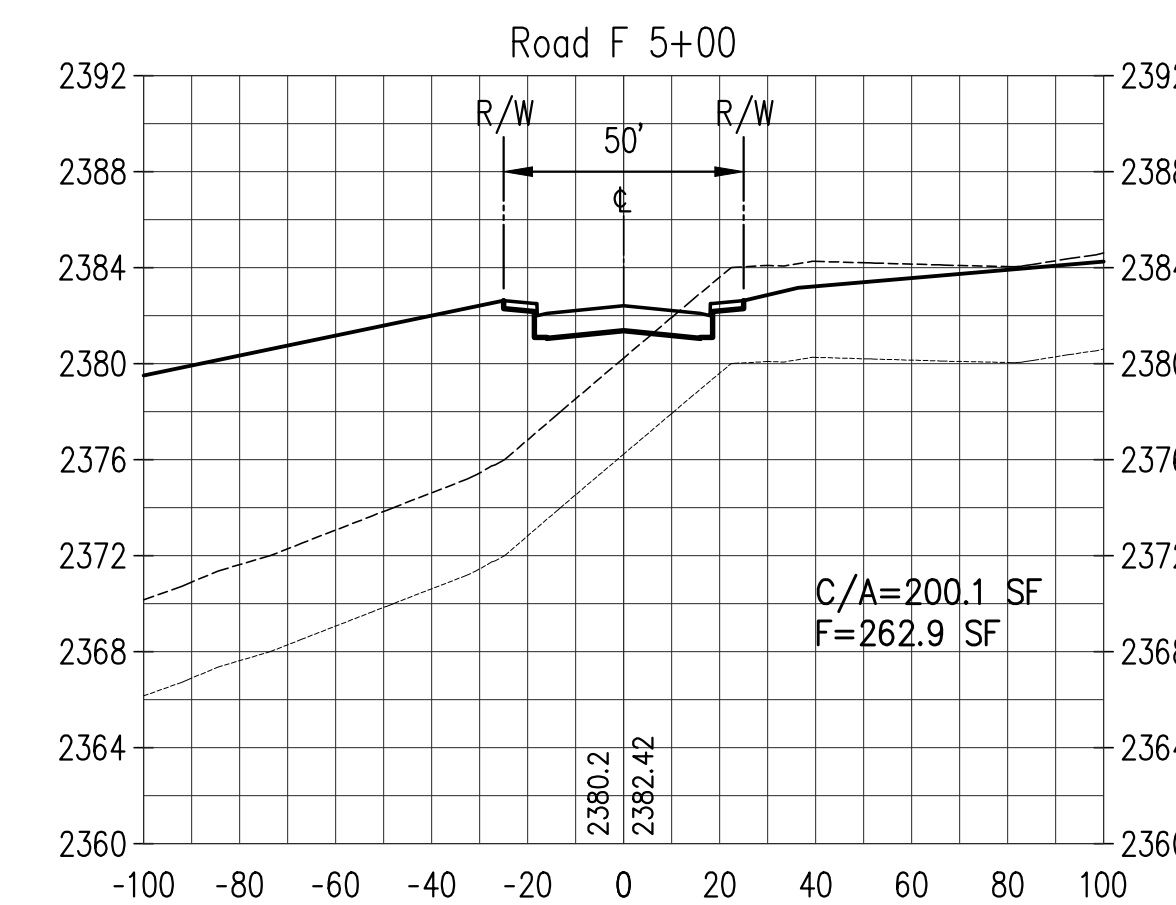
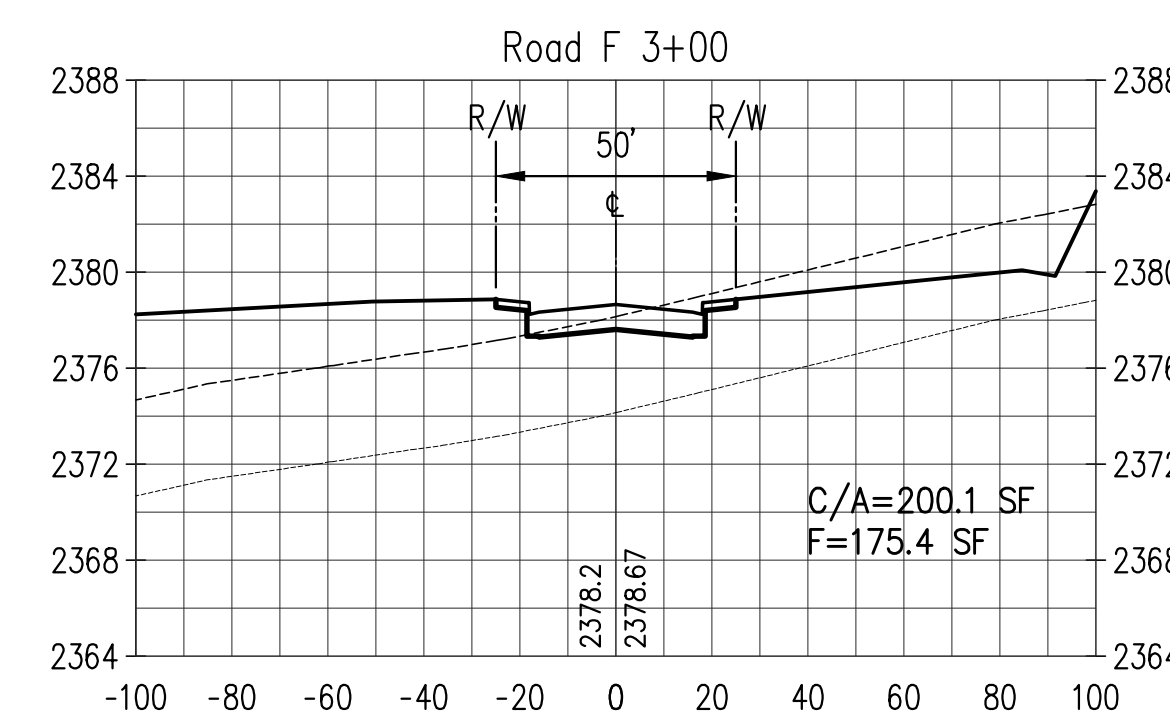
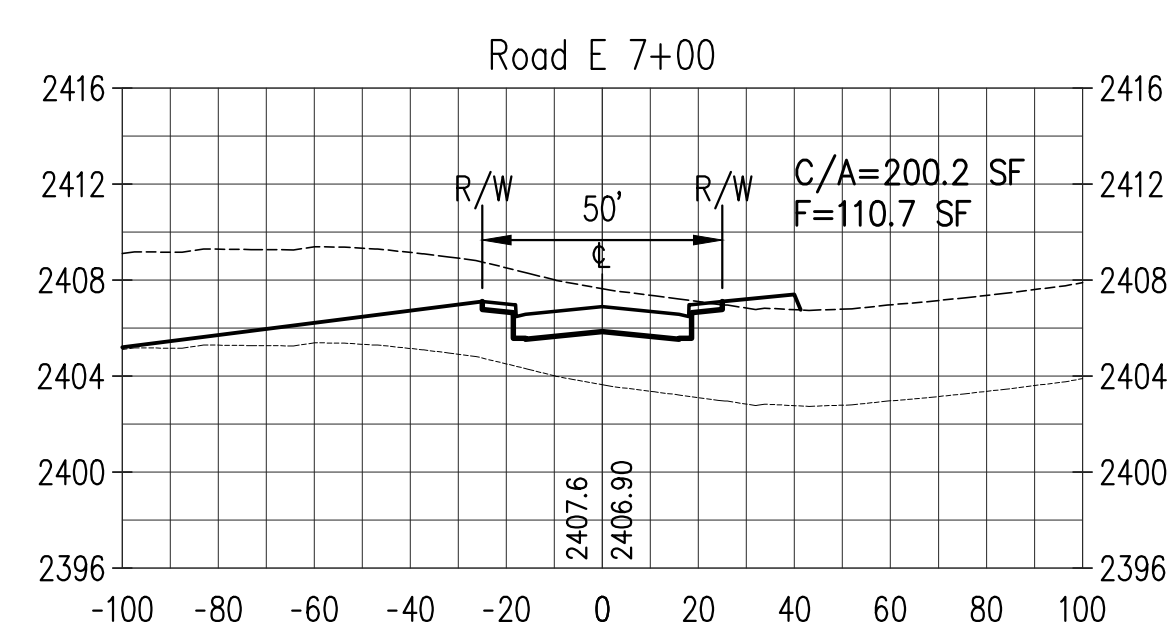
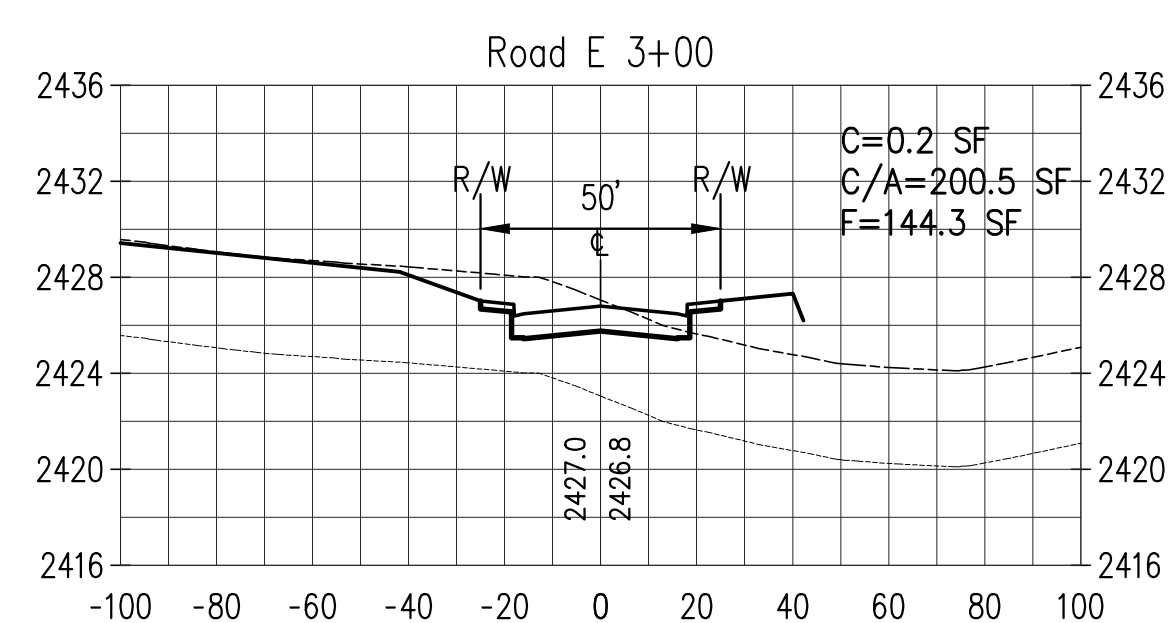
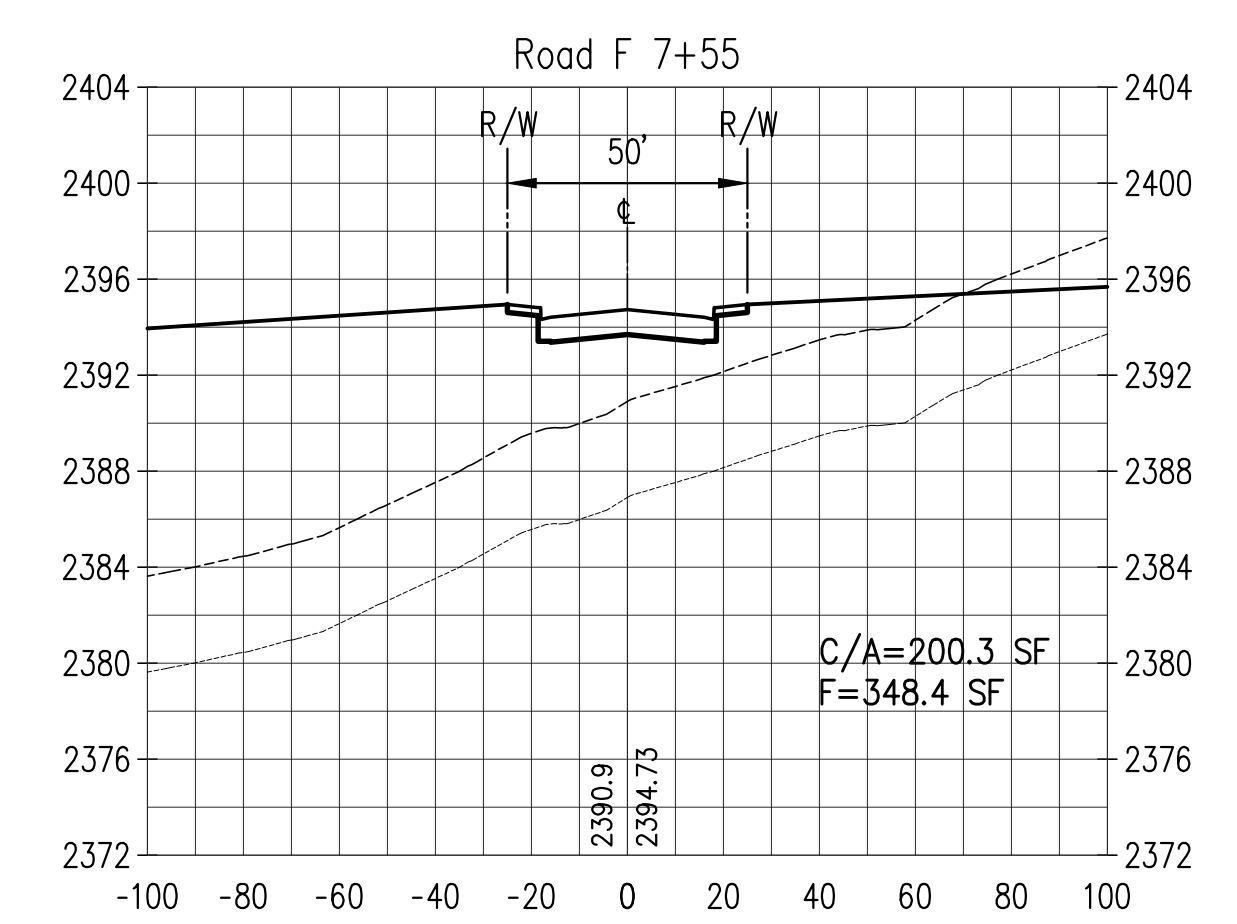
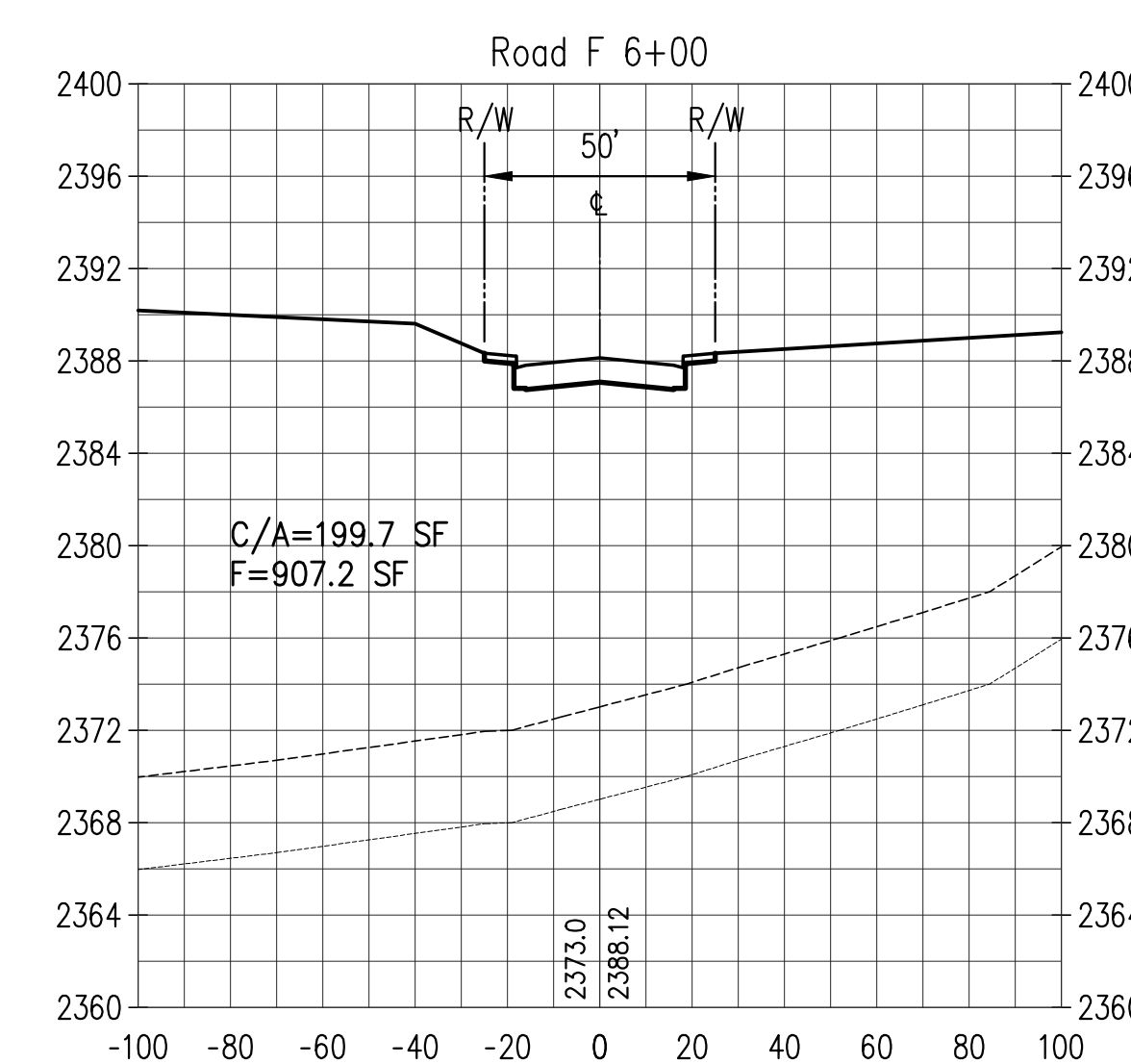
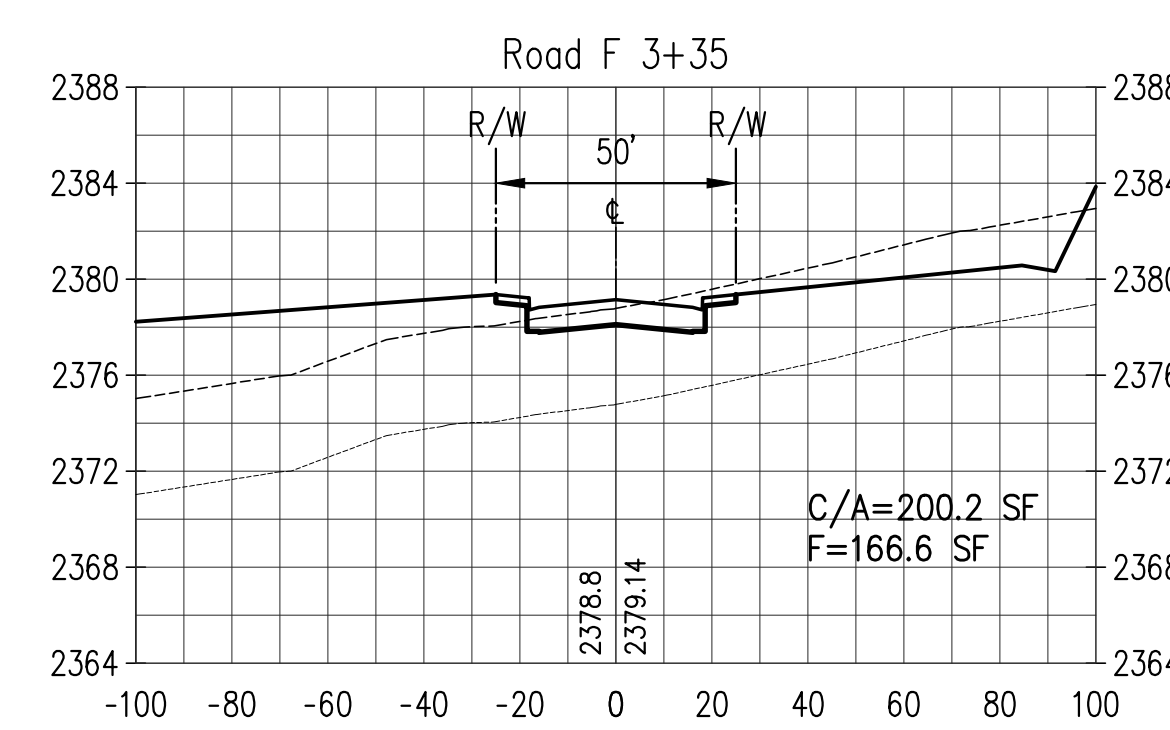
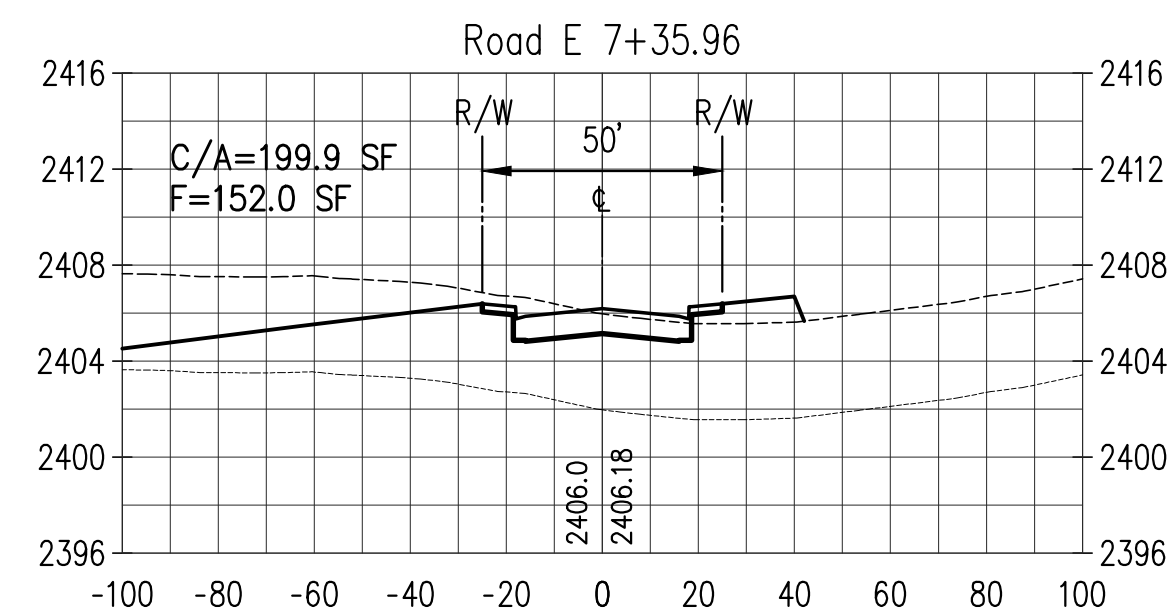
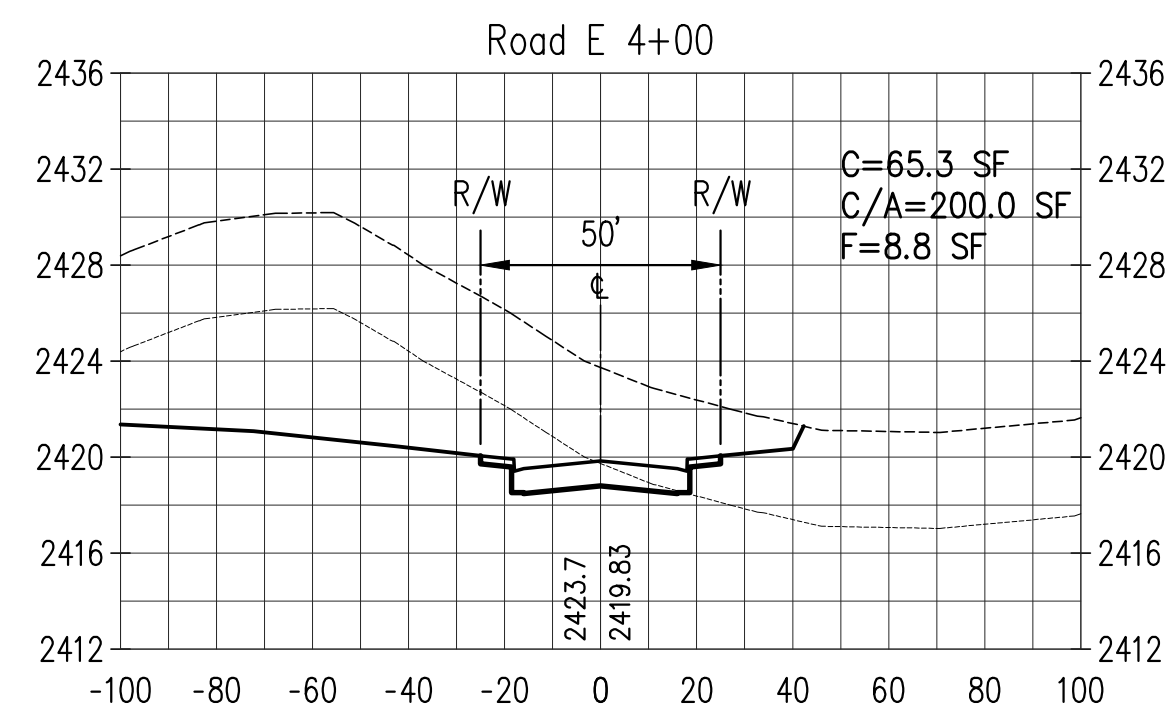
ROAD "D"
EXCAVATION = 0 CU. YDS.
EXCAVATION/ASH = 1,852 CU. YDS.
EMBANKMENT = 1,472 CU. YDS.

ROAD "G"
EXCAVATION = 663 CU. YDS.
EXCAVATION/ASH = 1,883 CU. YDS.
EMBANKMENT = 170 CU. YDS.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
ROAD CROSS SECTIONS - 3			
DRAWN BY: MFN	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			



CROSS SECTION - ROAD "E"

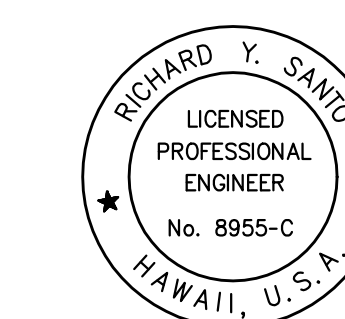
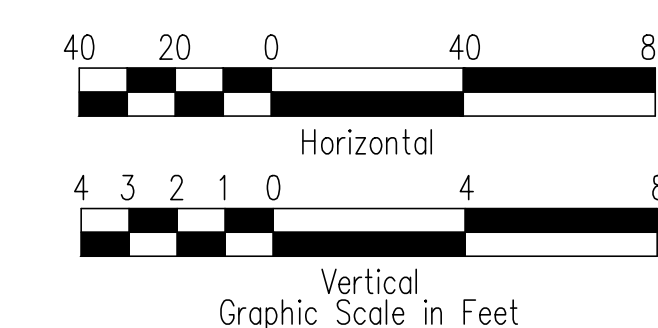
SCALES: HORIZ. 1"=40'
VERT. 1"= 4'

NOTES:

1. THE ROAD PRISM (I.E. A.C. PAVEMENT, BASE COURSE AND SUBBASE COURSE LAYERS) AND ASH LAYER ARE NOT APPLICABLE CUT AND FILL MATERIAL QUANTITIES FOR GRADING WORK.
2. OVER-EXCAVATE THE ASH LAYER (I.E. APPROXIMATELY 2 FEET BELOW EXISTING GROUND), ASH LAYER IS CLASSIFIED AS DISPOSAL MATERIAL.
3. REFER TO DWG. NO. C-13 FOR THE DETAILS OF TYPICAL ROAD SECTIONS.
4. MAXIMUM CUT OR FILL SLOPE IS 2:1.

CROSS SECTION - ROAD "F"

SCALES: HORIZ. 1"=40'
VERT. 1"= 4'



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

Community Planning and Engineering, Inc.

Engineering Design
Construction Management
Infrastructure Planning

1100 Alaska Street, Sixth Floor **Honolulu, Hawaii**

LALAMILO HOUSING

PHASE 2A, INCREMENT 1

WAIMEA, SOUTH KOHALA, HAWAII

SUBD. FILE NO. SUB-07-000603

OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS

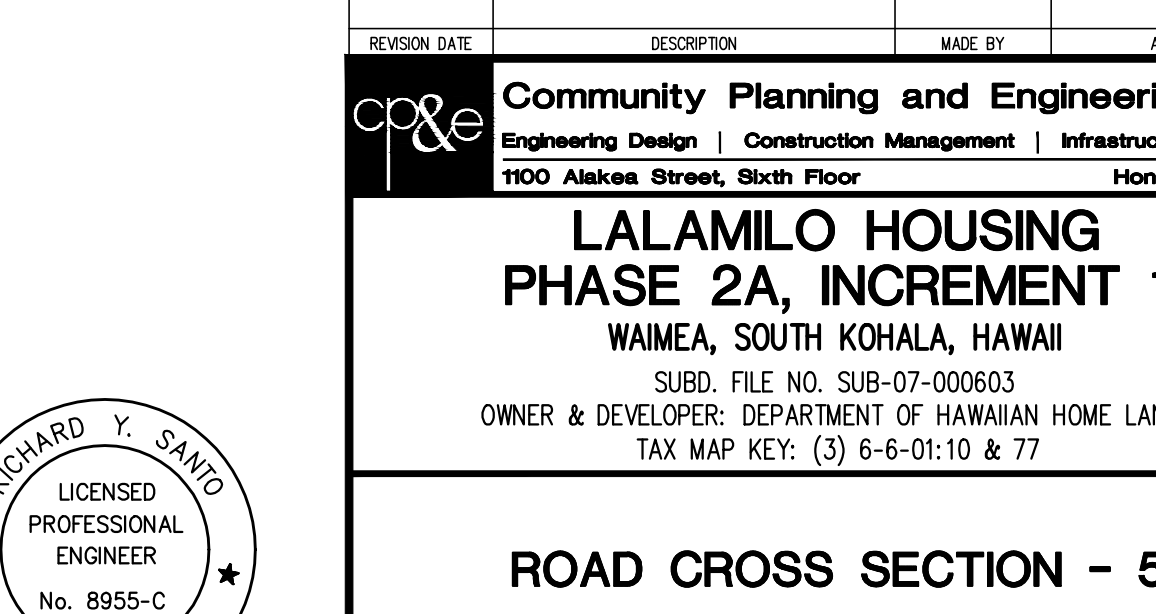
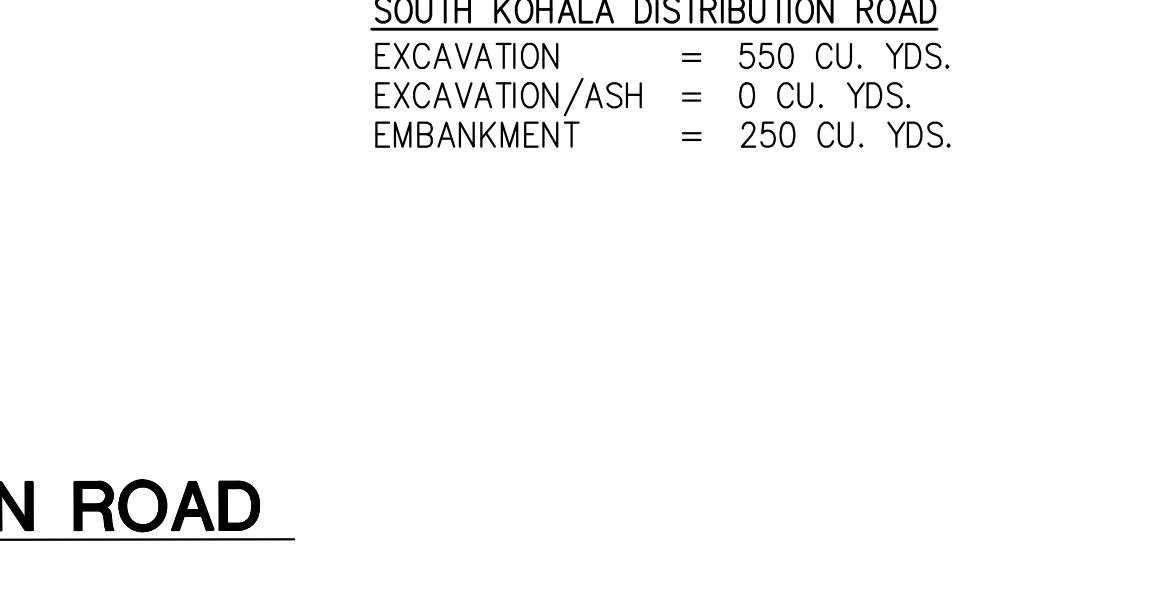
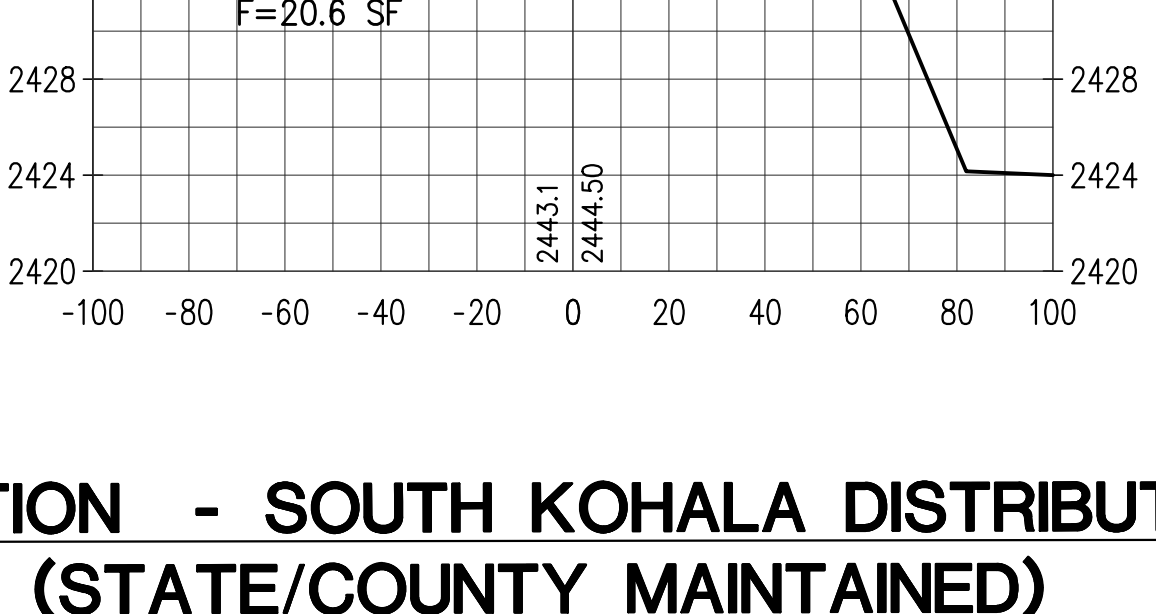
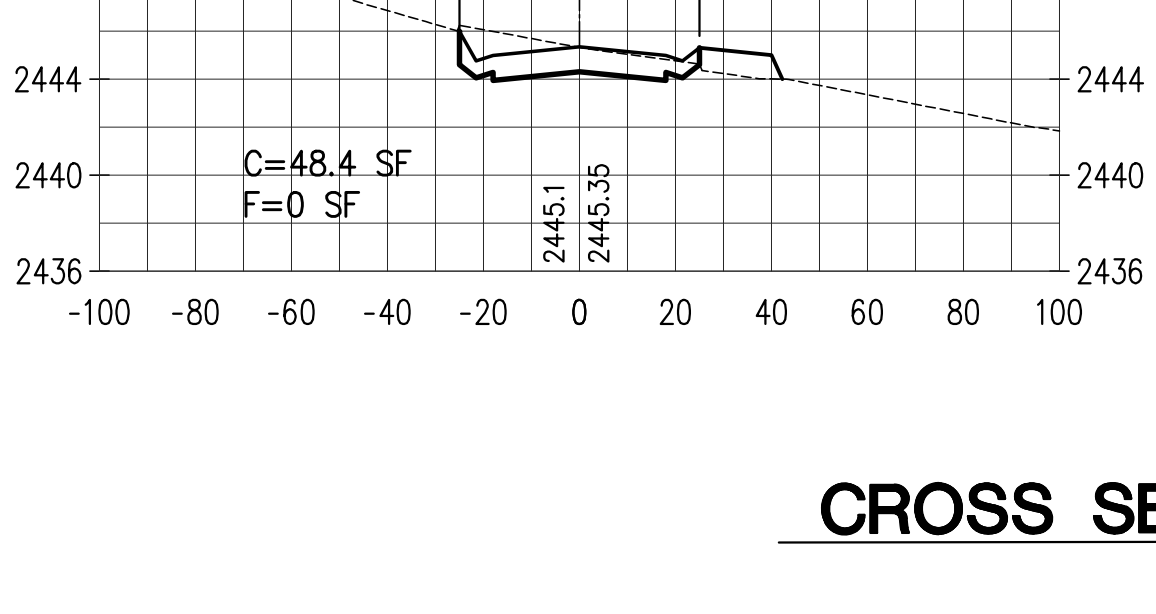
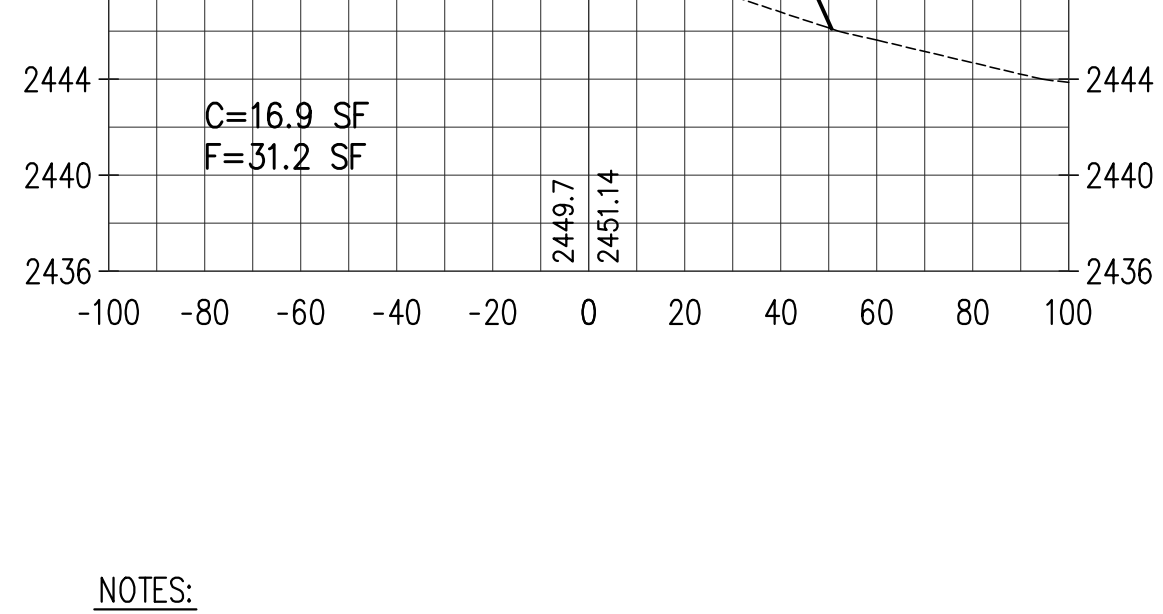
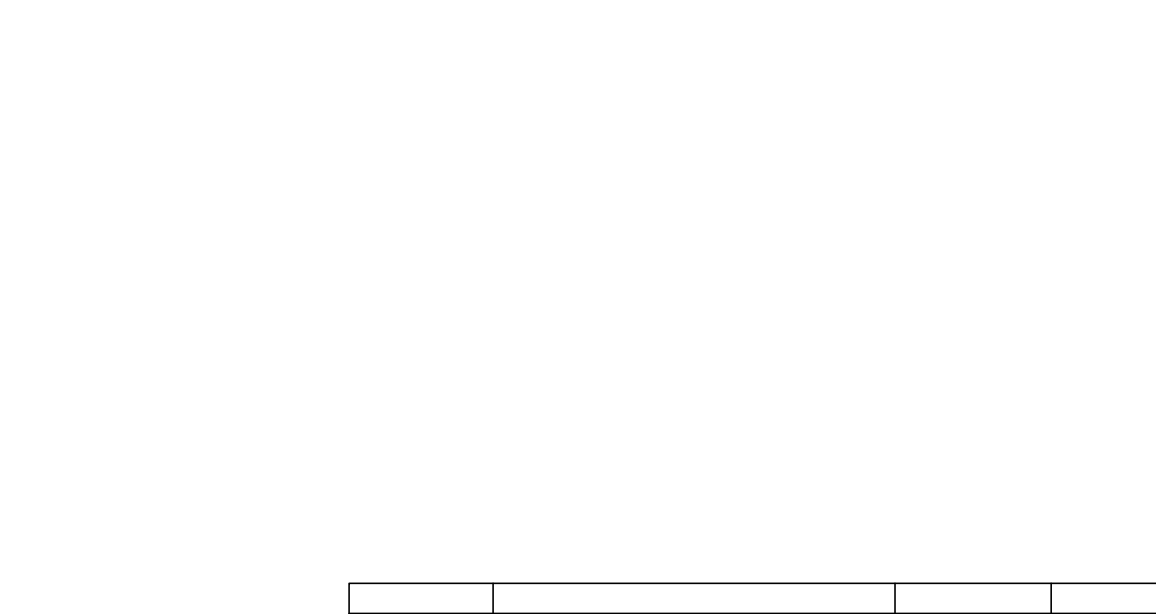
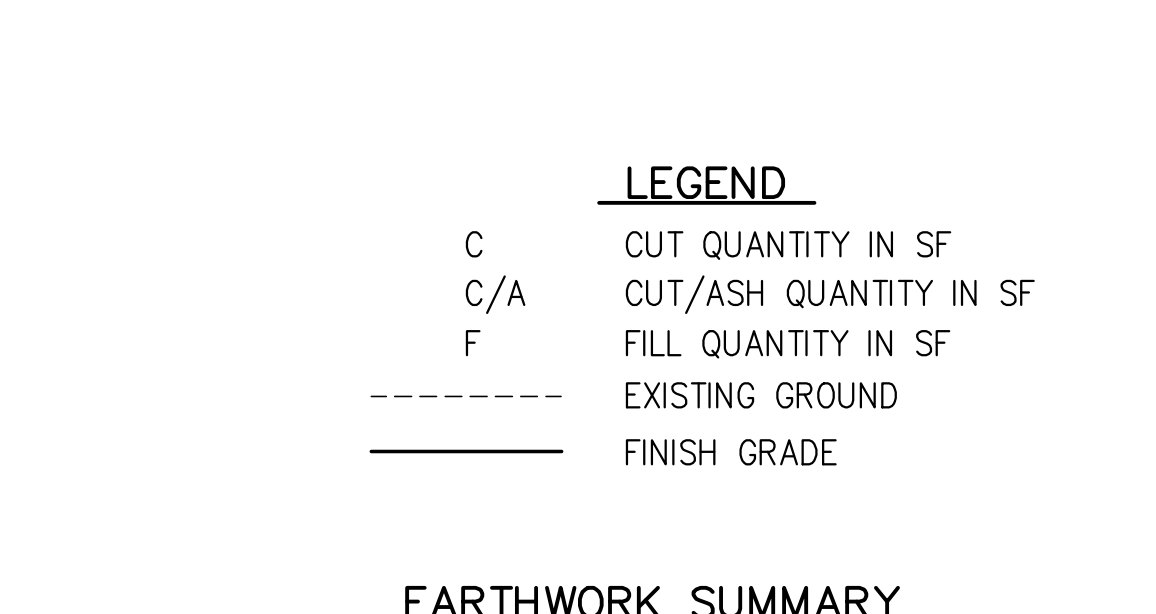
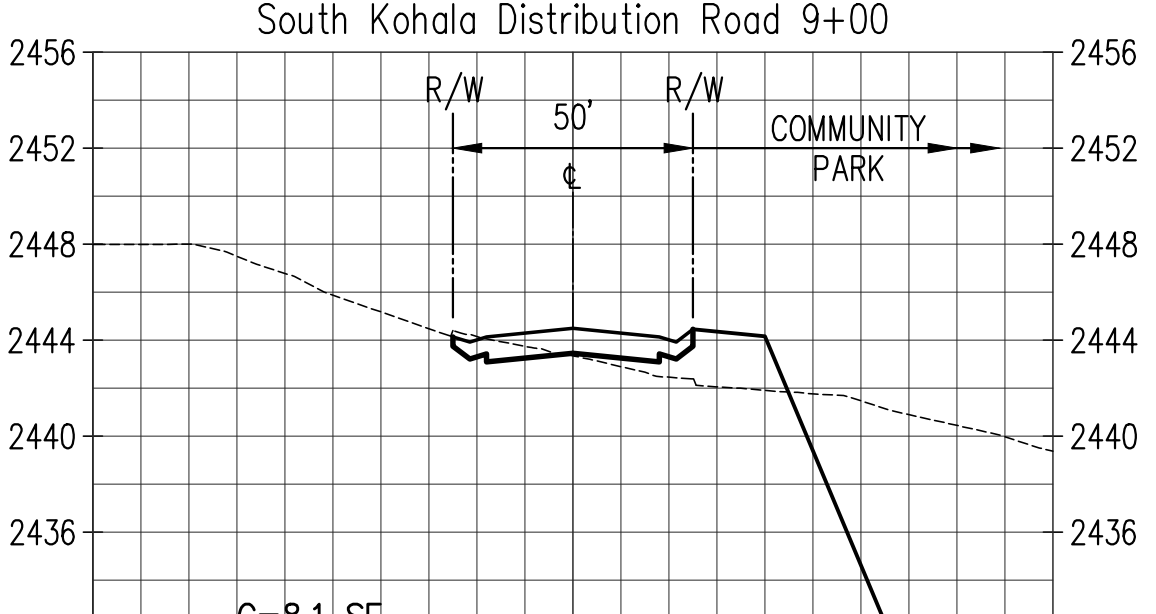
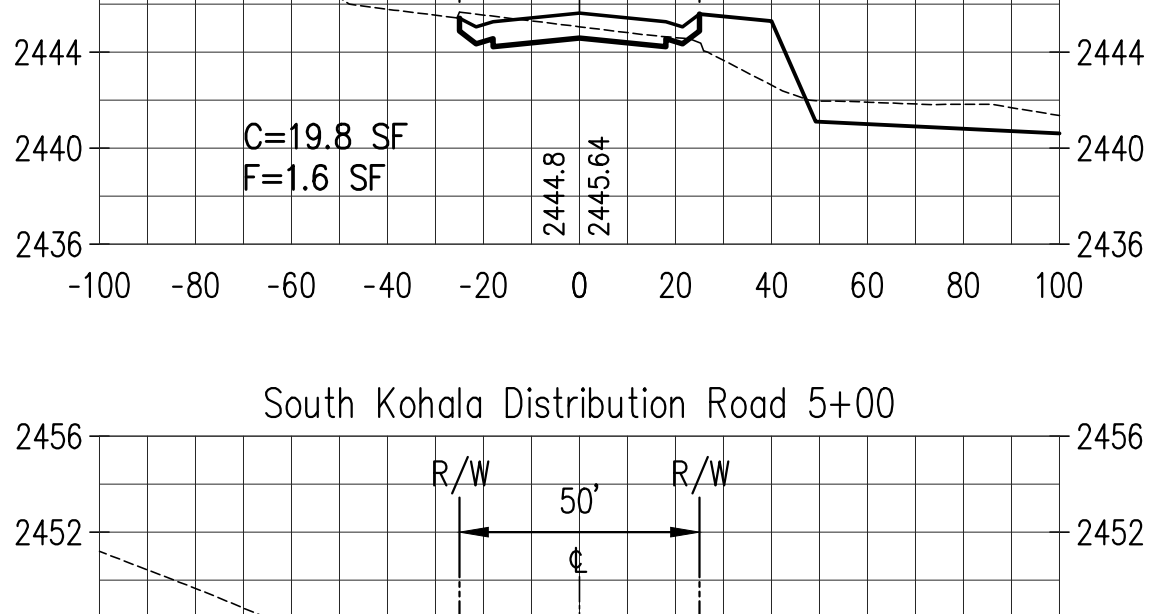
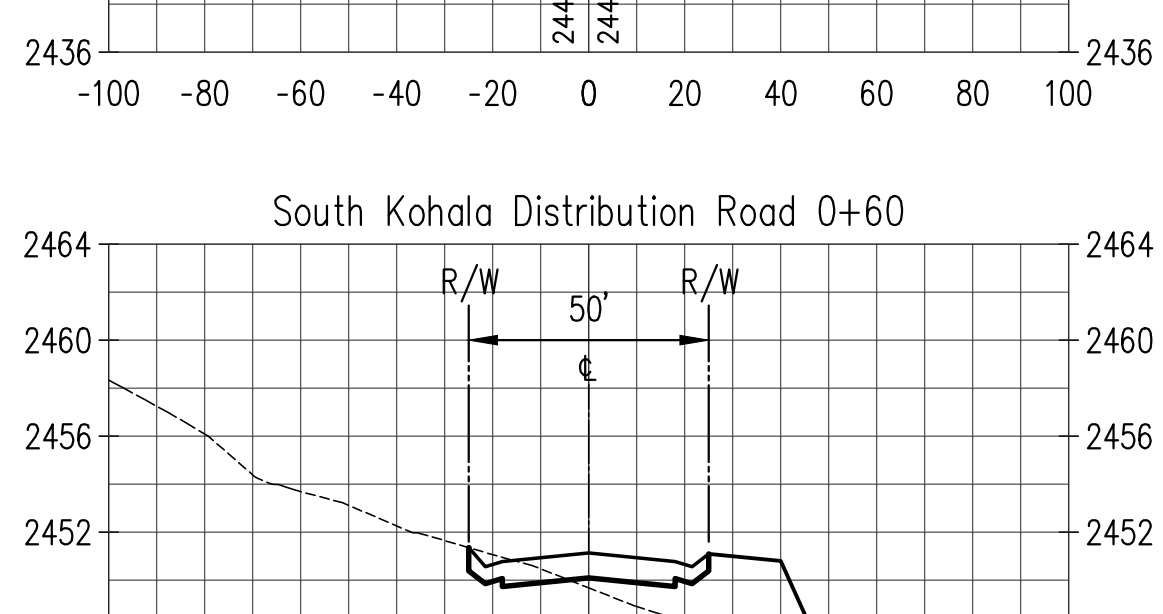
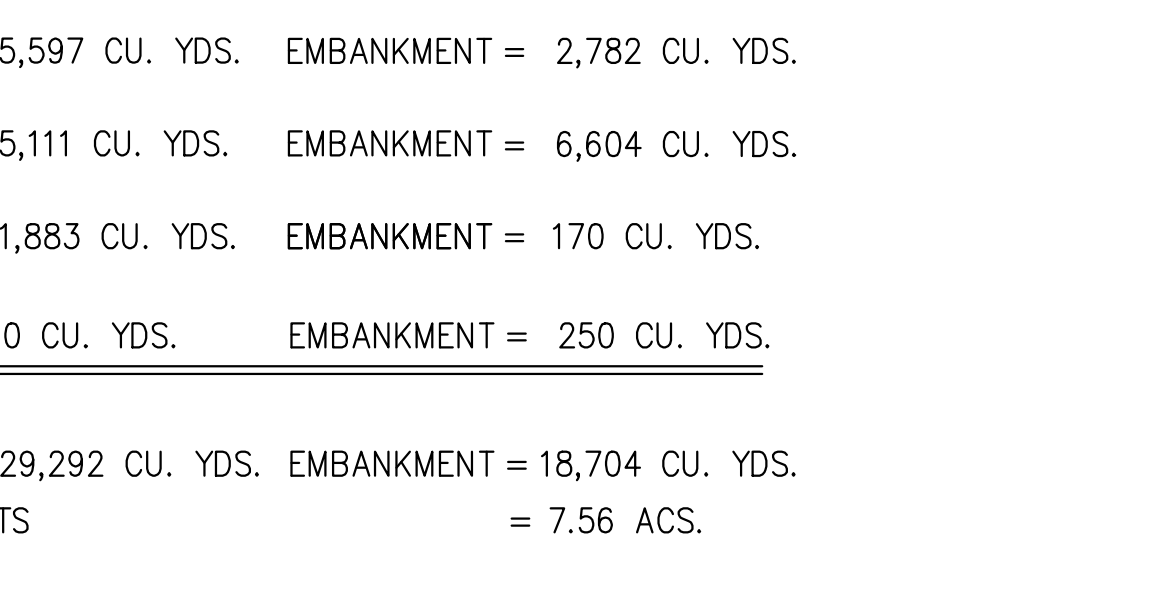
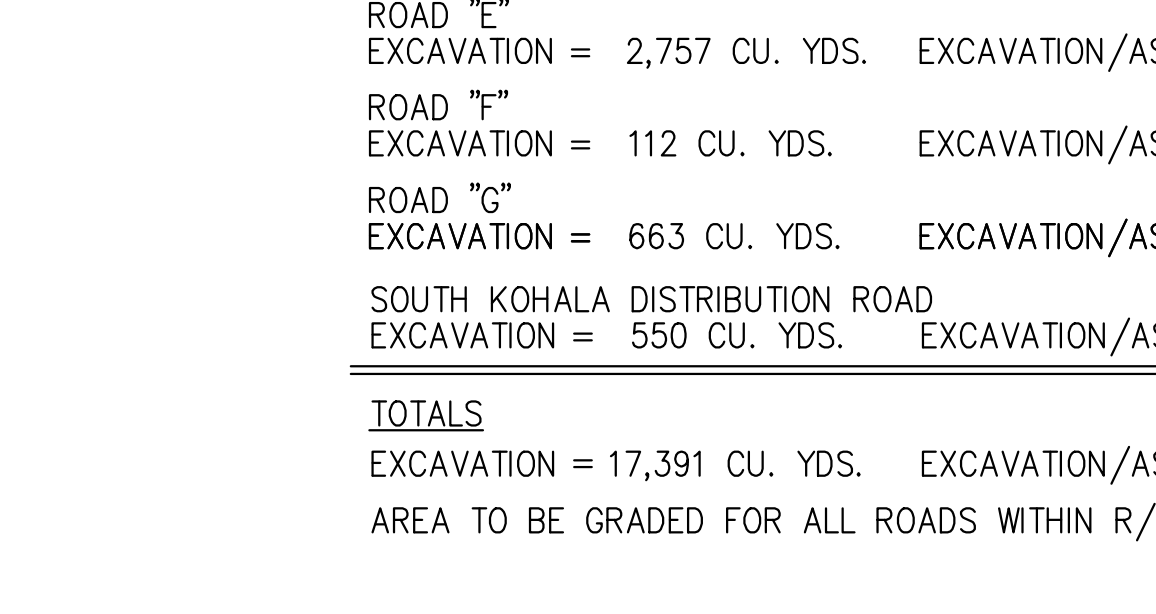
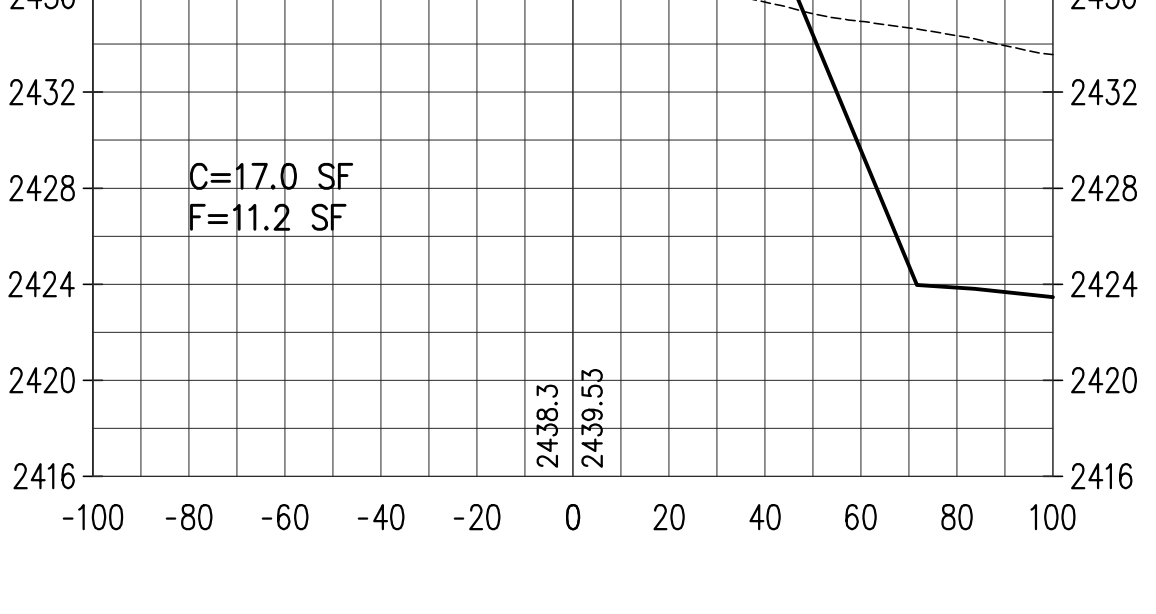
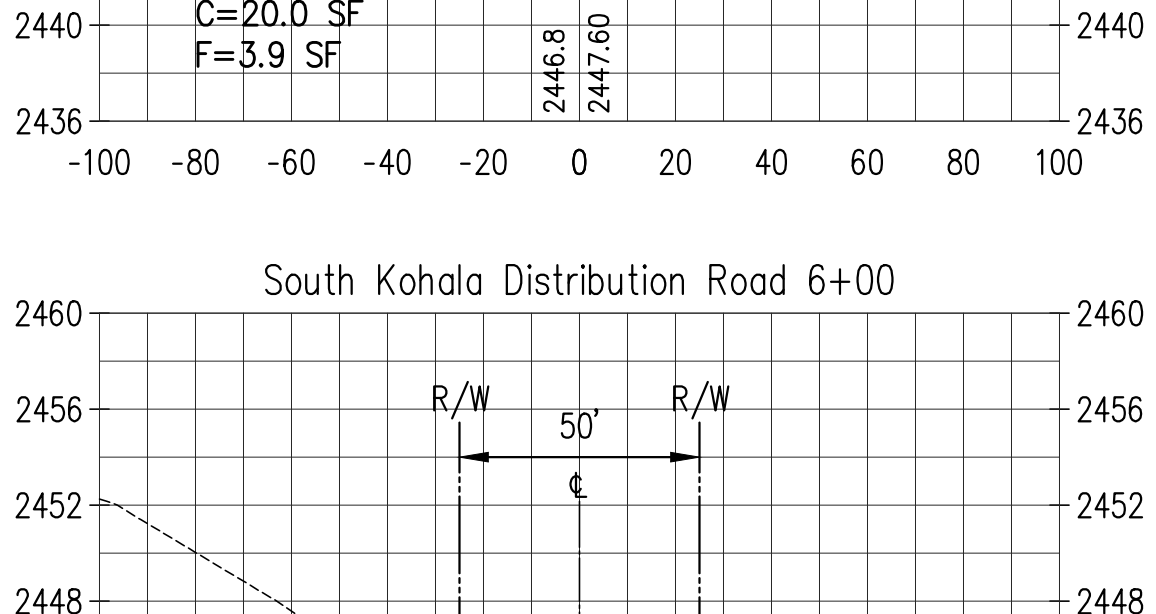
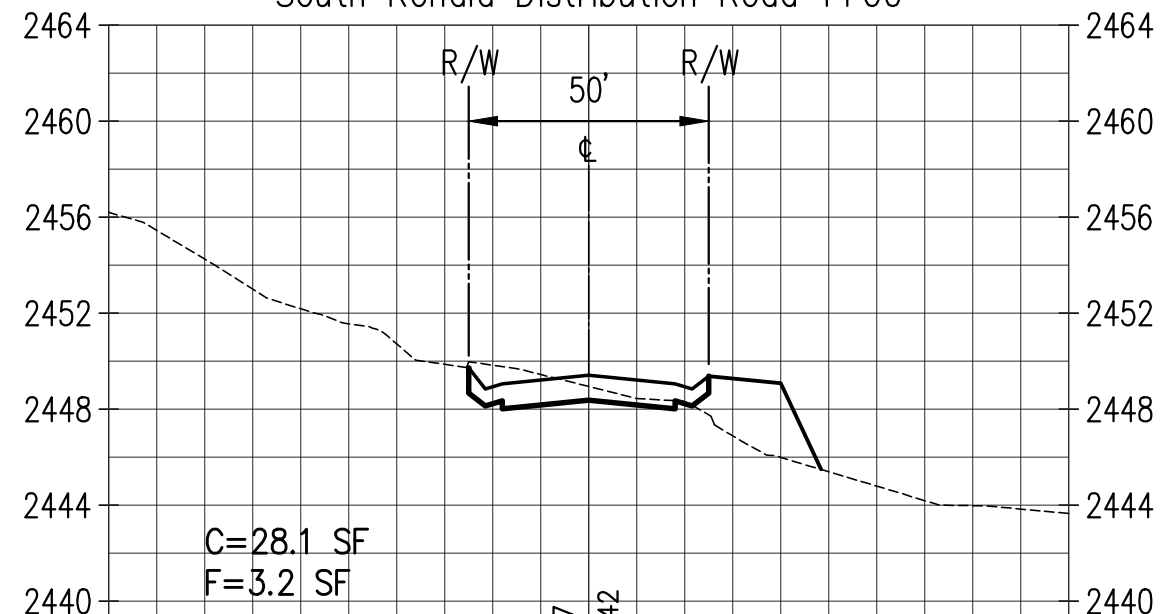
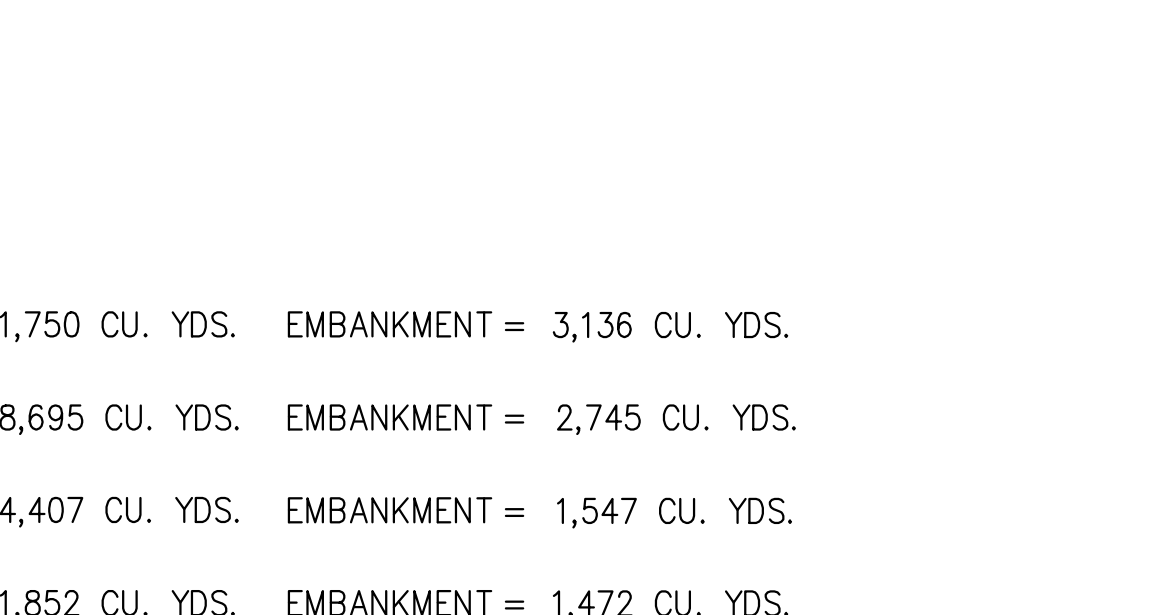
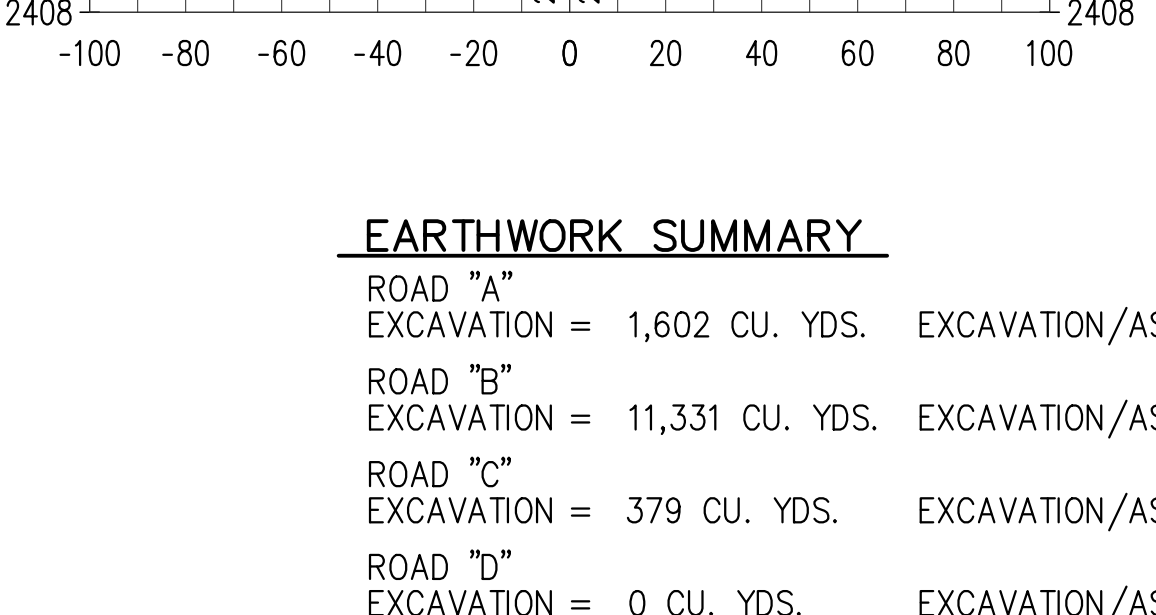
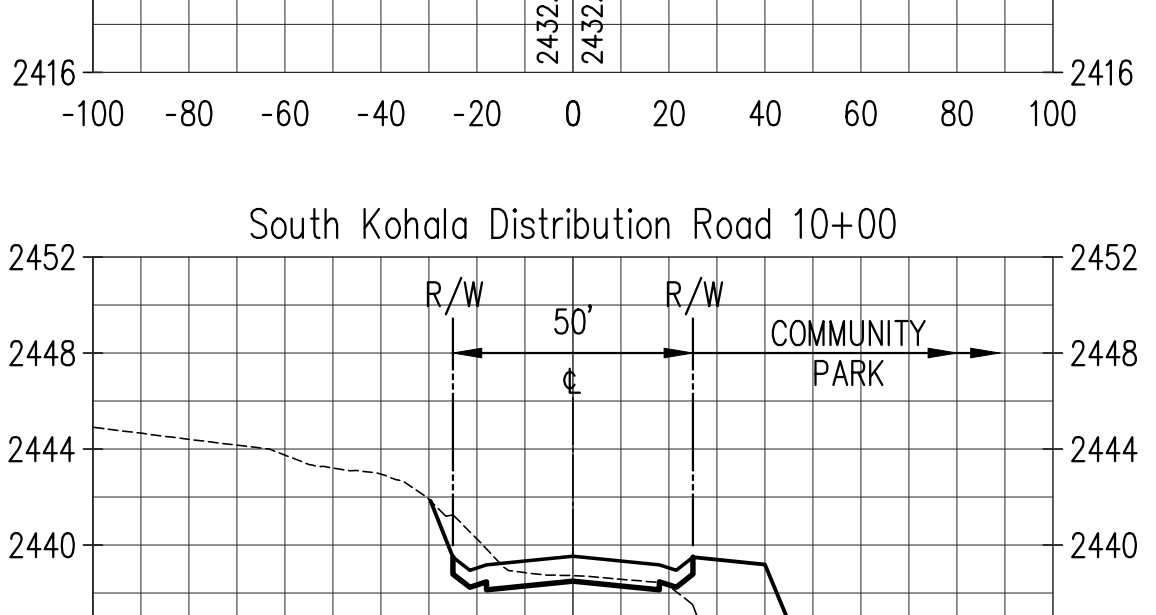
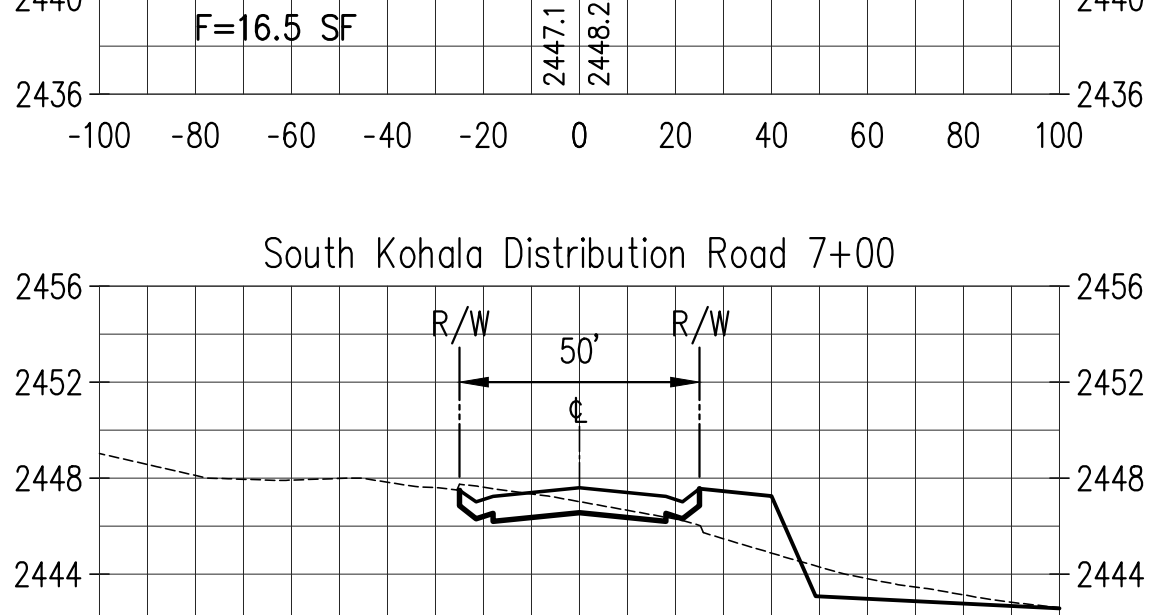
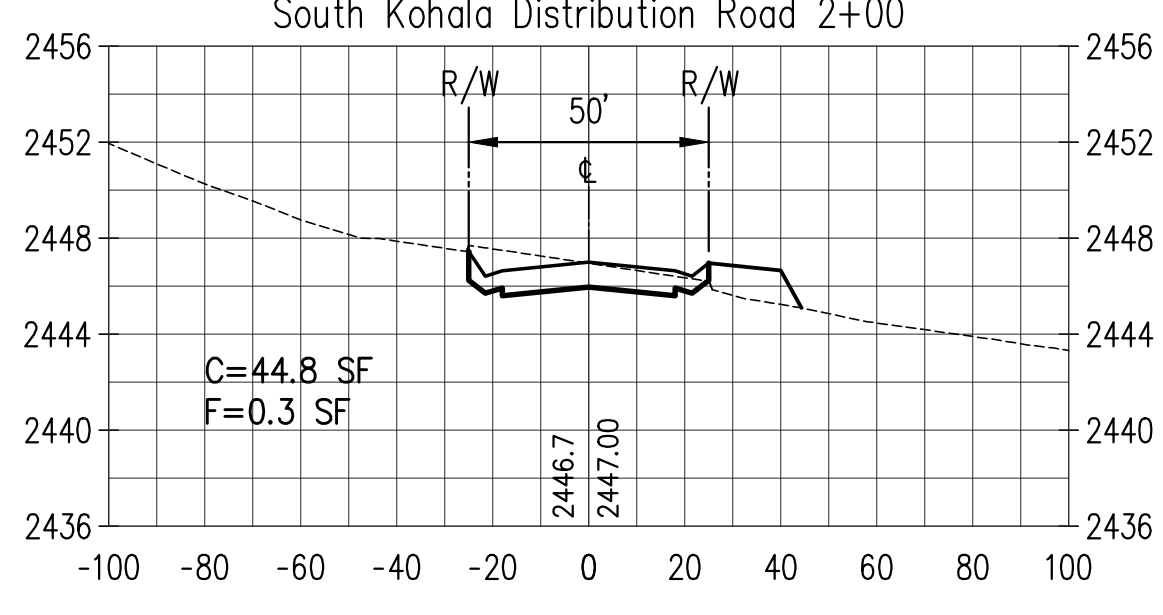
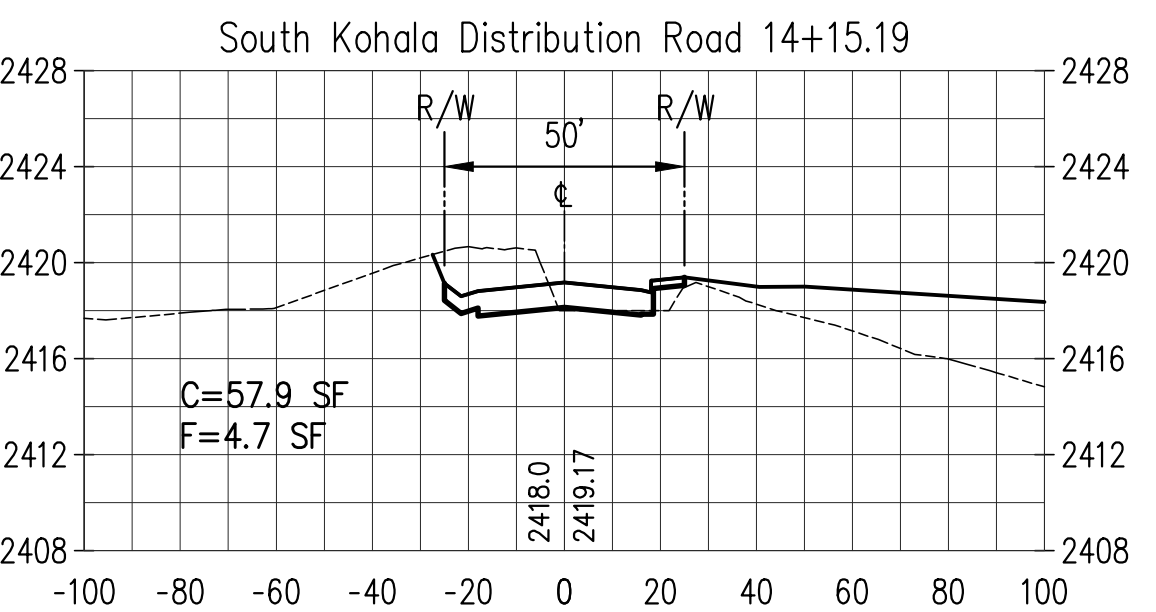
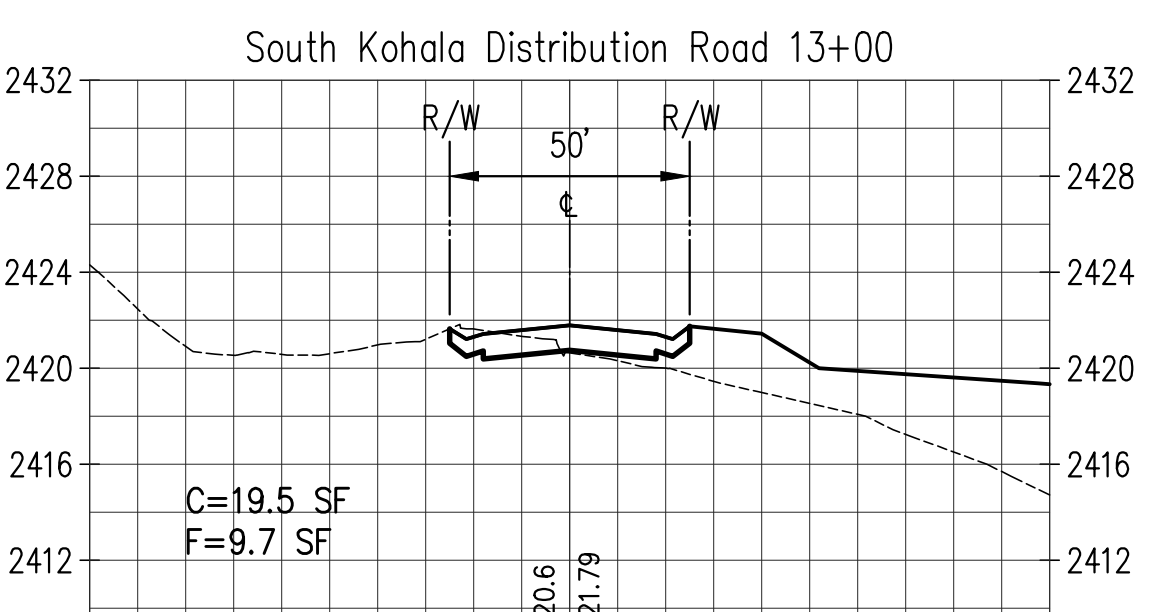
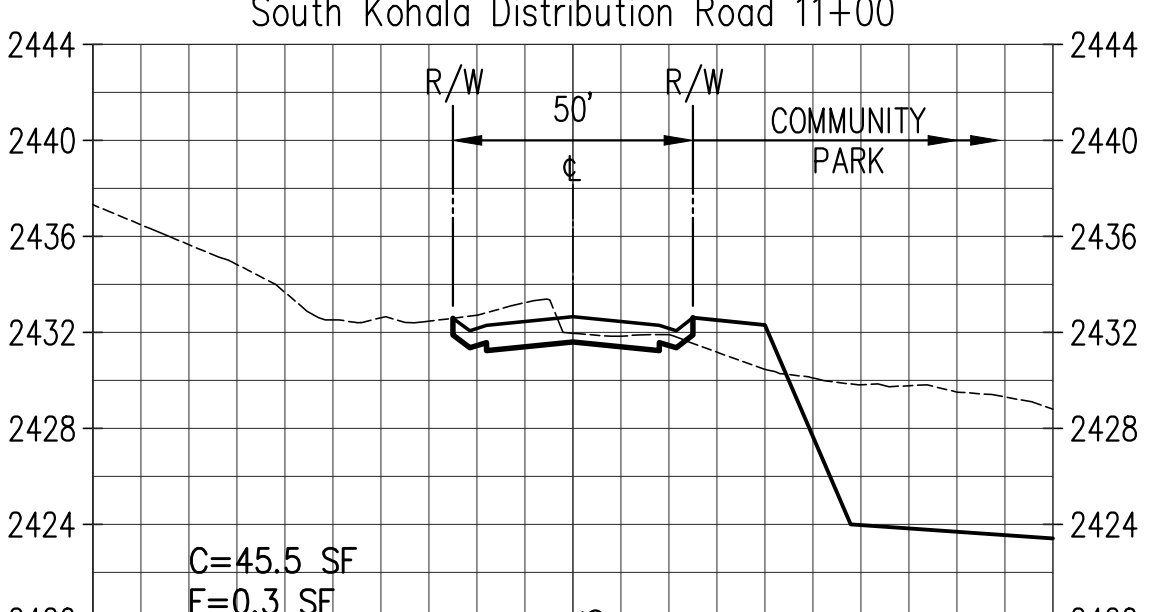
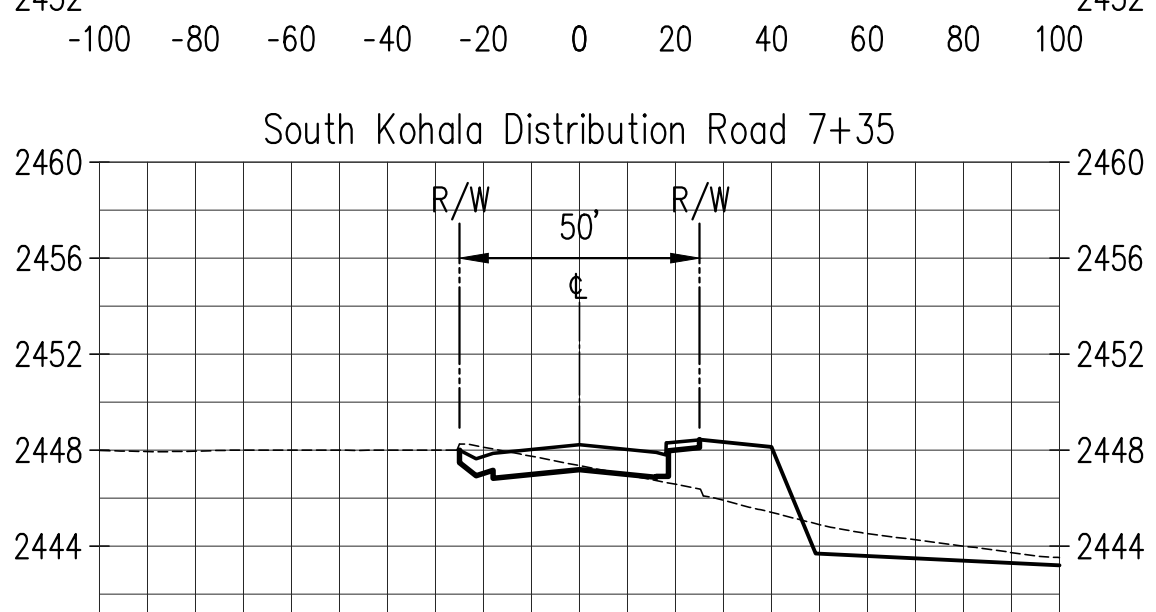
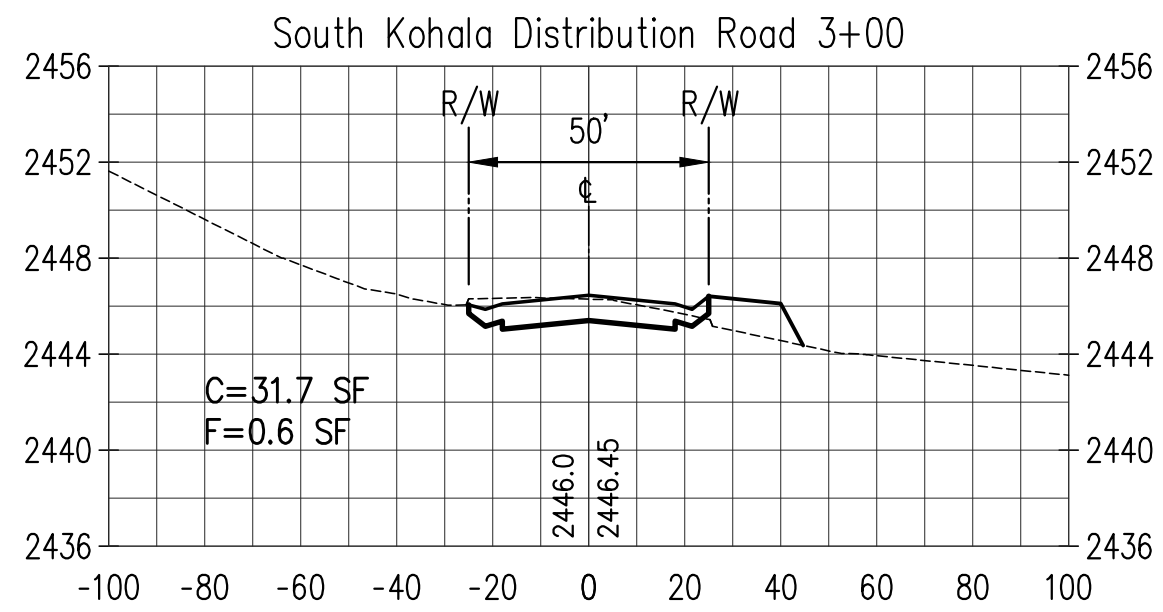
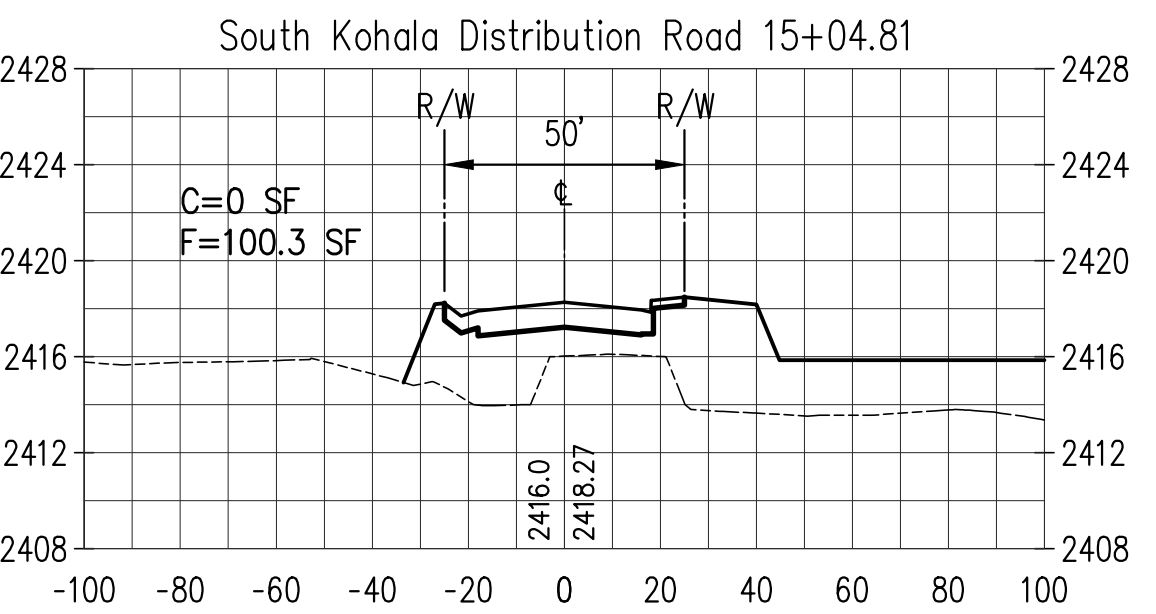
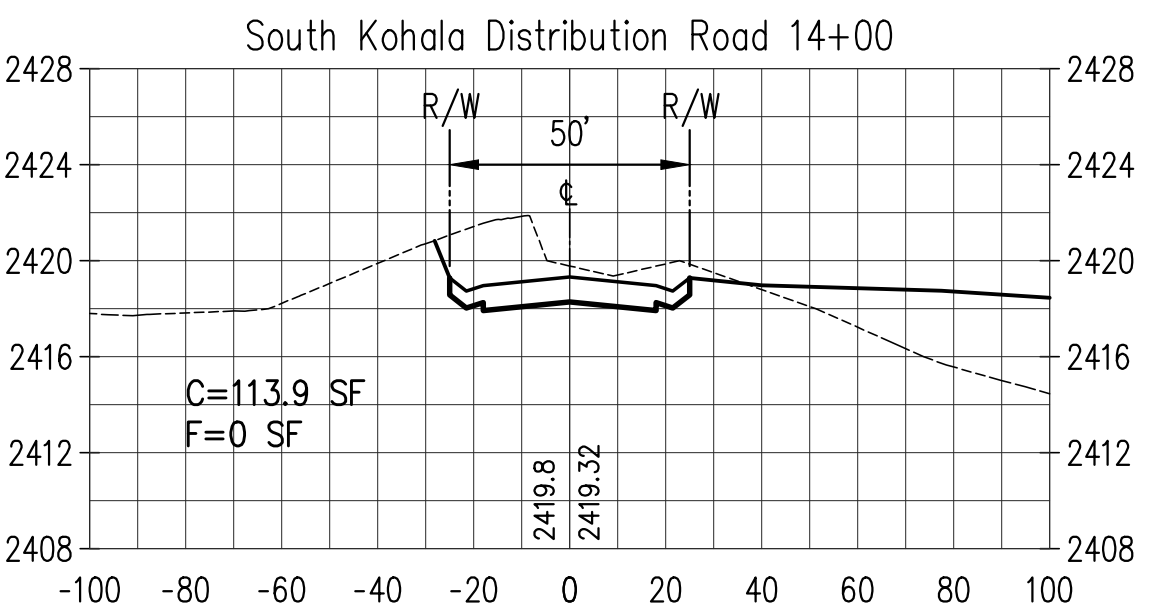
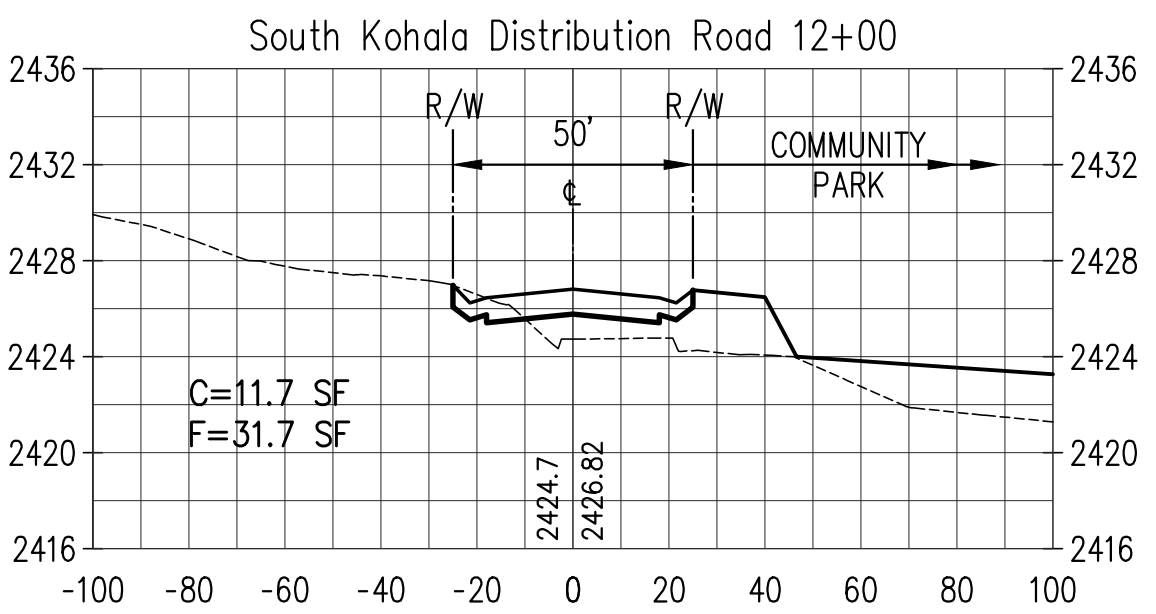
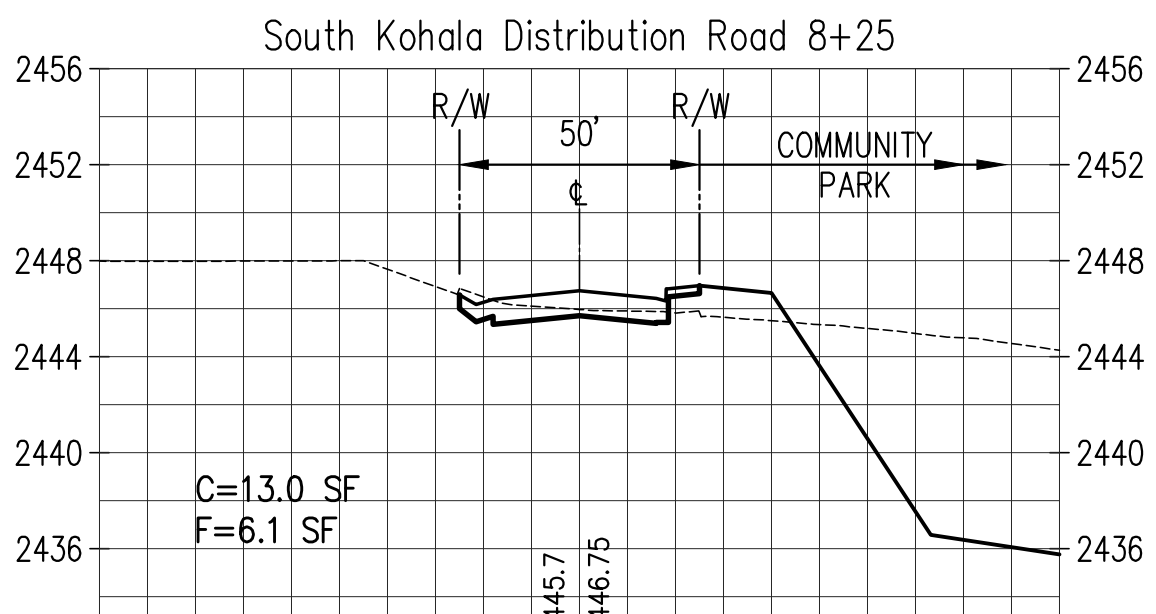
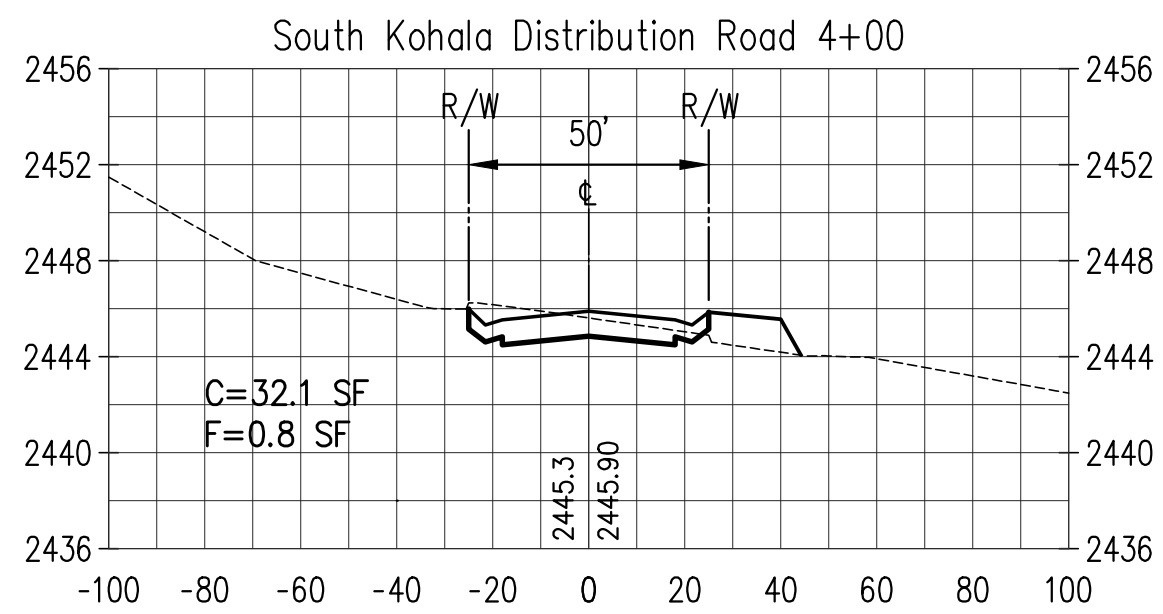
TAX MAP KEY: (3) 6-6-01:10 & 77

ROAD CROSS SECTIONS - 4

DRAWN BY: MFM	ENGINEER: FJC	CHECKED BY: RYS
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APPROVED:

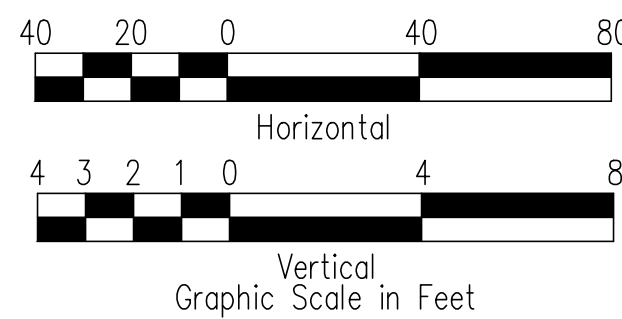
FILE	POCKET	FOLDER	NO.



NOTES:
1. THE ROAD PRISM (I.E. A.C. PAVEMENT, BASE COURSE AND SUBBASE COURSE LAYERS) AND ASH LAYER ARE NOT APPLICABLE CUT AND FILL MATERIAL QUANTITIES FOR GRADING WORK.
2. OVER-EXCAVATE THE ASH LAYER (I.E. APPROXIMATELY 2 FEET BELOW EXISTING GROUND). ASH LAYER IS CLASSIFIED AS DISPOSAL MATERIAL.
3. REFER TO DWG. NO. C-13 FOR THE DETAILS OF TYPICAL ROAD SECTIONS.
4. MAXIMUM CUT OR FILL SLOPE IS 2:1.

CROSS SECTION - SOUTH KOHALA DISTRIBUTION ROAD (STATE/COUNTY MAINTAINED)

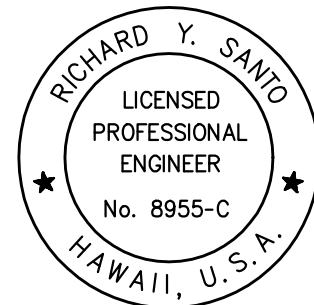
SCALES: HORIZ. 1"=40'
VERT. 1"= 4'



LEGEND
C CUT QUANTITY IN SF
C/A CUT/ASH QUANTITY IN SF
F FILL QUANTITY IN SF
----- EXISTING GROUND
————— FINISH GRADE

EARTHWORK SUMMARY
SOUTH KOHALA DISTRIBUTION ROAD
EXCAVATION = 550 CU. YDS.
EXCAVATION/ASH = 0 CU. YDS.
EMBANKMENT = 250 CU. YDS.

EARTHWORK SUMMARY
ROAD "A"
EXCAVATION = 1,602 CU. YDS. EXCAVATION/ASH = 1,750 CU. YDS. EMBANKMENT = 3,136 CU. YDS.
ROAD "B"
EXCAVATION = 11,331 CU. YDS. EXCAVATION/ASH = 8,695 CU. YDS. EMBANKMENT = 2,745 CU. YDS.
ROAD "C"
EXCAVATION = 379 CU. YDS. EXCAVATION/ASH = 4,407 CU. YDS. EMBANKMENT = 1,547 CU. YDS.
ROAD "D"
EXCAVATION = 0 CU. YDS. EXCAVATION/ASH = 1,852 CU. YDS. EMBANKMENT = 1,472 CU. YDS.
ROAD "E"
EXCAVATION = 2,757 CU. YDS. EXCAVATION/ASH = 5,597 CU. YDS. EMBANKMENT = 2,782 CU. YDS.
ROAD "F"
EXCAVATION = 112 CU. YDS. EXCAVATION/ASH = 5,111 CU. YDS. EMBANKMENT = 6,604 CU. YDS.
ROAD "G"
EXCAVATION = 663 CU. YDS. EXCAVATION/ASH = 1,883 CU. YDS. EMBANKMENT = 170 CU. YDS.
SOUTH KOHALA DISTRIBUTION ROAD
EXCAVATION = 550 CU. YDS. EXCAVATION/ASH = 0 CU. YDS. EMBANKMENT = 250 CU. YDS.
TOTALS
EXCAVATION = 17,391 CU. YDS. EXCAVATION/ASH = 29,292 CU. YDS. EMBANKMENT = 18,704 CU. YDS.
AREA TO BE GRADED FOR ALL ROADS WITHIN R/W LIMITS = 7.56 ACS.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
ROAD CROSS SECTION - 5			
DRAWN BY: MFN	ENGINEER: RYS	CHECKED BY: RYS	
APPROVED:			

BORING LOCATION: See Site Plan					DRILLER: Valley Well					BORING NO. B-5
BORING ELEVATION: TBD					LOGGED BY: MGN					
DATE (S) DRILLED: 5/31/06					TYPE RIG: B-59					
OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	CORE RECOVERY (%)	R.O.D. (ft)	NUMBER OF BLOWS/12"	SAMPLE NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.G.S.	GEOTECHNICAL DESCRIPTION
			0	0			CB-1			
	15.7				46		SPT-1			
			75	74			CB-2			
			53	23			CB-3			
SAMPLE TYPE										OTHER LABORATORY TESTS
MC - Modified California SPT - Standard Penetration										
CB - Core Barrel SH - Shelby Tube										
AUG - Auger Cuttings D&M - Dames & Moore										
LOG OF BORING										
Geotechnical & Environmental Consultants Construction Management, Testing & Inspection										
DHHL Proposed Lalamilo RS10 Subdivision Lalamilo, Waimea, Big Island of Hawaii										
DATE: July 2006										
PROJECT NO.: 26301.10/12										

PLATE NO. 7

BORING B-5

BORING LOCATION: See Site Plan					DRILLER: Valley Well					BORING NO. B-6	
BORING ELEVATION: TBD					LOGGED BY: MGN						
DATE (S) DRILLED: 5/29/06					TYPE RIG: B-59						
OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	CORE RECOVERY (%)	R.O.D. (ft)	NUMBER OF BLOWS/12"	SAMPLE NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.G.S.	GEOTECHNICAL DESCRIPTION	
			0	0	0	CB-1	0	ML	BR		Top Soil, grass-covered, stiff, brown, volcanic ash with roots, and gravel. Moist.
							1				
							2				
							3				
					36	SPT-1	4				Gravelly SIL/Volcanic Ash very stiff to hard, brown to light brown volcanic ash with clinker gravel and cobbles. Moist.
							5				
			0	0		CB-2	6		ML		
							7				
							8				
							9				
							10		BB		Basalt Rock, gray, fresh to slightly weathered, moderately fractured, moderately strong to strong, hard.
			90	65		CB-3	11				
							12				
							13				
							14				
							15		BA	Basalt Rock, gray, fresh to slightly weathered, vesiculated, moderate to closely fractured, moderately strong to strong, hard.	
			100	48		CB-4	16				
							17				
							18				
SAMPLE TYPE										OTHER LABORATORY TESTS	
MC - Modified California SPT - Standard Penetration					MD - Moisture/Density					UC - Unconfined Compression	
CB - Core Barrel SH - Shelby Tube					CON - Consolidation Test					SG - Specific Gravity	
AUG - Auger Cuttings D&M - Dames & Moore					PI - Atterberg Limits					SA - Sieve Analysis	
LOG OF BORING											
Geotechnical & Environmental Consultants Construction Management, Testing & Inspection										Continued Next Page	
DHHL Proposed Lalamilo RS10 Subdivision Lalamilo, Waimea, Big Island of Hawaii											
DATE: July 2006										PROJECT NO.: 26301.10/12	

PLATE NO. 8

BORING B-6 (TOP)

BORING LOCATION: See Site Plan							DRILLER: Valley Well			BORING NO. B-6
BORING ELEVATION: TBD							LOGGED BY: MGN			
DATE (S) DRILLED: 5/29/06							TYPE RIG: B-59			
OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	CORE RECOVERY (%)	R.O.D. (ft)	NUMBER OF BLOWS/12"	SAMPLE NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.G.S.	GEOTECHNICAL DESCRIPTION
							19			
			100	90			CB-5			
							20			
							21			
							22			
							23			
							24			
			66	30			CB-6			
							25			
							26			
							27			
							28			
							29			
							30			
							31			
							32			
							33			
							34			
							35			
							36			
SAMPLE TYPE							OTHER LABORATORY TESTS			
MC - Modified California SPT - Standard Penetration							MD - Moisture/Density			
CB - Core Barrel SH - Shelby Tube							CON - Consolidation Test			
AUG - Auger Cuttings D&M - Dames & Moore							SG - Specific Gravity			
							SA - Sieve Analysis			
LOG OF BORING										
Geotechnical & Environmental Consultants Construction Management, Testing & Inspection							DHHL Proposed Lalamilo RS10 Subdivision Lalamilo, Waimea, Big Island of Hawaii			
DATE: July 2006							PROJECT NO.: 26301.10/12			

PLATE NO. 8-A

BORING B-6 (BOTTOM)

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
08/20/06			
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 7100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
BORING LOGS - 1			
DRAWN BY: MGN	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			

PLATE NO. 9

PLATE NO. 10

PLATE NO. 11

PLATE NO. 12

PLATE NO. 13PLATE NO. 14

REVISION DATE	DESCRIPTION	MADE BY	APPROVED

Community Planning and Engineering, Inc.

Engineering Design | Construction Management | Infrastructure Planning

1100 Alakea Street, 8th Floor Honolulu, Hawaii

BORING LOCATION: See Site Plan										DRILLER: PSC		BORING NO. TP-13	
BORING ELEVATION: TBD										LOGGED BY: MGN			
DATE (S) DRILLED: 5/29/06										TYPE RIG: PC-78			
OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	CORE RECOVERY (%)	R.O.D. (%)	NUMBER OF BLOWS/12"	SAMPLE NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S.	GEOTECHNICAL DESCRIPTION			
		12.6			10	DCPT			ML	Top Soil, grass-covered, stiff, dark brown, very fine sandy SILT with roots, moist.			
							1			Cobbles with gravel in a stiff, brown, very fine sandy SILT matrix. Moist. (fragmental ash)			
							2		GM				
							3						
							4		BA	Basalt/Lava rock formation			
							5		BA	Test pit terminated at about 4 ft. below ground surface of the soil & lava rock interface			
SAMPLE TYPE										OTHER LABORATORY TESTS			
MC - Modified California SPT - Standard Penetration										MD - Moisture/Density UC - Unconfined Compression			
CB - Core Barrel SH - Shelby Tube										CON - Consolidation Test SG - Specific Gravity			
AUG - Auger Cuttings D&M - Dames & Moore										PI - Atterberg Limits SA - Sieve Analysis			
LOG OF BORING													
Geotechnical & Environmental Consultants Construction Management, Testing & Inspection										DHHL Proposed Lalamilo RS10 Subdivision Lalamilo, Waimea, Big Island of Hawaii			
DATE: July 2006										PROJECT NO.: 26301.10/12			

PLATE NO. 21

TEST PIT: TP-13

BORING LOCATION: See Site Plan										DRILLER: PSC		BORING NO. TP-14	
BORING ELEVATION: TBD										LOGGED BY: MGN			
DATE (S) DRILLED: 5/29/06										TYPE RIG: PC-78			
OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	CORE RECOVERY (%)	R.O.D. (%)	NUMBER OF BLOWS/12"	SAMPLE NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S.	GEOTECHNICAL DESCRIPTION			
		30.5			0				ML	Top Soil, grass-covered, stiff, brown, very fine sandy SILT with roots, moist.			
							1			Cobbles and Gravel in a stiff, light brown, very fine sandy silt matrix. Moist. (fragmental ash lava)			
							2						
							3		GM				
							4						
							5						
							6		BA	Basalt/Lava rock formation			
							7		BA	Test pit terminated at about 6 ft. below ground surface at the soil and rock interface.			
SAMPLE TYPE										OTHER LABORATORY TESTS			
MC - Modified California SPT - Standard Penetration										MD - Moisture/Density UC - Unconfined Compression			
CB - Core Barrel SH - Shelby Tube										CON - Consolidation Test SG - Specific Gravity			
AUG - Auger Cuttings D&M - Dames & Moore										PI - Atterberg Limits SA - Sieve Analysis			
LOG OF BORING													
Geotechnical & Environmental Consultants Construction Management, Testing & Inspection										DHHL Proposed Lalamilo RS10 Subdivision Lalamilo, Waimea, Big Island of Hawaii			
DATE: July 2006										PROJECT NO.: 26301.10/12			

PLATE NO. 22

TEST PIT: TP-14

BORING LOCATION: See Site Plan										DRILLER: PSC		BORING NO. TP-15	
BORING ELEVATION: TBD										LOGGED BY: MGN			
DATE (S) DRILLED: 5/29/06										TYPE RIG: PC-78			
OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	CORE RECOVERY (%)	R.O.D. (%)	NUMBER OF BLOWS/12"	SAMPLE NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S.	GEOTECHNICAL DESCRIPTION			
		17.2							ML	Top Soil, grass-covered, brown, SILT (volcanic ash) with roots, moist.			
							1			SILT/volcanic ash, brown, stiff, very fine with some cobbles. Moist.			
							2		ML				
							3						
							4		BA	Basalt/Lava rock formation			
							5		BA	Test pit terminated at about 3 feet below ground surface at the soil rock interface.			
SAMPLE TYPE										OTHER LABORATORY TESTS			
MC - Modified California SPT - Standard Penetration										MD - Moisture/Density UC - Unconfined Compression			
CB - Core Barrel SH - Shelby Tube										CON - Consolidation Test SG - Specific Gravity			
AUG - Auger Cuttings D&M - Dames & Moore										PI - Atterberg Limits SA - Sieve Analysis			
LOG OF BORING													
Geotechnical & Environmental Consultants Construction Management, Testing & Inspection										DHHL Proposed Lalamilo RS10 Subdivision Lalamilo, Waimea, Big Island of Hawaii			
DATE: July 2006										PROJECT NO.: 26301.10/12			

PLATE NO. 23

TEST PIT: TP-15

BORING LOCATION: See Site Plan										DRILLER: PSC		BORING NO. TP-59	
BORING ELEVATION: TBD										LOGGED BY: MGN			
DATE (S) DRILLED: 5/31/06										TYPE RIG: PC-78			
OTHER LAB TESTS	DRY UNIT WEIGHT (pcf)	MOISTURE CONTENT (%)	CORE RECOVERY (%)	R.O.D. (%)	NUMBER OF BLOWS/12"	SAMPLE NUMBER	DEPTH IN FEET	GRAPHIC SYMBOL	U.S.C.S.	GEOTECHNICAL DESCRIPTION			
		25.6			15	DCPT			ML	Top Soil, grass-covered, stiff, brown, very fine sandy SILT with roots, moist.			
							1		BA	Gravelly SILT, stiff, brown to light brown, very fine, with cobbles and trace sand. Moist.			
							2						
							3						
							4						
							5						
							6		BA	Basalt/Lava rock formation			
							7		BA	Test pit terminated at about 5 ft. below ground surface at the soil-rock interface.			
SAMPLE TYPE										OTHER LABORATORY TESTS			
MC - Modified California SPT - Standard Penetration										MD - Moisture/Density UC - Unconfined Compression			
CB - Core Barrel SH - Shelby Tube										CON - Consolidation Test SG - Specific Gravity			
AUG - Auger Cuttings D&M - Dames & Moore										PI - Atterberg Limits SA - Sieve Analysis			
LOG OF BORING													
Geotechnical & Environmental Consultants Construction Management, Testing & Inspection										DHHL Proposed Lalamilo RS10 Subdivision Lalamilo, Waimea, Big Island of Hawaii			
DATE: July 2006										PROJECT NO.: 26301.10/12			

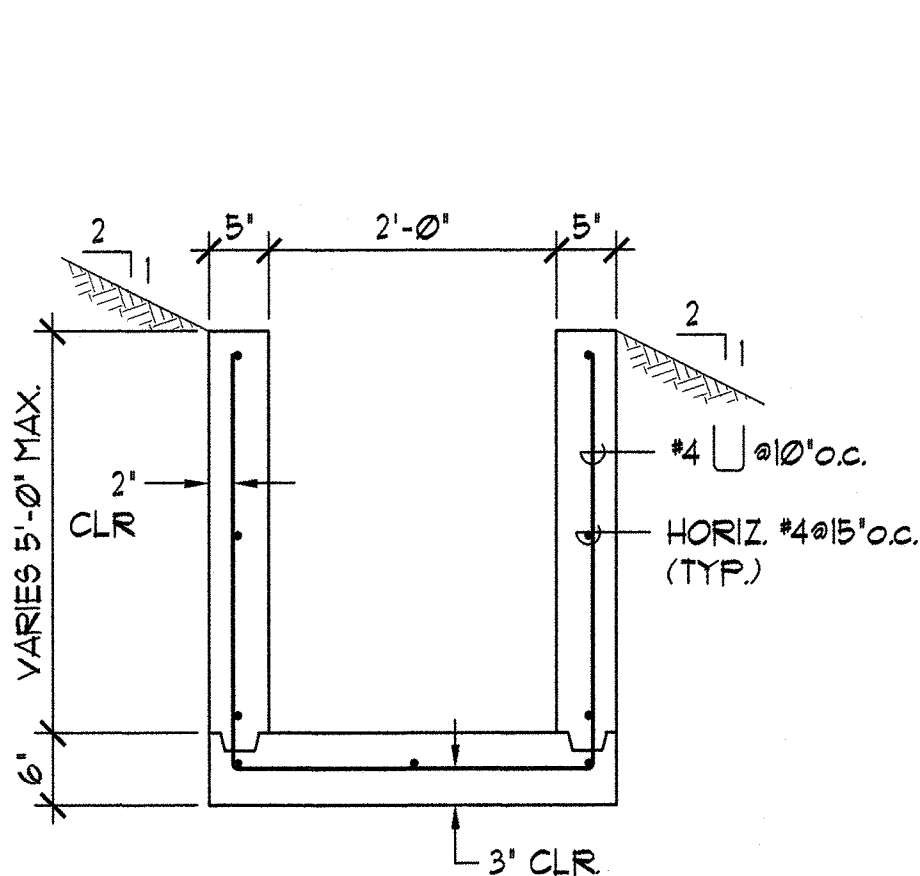
PLATE NO. 67

TEST PIT: TP-59

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, 8th Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: (3) 6-6-01:10 & 77			
BORING LOGS - 4			
DRAWN BY: MGN	ENGINEER: FJC	CHECKED BY: RYS	
APPROVED:			

GENERAL NOTES:

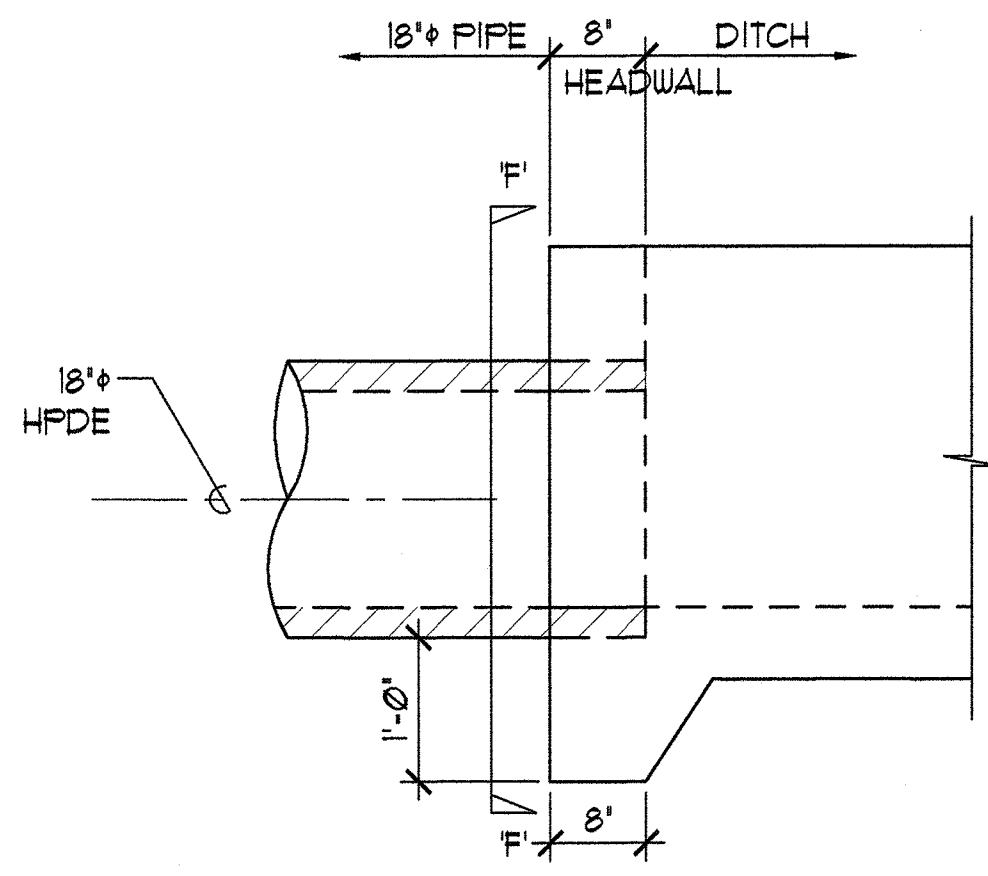
1. THE CONSULTANT IS RESPONSIBLE FOR VERIFYING THAT THE PLANS MEET CURRENT DESIGN REQUIREMENTS AND THAT PLANS ARE SUITABLE FOR INTENDED USE.
2. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST UNIFORM BUILDING CODE AS ADOPTED AND OR AMENDED BY THE COUNTY OF HAWAII.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO THE START OF CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCY IN WRITING TO THE ENGINEER BEFORE COMMENCEMENT OF WORK.
4. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING FOR ALL STRUCTURAL MEMBERS AS REQUIRED FOR STRUCTURAL STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
5. ALL CONCRETE WORK SHALL CONFORM TO ACI 318-95 AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS UNLESS NOTED OTHERWISE. MAXIMUM AGGREGATE SIZE SHALL BE 3/4 INCH WITH A MAXIMUM SLUMP OF FOUR (4) INCHES.
6. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615, GRADE 60. BENDS & HOOKS SHALL BE TO FAR FACE OF INTERSECTING WALL OR SLAB.
7. CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:
- a) CONCRETE CAST AGAINST EARTH 3"
b) CONCRETE EXPOSED TO EARTH 2"
c) CONCRETE EXPOSED TO WEATHER 1"
8. GRATES AND FRAMES SHALL CONFORM TO ASTM A-36 & SHALL BE HOT DIP GALVANIZED AFTER FABRICATION ACCORDING WITH ASTM A123.
9. THE DRY WELL INTAKE BOX IS SIZED TO ALLOW FOR A MAXIMUM 36-INCH CULVERT CONNECTION. THE DESIGNER MUST RESIZE THE CATCH BASIN AS NECESSARY. A MINIMUM EIGHT INCH WALL THICKNESS SHALL BE MAINTAINED AT ALL TIMES.
10. DRY WELL COVER WITH GRATED INLET BOX AND DRAINAGE INTAKE BOX SHALL BE CAST IN PLACE UNLESS APPROVED BY ENGINEER. EVEN IF APPROVED BY THE ENGINEER, THE ADJUSTABLE GRATING SEAT SHALL BE CAST IN PLACE. HOWEVER, ANY REPLACEMENT BOX AND ACCEPTABLE MODIFICATION REQUIRED DUE TO EXISTING SURROUNDING CONDITIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
11. THE DISTANCE FROM THE TOP OF THE PRECAST PORTION OF THE INTAKE BOX TO THE TOP OF THE CULVERT OPENING SHALL BE A MINIMUM OF 14 INCHES. THE DISTANCE FROM THE TOP OF THE INTAKE BOX TO THE TOP OF THE CULVERT OPENING SHALL BE A MINIMUM OF 24 INCHES.
12. TOP OF GRATING ELEVATION VARIES, SEE PLAN.
13. DRY WELL INTAKE BOX/CATCH BASIN/MANHOLE WALL OPENING FOR CONNECTING CULVERT SHALL BE CONSTRUCTED A MAXIMUM OF 1-1/2 INCH LARGER THAN THE CONNECTING CULVERT OUTSIDE DIAMETER. OVERSIZED OPENING SHALL NOT BE ALLOWED.
14. THE DESIGN ENGINEER SHALL INDICATE THE TOP OF GRATE (TOG) ELEVATION AT THE REFERENCE POINT SHOWN ON SHEET S-3 THE TOG ELEVATION SHALL BE 0.3' BELOW AND ORIENTED PARALLEL TO THE SWALE CENTERLINE PROFILE.
15. DRY WELL WITHIN THE ACCESSIBLE PATH SHALL CONFORM TO ADAAG GUIDELINES.
16. DRY WELLS SHALL BE LOCATED IN CUT AREA, OTHERWISE THE PORTION OF A UIC OR NON-UIC DRY WELL THAT IS BUILT ON FILL SHALL BE SOLID CONCRETE (COLLAR OR RING) AND SHALL BE AN ADDITIONAL HEIGHT TO THE MINIMUM REQUIRED DRY WELL DEPTH.



NOTE: FOR JT. SPACING SEE DET. E/S-1

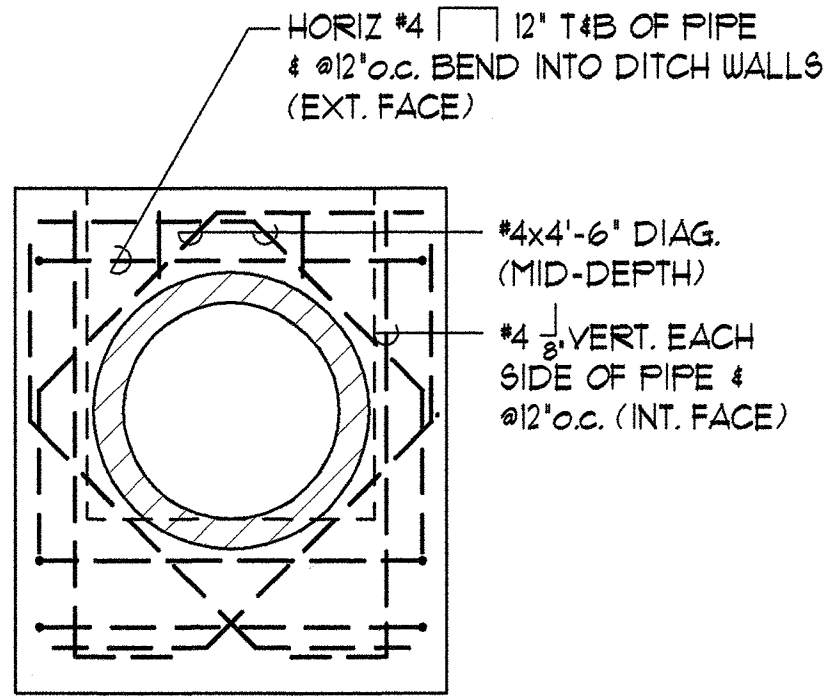
TYPICAL DITCH

SC: 3/4"=1'-0"

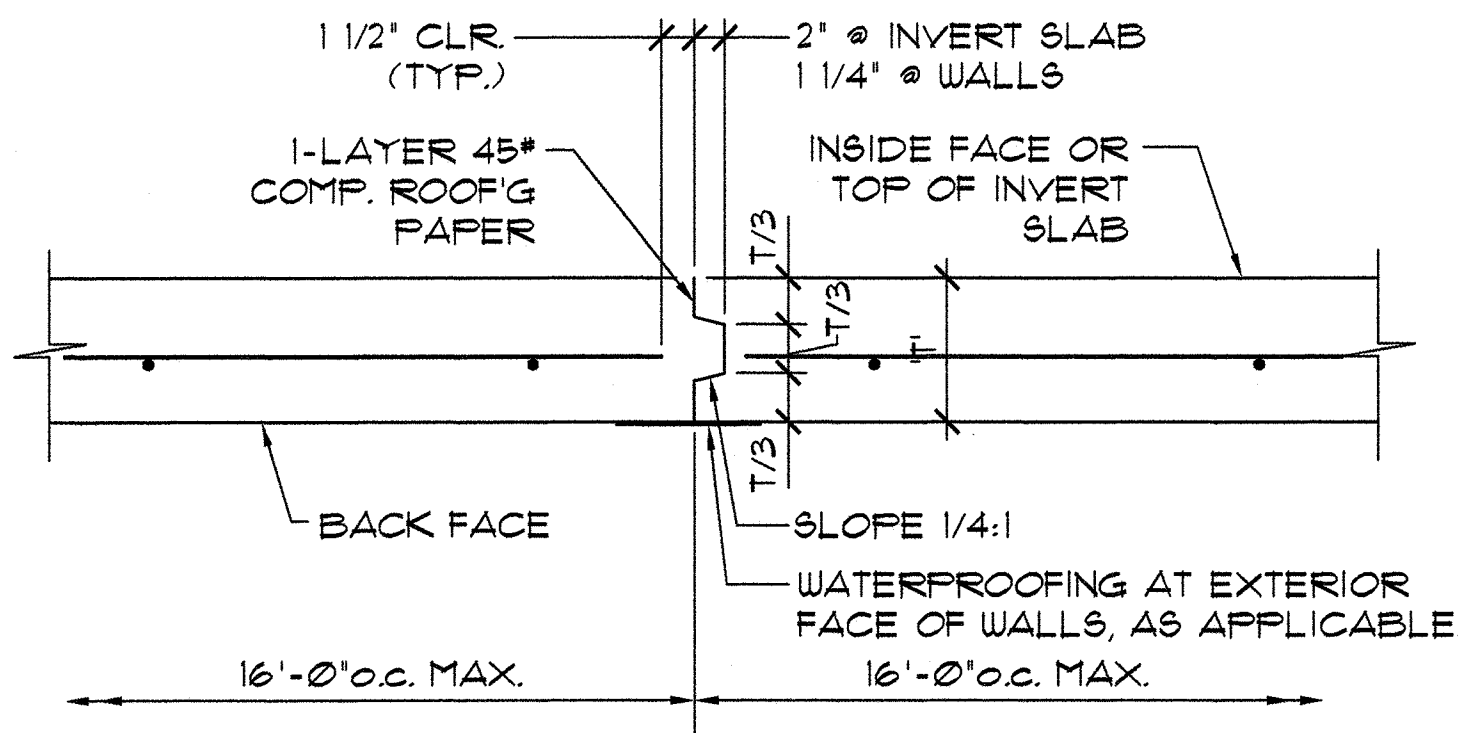


HEADWALL FOR CONCRETE DITCH

SC: 3/4"=1'-0"



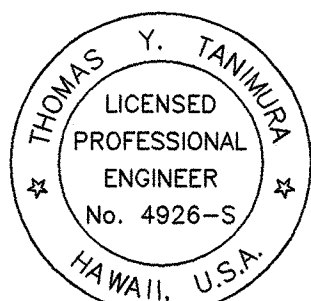
SECTION F-F



COND. AT CONSTRUCTION JOINT

TYP. DITCH JOINT DETAILS

NOT TO SCALE



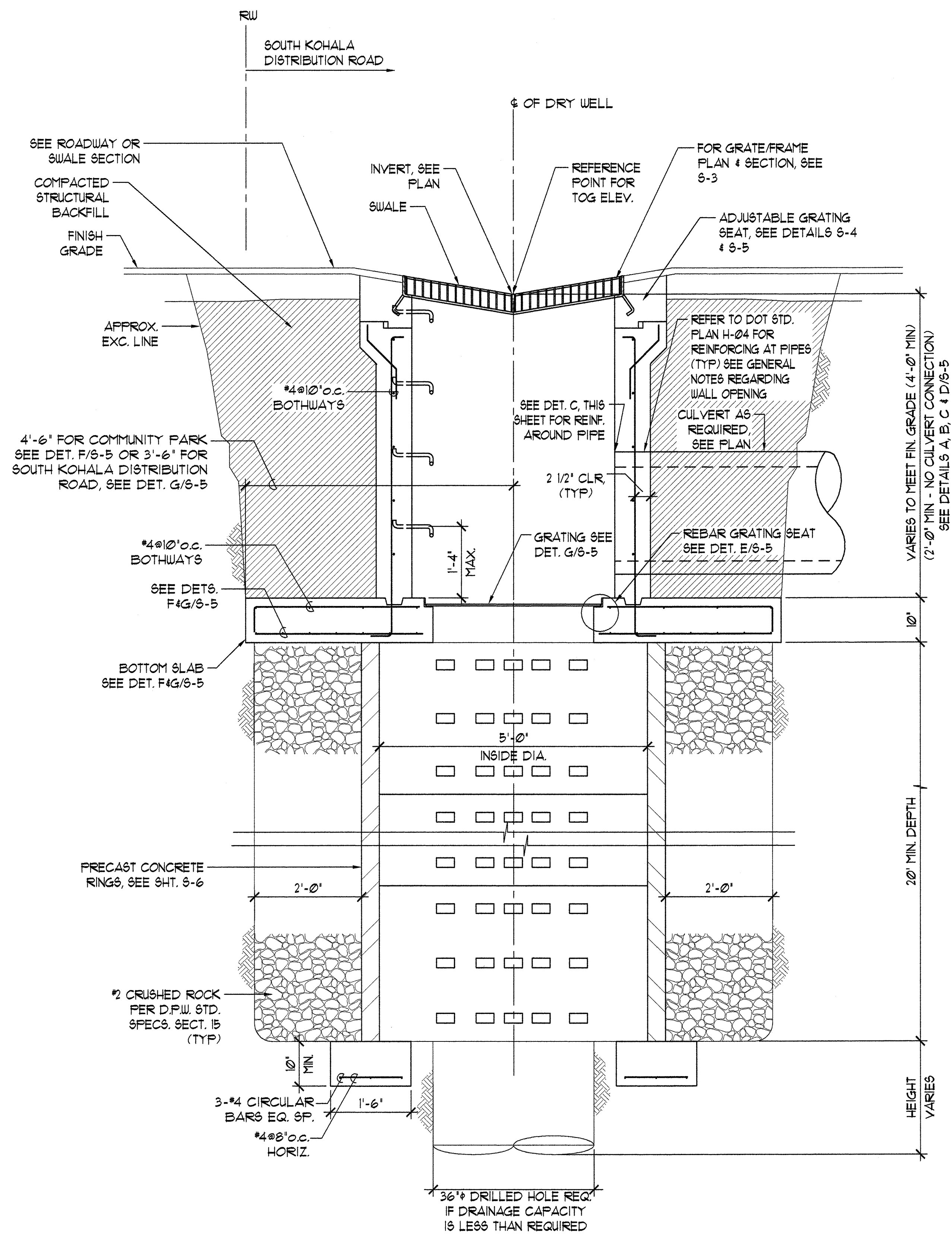
THOMAS Y. TANIGUCHI
LICENSED PROFESSIONAL ENGINEER
No. 4926-S
HAWAII, U.S.A.

04/30/12

Expiration Date of the License

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

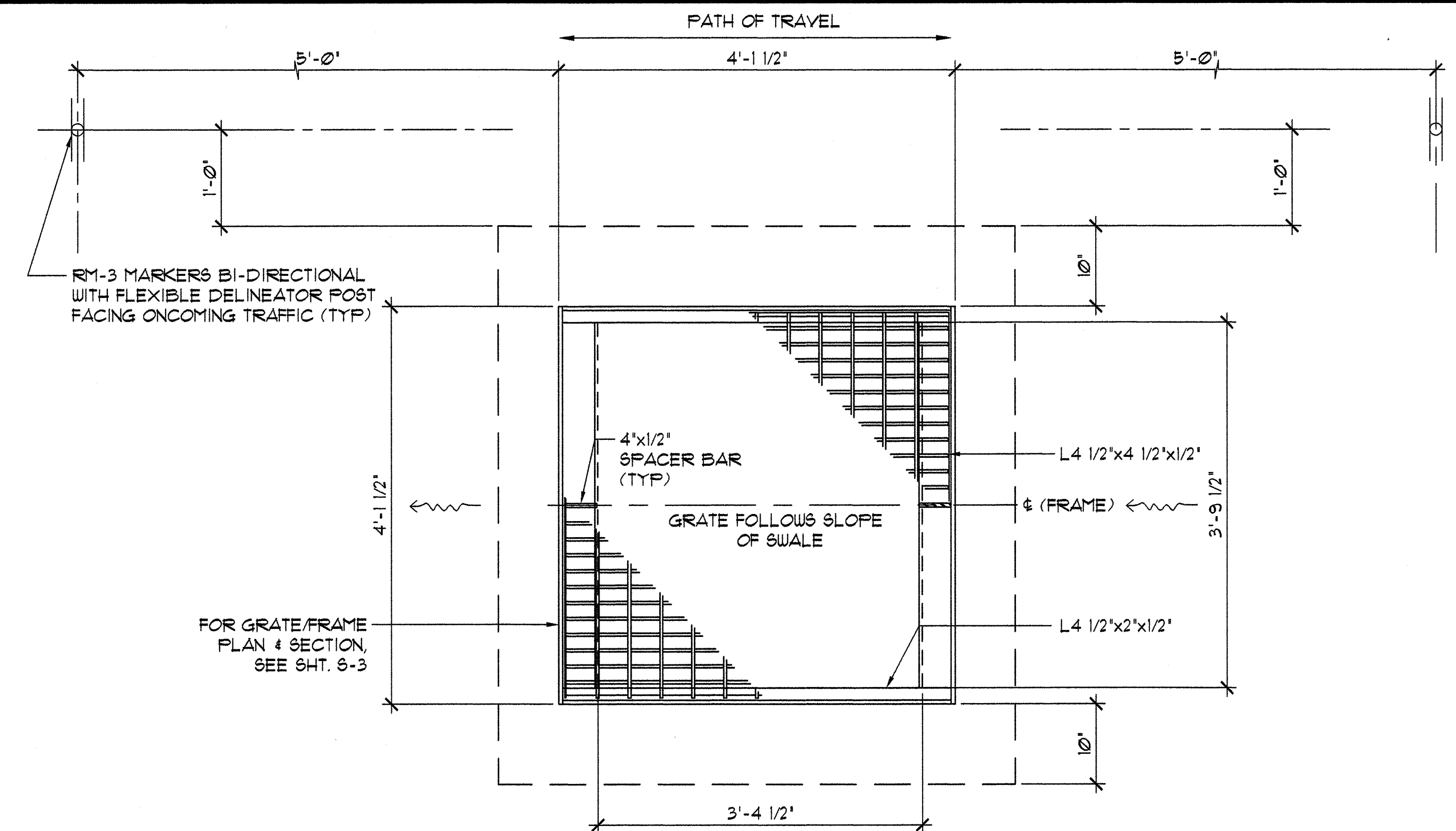
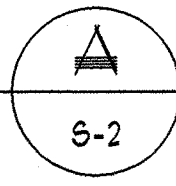
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii				
LALAMLO HOUSING PHASE 2A WAIMEA, SOUTH KOHALA, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01:77				
GENERAL NOTES & DITCH DETAILS				
DRAWN BY: HM		ENGINEER: TT	CHECKED BY: TT	
APPROVED:				
CHIEF, ENGINEERING DIVISION, D.P.M. & E.M. DATE				
CHIEF, ENGINEERING DIVISION, D.W.S. DATE				



NOTE: CONTRACTOR SHALL VERIFY THE DRAINAGE CAPACITY FOR EACH DEEP DRYWELL EXCEEDING 6 CFS. FIELD TEST SHALL BE COMPLETED AFTER CONSTRUCTION BY DISPENSING OF WATER VIA WATER TRUCK AND MEASUREMENT OF INFILTRATION RATE BY THE ENGINEER.

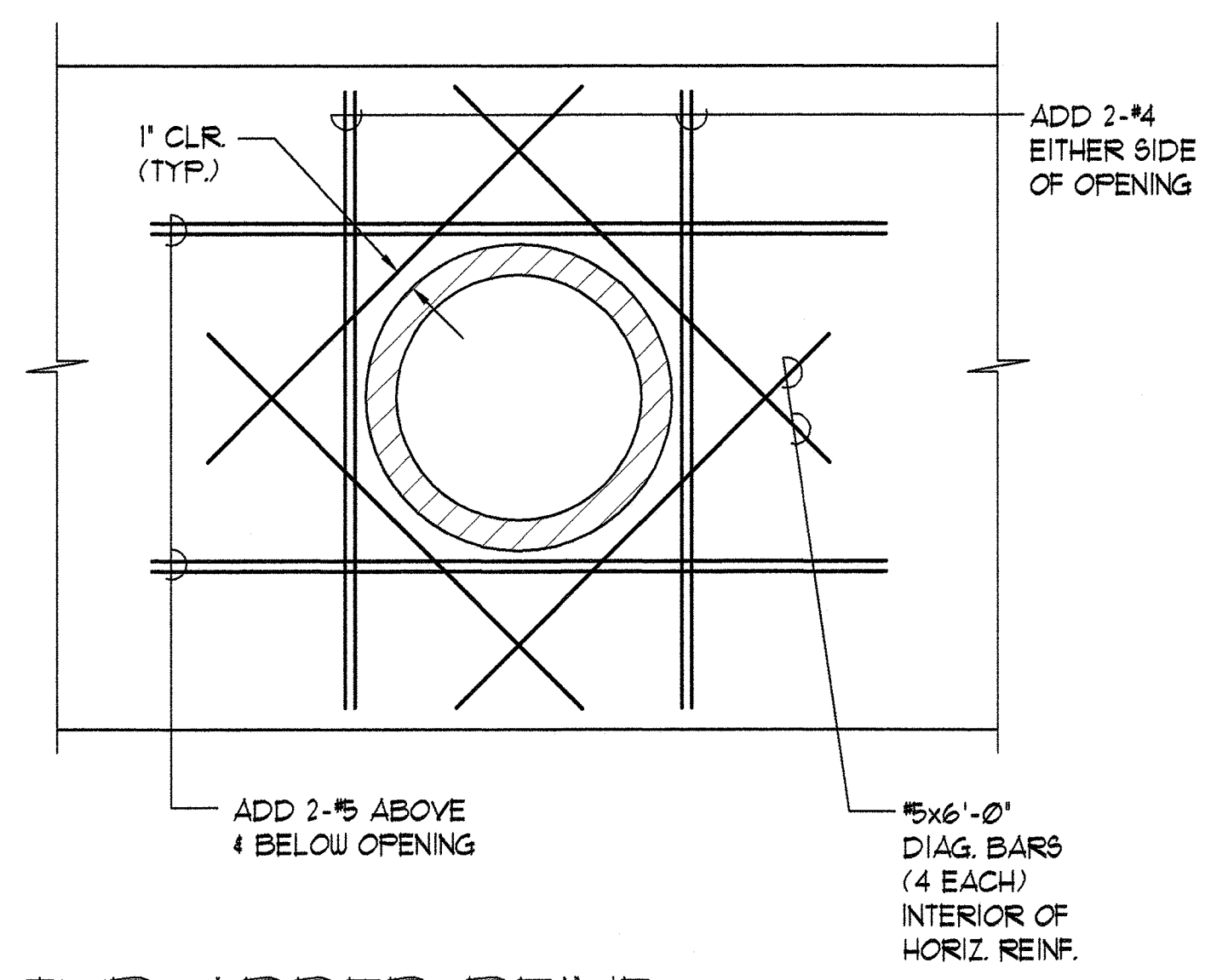
TYPICAL DRY WELL SECTION

N.T.S.



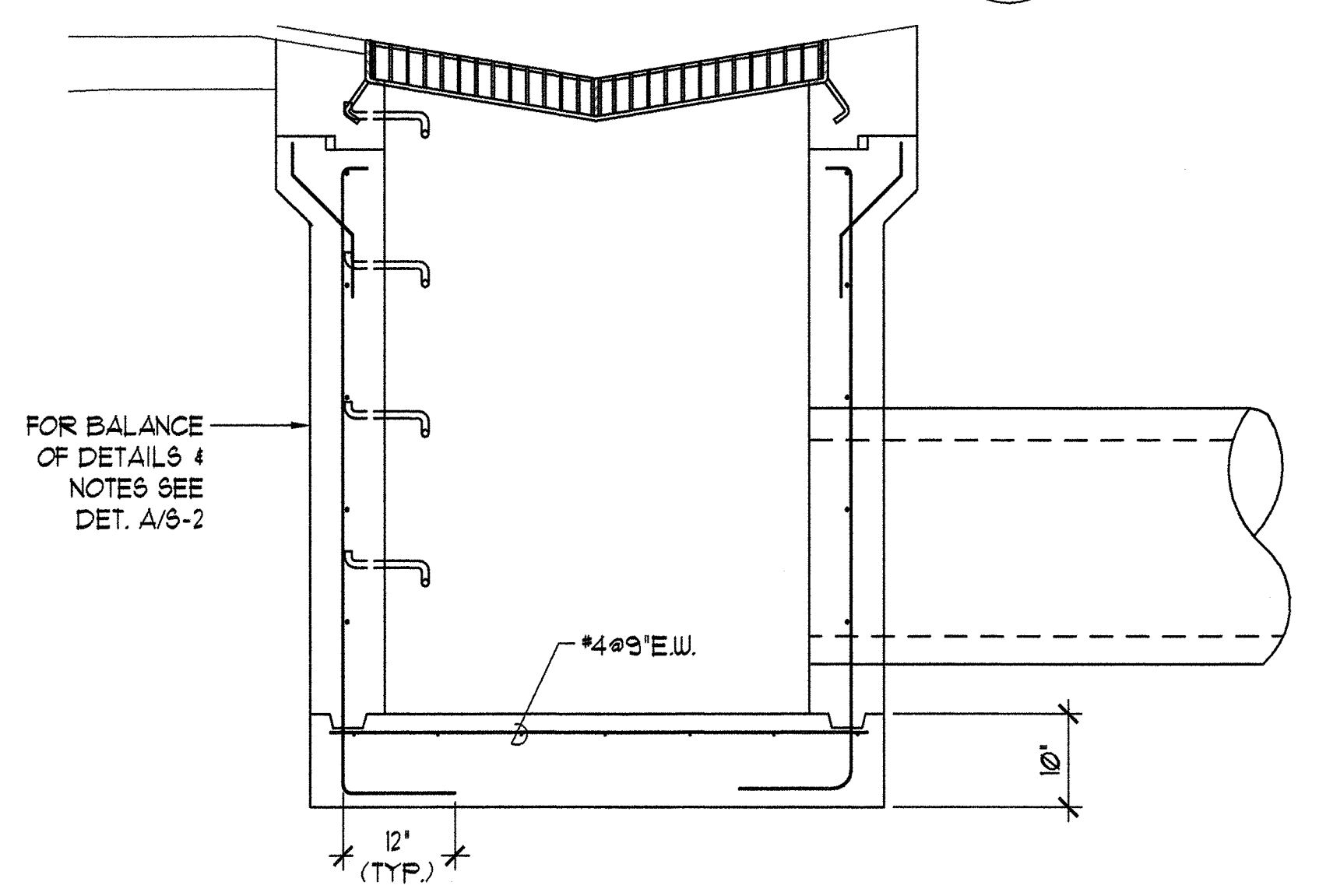
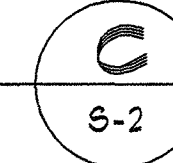
PLAN (TOP SLAB)

N.T.S.



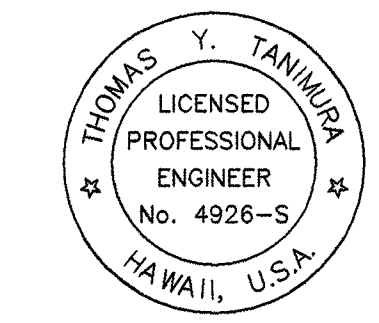
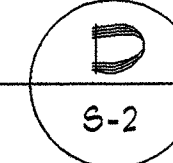
TYP. ADDED REINF. AT WALL OPENINGS

N.T.S.



DRAIN INLET W/OUT DRYWELL

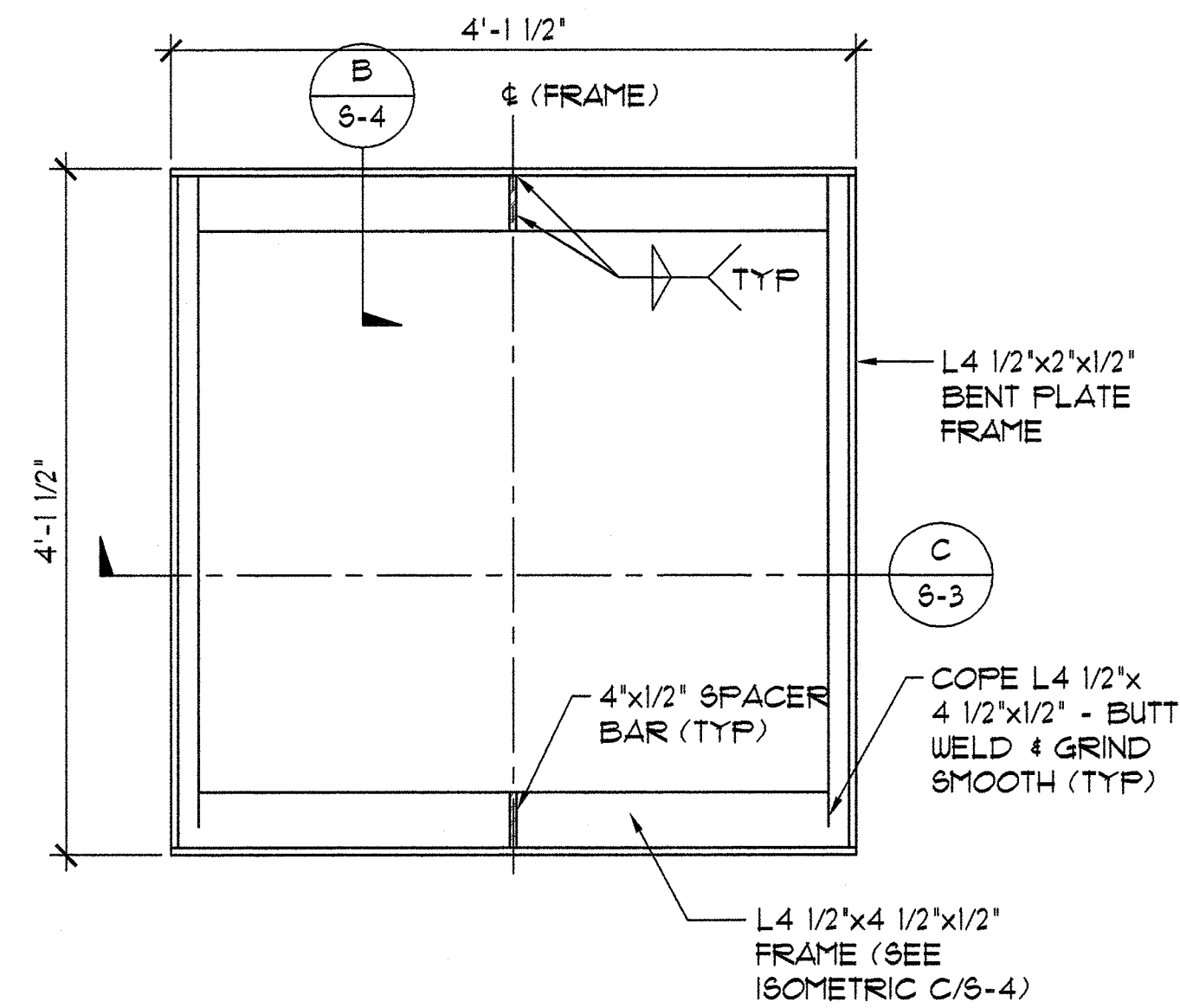
N.T.S.



T.Y. Tanimura
04/30/12
Expiration Date of the License

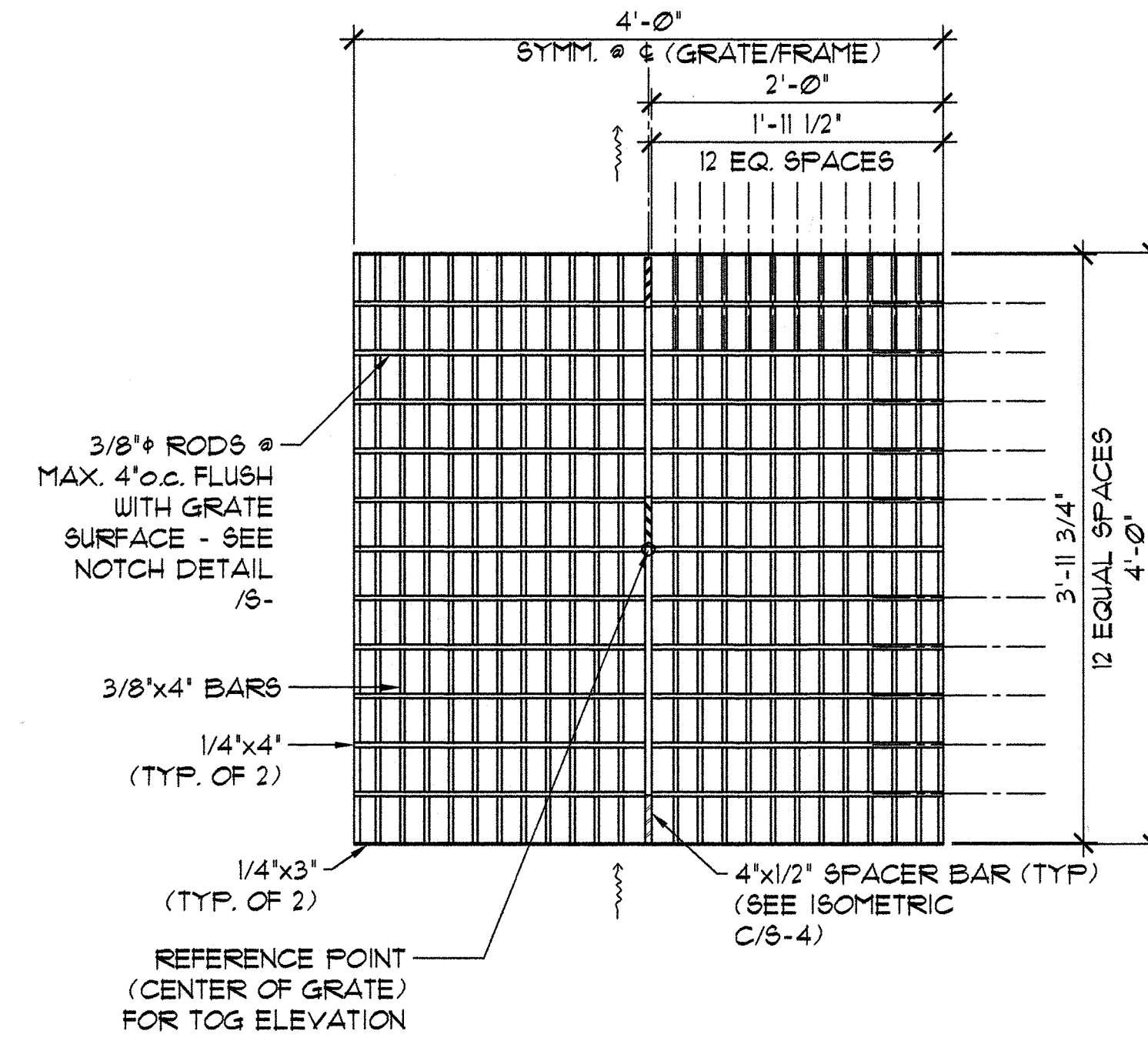
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alaheka Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A WAIMEA, SOUTH KOHALA, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01:77			
DRAIN INLET & DRYWELL DETAILS			
DRAWN BY: HM	ENGINEER: TT	CHECKED BY: TT	APPROVED:
CHIEF, ENGINEERING DIVISION, D.P.W. & E.M. DATE			
CHIEF, ENGINEERING DIVISION, D.M.S. DATE			



FRAME PLAN
SC: 1"=1'-0"

A
S-3

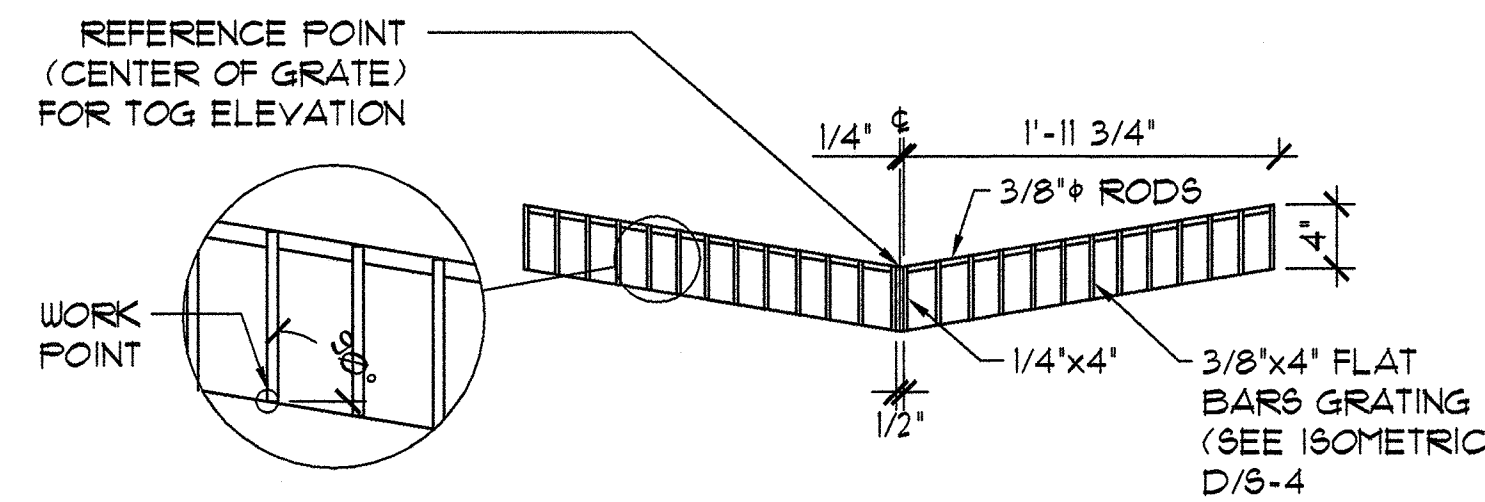


GRATE PLAN
SC: 1"=1'-0"

B
S-3

FRAME SECTION
SC: 1"=1'-0"

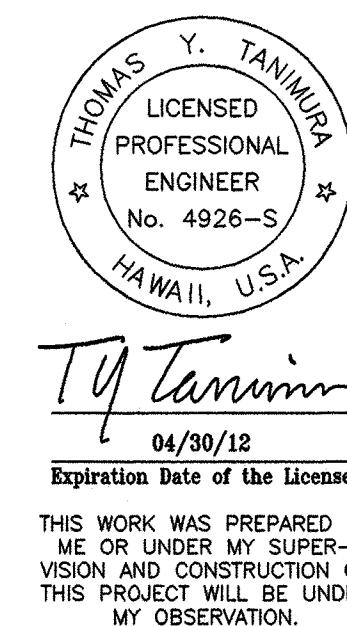
C
S-3



GRATE SECTION
SC: 1"=1'-0"

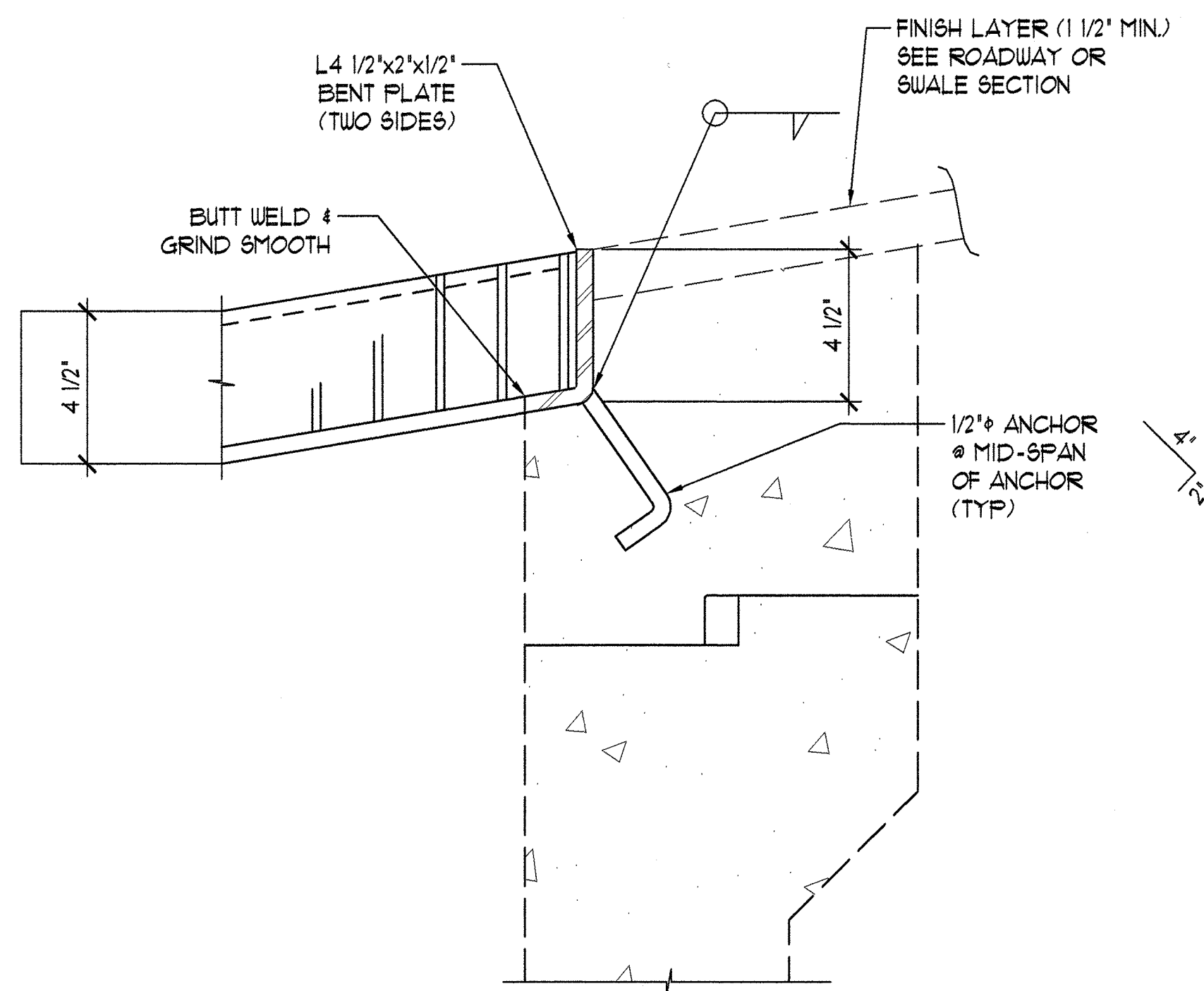
D
S-3

- NOTES:**
- ALL WELDS SHALL BE 3/8" UNLESS SHOWN OTHERWISE. GRIND SMOOTH ALL EXPOSED WELDS.
 - DESIGN LOADS:
 - LIVE LOADS: (PER AASHTO LRFD BRIDGE DESIGN)
 - ROADWAY SHOULDER HS20
 - ALL JOINTS SHALL BE FULLY WELDED.
 - ALL WELDS TO BE PREQUALIFIED FULL PENETRATION, UNLESS OTHERWISE SHOWN.
 - ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT EDITION OF REINFORCED STEEL WELDING CODE AWS D 14.
 - FLAT DRYWELL GRATES SHALL BE SIMILAR TO THE DETAILS SHOWN.



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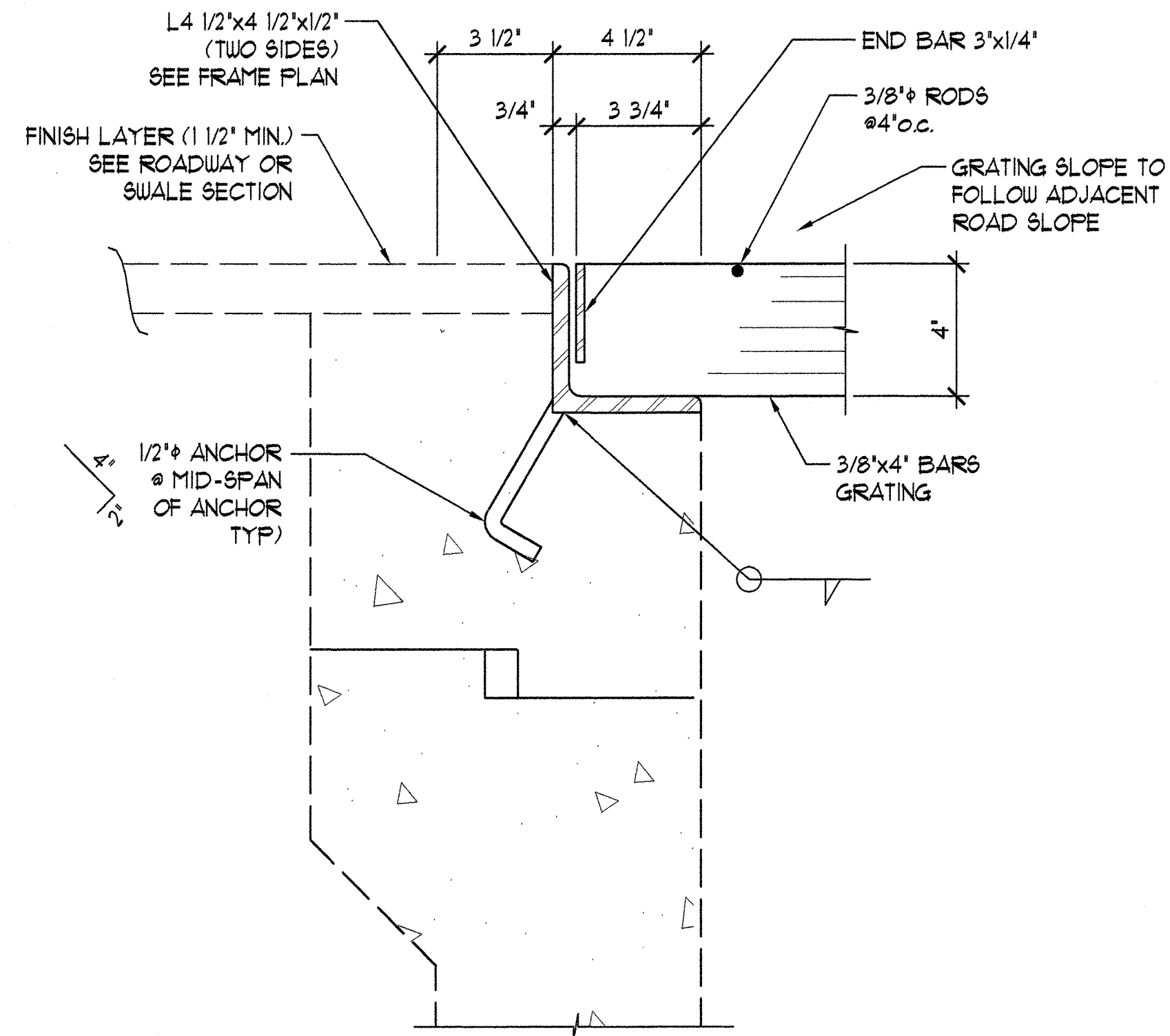
REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
<p>Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, 8th Floor Honolulu, Hawaii</p>				
<p>LALAMILO HOUSING PHASE 2A WAIMEA, SOUTH KOHALA, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01:77</p>				
<p>GRATING DETAILS</p>				
DRAWN BY: HM		ENGINEER: TT		CHECKED BY: TT
APPROVED:				
CHIEF, ENGINEERING DIVISION, D.P.W. & E.M. DATE				
CHIEF, ENGINEERING DIVISION, D.P.W. & E.M. DATE				



GRATING SEAT DETAIL

SC: 3' = 1'-0"

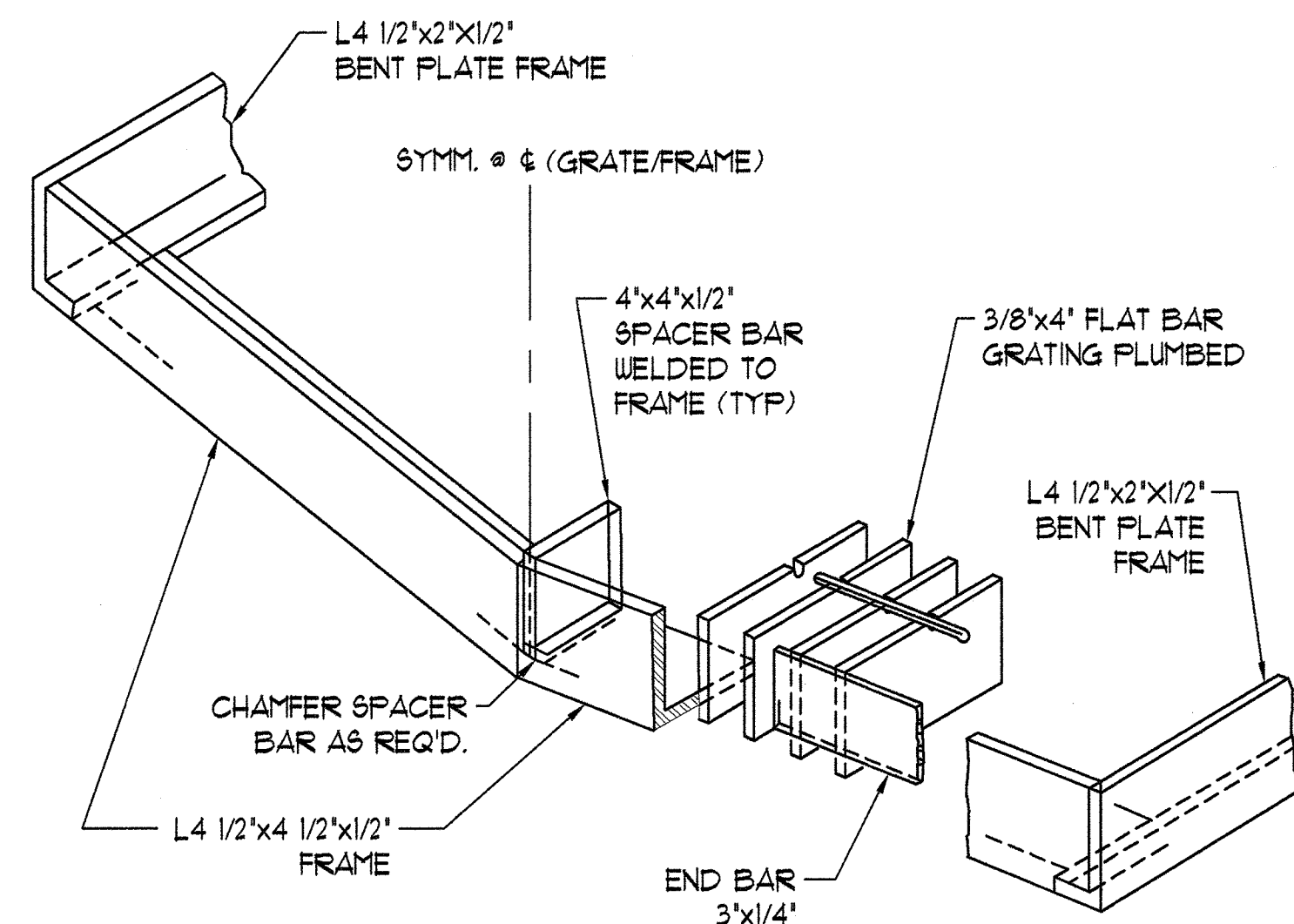
A
S-4



GRATING SEAT SECTION

SC: 3' = 1'-0"

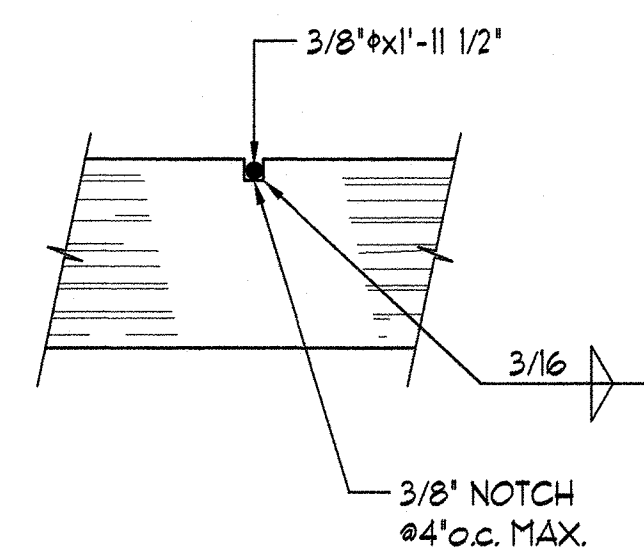
B
S-4



GRATE FRAME * SPACER BAR ISOMETRIC

SC: 3' = 1'-0"

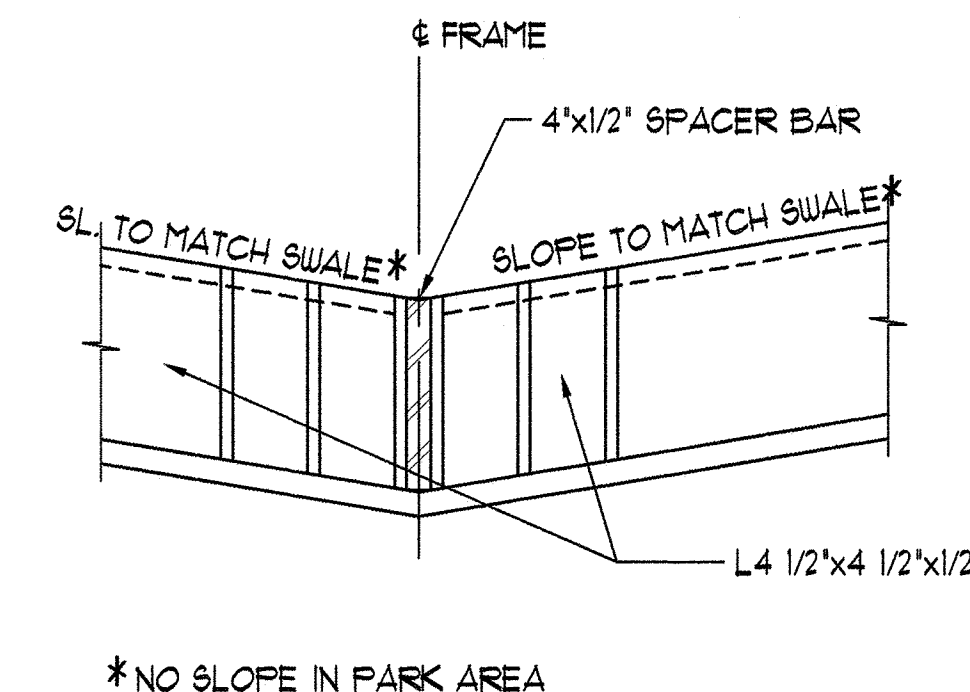
C
S-4



NOTCH DETAIL

SC: 3' = 1'-0"

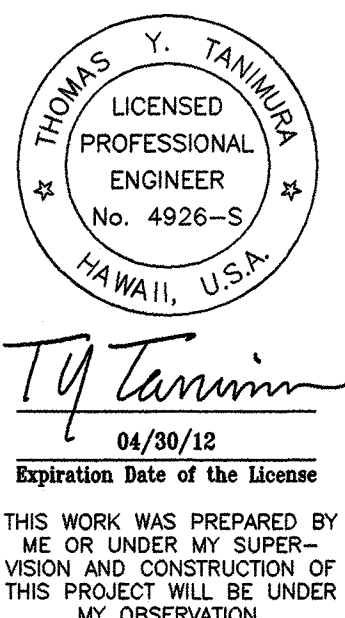
D
S-4



DETAIL

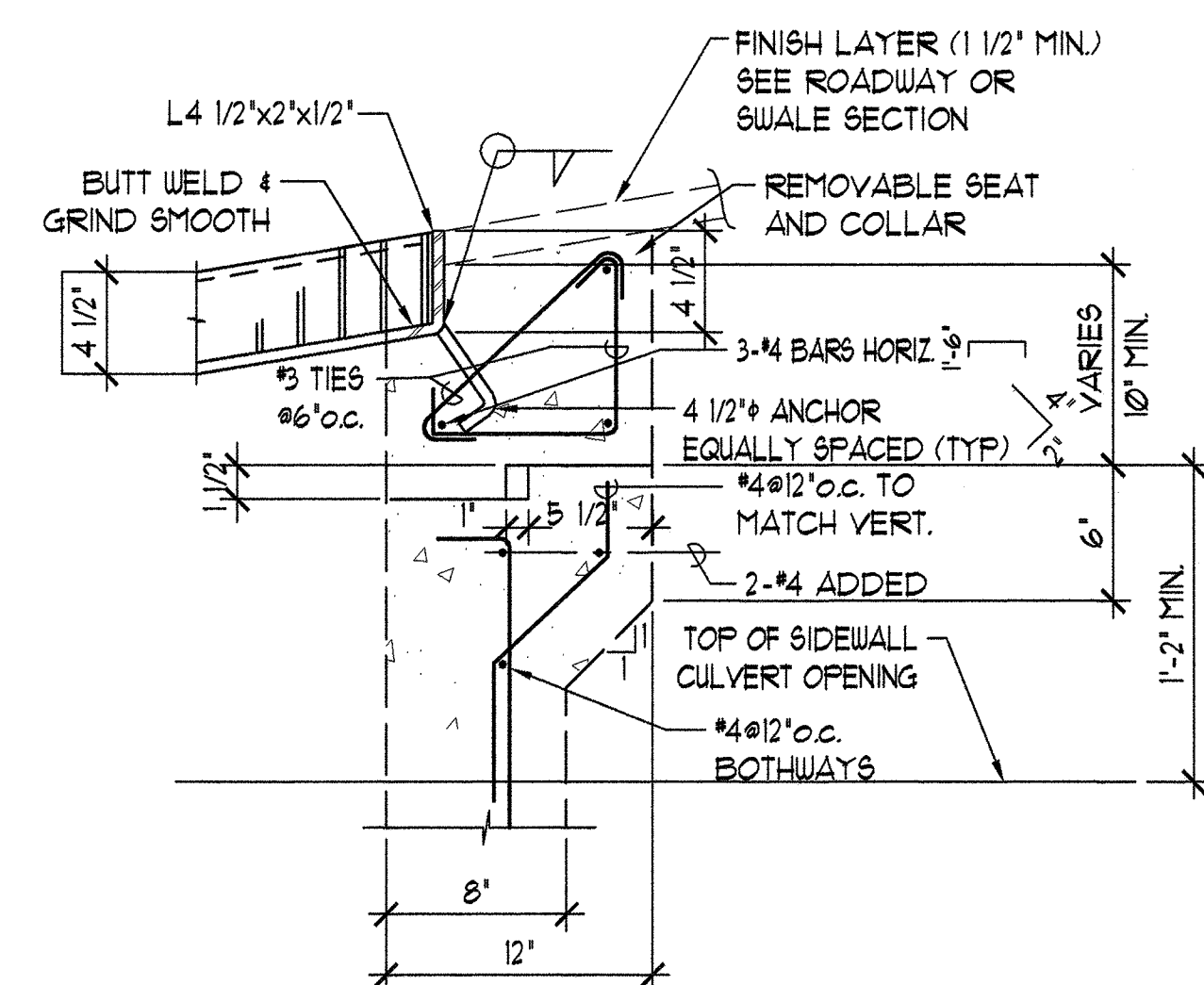
SC: 3' = 1'-0"

E
S-4



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
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A WAIMEA, SOUTH KOHALA, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01:77			
GRATING DETAILS			
DRAWN BY: HM	ENGINEER: TT	CHECKED BY: TT	
APPROVED:			
CHIEF, ENGINEERING DIVISION, D.W.4 DATE			
CHIEF, ENGINEERING DIVISION, D.W.4 DATE			

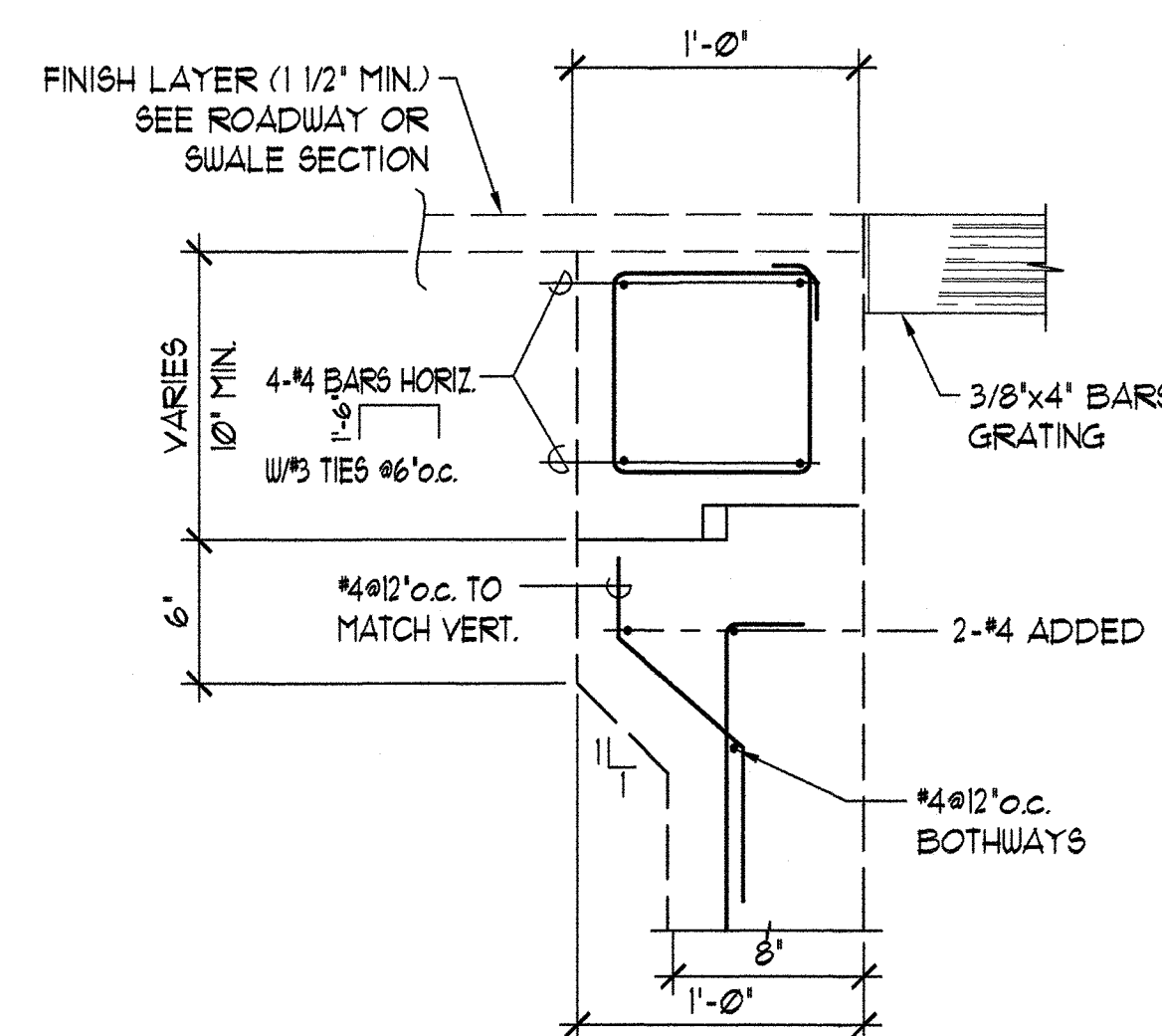


ADJUSTABLE GRATING SEAT DETAIL

SC: 1 1/2"=1'-0"

A

S-5

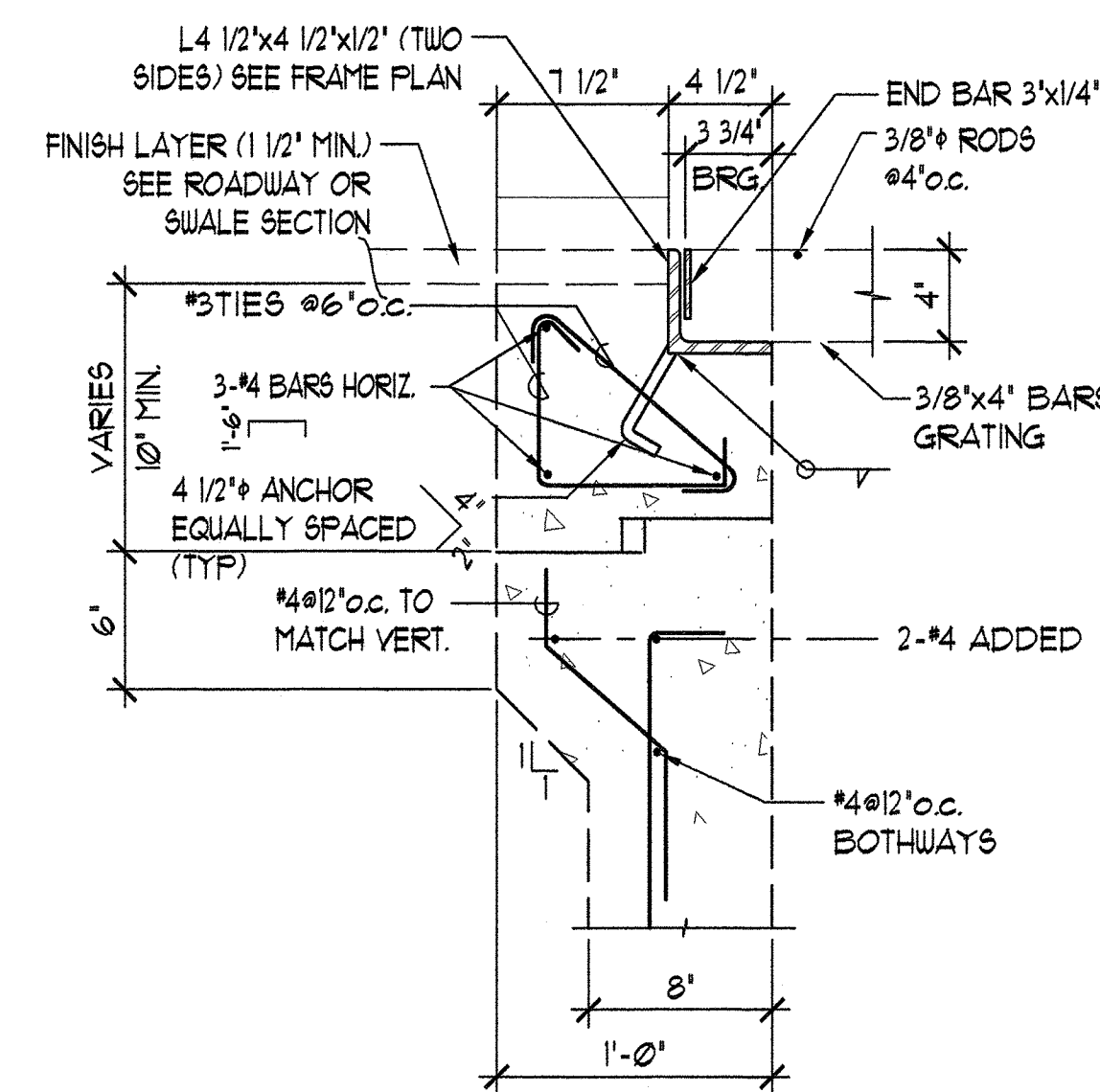


ADJUSTABLE GRATING SEAT AT NON-BEARING SIDE DETAIL

SC: 1 1/2"=1'-0"

B

S-5

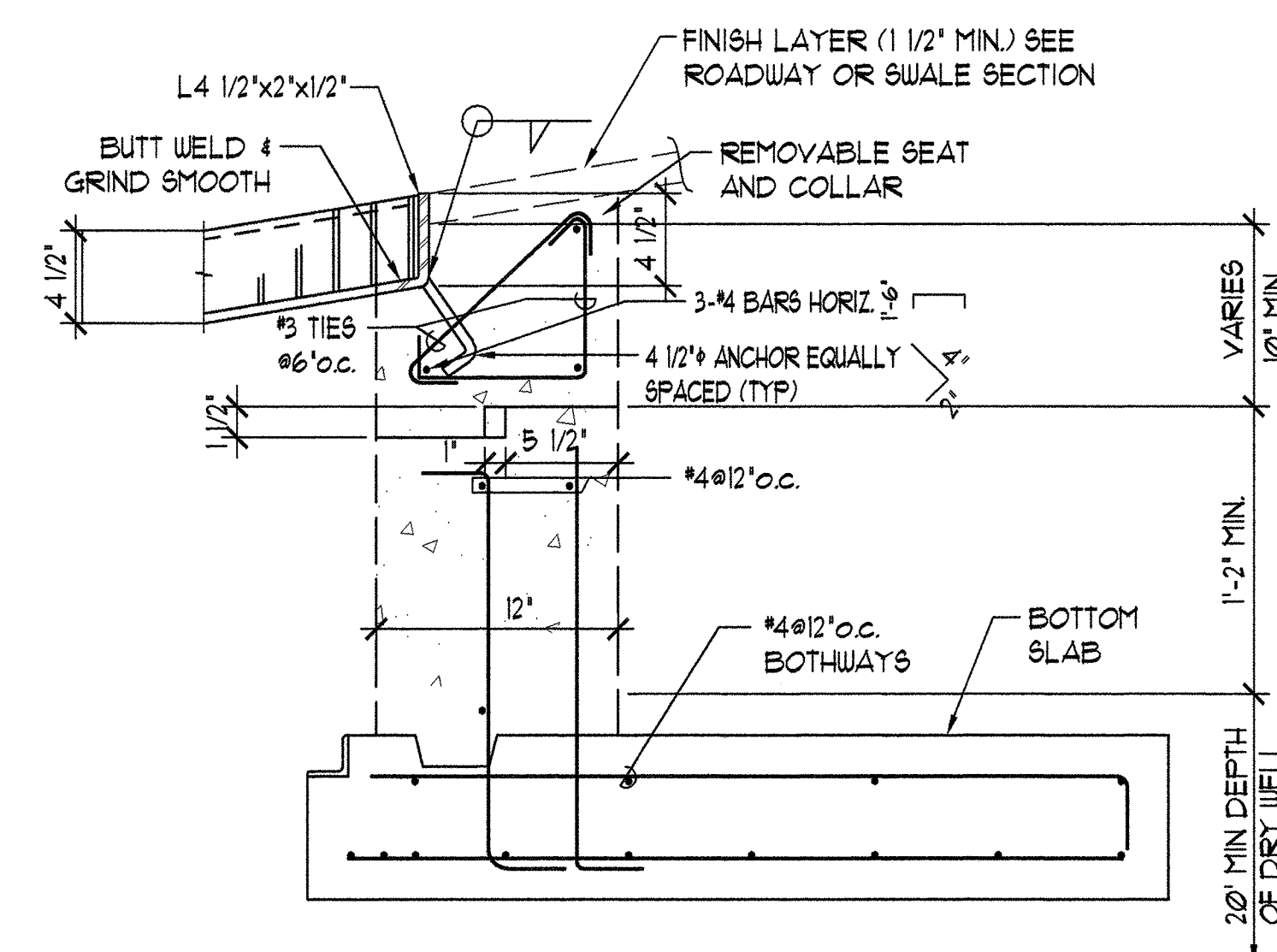


ADJUSTABLE GRATING SEAT DETAIL

SC: 1 1/2"=1'-0"

C

S-5

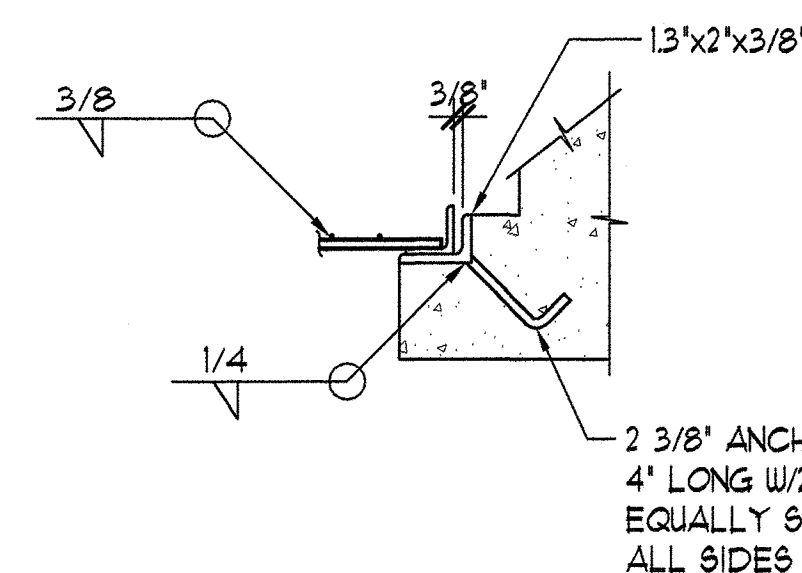


ADJUSTABLE GRATING SEAT DETAIL (TYP. - NO CULVERT CONNECTION)

SC: 1 1/2"=1'-0"

D

S-5

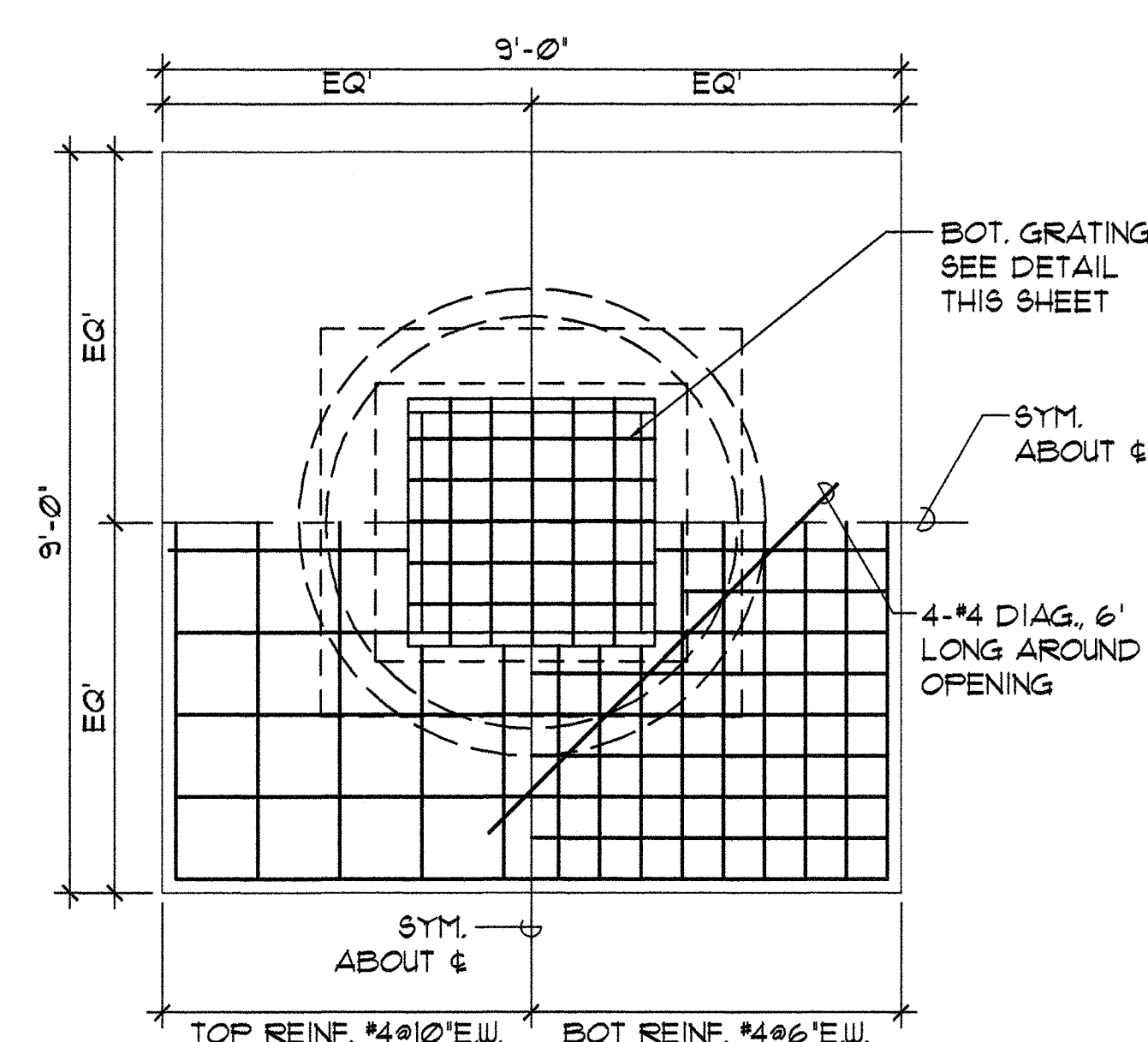


REBAR GRATING SEAT DETAIL

SC: 1 1/2"=1'-0"

E

S-5

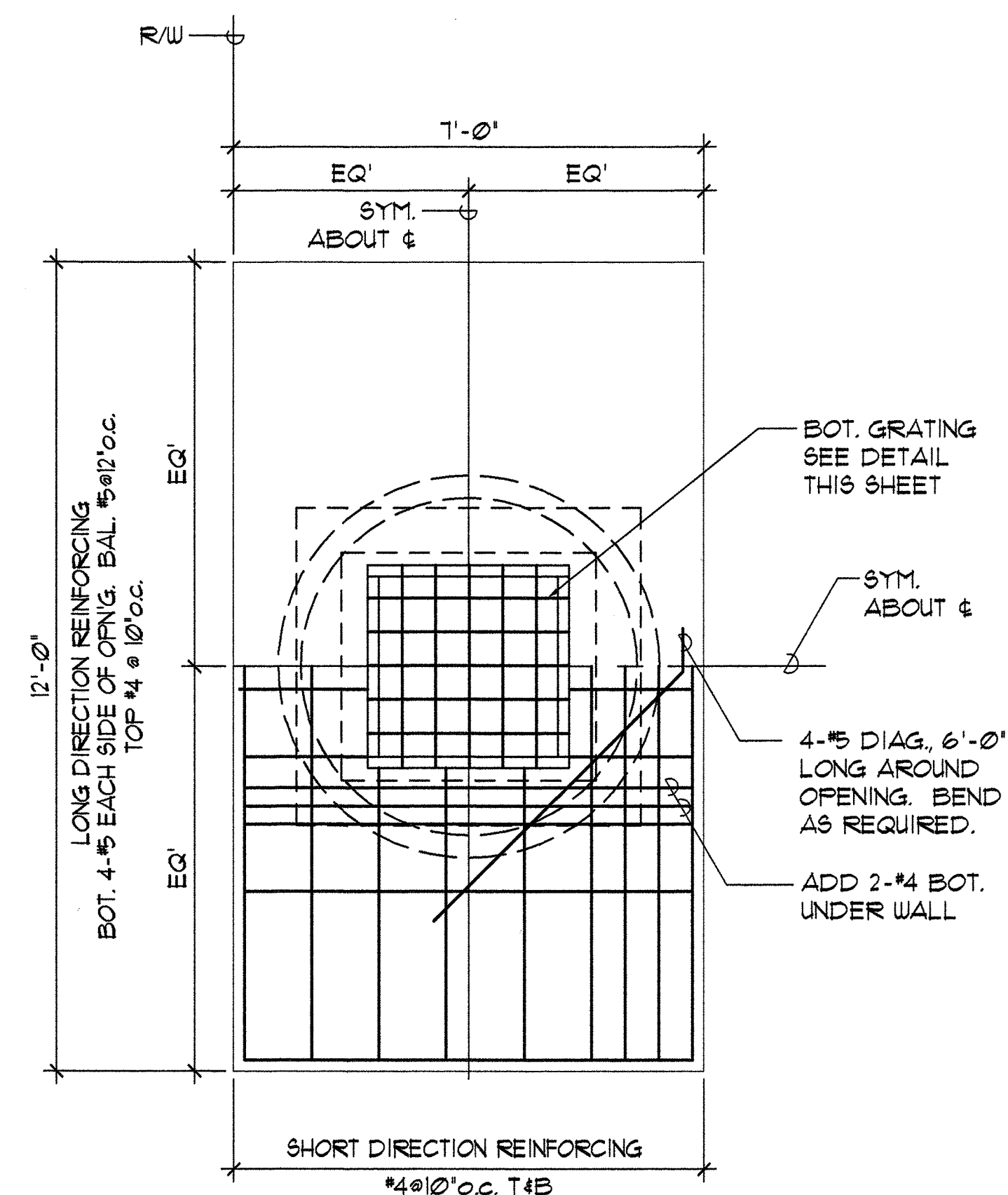


PLAN (BOT. SLAB) WITHIN COMMUNITY PARK

SC: 1/2"=1'-0"

F

S-5

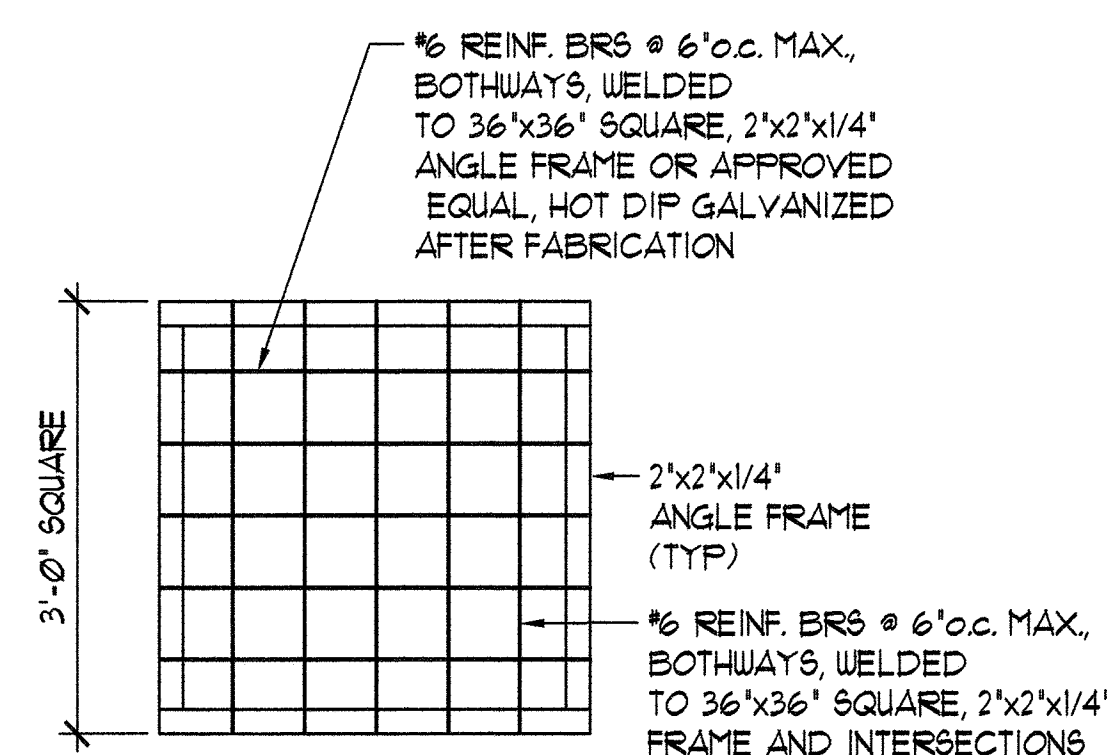


PLAN (BOT. SLAB) AT SWALE RIGHT OF WAY WITHIN SOUTH KOHALA DISTRIBUTION ROAD

SC: 1/2"=1'-0"

G

S-5

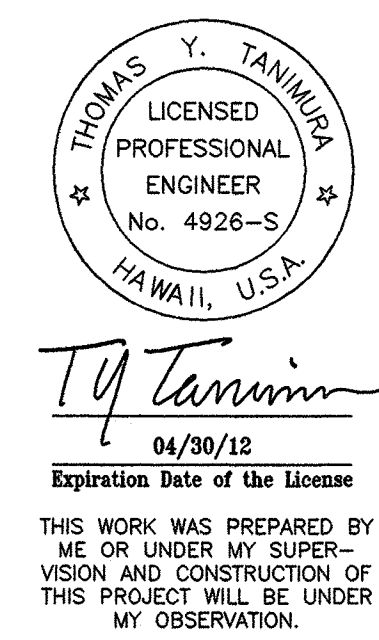


DRYWELL REBAR GRATING DETAIL

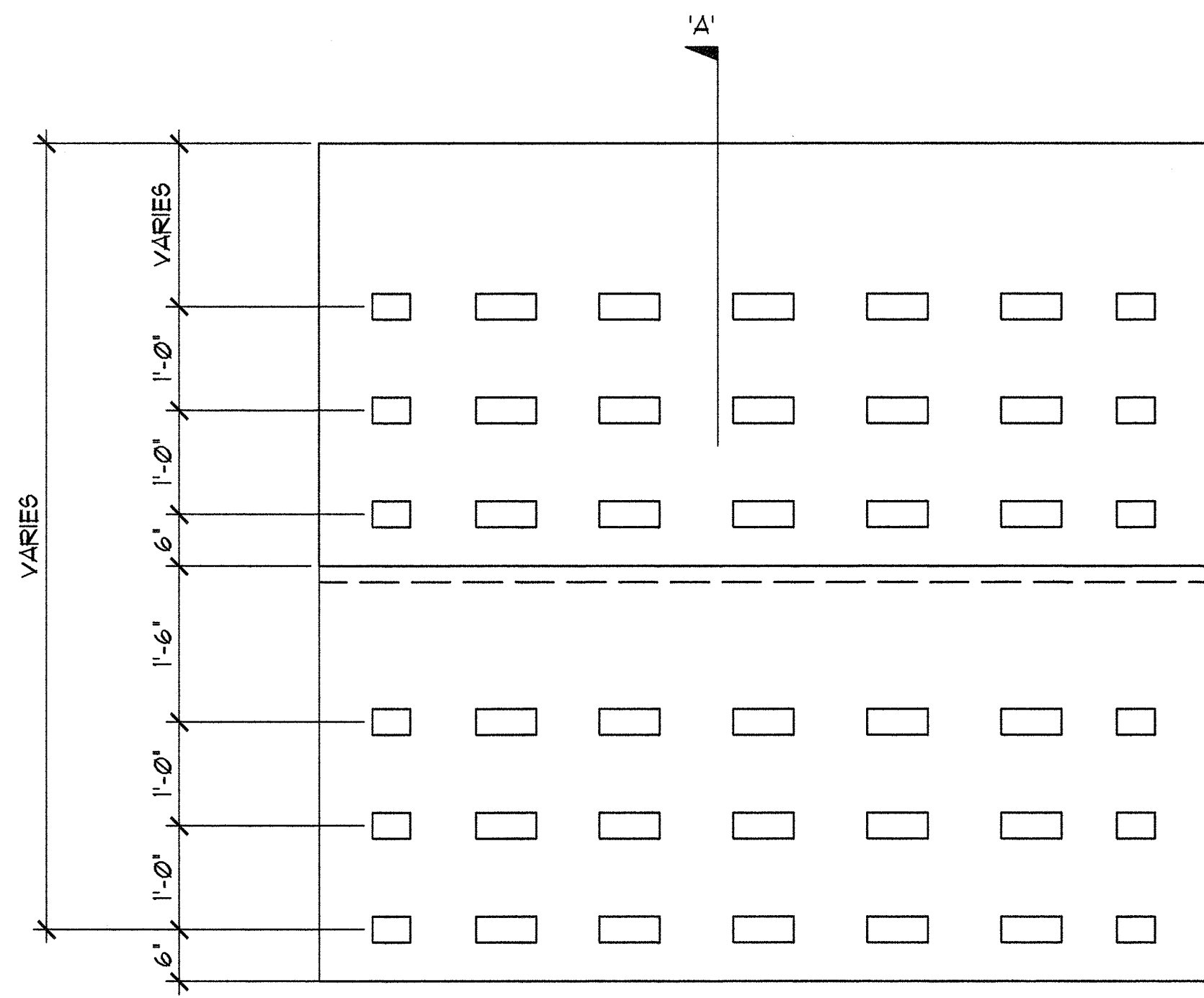
SC: 3/4"=1'-0"

H

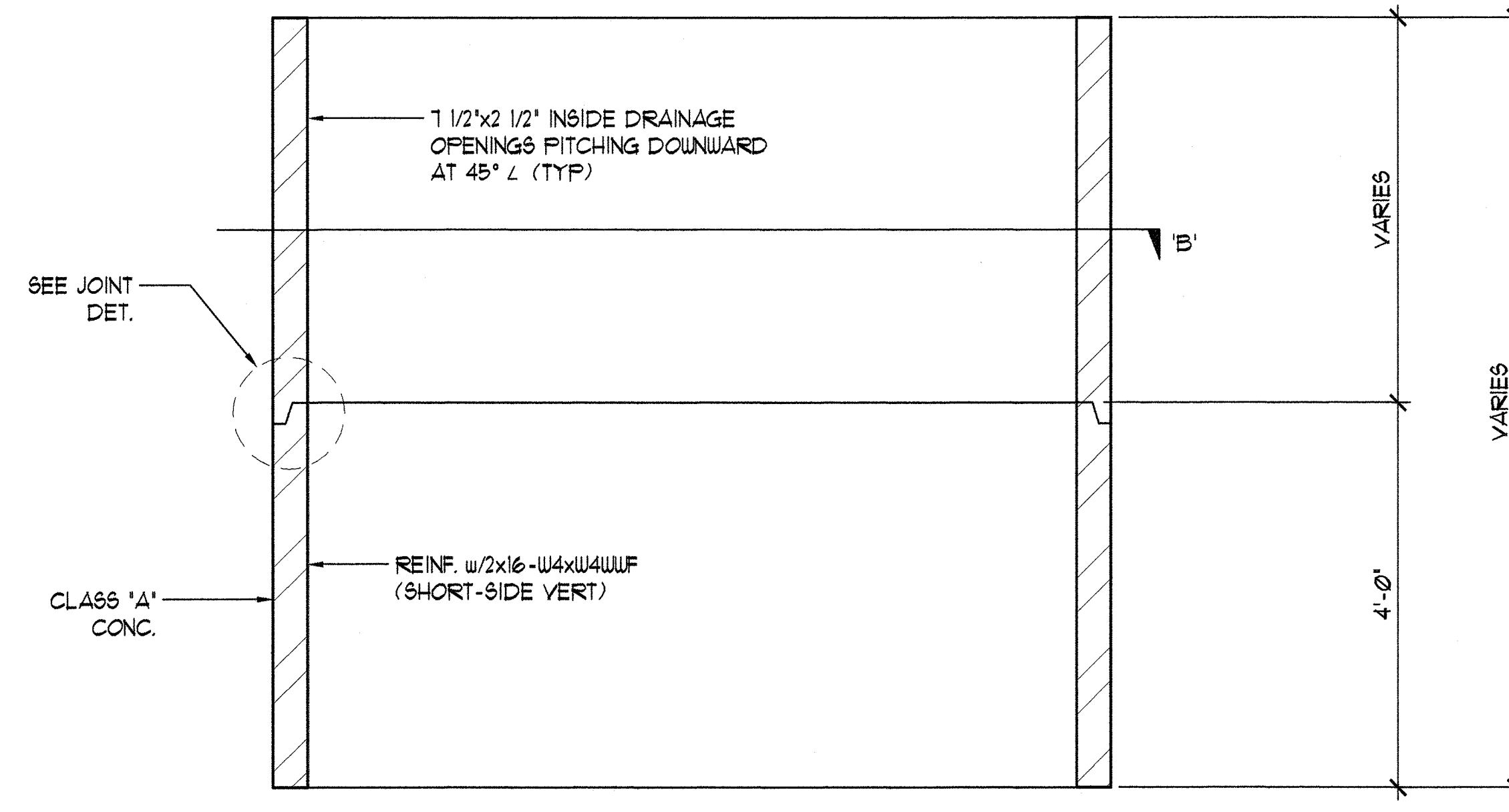
S-5



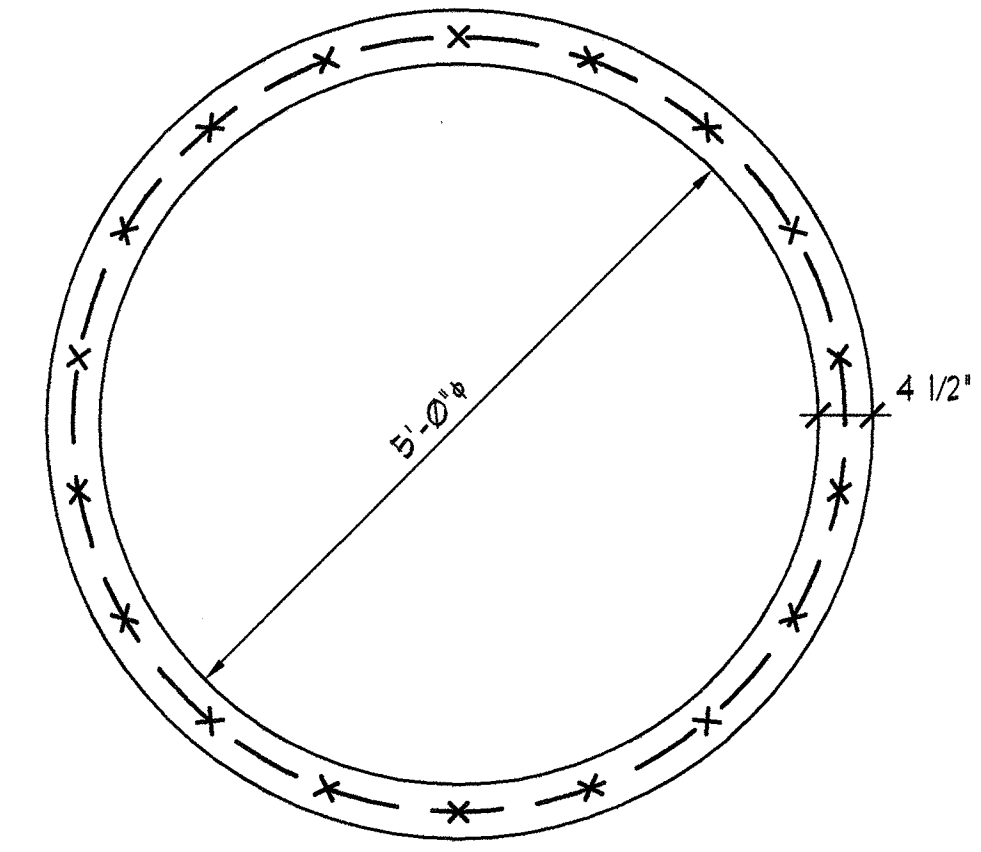
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakaa Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A WAIMEA, SOUTH KOHALA, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01:77			
GRATING & BOTTOM SLAB DETAILS			
DRAWN BY: HM	ENGINEER: TT	CHECKED BY: TT	
APPROVED:			
CHIEF, ENGINEERING DIVISION, D.P.W. & E.M. DATE			
CHIEF, ENGINEERING DIVISION, D.P.W. DATE			



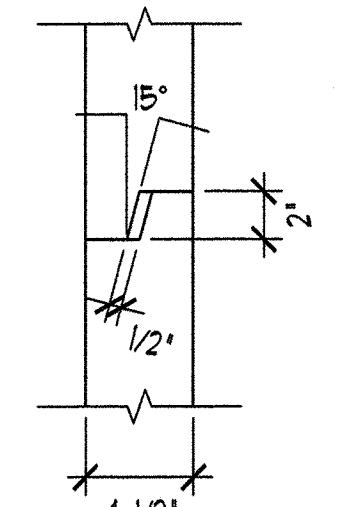
ELEVATION
SC: 3/4"=1'-0"



SECTION - A
SC: 3/4"=1'-0"



SECTION - B
SC: 3/4"=1'-0"



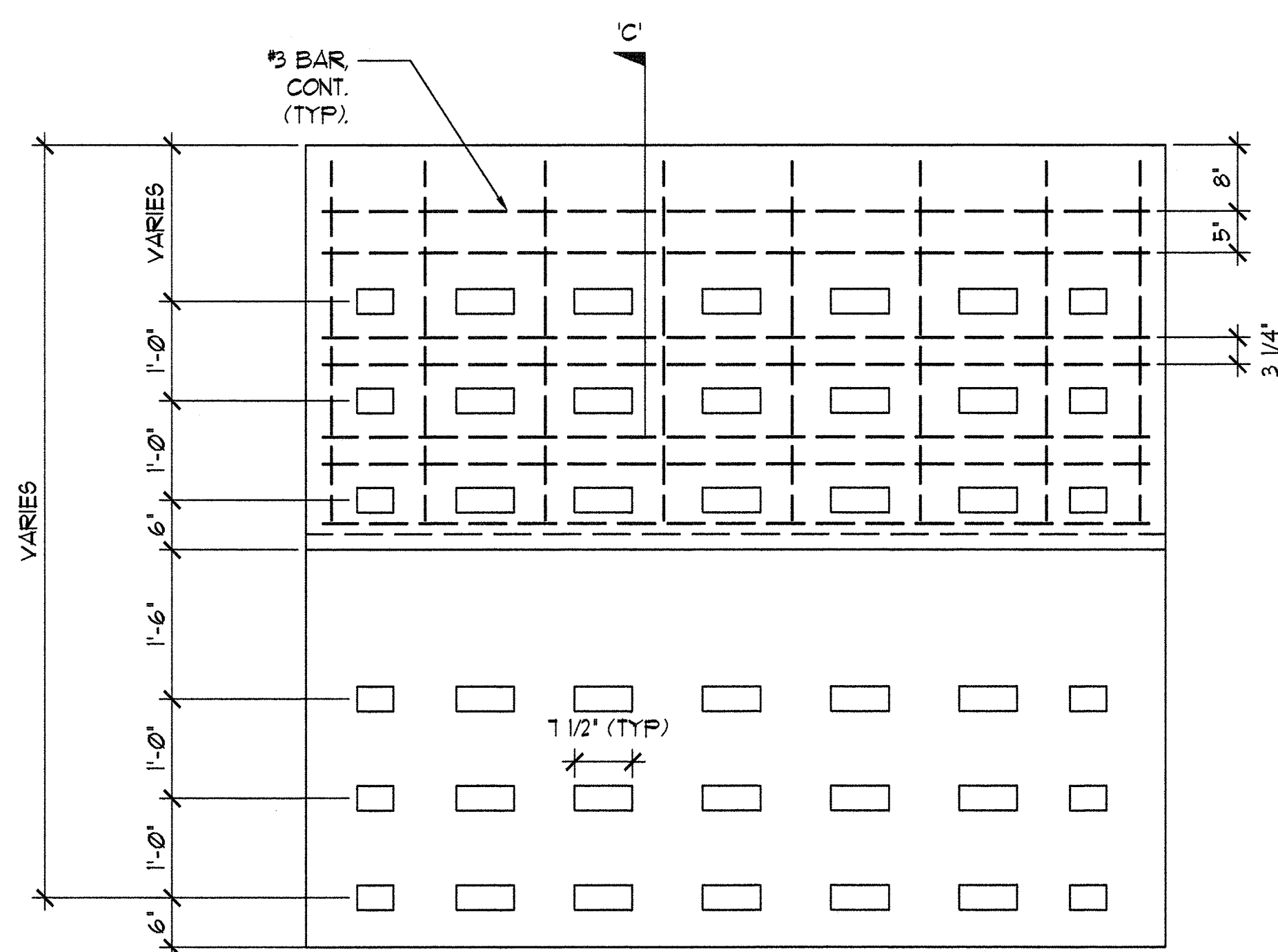
JOINT DET.
N.T.S.

NOTE: DELETE OPENINGS FOR SOLID CONCRETE RINGS.

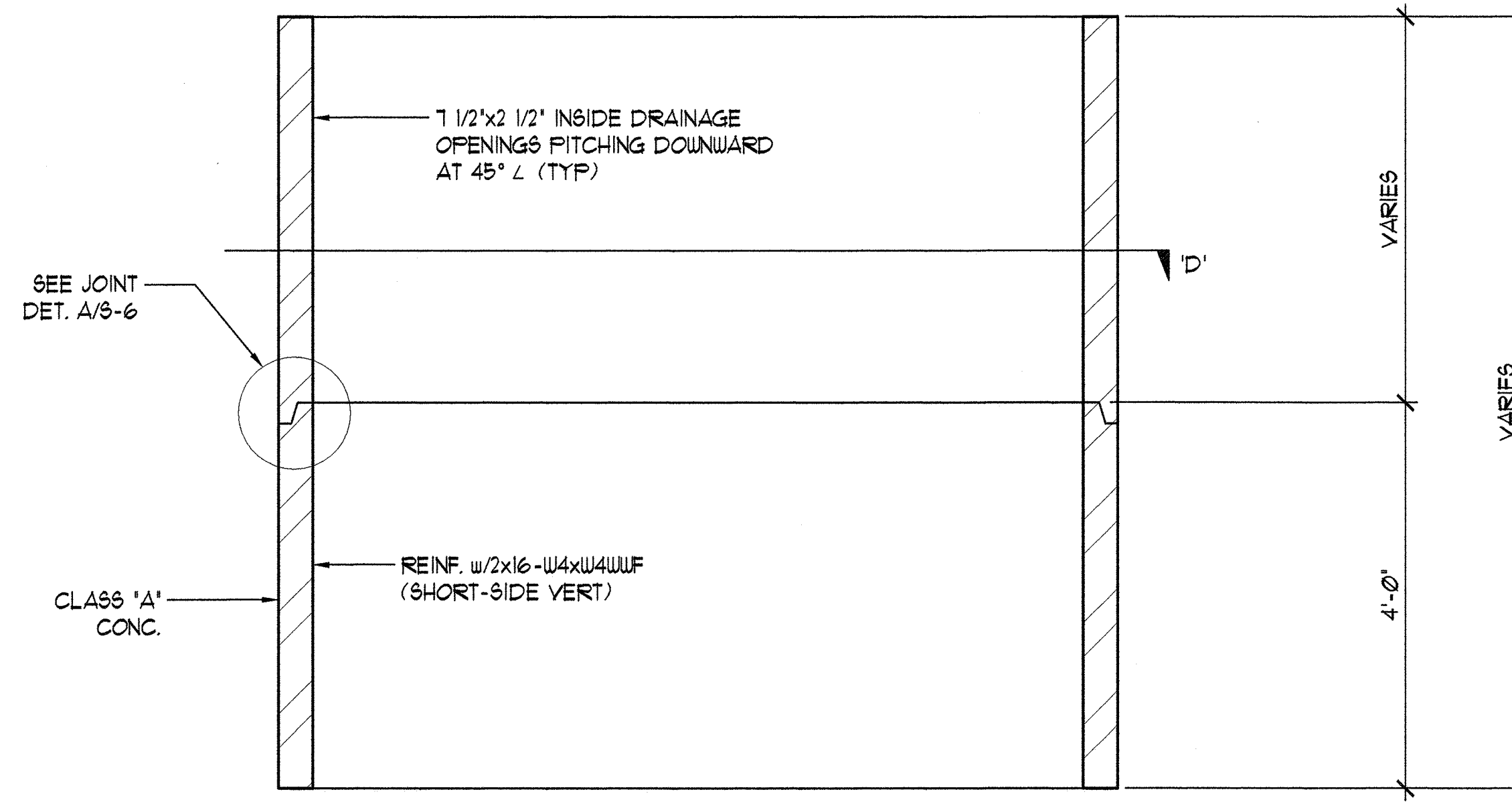
TYPICAL PRECAST REINF., CONC. RING DETAILS

SC: 3/4"=1'-0"

A
S-6

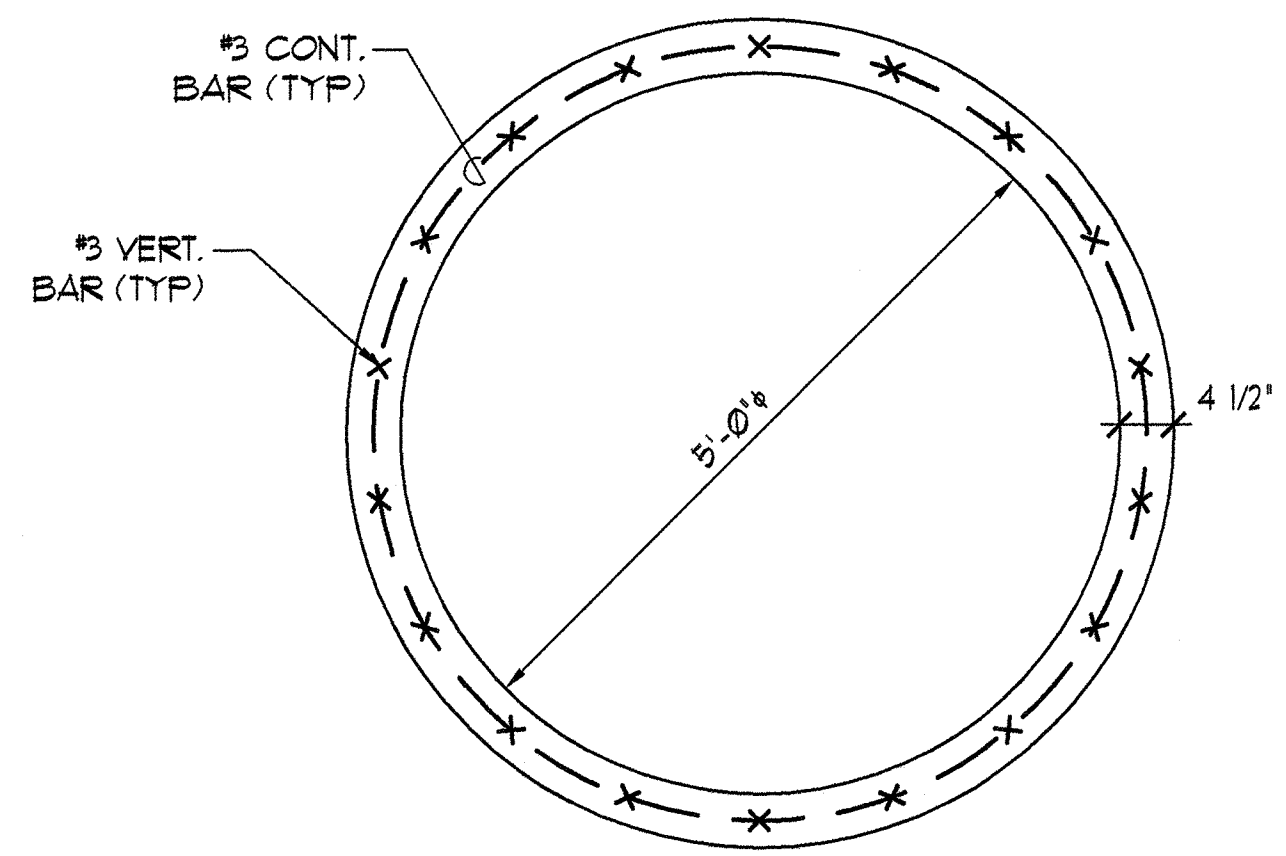


ELEVATION
SC: 3/4"=1'-0"



SECTION - C
SC: 3/4"=1'-0"

NOTE: DELETE OPENINGS FOR SOLID CONCRETE RINGS.

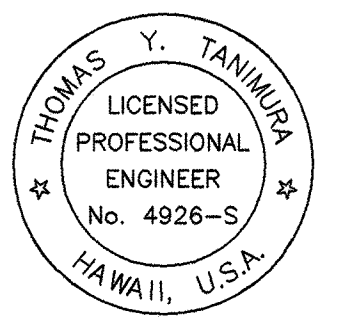


SECTION - D
SC: 3/4"=1'-0"

TYPICAL PRECAST REINF., CONC. RING DETAILS (ALTERNATE)

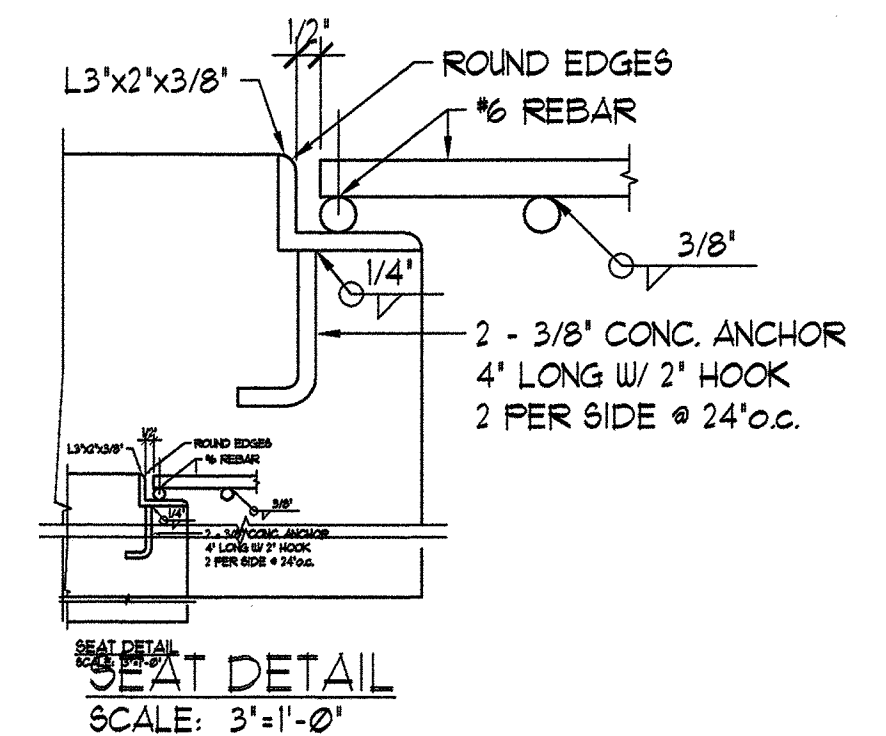
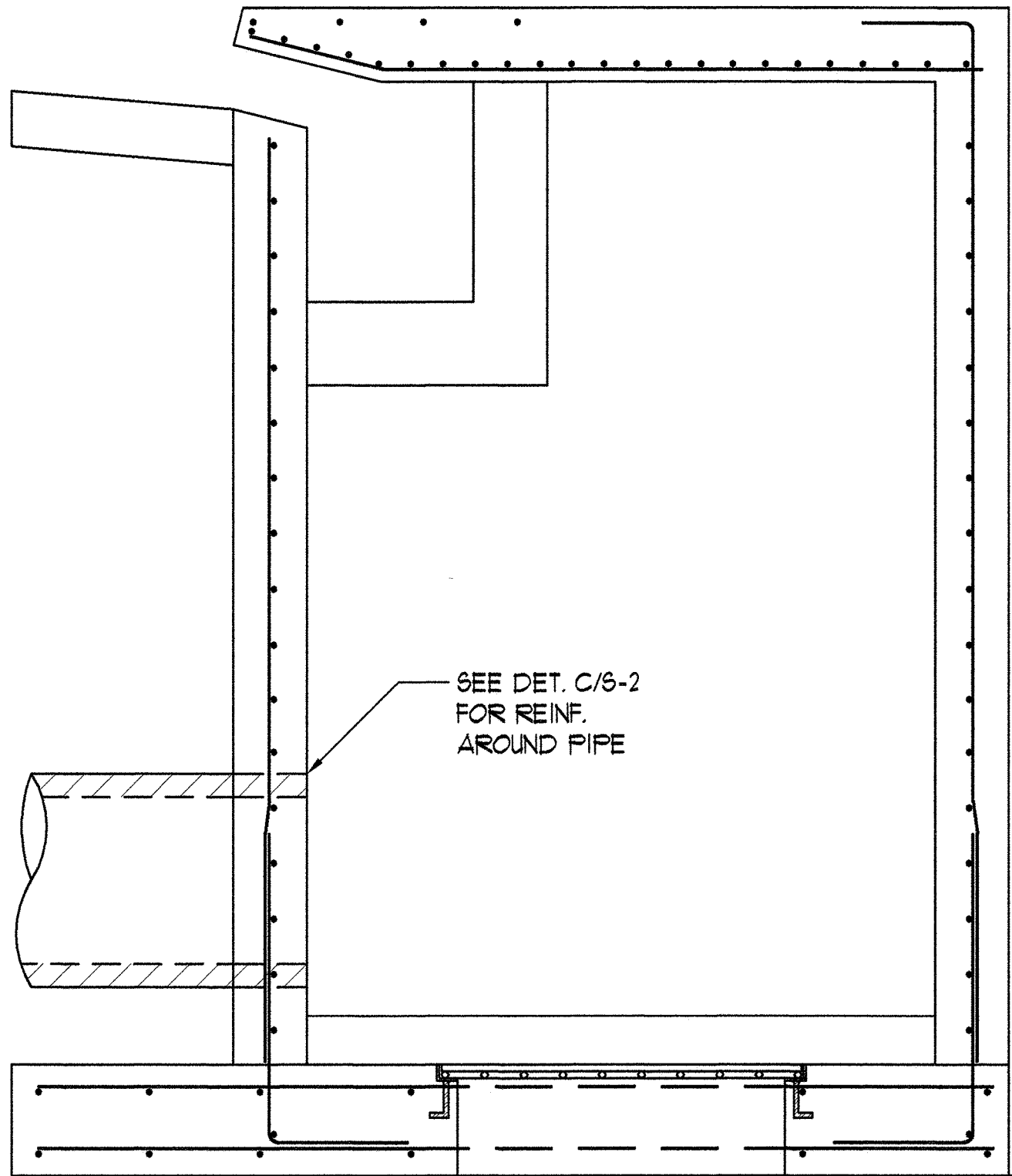
SC: 3/4"=1'-0"

B
S-6



T.Y. Tanimura
04/30/12
Expiration Date of the License
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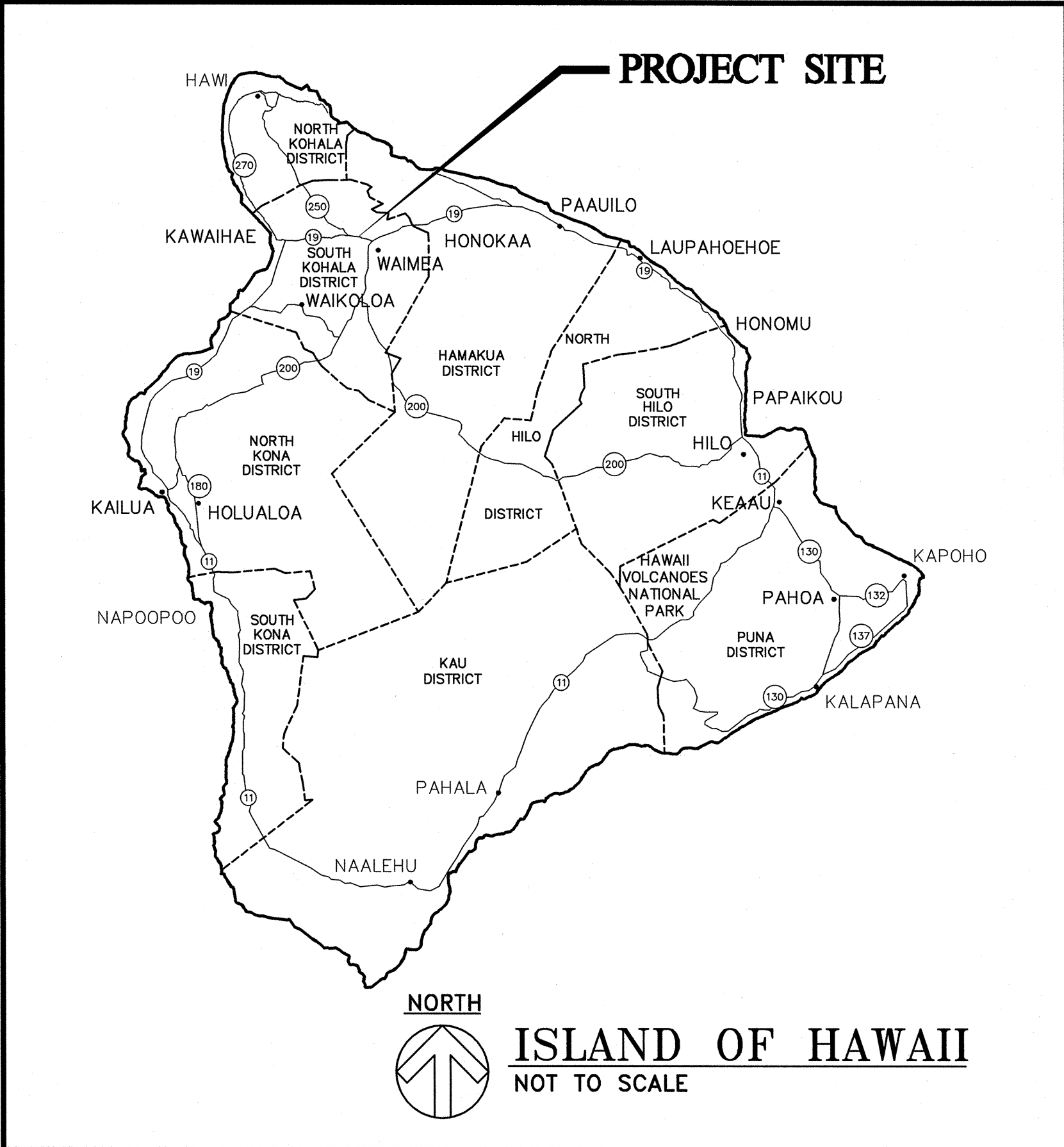
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMLO HOUSING PHASE 2A WAIMEA, SOUTH KOHALA, HAWAII OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01:77			
DRY WELL DETAILS			
DRAWN BY: HM	ENGINEER: TT	CHECKED BY: TT	
APPROVED:			
CHIEF, ENGINEERING DIVISION, D.P.W. & E.M. DATE			
CHIEF, ENGINEERING DIVISION, D.P.W. & E.M. DATE			



- # GRATING DETAILS
- N.T.S

S-8 **SHEET 55 OF 70 SHEETS**

FILE	POCKET	FOLDER	NO.



GENERAL NOTES

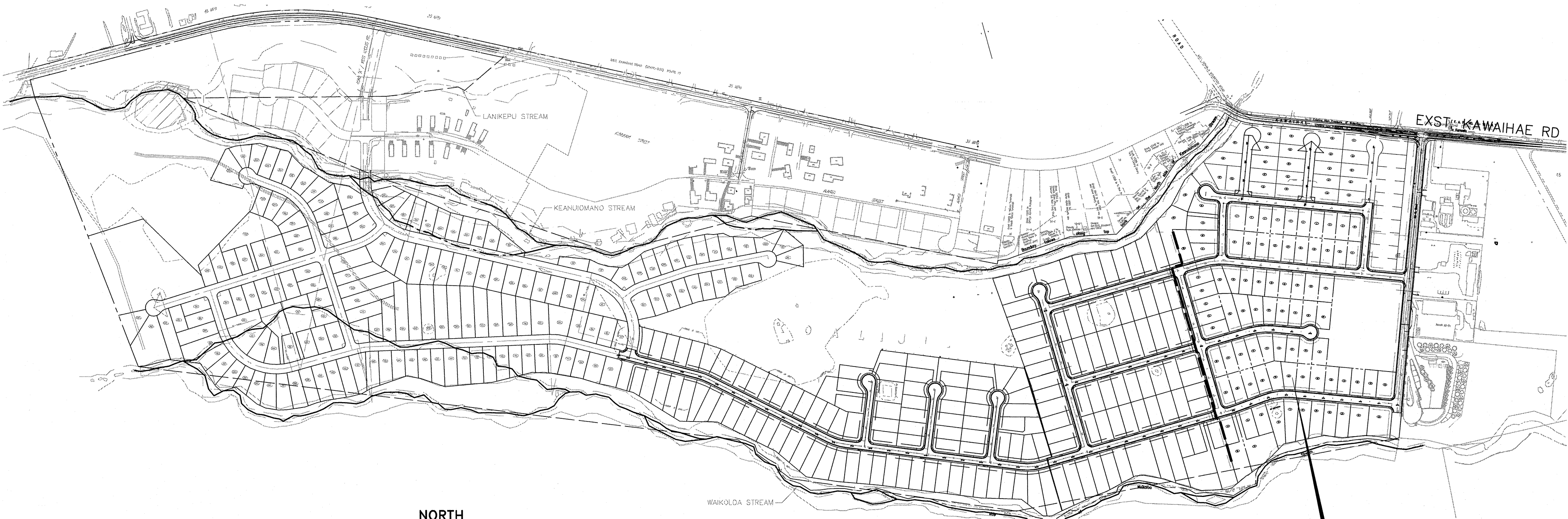
1. PROVIDE 5' MINIMUM CLEAR BETWEEN STREET LIGHT POLES & SEWER LATERALS.
2. PROVIDE 3' MINIMUM CLEAR BETWEEN PULLBOXES & SEWER LATERALS.
3. PROVIDE 6' MINIMUM CLEAR BETWEEN TRANSFORMER PADS & SEWER LATERALS (DO NOT STRADDLE).
4. PROVIDE 3' MINIMUM CLEAR BETWEEN DUCTLINES & SEWER LINES.
5. CONTRACTOR SHALL VERIFY SEWER LATERAL LOCATIONS WITH CIVIL SHEETS.
6. PROVIDE 3' MINIMUM HORIZONTAL CLEAR & 6" VERTICAL CLEAR BETWEEN WATER LINES & ALL ELECTRICAL SYSTEMS.
7. CONTRACTOR SHALL BE RESPONSIBLE TO ARRANGE WITH THE GENERAL CONTRACTOR TO IDENTIFY THE LOCATIONS OF CIVIL SITE UTILITIES, DRIVEWAYS, ETC. PRIOR TO ELECTRICAL CONTRACTORS LAYOUT OF ELECTRIC, STREET LIGHT, TRAFFIC SIGNAL, AND COMMUNICATIONS SYSTEMS.

NOTES FOR CONSTRUCTION

- a. THE LOCATION OF OVERHEAD AND UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE FROM EXISTING RECORDS WITH VARYING DEGREES OF ACCURACY AND ARE NOT GUARANTEED AS SHOWN. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHENEVER CONSTRUCTION CROSSES OR IS IN PROXIMITY OF UNDERGROUND LINES AND SHALL MAINTAIN ADEQUATE CLEARANCE WHEN OPERATING EQUIPMENT UNDER ANY OVERHEAD LINES.
- b. THE CONTRACTOR IS TO COMPLY WITH THE DIRECTIONS OF THE STATE OF HAWAII OCCUPATIONAL SAFETY AND HEALTH LAW (DOSH).
- c. WHEN TRENCH EXCAVATION IS ADJACENT TO EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT, AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING TO FULLY PROTECT IT FROM DAMAGE.
- d. AS REQUIRED BY THE COUNTY OF HAWAII, THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.
- e. WHERE PEDESTRIAN WALKWAYS EXIST, SUCH WALKWAYS SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGE BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED.
- f. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THESE RIGHT-OF-WAYS ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
- g. THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN BY THE ENGINEER TO EXIST FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING 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.

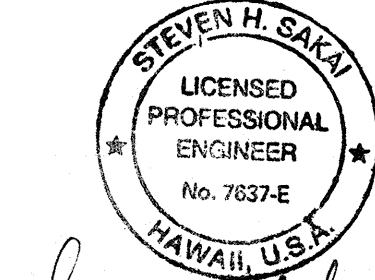
ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	55W STREET LIGHT, LOW PRESSURE SODIUM LUMINAIRE, ALUMINUM POLE, XFMR BASE & BRACKET ARM, SEE DETAIL A/E-12		HELCO 2' x 3' PULLBOX
			HELCO 3' x 5' HANDHOLE
			HELCO 4' x 6' HANDHOLE
			HELCO 5' x 7' HANDHOLE
			HELCO 6' x 11' MANHOLE
	BREAKLINE TO BEGIN & END DUCT SECTION TYPE		EXST. HELCO HANDHOLE
	ELECTRIC/SIGNAL DUCTLINE WITH DESIGNATORS; INDICATES TYPE "A" DUCT SECTION WITH "2-2E" DUCTS. SEE SHEET E-8 & E-9 FOR DUCT SECTIONS AND E-2 FOR CONDUIT SCHEDULE		EXST. HELCO MANHOLE
	STUB, CAP, & MARK CONDUIT(S) WITH CONCRETE MARKER, SEE DETAIL B/E-11		
	SAWCUT EXST. A.C. PAVEMENT, CONC. SIDEWALK, CURB & GUTTER PRIOR TO TRENCH EXCAVATION. RESTORE SUBBASE, BASECOURSE, PAVEMENT, CONC. SIDEWALK, CURB & GUTTER PER COUNTY REQUIREMENTS, THICKNESS SHALL MATCH EXST. ROAD DESIGN. SEE CIVIL SHEET C-29 FOR DETAIL.		SIC 13' x 24' HANDHOLE
			SIC 30' x 48' HANDHOLE
			SIC 3' x 5' HANDHOLE
			SIC 3' x 5' MANHOLE
			SIC 4' x 6' HANDHOLE
	STREET LIGHT DUCTS & WIRING		GROUND ROD, 5/8" DIA. X 8'-0" (BM2)
	STREET LIGHT HOMERUN TO HELCO HANDHOLE		EXST. SIC MANHOLE
			EXST. HTCO MANHOLE
	EXST. UNDERGROUND DUCTLINE & WIRING		CATV POWER SUPPLY PAD, SEE DETAIL ON E-13
	EXST. UNDERGROUND TEL. CABLES		
	EXST. UNDERGROUND STREET LIGHT CABLES & CONDUITS		HELCO TRANSFORMER PAD LOT, SEE DETAIL D/E-10
	EXST. UNDERGROUND TRAFFIC SIGNAL CONDUITS		HELCO SWITCHING EASEMENT PAD LOT, SEE DETAIL A/E-11
	EXST. UNDERGROUND SECONDARY POWER CABLES AND CONDUIT		
			EXST. HELCO XFMR EASEMENT PAD LOT
	STREET LIGHT I.D. TAG, SEE DETAIL C/E-12		EXST. HELCO SWITCHING EASEMENT PAD LOT
			NOTE SYMBOL, SEE PLAN FOR NOTES



LOCATION MAP
NOT TO SCALE

PROJECT SITE



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/12

REVISION	DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii				
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01: 77				
ELECTRICAL SYMBOLS, MAPS, NOTES				
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS		
APPROVED:				
HAWAII ELECTRIC LIGHT CO.	DATE		DATE	
SANDWICH ISLES COMMUNICATIONS, INC.	DATE		DATE	

HAWAIIAN TELCOM (HTCO) NOTES

1.

THE CONTRACTOR SHALL PROCURE AND PAY FOR ALL LICENSES AND PERMITS AND SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
2.

THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT AND TONING REQUEST FROM HAWAIIAN TELCOM'S EXCAVATION PERMIT SECTION LOCATED AT 3239 UALENA ST., 3RD FLR., TWO WEEKS PRIOR TO THE START OF CONSTRUCTION. HOURS OF BUSINESS ARE: 8:00 AM TO 11:00 AM AND 12:00 PM TO 3:30 PM MONDAY THRU FRIDAY, EXCEPT HOLIDAYS.
3.

PRIOR TO THE EXCAVATION OF THE DUCTLINE, THE CONTRACTOR SHALL REQUEST HAWAIIAN TELCOM TO LOCATE EXISTING DUCTLINE WHEREVER REQUIRED. FOR UNDERGROUND CABLE LOCATING AND MARKING, FIVE (5) WORKING DAYS ADVANCE NOTICE IS REQUIRED. THREE (3) WORKING DAYS ADVANCE NOTICE IS REQUIRED FOR ANY INSPECTION BY A DESIGNATED REPRESENTATIVE.
4.

THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION AND SHALL MAINTAIN PROPER CLEARANCES WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF HAWAIIAN TELCOM FACILITIES. THE CONTRACTOR SHALL VERIFY THEIR LOCATION AND SHALL BE LIABLE FOR ANY DAMAGES TO HAWAIIAN TELCOM FACILITIES. ANY DAMAGES SHALL BE REPORTED IMMEDIATELY TO HAWAIIAN TELCOM'S REPAIR SECTION AT #611 (24 HOURS) OR TO THE EXCAVATION PERMIT SECTION AT 840-1444 (NORMAL WORKING HOURS, MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS). AS A RESULT OF HIS OPERATIONS, ADJUSTMENTS TO THE NEW DUCTLINE ALIGNMENT, IF REQUIRED, SHALL BE MADE TO PROVIDE REQUIRED CLEARANCES.
5.

THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTION NOT TO DAMAGE EXISTING CABLES OR DUCTS. A HAWAIIAN TELCOM INSPECTOR OR DESIGNATED REPRESENTATIVE IS REQUIRED TO BE AT ANY JOB SITE WHENEVER THERE WILL BE BREAKAGE INTO OR ENTRY INTO ANY STRUCTURE THAT CONTAIN HAWAIIAN TELCOM FACILITIES. TEMPORARY CABLE AND DUCT SUPPORTS SHALL BE PROVIDED WHENEVER NECESSARY.
6.

THE CONTRACTOR SHALL NOTIFY HAWAIIAN TELCOM'S INSPECTOR OR DESIGNATED REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION, BRACING OR BACKFILLING OF HAWAIIAN TELCOM'S STRUCTURES OR FACILITIES.
7.

ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "HAWAIIAN TELCOM STANDARD SPECIFICATIONS FOR PLACING UNDERGROUND TELEPHONE SYSTEMS" DATED MARCH 1999. ALL SUBSEQUENT AMENDMENTS AND ADDITION, AND ALL OTHER PERTINENT STANDARD FOR TELEPHONE CONSTRUCTION. CONTRACTOR SHALL FAMILIARIZE HIS PERSONNEL BY OBTAINING APPLICABLE SPECIFICATIONS.
8.

WHEN EXCAVATION IS ADJACENT TO OR BENEATH HAWAIIAN TELCOM'S EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL:

A)

SHEET AND/OR BRACE THE EXCAVATION TO PREVENT SLIDES, CAVE-INS OR SETTLEMENT ENSURING NO MOVEMENT TO HAWAIIAN TELCOM'S STRUCTURES OR FACILITIES.

B)

PROTECT EXISTING STRUCTURES AND/OR FACILITIES WITH BEAMS, STRUTS OR UNDERPINNINGS WHILE EXCAVATING BENEATH THEM TO ENSURE NO MOVEMENT TO HAWAIIAN TELCOM'S STRUCTURES OR FACILITIES.
9.

THE CONTRACOTR SHALL BRACE ALL POLES OR LIGHT STANDARD NEAR THE NEW DUCTLINE, MANHOLE, OR HANDHOLE DURING HIS OPERATIONS.
10.

THE CONTRACTOR SHALL SAW-CUT A.C. PAVEMENT AND CONCRETE GUTTER WHEREVER NEW MANHOLES, HANDHOLES, OR DUCTLINES ARE TO BE PLACED AND SHALL RESTORE TO EXISTING CONDITION OR BETTER.
11.

THE CONTRACTOR SHALL COMPLY WITH THE POLICY ADOPTED BY THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, CONCERNING THE REPLACEMENT OF CONCRETE SIDEWALKS AFTER EXCAVATION WORK.
12.

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 DEPTH OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. WHEREVER CONNECTIONS OF NEW UTILITIES TO EXISTING UTILITES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINE AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATONS AND DEPTH PRIOR TO EXCAVATION FOR THE NEW LINES.
13.

WHEREVER CONNECTIONS TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES PRIOR TO EXCAVATION OF THE MAIN TRENCHES TO VERIFY THEIR LOCATIONS AND DEPTHS.
14.

THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE COST FOR SUPPLEMENTARY MEASURES, WHICH WILL BE REQUIRED BY THE CITY AND COUNTY, SHALL BE BORNE BY THE CONTRACTOR.
15.

THE CONTRACTOR SHALL PUMP ALL MANHOLES DRY DURING FINAL INSPECTION.
16.

THE CONTRACTOR SHALL NOTIFY HAWAIIAN TELCOM INSPECTOR 24 HOURS PRIOR TO POURING OF CONCRETE OR BACKFILLING.
17.

WHEN CONNECTING TO MANHOLE WALLS, ALL EXISTING REINFORCING BARS SHALL BE LEFT INTACT. DUCTS SHALL BE ADJUSTED IN THE FIELD IN ORDER TO CLEAR REINFORCING.
18.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT ALL REQUIRED LINES AND GRADES AND SHALL PRESERVE ALL BENCH MARKS AND WORKING POINTS NECESSARY TO LAY OUT THE WORK CORRECTLY. THE NEW DUCTLINE SHALL BE ADJUSTED BY THE CONTRACTOR TO SUIT THE EXISTING CONDITIONS AND THE DETAILS AS DESCRIBED IN THE PLANS.

19.

MINIMUM CONCRETE STRENGTH SHALL BE:

FOR DUCTLINE

2500 PSI AT 28 DAYS

FOR MANHOLE

3000 PSI AT 28 DAYS OR AS SPECIFIED IN DESIGN NOTES
20.

BENDS IN THE DUCT ALIGNMENT, DUE TO CHANGES IN GRADE SHALL HAVE A MINIMUM RADIUS OF 25 FEET. ALL 90 DEGREE C-BENDS AT A POLE OR AT THE BULDING FLOOR SLAB PENETRATION, SHALL HAVE A BEND RADIUS OF TEN TIMES THE DIAMETER OF THE DUCT OR GREATER.
21.

AFTER DUCTLINE HAS BEEN COMPLETED, A MANDREL WITH A SQUARE FRONT NOT LESS THAN 12" LONG AND HAVING A DIAMETER OF 1/4" LESS THAN THE INSIDE DIAMETER OF THE DUCT, SHALL BE PULLED THROUGH EACH DUCT AFTER WHICH A BRUSH WITH STIFF BRISTLES SHALL BE PULLED THROUGH TO MAKE CERTAIN THAT NO PARTICLES OF EARTH, SAND OR GRAVEL HAVE BEEN LEFT INSIDE. DUCTS SHALL BE COMPLETELY DRY AND CLEAN.
22.

ALL DUCTS AND CONDUITS SHALL HAVE AN 1800# POLYESTER MULE-TAPE (NEPTCO, WP1800P, HAWAIIAN TELCOM MATERIAL CODE NO. 571154) INSTALLED THROUGHOUT ITS ENTIRE LENGTH. ALL DUCTS SHALL BE CAPPED TO PREVENT ENTRY OF FORIGN MATERIAL DURING CONSTRUCTION AND AT THE COMPLETION OF INSTALLATION.

OCEANIC TIME WARNER CABLE (CATV) NOTES

1.

THE LOCATION OF CATV FACILITIES ARE BASICALLY WITHIN EXISTING CATV CONDUITS. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN CLOSE PROXIMITY OF CATV FACILITIES.
2.

THE CONTRACTOR SHALL OBTAIN EXCAVATION PERMIT CLEARANCE FROM OCEANIC TIME WARNER CABLE'S ENGINEERING SECTION LOCATED AT 200 AKAMAINUI ST., MILILANI TECH. PARK. PHONE 625-8443.
3.

ANY WORK REQUIRED TO RELOCATE CATV FACILITIES SHALL BE DONE BY OCEANIC TIME WARNER CABLE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION REQUIREMENTS AND ASSOCIATED APPLICABLE COSTS.
4.

ANY DAMAGE TO CATV FACILITIES SHALL BE REPORTED IMMEDIATELY TO OCEANIC TIME WARNER CABLE'S REPAIR DISPATCH DEPARTMENT AT 625-8437.
5.

CONTACT OCEANIC TIME WARNER CABLE INSPECTOR 72 HOURS PRIOR TO STARTING WORK ON CATV INFRASTRUCTURE. CALL MOKI PLACE AT 625-8378.
6.

ALL CONDUITS SHALL ENTER THROUGH THE END OF THE PULLBOX AT 90 DEGREES TO THE WALL OF PULLBOX.
7.

ALL ENTRANCES INTO THE PULLBOX SHALL BE GROUTED AROUND THE CONDUITS AND THE INSIDE SURFACES SHALL BE SMOOTH AND FLUSH WITH THE EXISTING WALL.
8.

ALL 4" CONDUITS SHALL HAVE MULETAPE AND ALL OTHER SIZE CONDUITS SHALL HAVE PULLSTRING.
9.

END BELS ARE REQUIRED ON ALL 4" AND 2" CONDUITS.
10.

AFTER DUCTLINE HAS BEEN COMPLETED, A MANDREL NOT LESS THAN 12" LONG AND HAVING A DIAMETER OF 1/4" LESS THAN THE INSIDE DIAMETER OF DUCT SHALL BE PULLED THROUGH EACH DUCT.

SANDWICH ISLES COMMUNICATIONS INC. (SIC) NOTES

1.

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH SPECIFICATIONS AND REQUIREMENTS OF SANDWICH ISLES COMMUNICATIONS INC. FOR THE FACILITIES WITHIN THEIR JURISDICTION.
2.

THE CONTRACTOR SHALL CLOSELY COORDINATE ALL WORK WITH SIC. ALL TRENCHES MUST BE INSPECTED PRIOR TO BACKFILLING WITH CONCRETE OR BACKFILL MATERIAL.

THE CONTRACTOR SHALL NOTIFY THE SIC INSPECTOR AT LEAST 72 HOURS PRIOR TO POURING OF CONCRETE OR BACKFILLING.
3.

ALL MATERIALS USED ON SIC PORTION OF THE PROJECT MUST BE ON THE RURAL UTILITIES SERVICE (RUS), UNITED STATES DEPARTMENT OF AGRICULTURE, LIST OF APPROVED MATERIALS.
4.

STUBOUT CONDUITS FROM HANDHOLES TO INDIVIDUAL RESIDENTIAL LOTS SHALL BE 1" SCHEDULE 40 PVC, AND EXTENDED 5' BEYOND PROPERTY LINE. CAP AND SEAL ENDS AND MARK LOCATION WITH ABOVE GROUND MARKER.

EQUIPMENT SCHEDULE

THE HAWAII ELECTRIC LIGHT Co., SANDWICH ISLES COMMUNICATIONS, INC., COMMUNITY ANTENNA TELEVISION & STREET LIGHTING PULLBOXES, HANDHOLE, TRANS-FORMER PAD LOTS & SWITCHING EQUIPMENT PAD LOTS SHALL BE CONSTRUCTED BY THE CONTRACTOR AS SHOWN IN THESE DRAWINGS & IN ACCORDANCE WITH THE FOLLOWING STANDARD DRAWINGS:

TYPE	DESCRIPTION	TYPE	DESCRIPTION
2' X 3' HELCO PULLBOX	2' X 3' NON-CONCRETE SERVICE BOX PER HELCO STD. DWG. NO. 30-2006	3' X 5' COMMUNICATION HANDHOLE	3'-9" X 5'-9" X 3'-10 ¹ / ₂ " REINFORCED CONCRETE HANDHOLE WITH TWO PIECE HINGED NON-SKID SURFACE POLYMER CONCRETE 20K "TRAFFIC" RATED COVERS, "SIC" INSCRIBED ON COVERS. PROVIDED IN ACCORDANCE WITH SANDWICH ISLES COMMUNICATIONS REQUIREMENTS, TYPE UH3x5.
4' X 6' HELCO HANDHOLE	4' X 6'V HANDHOLE PER HELCO STD. DWG. NO. 892001 & 892004	3' X 5' COMMUNICATION MANHOLE	3'-9" X 5'-9" X 3'-7" REINFORCED CON-CRETE MANHOLE WITH TRAFFIC RATED FRAME AND COVERS, PROVIDED IN ACCORDANCE WITH SANDWICH ISLES COMMUNICATIONS REQUIREMENTS, TYPE UM-35. VERIFY DEPTH OF HANDHOLE.
5' X 7' HELCO HANDHOLE	5' X 7'V HANDHOLE PER HELCO STD. DWG. NO. 892001 & 892004	4' X 6' COMMUNICATION HANDHOLE	4'-0" X 6'-0" X 6'-1/4" REINFORCED CONCRETE HANDHOLE WITH GALVANIZED SLIP-NOT COVERS, "SIC" INSCRIBED ON COVERS. PROVIDED IN ACCORDANCE WITH SANDWICH ISLES COMMUNICATIONS REQUIREMENTS, TYPE UH-4 X 6. VERIFY DEPTH OF HANDHOLE.
6' X 11' HELCO MANHOLE	6' X 11' MANHOLE PER HELCO STD. DWG. NO. 892003, 892004, & 922003-C		
13" X 24" COMMUNICATION HANDHOLE	13" X 24" X 36" FIBRE REINFORCED PLASTIC HANDHOLE WITH NON-SKID SURFACE POLYMER CONCRETE 20K "TRAFFIC" RATED COVERS, "SIC" INSCRIBED ON COVERS. PROVIDED IN ACCORDANCE WITH SANDWICH ISLES COMMUNICATIONS REQUIREMENTS, TYPE UHC 13x24. VERIFY DEPTH OF HANDHOLE.		
30" X 48" COMMUNICATION HANDHOLE	30" X 48" X 33" FIBRE REINFORCED PLASTIC HANDHOLE WITH NON-SKID SURFACE POLYMER CONCRETE 20K "TRAFFIC" RATED COVERS, "SIC" INSCRIBED ON COVERS. PROVIDED IN ACCORDANCE WITH SANDWICH ISLES COMMUNICATIONS REQUIREMENTS, TYPE UHC 30x48. VERIFY DEPTH OF HANDHOLE.		

CONDUIT SCHEDULE

ITEM	DESCRIPTION	ITEM	DESCRIPTION
(2E)	HAWAII ELECTRIC LIGHT CO. 1-2"C	(8-1S)	SANDWICH ISLES COMM UD(4x2-1")
(2-2E)	HAWAII ELECTRIC LIGHT CO. 2-2"C	(6-1S)	SANDWICH ISLES COMM UD(3x2-1")
(3-2E)	HAWAII ELECTRIC LIGHT CO. 3-2"C	(4-1S)	SANDWICH ISLES COMM UD(2x2-1")
(6-2E)	HAWAII ELECTRIC LIGHT CO. 6-2"C	(2-1S)	SANDWICH ISLES COMM UD(1x2-1")
(3E)	HAWAII ELECTRIC LIGHT CO. 1-3"C	(2-4S)	SANDWICH ISLES COMM UD(1x2-4")
(2-3E)	HAWAII ELECTRIC LIGHT CO. 2-3"C	(4-4S)	SANDWICH ISLES COMM UD(2x2-4")
(2-5E)	HAWAII ELECTRIC LIGHT CO. 2-5"C	(6-4S)	SANDWICH ISLES COMM UD(3x2-4")
		(1 ¹ / ₄)	STREET LIGHT 1-1 ¹ / ₄ "C
		(1 ¹ / ₂)	STREET LIGHT 1-1 ¹ / ₂ "C

STEVEN H. SAKAI

LICENSED PROFESSIONAL ENGINEER

No. 7637-E

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
<div><div>Community Planning and Engineering, Inc.</div><div>Engineering Design Construction Management Infrastructure Planning</div><div>1100 Alakea Street, Sixth Floor</div><div>Honolulu, Hawaii</div></div>			
<div><div>LALAMILO HOUSING</div><div>PHASE 2A, INCREMENT 1</div><div>WAIMEA, SOUTH KOHALA, HAWAII</div><div>SUBD. FILE NO. SUB-07-000603</div><div>OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS</div><div>TAX MAP KEY: 6-6-01: 77</div></div>			
NOTES & SCHEDULES			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
HAWAII ELECTRIC LIGHT CO.	DATE		DATE
SANDWICH ISLES COMMUNICATIONS, INC.	DATE		DATE

FILE	POCKET	FOLDER	NO.

1. LOCATION OF HELCO FACILITIES

2. COMPLIANCE WITH HAWAII OCCUPATIONAL SAFETY AND HEALTH LAWS

3. EXCAVATION PERMIT

4. CAUTION!!! ELECTRICAL HAZARD!!!

5. OVERHEAD LINES

6. POLE BRACING

7. UNDERGROUND LINES

_LAST SAVE: 02/15/12 @ 13:23:02 BY: GDT PLOT SC 1'0"=1'
Z: \ACAD\PROJECTS\27066A\E03_27066a_Note02

9. EXCAVATIONS

10. RELOCATION OF HELCO FACILITIES

11. CONFLICTS

12. DAMAGE TO HELCO FACILITIES

13. HELCO STAND-BY PERSONNEL

14. CLEARANCES

15. INDEMNITY

16. SCHEDULE

17. AUTHORITY

18. SPECIFICATIONS


19. CONSTRUCTION

20. STAKEOUT


21. DUCTLINES

22. JOINT POLE REMOVAL

23. AS-BUILT PLANS

A circular professional engineer seal. The outer ring contains the text "STEVEN H. SAKAI" at the top and "HAWAII, U.S.A." at the bottom, separated by two five-pointed stars. The inner circle contains the text "LICENSED PROFESSIONAL ENGINEER" and "No. 7637-E".

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
			
Community Planning and Engineering, Inc.			
Engineering Design Construction Management Infrastructure Planning			
1100 Alaake Street, Sixth Floor		Honolulu, Hawaii	
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01: 77			
HELCO NOTES			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
HAWAII ELECTRIC LIGHT CO.	DATE _____	DATE _____	
	DATE _____	DATE _____	

GENERAL:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH SPECIFICATIONS AND REQUIREMENTS OF THE RURAL UTILITIES SERVICES (RUS) AND SANDWICH ISLES COMMUNICATIONS (SIC), WHICH COMPLIES WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL REQUIREMENTS.

ALL MATERIALS USED MUST BE APPROVED AND (OR) ACCEPTED BY SANDWICH ISLES COMMUNICATIONS, INC..

CONTRACTOR MAY REFER TO THE RUS WEBSITE (HTTP://WWW.RURDEV.USDA.GOV/RUSTELECOMPROGRAMS.HTML) FOR REGULATIONS, BULLETINS, FORMS, ETC.

CONTACT THE HAWAII ONE CALL CENTER AT (866) 423-7287 FOR LOCATING EXISTING UNDERGROUND FACILITIES PRIOR TO BEGINNING ANY EXCAVATION.

ALL WORK SHALL BE COORDINATED AND SCHEDULED WITH SIC AND/OR IT'S REPRESENTATIVE AND ANY OTHER AGENCY INVOLVED WITH THE PROJECT.

THE CONTRACTOR SHALL PROCURE AND PAY FOR ALL LICENSES AND PERMITS AND SHALL GIVE ALL NOTICES NECESSARY FOR PROSECUTION OF THE WORK.

CONDUITS:

- ALL PVC CONDUITS, SWEEPS, COUPLINGS, ADAPTERS AND BELL ENDS SHALL BE SCHEDULE 40, UNLESS OTHERWISE SPECIFIED.
- ALL HIGH DENSITY POLYETHYLENE CONDUITS SHALL BE SDR 11. TYPICAL 4-PACK UNIT INCLUDES FOUR 1-1/2" SDR 11 RATED CONDUITS IN THE COLORS OF BLACK, RED, ORANGE, AND WHITE, UNLESS OTHERWISE SPECIFIED. ALL CONDUITS TO BE PRESSURE TESTED AT 120 PSI. FUSION SPLICING OF THE CONDUIT SHALL BE ACCEPTABLE ONLY WHEN PULLING JOINTS THROUGH BORES. ALL COUPLINGS SHALL BE DOUBLE "E-LOC" MANUFACTURED BY ETOC SPECIALTY PRODUCTS, INC.
- MAIN CONDUIT RUNS, EXCEPT RISER CONDUITS, SHALL BE CONSTRUCTED WITH MINIMUM 6-FOOT RADIUS CURVES, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- AFTER THE CONDUITS ARE INSTALLED, A ROUND SOLID MANDREL NOT LESS THAN 12" IN LENGTH AND HAVING A DIAMETER OF ∞" LESS THAN THE INSIDE DIAMETER OF THE CONDUIT SHALL BE PULLED THROUGH EACH CONDUIT. SUFFIXES LISTED IN RUS 515B FOR CONDUITS ARE APPLICABLE.
- INSTALL MULETAPE IN ALL PVC CONDUITS AND CAP ALL CONDUITS AFTER TESTING. THE NEPTCO (OR APPROVED EQUAL) MULETAPE IS AVAILABLE IN 3,000FT., 6,500FT., AND 10,000FT. REELS FROM WESTINGHOUSE ELECTRIC SUPPLY COMPANY (WESCO), THE NEPTCO MULETAPE IS PRE-LUBRICATED AND PRINTED WITH SEQUENTIAL FOOTAGE MARKINGS. MULETAPE WILL NOT BE INSTALLED IN CONDUITS DESIGNATED FOR FIBER.
- ALL 4" DUCTS SHALL HAVE WATERTIGHT PLUGS TO KEEP THEM FREE OF MOISTURE & DEBRIS AND TO ACCOMMODATE CABLING PLACED ON FUTURE PROJECTS.
4" PLUGS SHALL CONSIST OF:
TYCO, QUADPLEX JACKMOON PLUGS, SERIES 136
TYCO, JACKMOON HOLE PLUGS & BUSHINGS, SERIES 136
ALL OTHER DUCTS SHALL HAVE TYCO, BLANK JACKMOON PLUGS TO KEEP THEM FREE OF WATER AND DEBRIS.
- CONDUIT STUBS FROM HANDHOLES TO INDIVIDUAL RESIDENTIAL LOTS SHALL BE SCHEDULE 40 PVC, 1" DIAMETER AND EXTENDED 5' BEYOND PROPERTY LINE. CAP AND SEAL END AND MARK LOCATIONS WITH ABOVE GROUND MARKER.
- ALL CONDUITS SHALL ENTER MANHOLES AT A 90 DEGREE ANGLE AND SHALL EXTEND INTO THE MANHOLE AS FOLLOWS: CONDUITS DESIGNATED FOR FIBER SHALL EXTEND 12" INTO THE MANHOLE. ALL OTHER CONDUITS SHALL BE FLUSH WITH THE INSIDE WALL AND INCLUDE BELL ENDS. ANY EXCEPTIONS SHALL ONLY BE PERMITTED WHEN SPECIFIED BY THE ENGINEER.
- ALL CONDUITS ENTERING MANHOLES OR HANDHOLES SHALL BE GROUTED BETWEEN THE CONDUITS AND SIDEWALL, INSIDE AND OUT. ALL CONDUITS WILL ENTER THE MANHOLES AND HANDHOLES ON THE PROPERTY SIDE AT ALL TIMES UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- BACKFILL AND COMPACTION FOR DUCTLINE TRENCHES, MANHOLES AND HANDHOLES SHALL BE IN ACCORDANCE WITH:
 - STATE HIGHWAY DEPARTMENT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH LATEST AMENDMENTS, IF CONSTRUCTION IS LOCATED UNDER A STATE STREET OR ROAD, OR LOCATED IN PRIVATE PROPERTY.
 - THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, DATED 1986, OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, WITH LATEST AMENDMENTS; COUNTY OF KAUAI, MAUI, OR HAWAII, AS THE CASE MAY BE, IF CONSTRUCTION IS LOCATED UNDER COUNTY STREETS AND ROADS

- BACKFILLING SHALL BE SUBJECT TO THE APPROVAL OF THE SIC INSPECTOR, THE AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII AND/OR DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, COUNTY OF KAUAI, MAUI OR HAWAII, AS THE CASE MAY BE.
- A THIRD PARTY GEOTECHNICAL ENGINEER, LICENSED AND INSURED IN THE STATE OF HAWAII, MUST CERTIFY THAT THE EXCAVATED AREA MEETS THE GOVERNING AGENCIES AND/OR OWNERS STANDARDS FOR BACKFILL AND COMPACTION.
- EXCAVATED MATERIAL MAY BE REUSED AS BACKFILL, PROVIDING THAT IT CONFORMS TO REQUIREMENTS OF TYPE "A" AND TYPE "B" BACKFILL, AS REQUIRED WITHIN THE STANDARD SPECIFICATIONS. A WRITTEN SOILS REPORT OF CONFORMANCE BY A LICENSED THIRD PARTY GEOTECHNICAL ENGINEER IS NEEDED PRIOR TO BACKFILL USING THE EXCAVATED MATERIAL.
 - TYPE A BACKFILL IS DEFINED AS BEACH SAND, EARTH OR EARTH AND GRAVEL. MAXIMUM PARTICLE SIZE SHALL BE 1" AND MIXTURE SHALL NOT CONTAIN MORE THAN 20 % BY VOLUME OF ROCK PARTICLES.
 - TYPE B BACKFILL IS DEFINED AS BEACH SAND, EARTH OR EARTH AND GRAVEL. MAXIMUM PARTICLE SIZE SHALL BE 1/2" AND MIXTURE SHALL NOT CONTAIN MORE THAN 20 % BY VOLUME OF ROCK PARTICLES.
- ALL CONDUIT RUNS SHALL HAVE A 3" NON-METALLIC WARNING TAPE PLACED 12 INCHES ABOVE THE CONDUIT RUN. THE TAPE SHALL READ "CAUTION BURIED FIBER OPTIC CABLE BELOW".

MANHOLES AND HANDHOLES:

- ALL MANHOLES SHALL HAVE HS20-44 TRAFFIC LOADING COVERS (UNLESS OTHERWISE NOTED). HANDHOLES SHALL HAVE 20K TRAFFIC LOAD RATED COVERS.
- ALL MANHOLE AND HANDHOLE COVERS SHALL HAVE COVER LOGO TO READ "SIC".
- ALL MANHOLE AND HANDHOLE COVER BOLTS SHALL BE STAINLESS STEEL U" PENTAHEAD, UNLESS OTHERWISE NOTED.
- ALL MANHOLES AND HANDHOLES ARE SPECIFIED AS FOLLOWS:
 - UM35 AND UM4X6 MANHOLE ASSEMBLY UNITS - HAWAII PRECAST, INC. AS PER MASTER PURCHASE AGREEMENT.
 - UHC30X48X33 HANDHOLE (PULLBOX) ASSEMBLY UNIT. THIS UNIT SHALL CONSIST OF ONE TWO TIER ARMORCAST POLYMER CONCRETE BOX & COVER ASSEMBLY. PART NUMBER (A6001430TA-S1C4) OR EQUIVALENT.
 - UHC13X24X36 HANDHOLE (PULLBOX) ASSEMBLY UNIT. THIS UNIT SHALL CONSIST OF ONE ARMORCAST POLYMER CONCRETE BOX & COVER ASSEMBLY. PART NUMBER (A6001946TA-S1C2) OR EQUIVALENT.
 - UH35 AND UH4X6 HANDHOLE ASSEMBLY UNITS - HAWAII PRECAST, INC. AS PER MASTER PURCHASE AGREEMENT.
- ALL MANHOLES AND HANDHOLES TO BE ORDERED WITH ALL HARDWARE, INCLUDING CABLE RACKS, STEPS AND LOCKS.
- SET MANHOLE OR HANDHOLE ON A LEVEL AREA, IN THE BOTTOM OF THE EXCAVATION, ON A 4" LAYER OF CRUSHED ROCK, FOR DRAINAGE PURPOSES.
- THE BASE OF ALL MANHOLES AND HANDHOLES WILL BE PLACED LEVEL. SOME MANHOLES HAVE ADJUSTABLE FRAMES. ALL VOIDS CREATED DURING INSTALLATION MUST BE FILLED WITH MORTAR MIX OR CONCRETE. THIS IS ESPECIALLY TRUE FOR MANHOLES AND HANDHOLES SET IN ROADWAYS.
- BEFORE BACKFILLING AND COMPACTING, MAKE SURE COVERS ARE IN PLACE AND SECURE. LAYER 6" TO 8" OF BACKFILL MATERIAL AROUND THE MANHOLE OR HANDHOLE. TAMP EACH INDIVIDUAL LAYER OF BACKFILL MATERIAL. CONTINUE THE LAYERING AND "TAMPING" UNTIL FINAL GRADE IS ACHIEVED.
- THE TOPS OF ALL MANHOLES AND HANDHOLES SHALL BE FLUSH TO GRADE IN PAVED AREAS OR 1" ABOVE FINISH GRADE IN NON-PAVED AREAS, UNLESS OTHERWISE SPECIFIED BY ENGINEER.
- PROVIDE A 5/8-INCH DIAMETER X 8 FT. COPPER CLAD GROUND ROD AT HANDHOLES AND MANHOLES, AS SPECIFIED ON THE DRAWINGS OR AS DIRECTED BY THE PROJECT MANAGER.

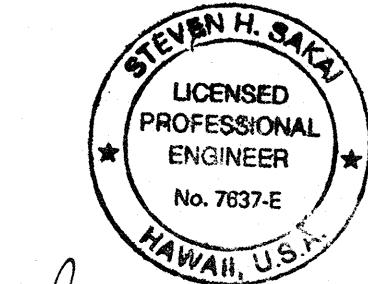
AERIAL PLANT:

- ALL AERIAL WORK SHALL BE IN STRICT ACCORDANCE WITH SPECIFICATIONS AND REQUIREMENTS OF THE RURAL UTILITIES SERVICES (RUS) BULLETIN 1753F-152.
- UTILITY POLES SHALL BE PRESERVED UTILIZING THE PENTACHLOROPHENOL (PENTA) TYPE TREATMENT.
- UTILITY POLES SHALL BE TERMITE PROTECTED UTILIZING TERMIMESH POLESOCK'S OR EQUIVALENT. POLESOCK'S SHALL EXTEND NO MORE THAN SIX INCHES ABOVE GROUND. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION.
- THE POLE HOLE SHALL BE OF SUFFICIENT DIAMETER TO PERMIT THE POLE TO SETTLE FREELY TO THE BOTTOM OF THE HOLE WITHOUT TRIMMING THE BUTT AND STILL HAVE SUFFICIENT SPACE BETWEEN THE POLE AND THE SIDE OF THE HOLE TO PERMIT PROPER TAMPING OF THE BACKFILL AT EVERY POINT AROUND THE POLE, AND THROUGHOUT THE ENTIRE DEPTH OF THE HOLE.
- THE POLE HOLE SHALL NOT EXCEED TWO TIMES THE DIAMETER OF THE POLES BUTT DIAMETER.
- BACKFILL SHALL BE THOROUGHLY TAMPED THE FULL DEPTH OF THE POLE HOLE. EARTH MUST BE BANKED AROUND THE POLE TO A MINIMUM HEIGHT OF SIX INCHES ABOVE GROUND LEVEL.
- POLES SHALL BE SET PLUMB EXCEPT AT CORNERS WHERE THEY SHALL BE SET AND RAKED AGAINST THE LOAD SO THAT THE POLE TOP WILL BE IN LINE AFTER THE LOAD IS APPLIED. THE RAKE POLE SHALL NOT EXCEED SIX INCHES FOR EACH TEN FEET OF POLE LENGTH AFTER THE CONDUCTORS ARE INSTALLED AT THE REQUIRED TENSION. DEADEND SHALL BE SET SO AS TO BE PLUMB AND IN LINE AFTER THE LOAD IS APPLIED.
- POLE LIGHTENING PROTECTION SHALL BE A #6 AWG BARE COPPER WIRE IN ACCORDANCE WITH RUS CONSTRUCTION PRACTICES.
- SUSPENSION STRAND / HARDWARE SHALL BE CLASS C GALVANIZED STEEL UTILITY GRADE FOR CORROSION AREAS.
- GUY GUARDS, YELLOW IN COLOR SHALL BE PLACED ON ALL DOWN GUYS.


OCEANIC TIME WARNER CABLE NOTES:

- THE LOCATION OF CATV FACILITIES ARE BASICALLY WITHIN EXISTING CATV CONDUITS. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN CLOSE PROXIMITY OF CATV FACILITIES.
- THE CONTRACTOR SHALL OBTAIN EXCAVATION PERMIT CLEARANCE FROM OCEANIC TIME WARNER CABLE'S ENGINEERING SECTION LOCATED AT 200 AKAMAINUI ST., MILILANI TECH. PARK. PHONE 625-8443.
- ANY WORK REQUIRED TO RELOCATE CATV FACILITIES SHALL BE DONE BY OCEANIC TIME WARNER CABLE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION REQUIREMENTS AND ASSOCIATED APPLICABLE COSTS.
- ANY DAMAGE TO CATV FACILITIES SHALL BE REPORTED IMMEDIATELY TO OCEANIC TIME WARNER CABLE'S REPAIR DISPATCH DEPARTMENT AT 625-8437.
- CONTACT OCEANIC TIME WARNER CABLE INSPECTOR 72 HOURS PRIOR TO STARTING WORK ON CATV INFRASTRUCTURE. CALL MOKI PLACE AT 625-8378.
- ALL CONDUITS SHALL ENTER THROUGH THE END OF THE PULLBOX AT 90 DEGREES TO THE WALL OF PULLBOX.
- ALL ENTRANCES INTO THE PULLBOX SHALL BE GROUTED AROUND THE CONDUITS AND THE INSIDE SURFACES SHALL BE SMOOTH AND FLUSH WITH THE EXISTING WALL.
- ALL 4" CONDUITS SHALL HAVE MULETAPE AND ALL OTHER SIZE CONDUITS SHALL HAVE PULLSTRING.
- END BELLS ARE REQUIRED ON ALL 4" AND 2" CONDUITS.
- AFTER DUCTLINE HAS BEEN COMPLETED, A MANDREL NOT LESS THAN 12" LONG AND HAVING A DIAMETER OF 1/4" LESS THAN THE INSIDE DIAMETER OF DUCT SHALL BE PULLED THROUGH EACH DUCT.

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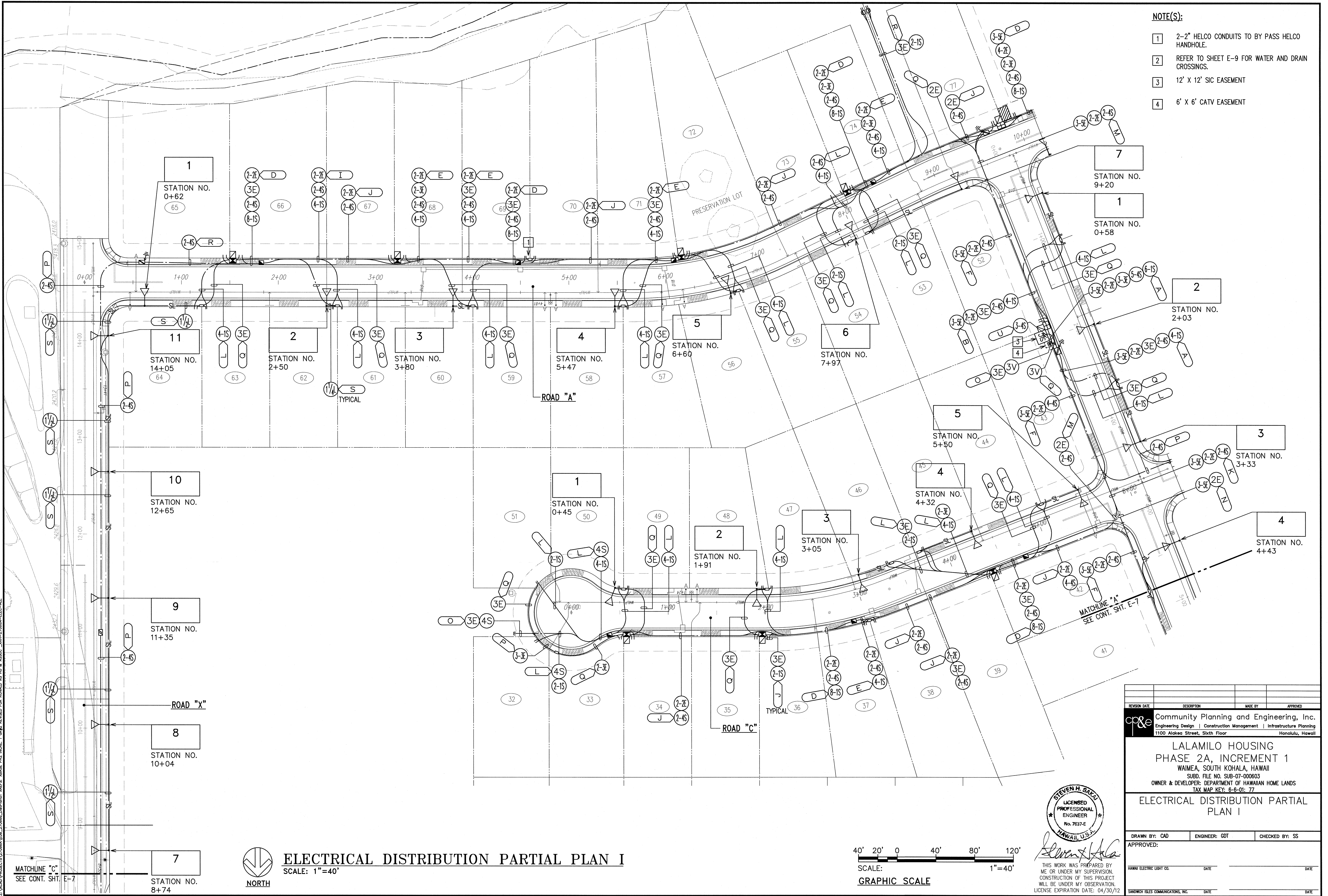


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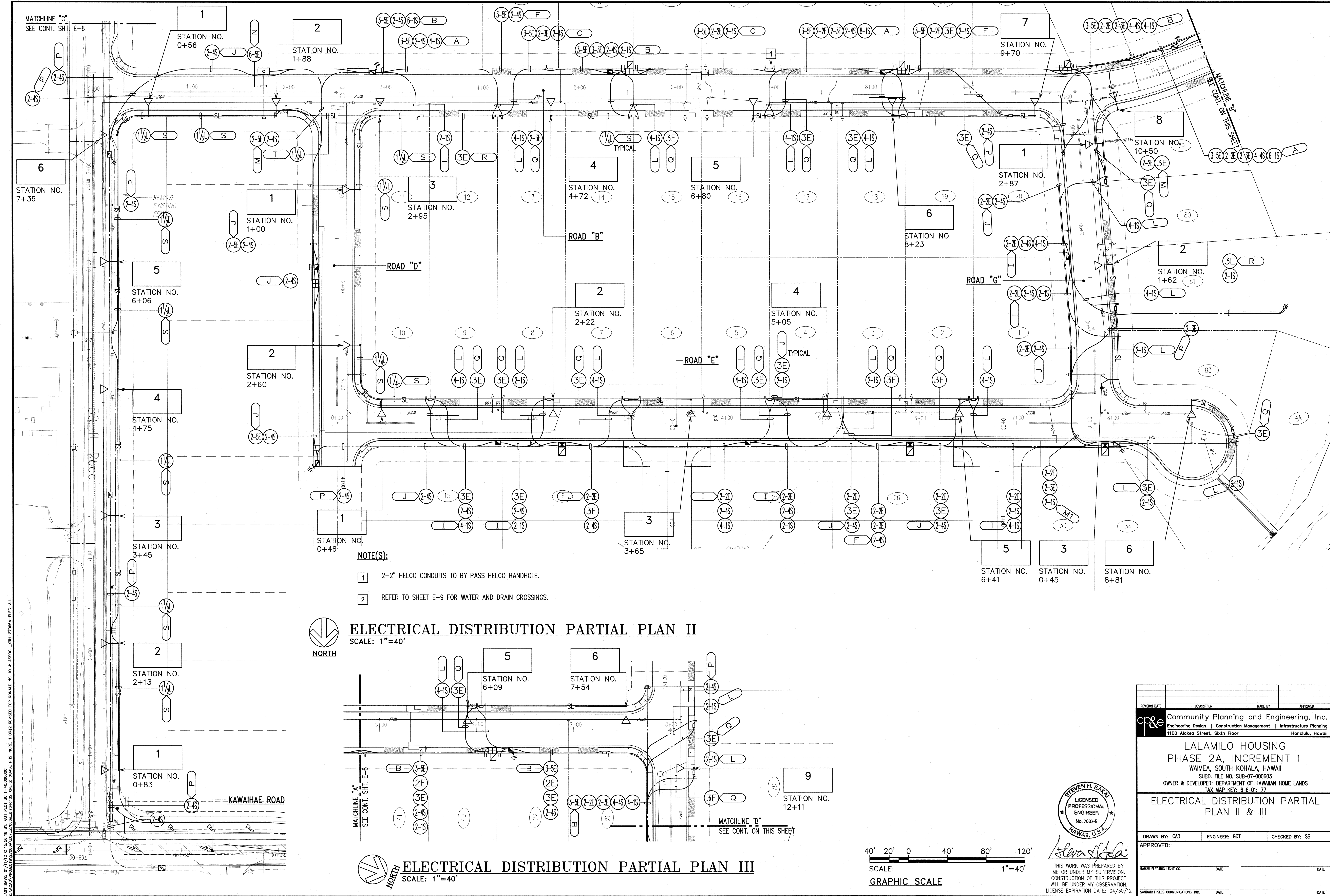
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 Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alaoka Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01: 77			
SIC & OCEANIC NOTES			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
DATE		DATE	
DATE		DATE	
SANDWICH ISLES COMMUNICATIONS, INC.			
FILE	POCKET	FOLDER	NO.

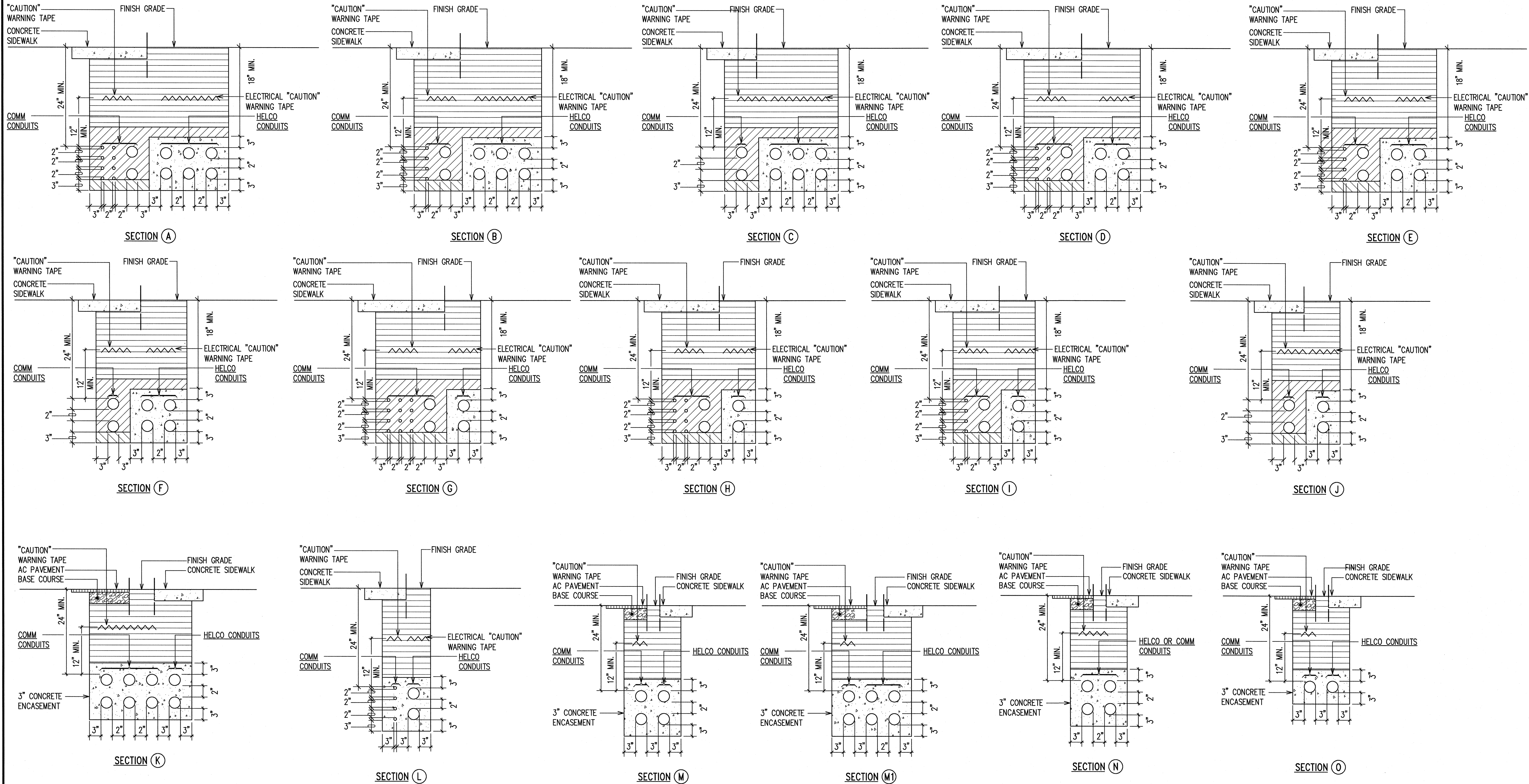
NOTE(S):

- 1 2-2" HELCO CONDUITS TO BY PASS HELCO HANDHOLE.
- 2 REFER TO SHEET E-9 FOR WATER AND DRAIN CROSSINGS.
- 3 12' X 12' SIC EASEMENT
- 4 6' X 6' CATV EASEMENT



LAST SAVE: 01/13/13 @ 13:28:28 BY: RN PLOT SC: 1000000-40.000000
Z:\MAD\PROJECTS\27066A\LEW_27066a.dgn (p1) SHEET: 61 OF 70 INCH: 11.69





NOTES:

- ELECTRICAL WARNING TAPE—HEAVY GAUGE 4 MIL. RED WITH BLACK LETTERING, 3" WIDE, "BURIED ELECTRIC LINE BELOW—CAUTION" @ DIRECT BURIED CONDUITS.
- "CAUTION" WARNING TAPE REQUIRED OVER ENTIRE LENGTH OF ALL CONDUITS.
- 3" SEPARATION REQUIRED BETWEEN ELECTRICAL AND TELEPHONE CONDUITS WITHIN CONCRETE ENCASEMENT.
- CONTRACTOR TO MAINTAIN MIN. 8" SEPERATION FROM DUCTLINE TO PROPERTY LINE/EASEMENT.
- SEE DISTRIBUTION PLANS FOR DUCT QUANTITY.

BACKFILL NOTES:

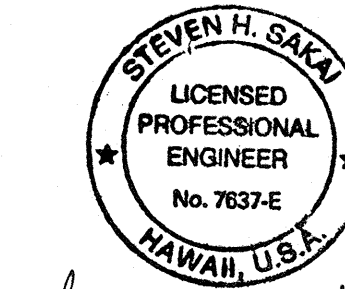
- TYPE "A" BACKFILL — EARTH & GRAVEL. ROCK SIZE TO BE 1" MAX & THE MIXTURE TO CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICLES. THE MATERIAL SHALL BE NONEXPANSIVE. 95% COMPACTION.
- TYPE "B" BACKFILL — EARTH & GRAVEL. MIXTURE MUST PASS A 1/2" MESH SCREEN & CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICLES. 95% COMPACTION.

NOTE — IF NORMAL MATERIAL AT BOTTOM OF TRENCH IS NOT TYPE "B", AN ADDITIONAL 3" SHALL BE EXCAVATED & TYPE "B" BACKFILL PROVIDED.

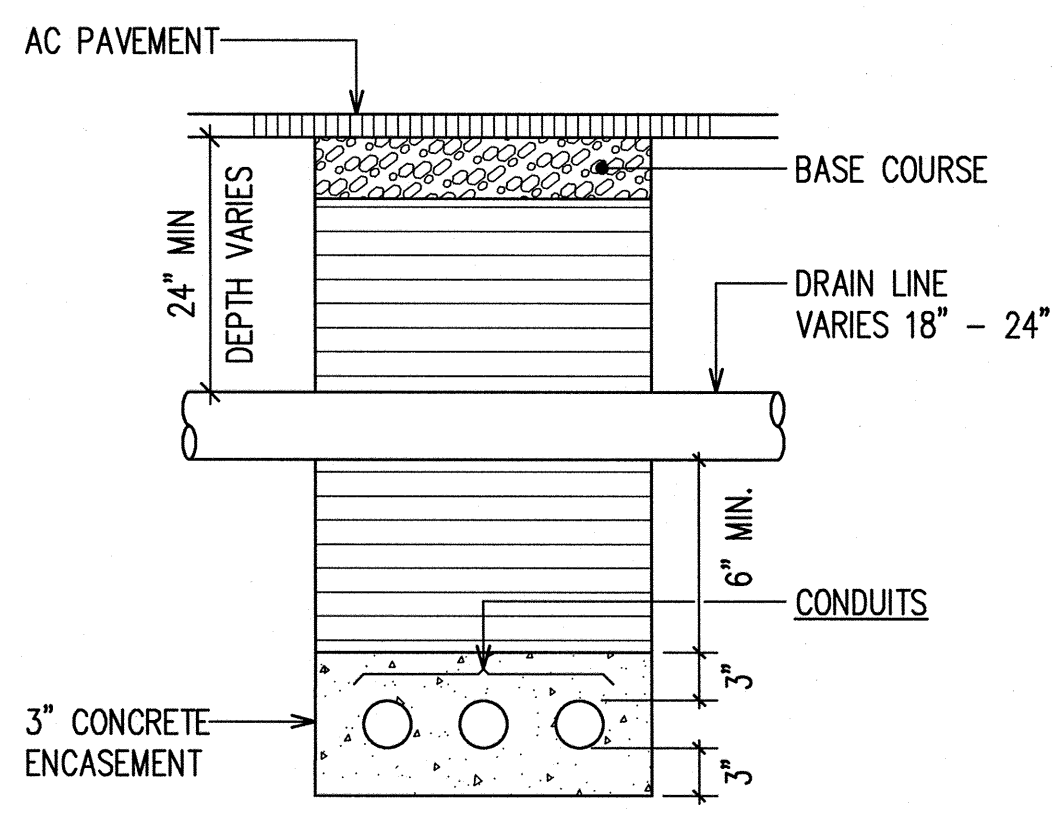
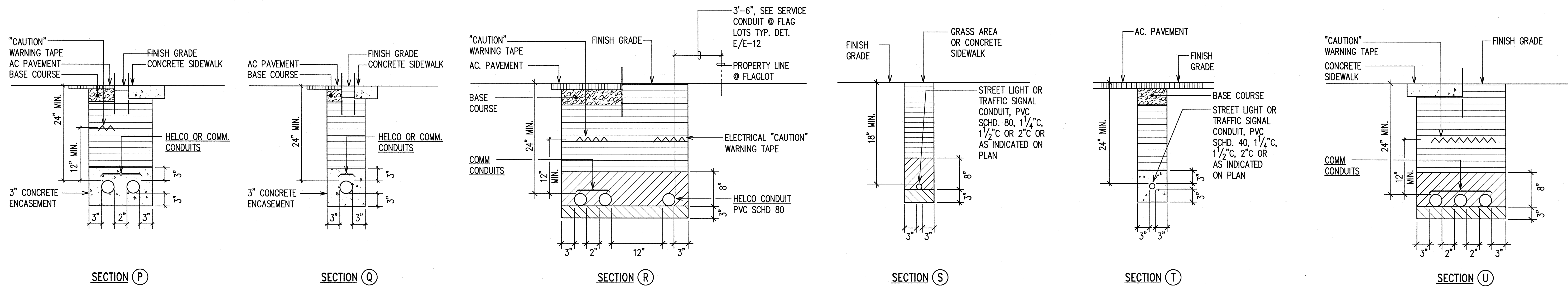
CONCRETE — 3" ENCASEMENT, 2500 PSI COMPRESSIVE STRENGTH @ 28 DAYS.

TYPICAL DUCT SECTIONS I
NOT TO SCALE

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01: 77			
TYPICAL DUCT SECTIONS I			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
HAWAII ELECTRIC LIGHT CO.	DATE		DATE
SANDWICH ISLES COMMUNICATIONS, INC.	DATE		DATE

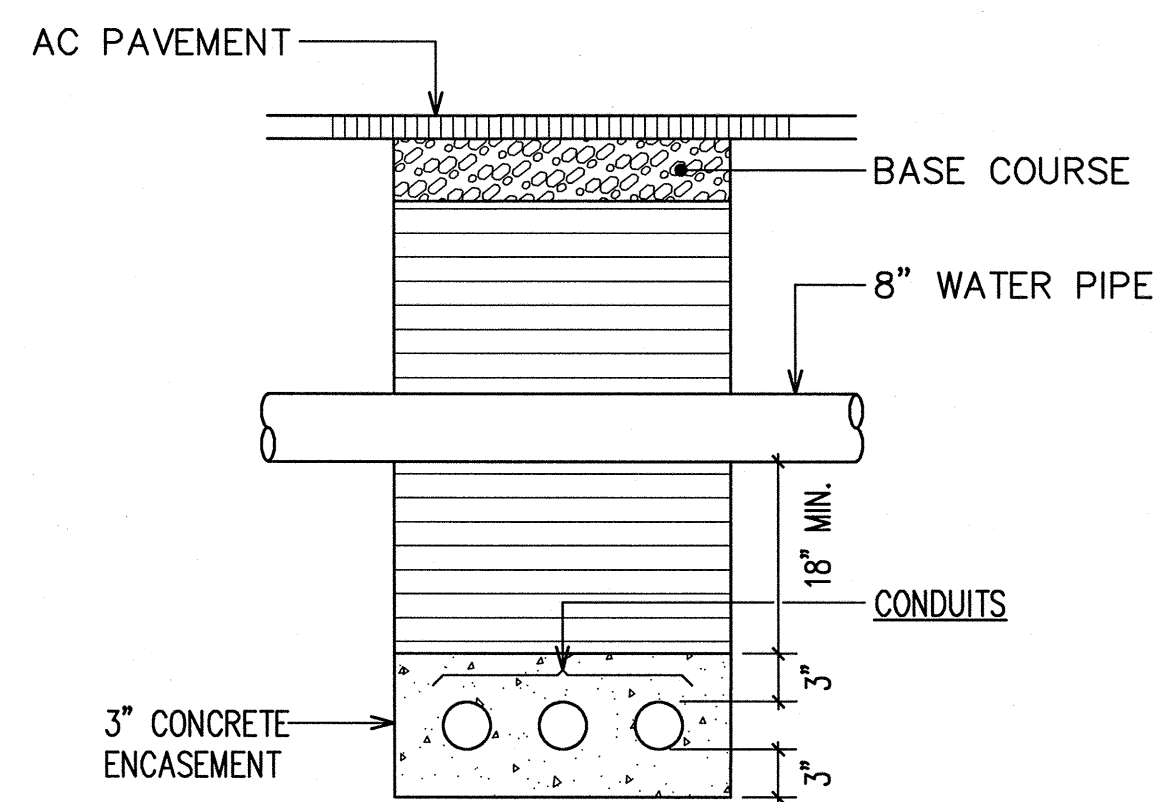


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AFTER DRAIN LINE CROSSING
SLOPE DUCT BANK UPWARDS
TO 24" MIN. COVER

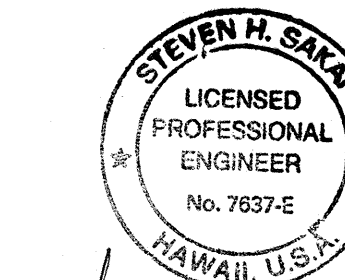
DRAIN CROSSING VERTICAL CLEARANCE



WATER CROSSING VERTICAL CLEARANCE

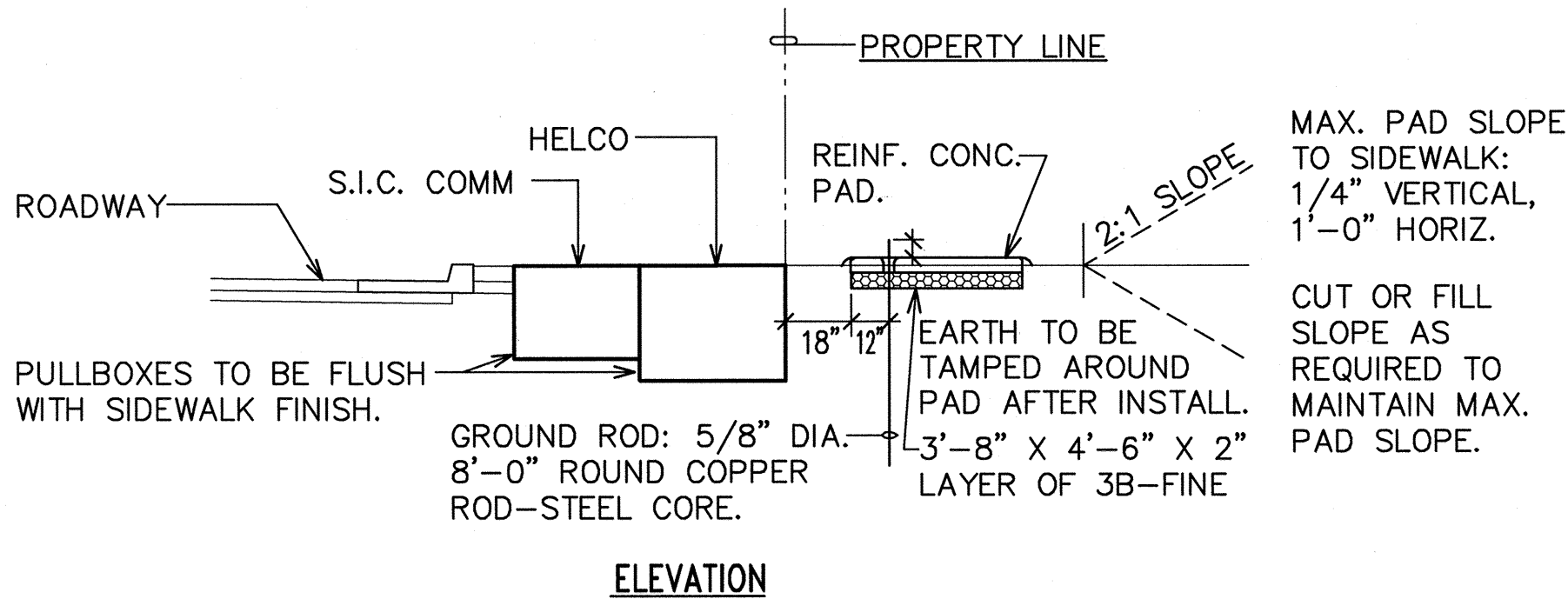
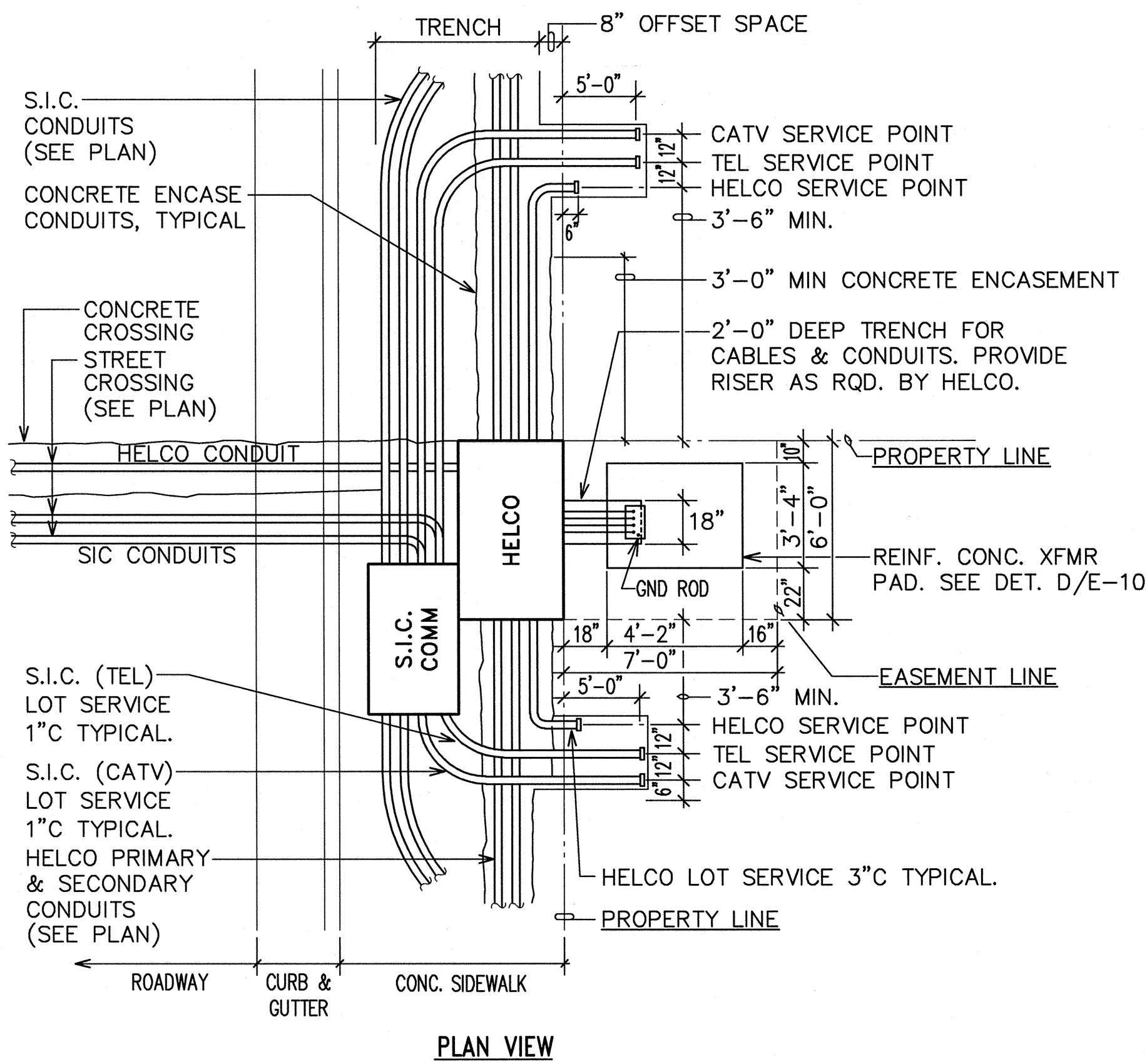
TYPICAL DUCT SECTIONS II

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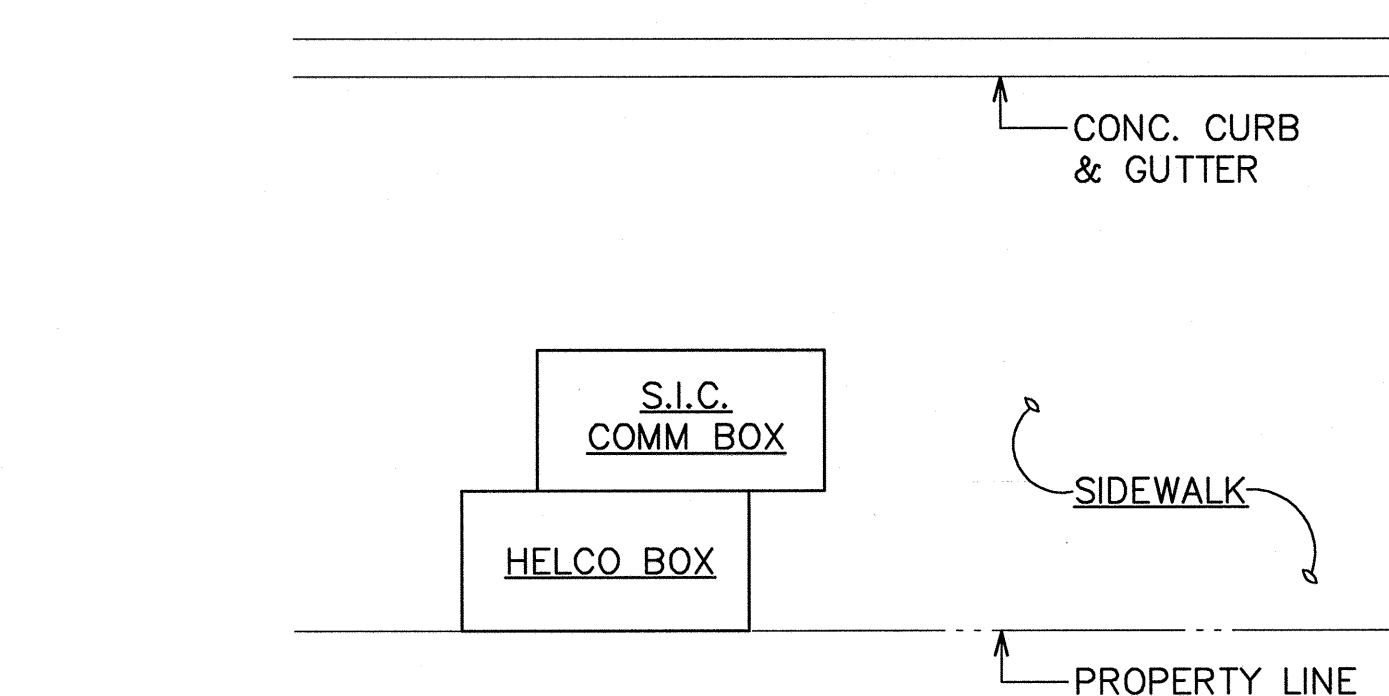
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
CONSTRUCTION OF THIS PROJECT
WILL BE UNDER MY OBSERVATION.
LICENSE EXPIRATION DATE: 04/30/12

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01: 77			
TYPICAL DUCT SECTIONS (CONT.)			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
HAWAII ELECTRIC LIGHT CO.	DATE		DATE
SANDWICH ISLES COMMUNICATIONS, INC.	DATE		DATE

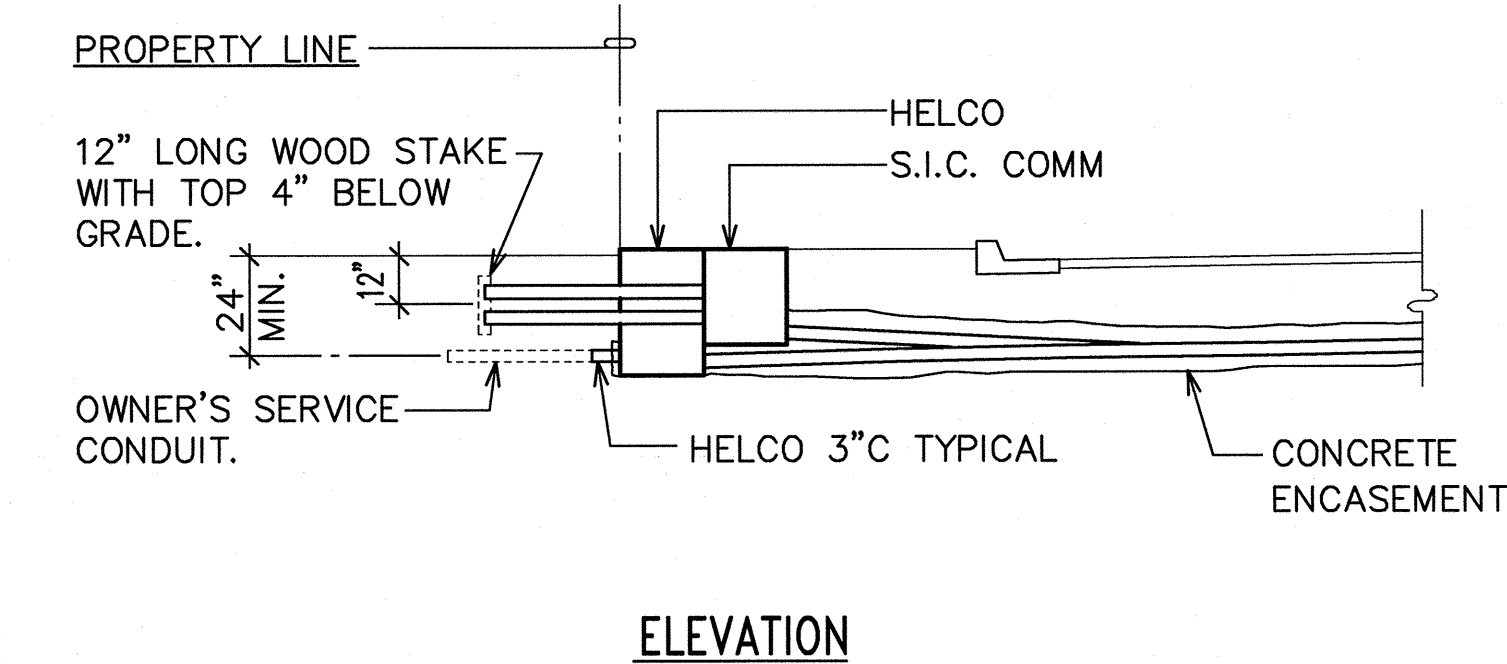
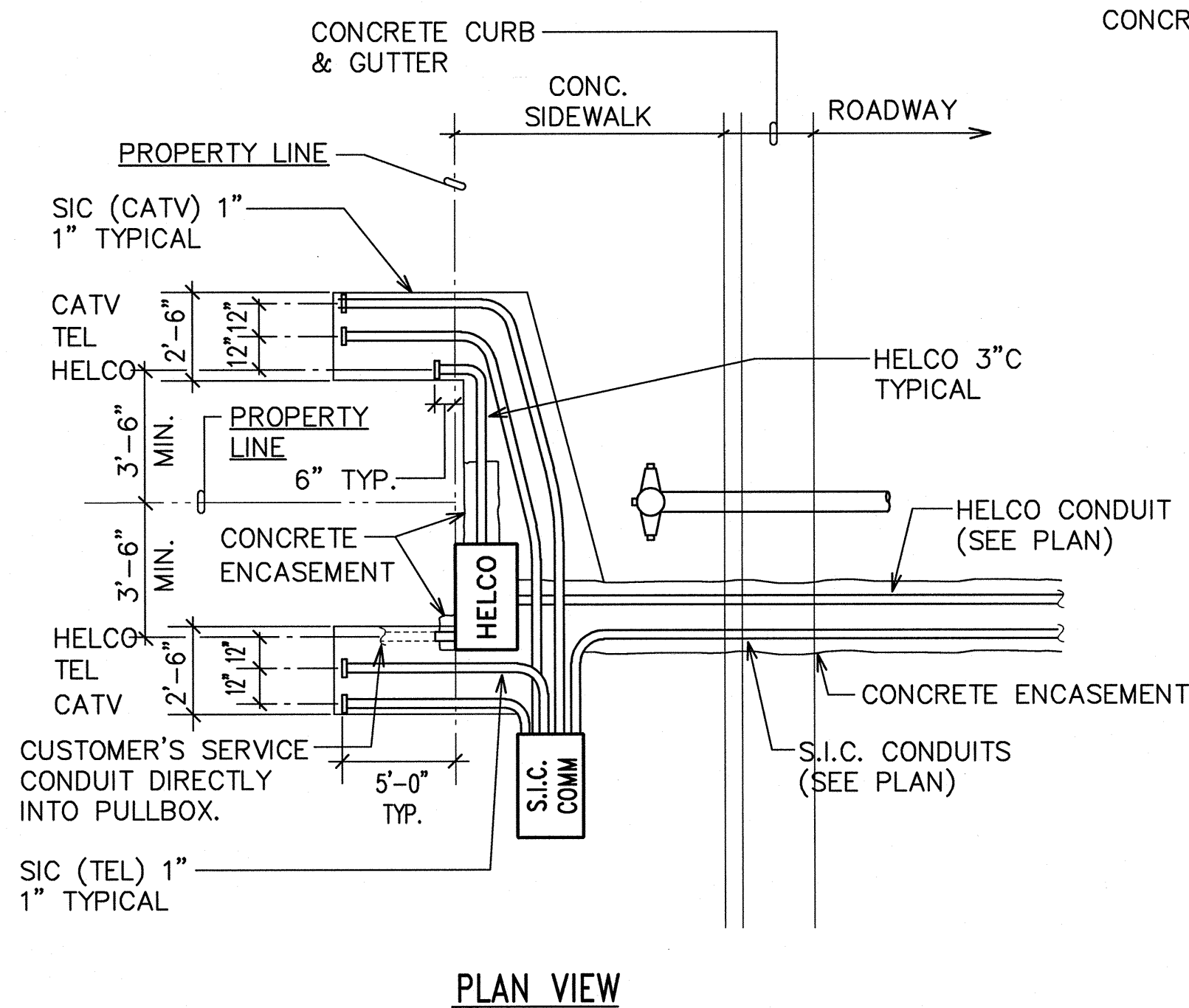


- NOTES:**
1. REINFORCED CONCRETE TRANSFORMER PAD TO BE CONSTRUCTED AS SHOWN ON THIS SHEET.
 2. GRADE AND COMPACT LOT AS REQUIRED BY HELCO.
 3. HIGHEST FRONT CORNER OF TRANSFORMER PAD LOT SHALL MATCH FINAL SIDEWALK GRADE.
 4. CONCRETE ENCASE ALL HELCO PRIMARY DUCTS. CONCRETE ENCASE ALL COMM DUCTS UNDER ROADWAY.

A
E-10 TYPICAL TRANSFORMER PAD LOT
NOT TO SCALE

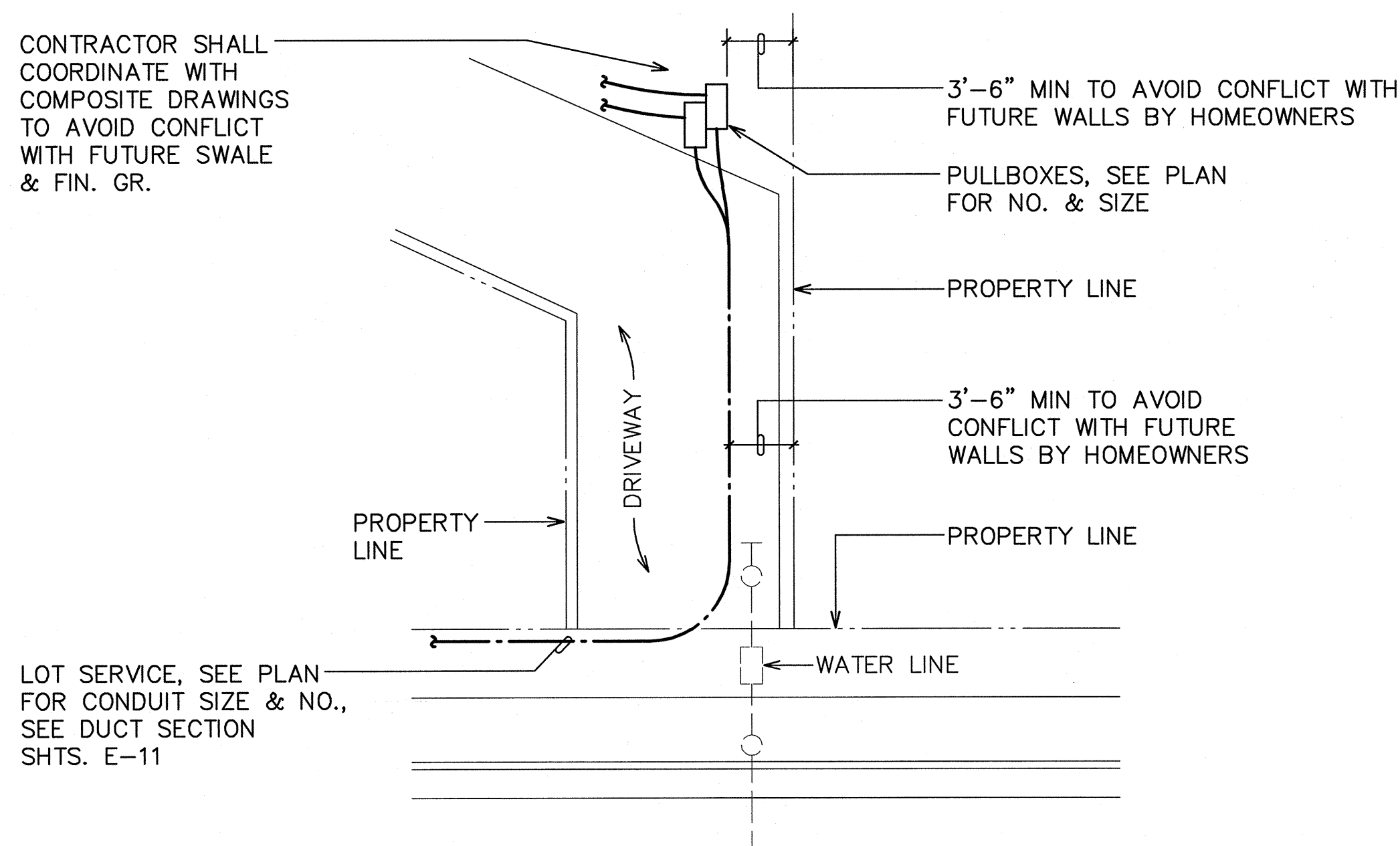


B
E-10 TYPICAL HANDHOLE GROUP ARRANGEMENT
NOT TO SCALE

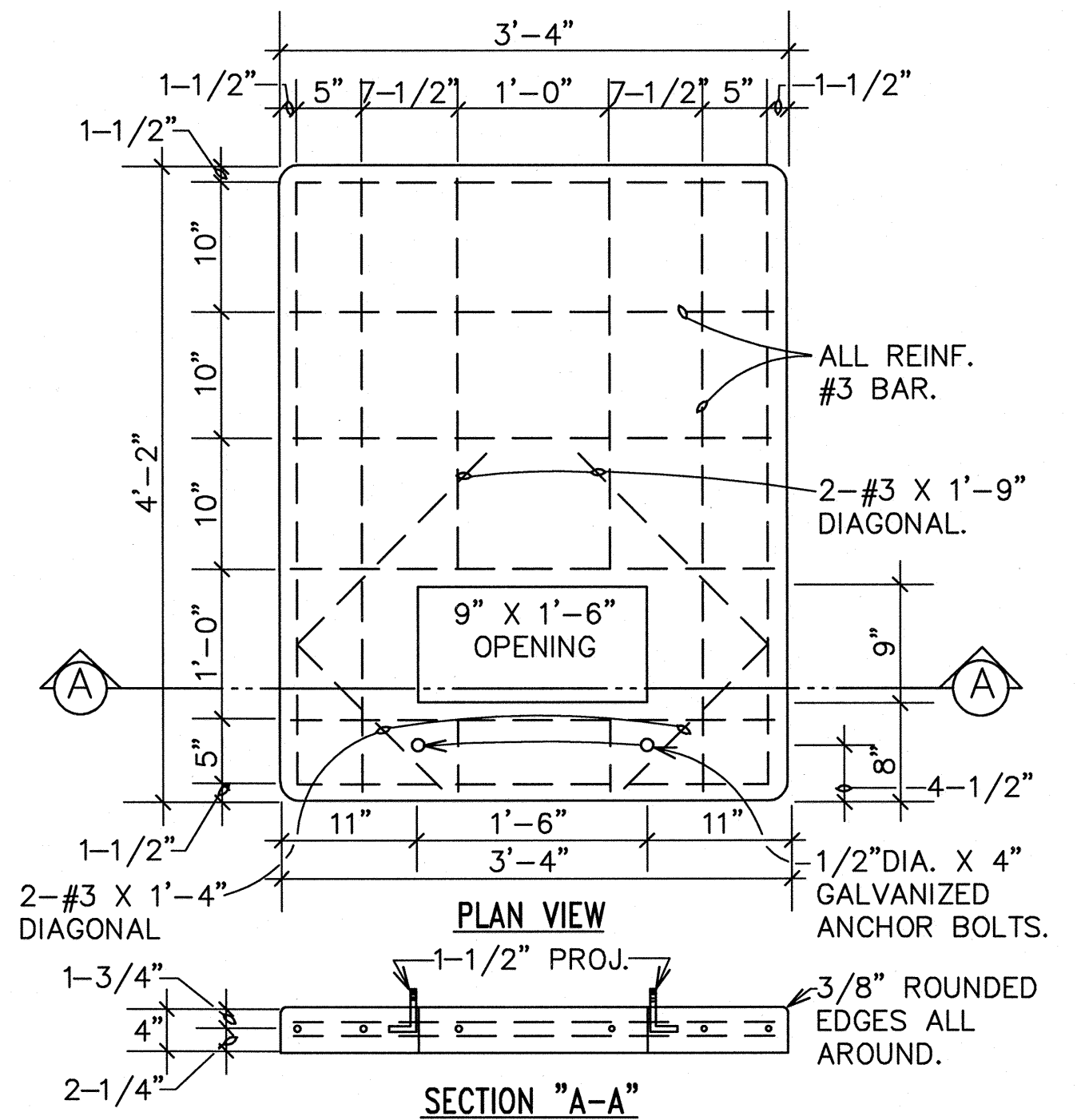
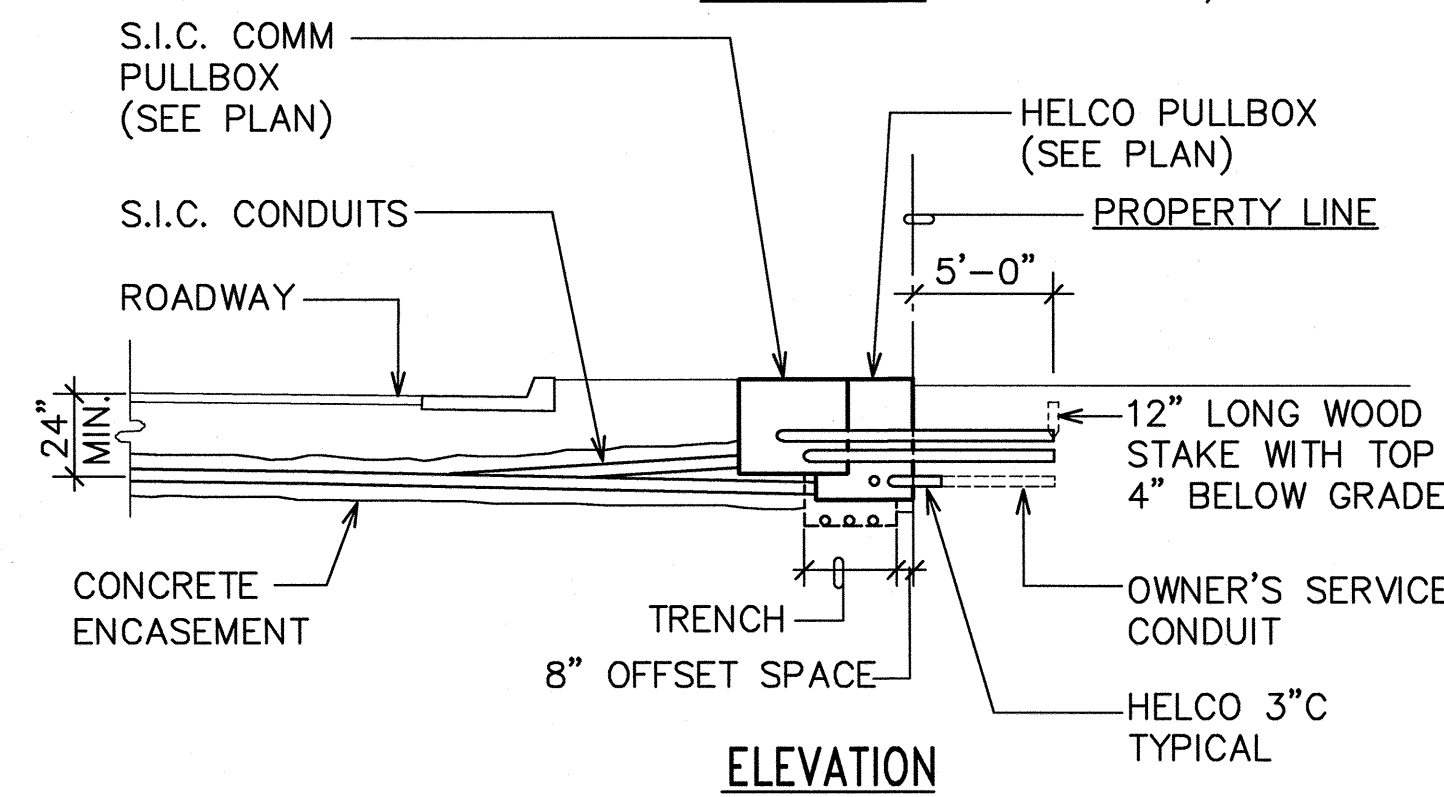
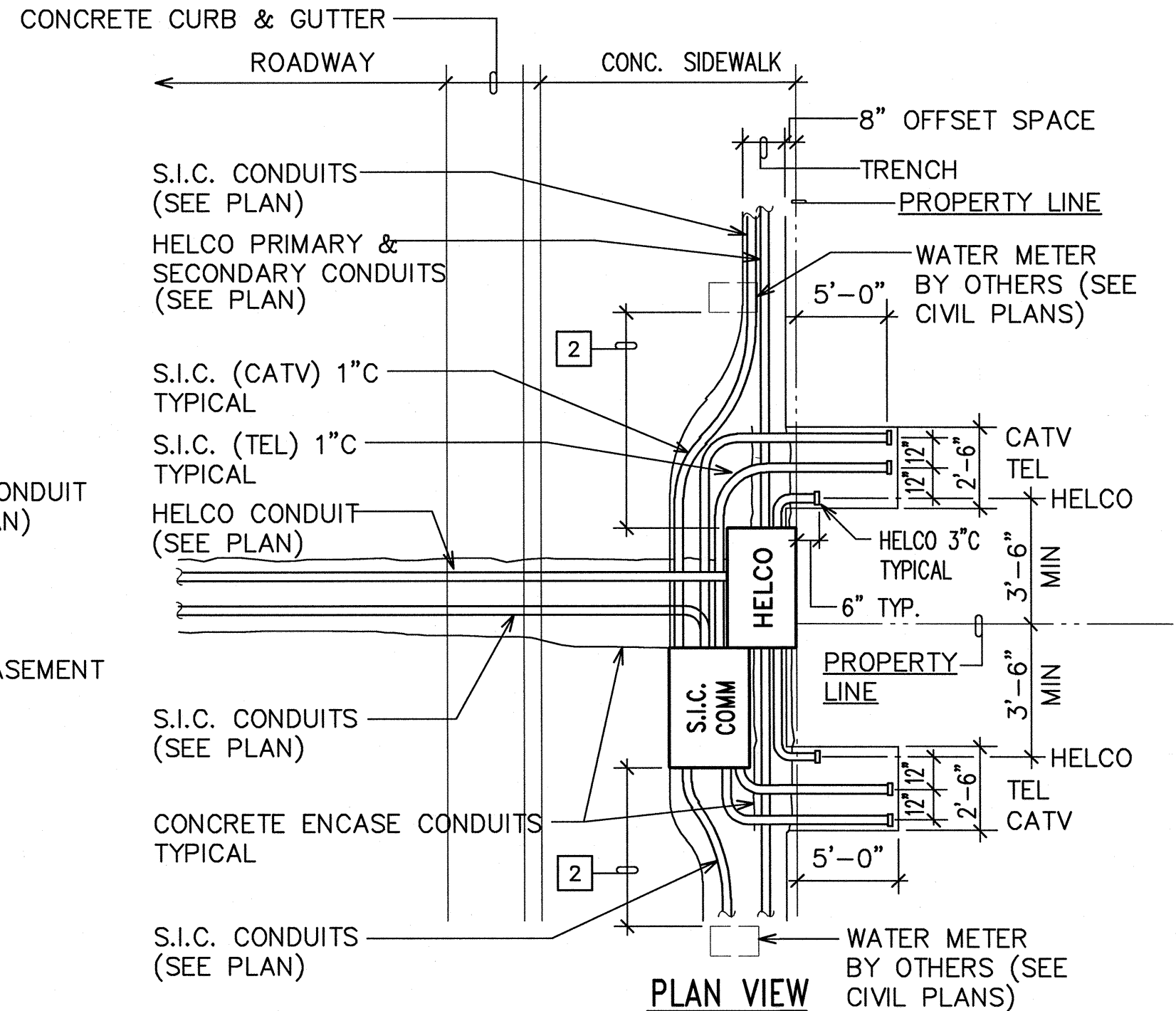


- NOTES:**
1. CONCRETE ENCASE ALL HELCO PRIMARY DUCTS. CONCRETE ENCASE ALL COMM DUCTS UNDER ROADWAY.
 2. MAINTAIN 3'-0" MIN. CLEARANCE. VERIFY CLEARANCE REQUIREMENTS AND ADJUST ELEC WORK AS NECESSARY.

C
E-10 TYPICAL LOT SERVICE
NOT TO SCALE



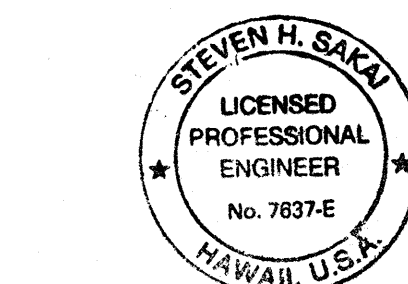
E
E-10 SERVICE CONDUITS @ FLAGLOTS
NOT TO SCALE



- NOTES:**
1. COMPRESSIVE STRENGTH OF CONCRETE : 3000 PSI IN 28 DAYS.
 2. REINFORCING ROUND DEFORMED BAR SHALL BE CLEAN & NEW.
 3. CURE CONCRETE BY APPROVED METHOD.
 4. TOP OF CONC. PAD TO BE SMOOTH, TRUE & LEVEL, FREE FROM DEFECTS.
 5. CONTRACTOR HAS OPTION OF FURNISHING CAST-IN-PLACE OR PRECAST.

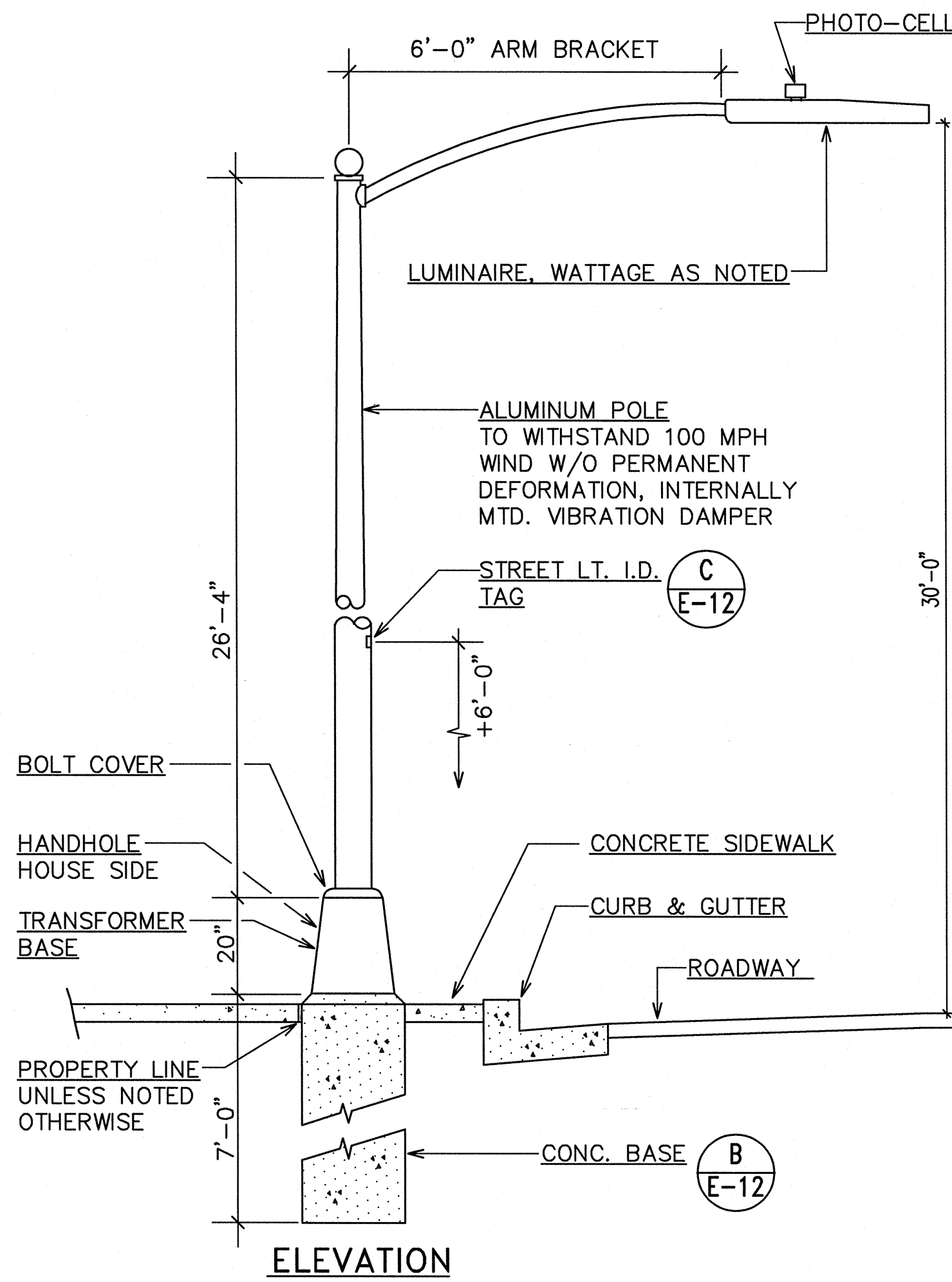
D
E-10 CONCRETE TRANSFORMER
PAD DETAIL
NOT TO SCALE

E
E-10 SERVICE CONDUITS @ FLAGLOTS
NOT TO SCALE

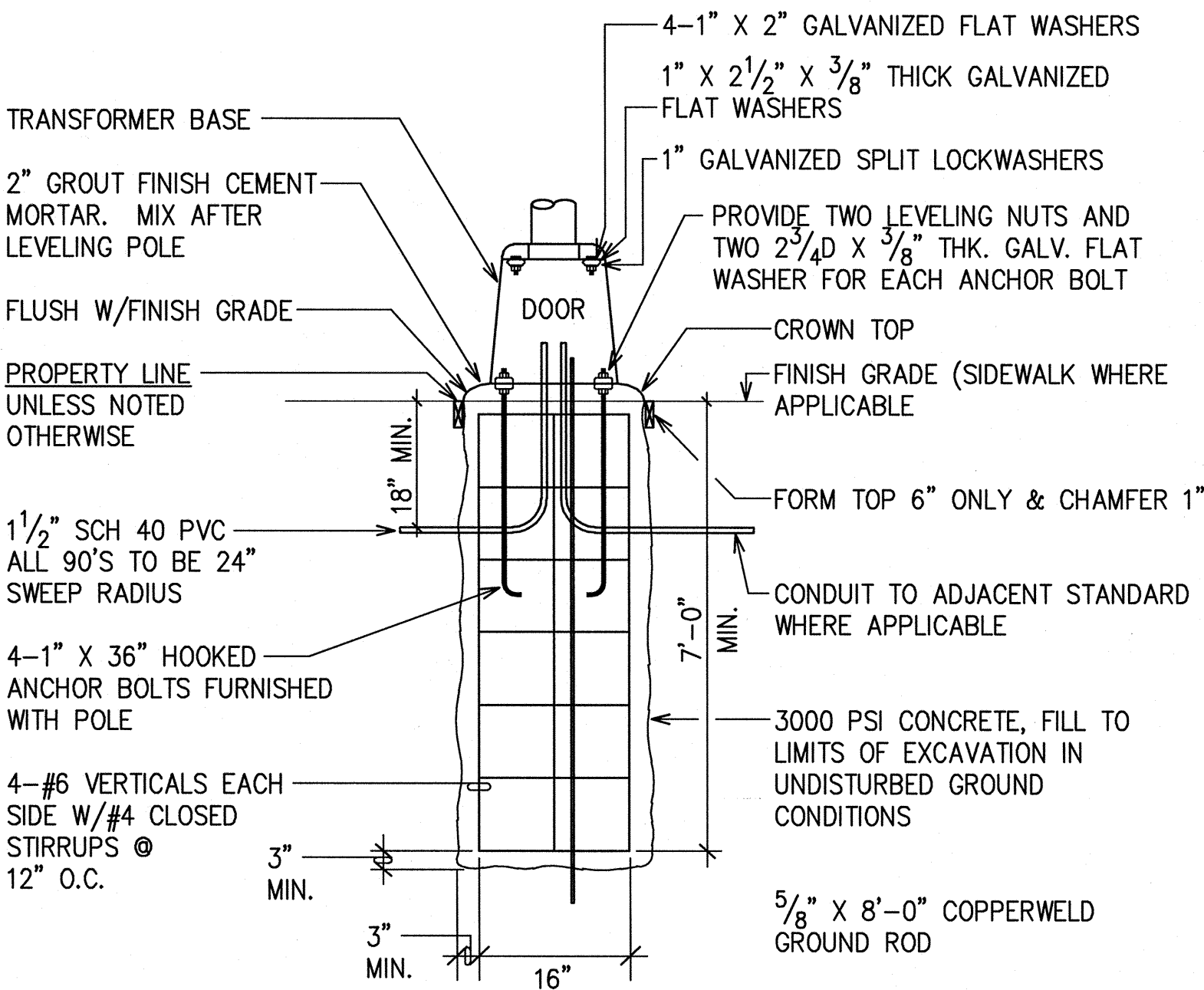


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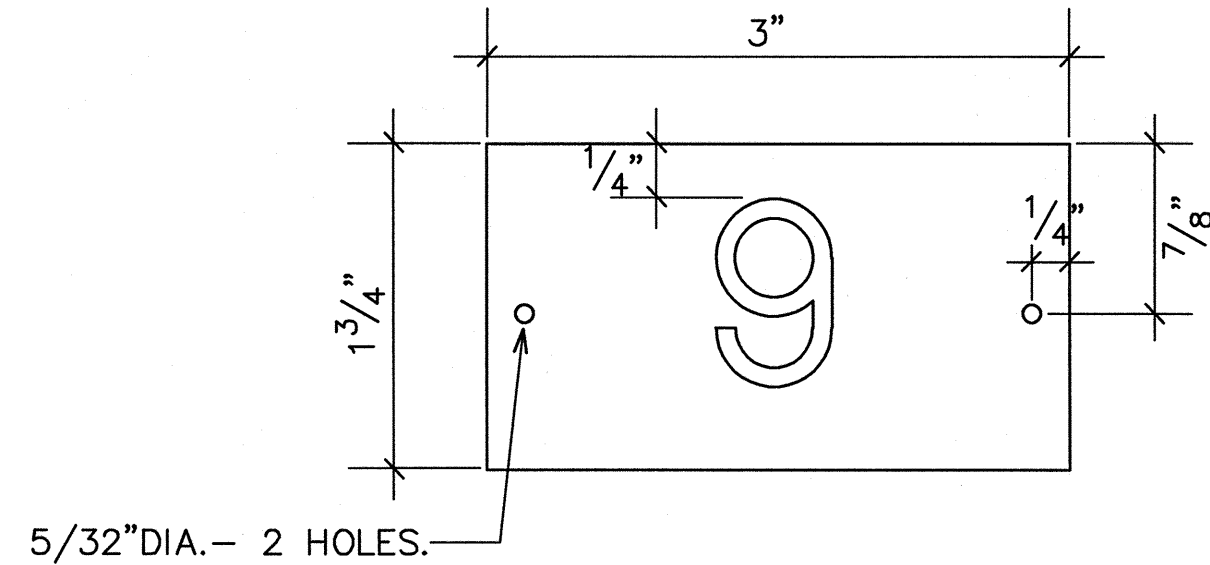
REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc. Engineering Design Construction Management Infrastructure Planning 1100 Aiea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01: 77			
TYPICAL TRANSFORMER PAD & LOT SERVICE DETAILS			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
HAWAII ELECTRIC LIGHT CO.	DATE		DATE
SANDWICH ISLES COMMUNICATIONS, INC.	DATE		DATE



A STREET LIGHT STANDARD
E-12 NOT TO SCALE



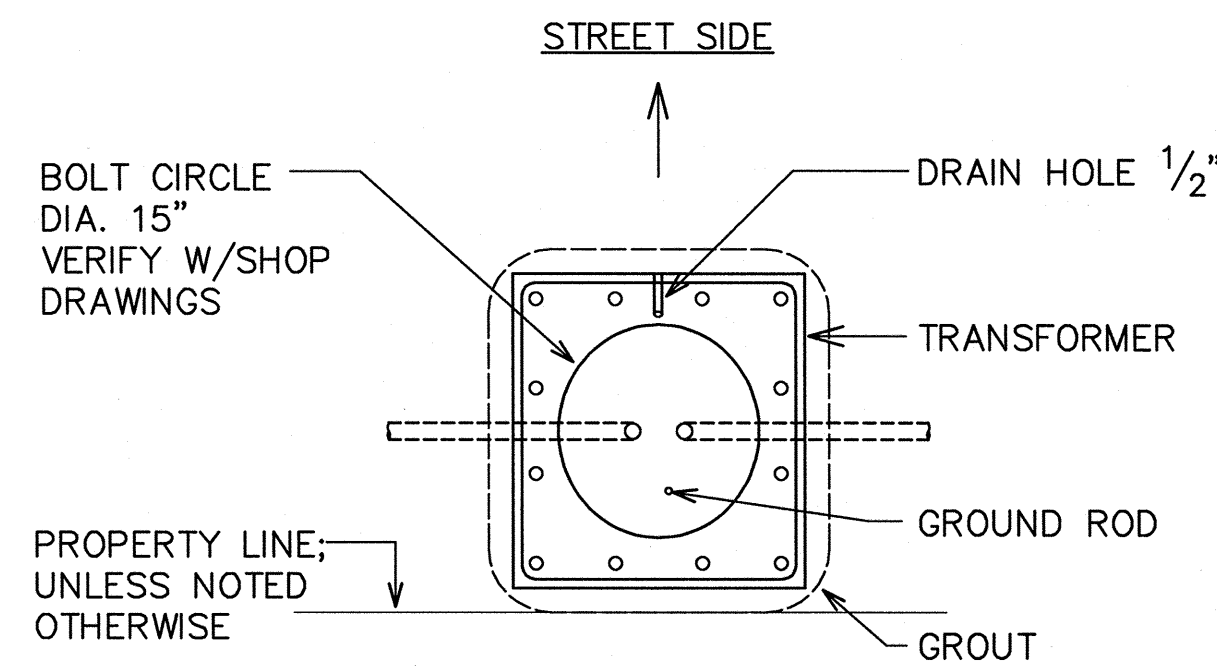
B STREET LIGHT BASE DETAIL
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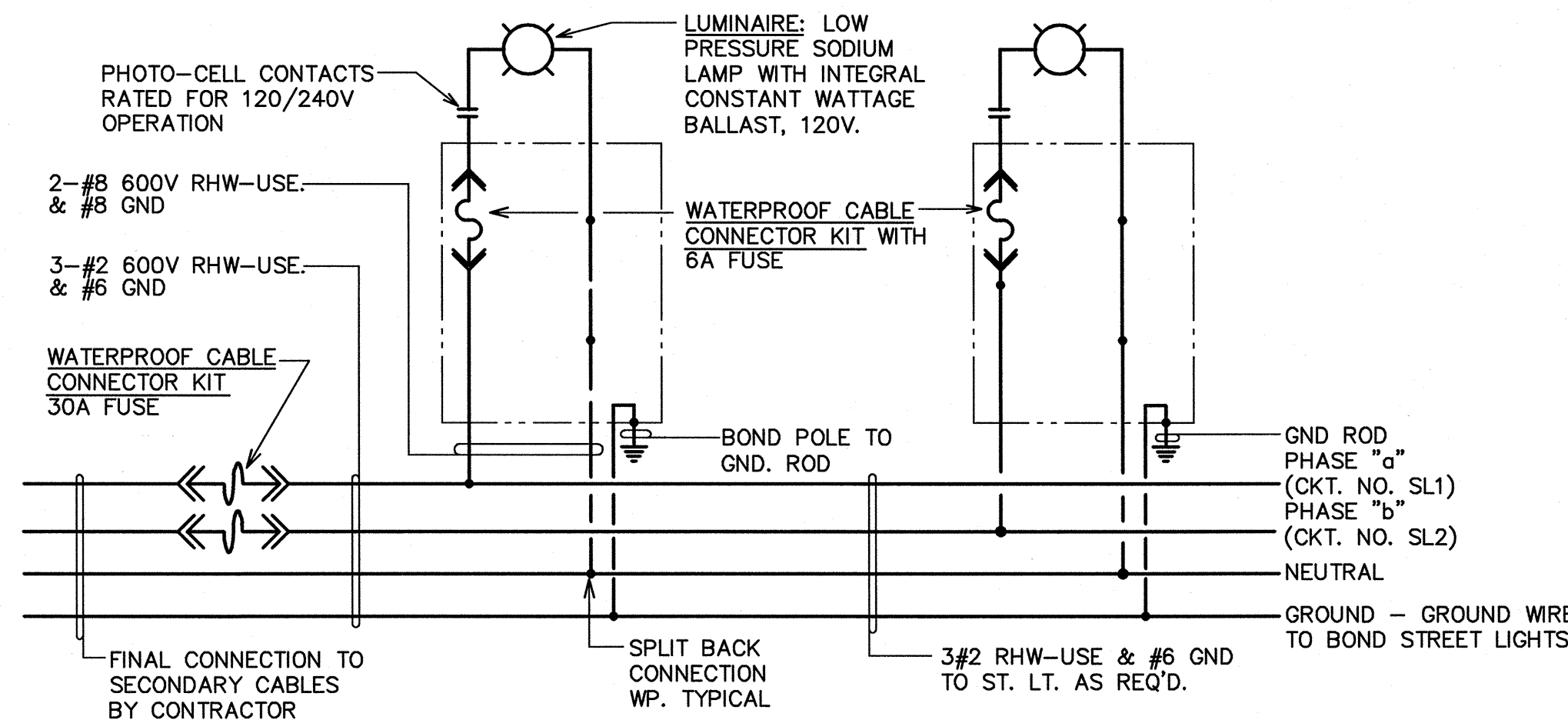
NOTES: (FOR METAL POLES ONLY)

- USE 2 PLY PLASTIC - BLACK, WHITE.
- NUMBER SIZE SHALL BE 1" HIGH AND ENGRAVED 1/8" WIDE, WHITE IN COLOR (NUMBER AS REQUIRED).
- NOMENCLATURE SIZE SHALL BE 1/4" HIGH AND ENGRAVED 1/32" WIDE, WHITE IN COLOR (WATTAGE IES DISTRIBUTION AND VOLTAGE AS REQUIRED AS NOTED).
- ATTACH TO STEEL POLES WITH NO.7 CADMIUM PLATE DRIVE SCREWS. (a) ATTACH TO ALUMINUM POLE WITH NO.7 ALUMINUM DRIVE SCREWS.

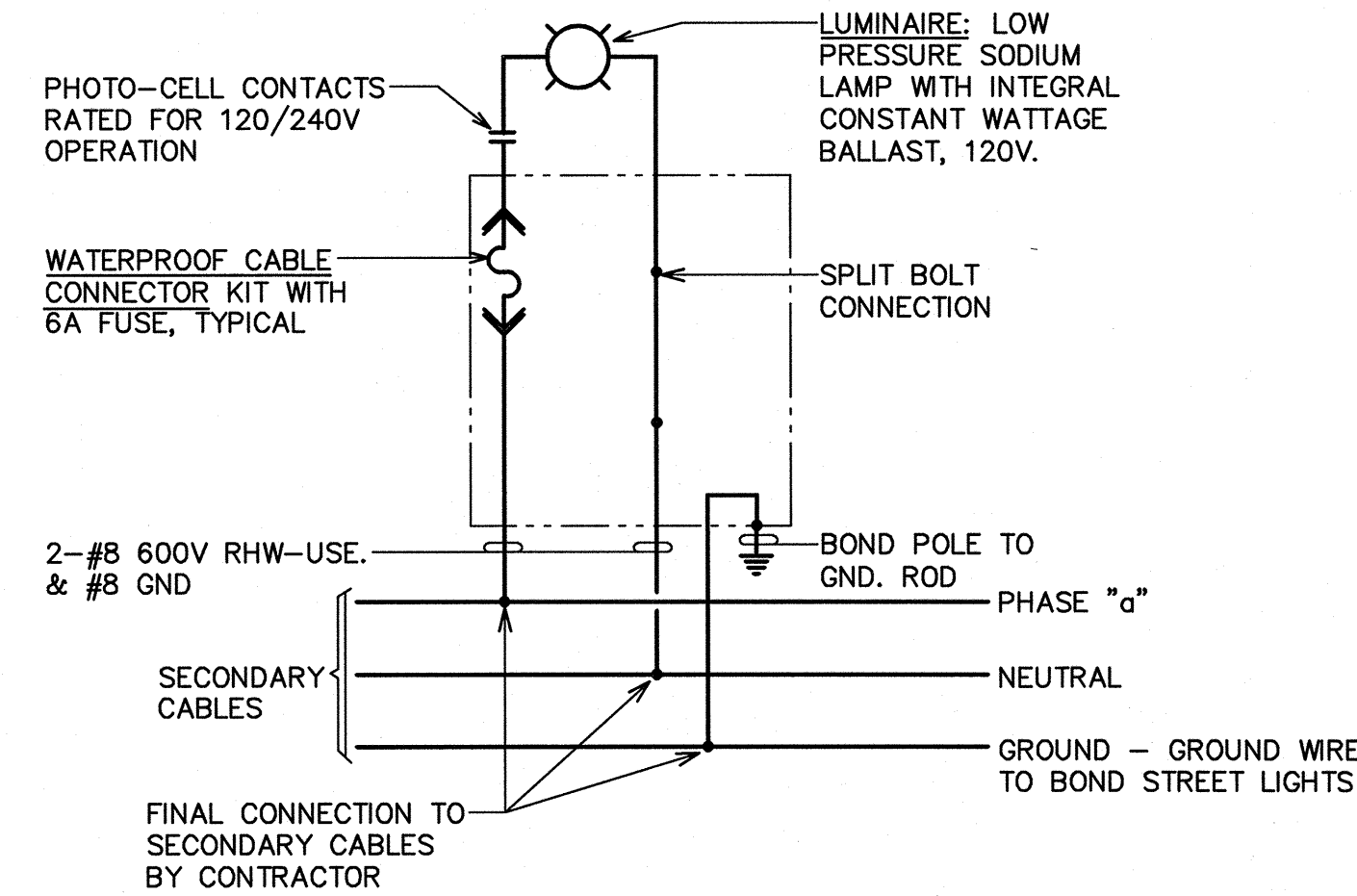
C STREET LIGHT I.D. TAG DETAIL
E-12 NOT TO SCALE



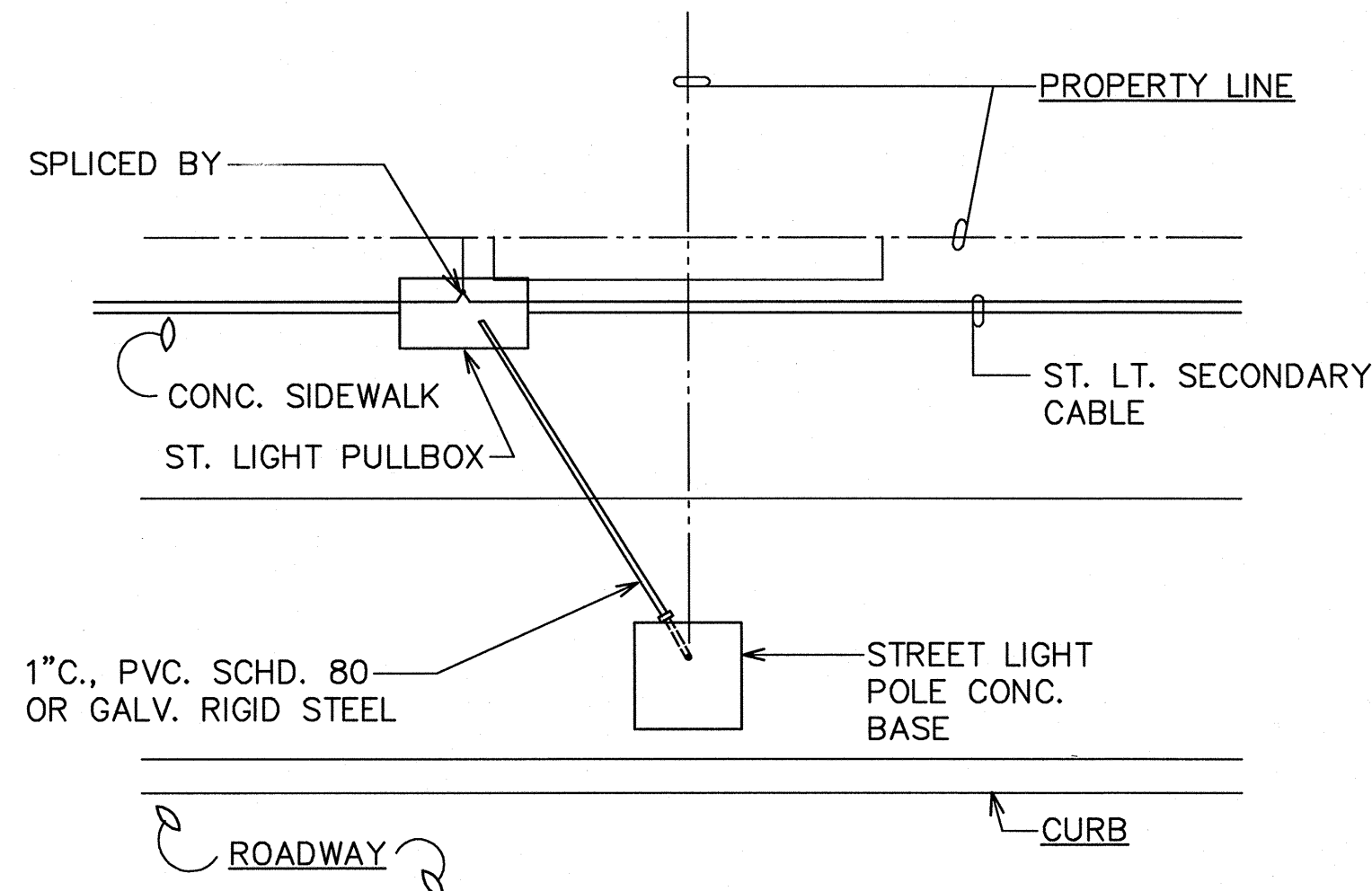
D CONCRETE BASE PLAN
E-12 NOT TO SCALE



G STREET LIGHT MULTIPLE CONNECTION DIAGRAM
E-12 NOT TO SCALE



E STREET LIGHT CONNECTION DIAGRAM
E-12 NOT TO SCALE



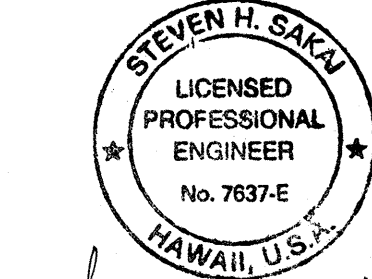
F STREET LIGHT SECONDARY CONNECTION
E-12 NOT TO SCALE

STREET LIGHT NOTES:

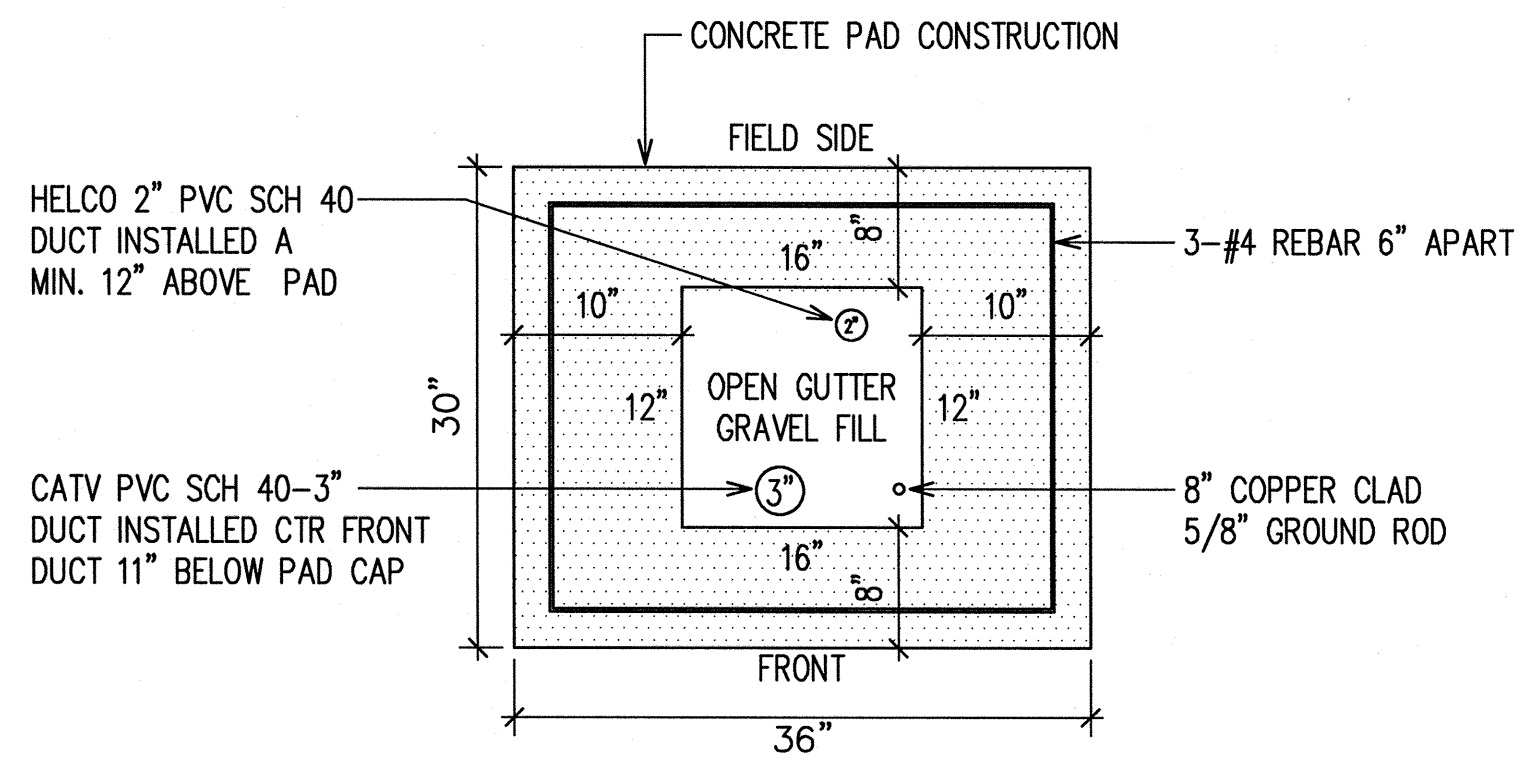
- NO CHANGES WILL BE ALLOWED WITHOUT PRIOR APPROVAL FROM TRAFFIC DIVISION.
- ALL STREET LIGHT IDENTIFICATION TAG NUMBERING FOR METAL POLES SHALL START WITH "1" AND CONTINUE NUMERICALLY FOR EACH STREET IN THE SUBDIVISION. ALL STREET LIGHT I.D. TAG NUMBERING FOR WOODEN POLES SHALL BE IN ACCORDANCE WITH HELCO'S NUMBERING SYSTEM.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY SECONDARY CIRCUIT EXTENSIONS TO THE NEAREST HELCO SECONDARY. IF THE STREETLIGHTS ARE INSTALLED BEFORE HELCO INSTALLS THEIR SECONDARY, THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND INFORMING HELCO OF STREET LIGHT LOCATIONS AND POLE CONTACTS.
- FOR FINAL INSPECTION APPROVAL: ANY SUBDIVISION WITH TWO (2) OR MORE STREET LIGHTS-DEVELOPER SHALL SET UP ACCOUNT WITH HELCO - PROVIDING STREET NAME(S), POLE NUMBERS, WATTAGES, AND BILLING ADDRESS TO ENERGIZE LIGHTS IN SUBDIVISION. DEVELOPER WILL ALSO BE RESPONSIBLE FOR ENERGY COST UNTIL STREET(S) ARE DEDICATED TO COUNTY WHERE UPON BILLING WILL BE TRANSFERRED TO COUNTY.
- CONTRACTOR SHALL INSCRIBE THE MONTH AND YEAR OF INSTALLATION ON PHOTOCELLS AND LAMPS. ALL P.E.'S SHALL HAVE THE NORTH INDEX FACING NORTH.
- ALL LABOR AND MATERIALS SHALL BE WARRANTED FOR A MINIMUM OF ONE YEAR FROM DATE OF FINAL APPROVAL.
- ACCEPTABLE STREET LIGHT MATERIALS:
 - LUMINAIRES:** MUST HAVE PE RECEPTACLE AND HPF BALLAST.
VISIONAIRE LIGHTING: (REQUIRED FIXTURE IN KONA AND KOHALA DISTRICTS.)
RDW-1 (55W), RDW-2 (90W), RDW-3 (180W). GREY FINISH (GY), AND REMOVABLE BALLAST TRAY (RBT)
AMERICAN ELECTRIC: (NOT FOR USE IN KONA AND KOHALA DISTRICTS)
SRX-55, SP2-90, SP2-180 WITH POLYCARBONATE SEMI-CUTOFF LENS.
 - PHOTOCELLS:** COMPLETELY SOLID STATE. FAIL "ON".
FISHER PIERCE: FP-7790B SPS
 - ALUMINUM POLES:** INTERNAL MOUNTED VIBRATION DAMPER, MIN. 0.188 WALL THICKNESS. MUST BE APPROVED BY F.H.W.A. AND IN COMPLIANCE WITH THE 2001 AMENDED AND ADOPTED AASHTO SPECIFICATIONS. 10-12 INCH BASE BOLT CIRCLE. ARM LENGTH SHALL BE PER PLAN.
LEXINGTON: 2708-45806T4, 2208-45806T4
HAPCO: B78382-001, B78382-002, B76205-001, B76205-002 73892-001, 73892-002, 73892-003.
 - TRANSFORMER BASES:** ALUMINUM WITH 15" BASE BOLT CIRCLE. MUST BE APPROVED BY F.H.W.A. TO BE IN COMPLIANCE WITH THE 2001 AMENDED AND ADOPTED AASHTO BREAK AWAY SPECIFICATIONS.
LEXINGTON 08R-1315B-17
AKRON FOUNDRY TB1-17
 - FIBERGLASS POLES:**
COMPOSITE MATERIALS TECHNOLOGY--HI-MB33-K-50-SE8-OHS-PC-MH
 - WIRE:** RHW-STRANDED-SIZE SHALL BE PER PLAN. WHITE TAPE DENOTING NEUTRAL SHALL BE A MINIMUM OF 12".
 - A SCALED DRAWING OF STREET LIGHT LOCATIONS (PREFER ON ONE SHEET) AND DETAILS OF FIXTURE MOUNTING, LUMINAIRES TYPE, ARM LENGTH, IDENTIFICATION TAGS, IF UNDERGROUND--CIRCUITS, FOUNDATION, BASE AND POLES WILL BE SUBMITTED TO THE TRAFFIC DIVISION AFTER PLAN APPROVAL AND BEFORE CONSTRUCTION BEGINS.
 - SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL BY TRAFFIC DIVISION.
 - ANY STREET LIGHT(S) REQUIRED ON EXISTING POLE(S) SHALL BE INSTALLED BY TRAFFIC DIVISION AT A COST OF \$2,500.00 PER LIGHT, DEVELOPER WILL SUBMIT CHECK--PAYABLE TO COUNTY FINANCE DIRECTOR--ALONG WITH SUBDIVISION NUMBER, DPW FOLDER NAME, TAX KEY AND POLE NUMBER(S).
 - WHEN STREET LIGHTS ARE INSTALLED ON ROADWAYS UNDER STATE JURISDICTION THE DEVELOPER SHALL SUBMIT PLANS TO THE STATE D.O.T. FOR APPROVAL. TRAFFIC DIVISION WILL INSTALL STREET LIGHTS ON EXISTING POLE(S) WITH COST DEPENDENT ON HEIGHT OF POLE.
 - ALL OVERHEAD WIRING STREET LIGHT FIXTURES SHALL BE BONDED TO THE NEUTRAL WIRE. ALL BONDED STREET LIGHT FIXTURES SHALL HAVE 2"x2" REFLECTIVE GREEN STICKER PLACED AT THE BASE OF WIRING OPENING ON ALUMINUM ARM, SIGNIFYING STREET LIGHTS ARE BONDED.
 - ALL UNDERGROUND WIRING STREET LIGHTS SHALL BE GROUNDED TO PROVIDE A MAXIMUM 25 OHMS TO GROUND.
 - ALL WORK SHALL CONFORM TO THE LATEST NATIONAL ELECTRICAL CODE.

REV. 11/09

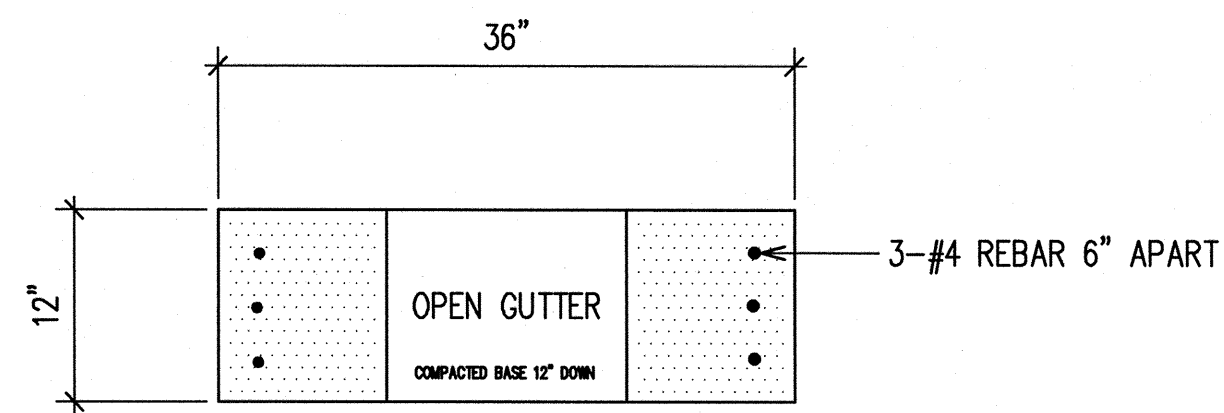
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Engineering Design Construction Management Infrastructure Planning			
1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING			
PHASE 2A, INCREMENT 1			
WAIKANA, SOUTH KOHALA, HAWAII			
SUBD. FILE NO. SUB-07-000603			
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS			
TAX MAP KEY: 6-6-01: 77			
STREET LIGHT DETAILS			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
HAWAII ELECTRIC LIGHT CO.	DATE		DATE
SANDWICH ISLES COMMUNICATIONS, INC.	DATE		DATE



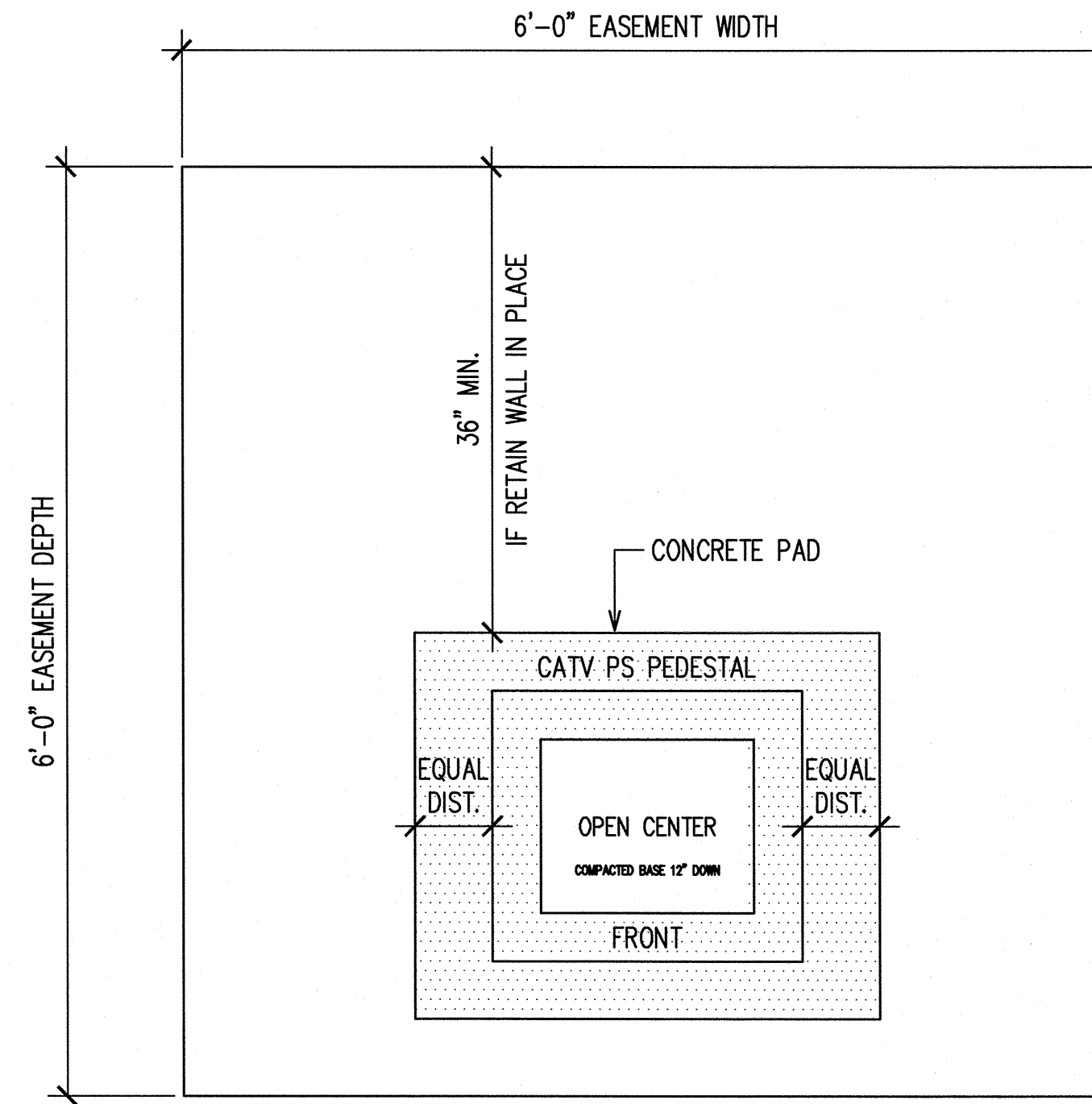
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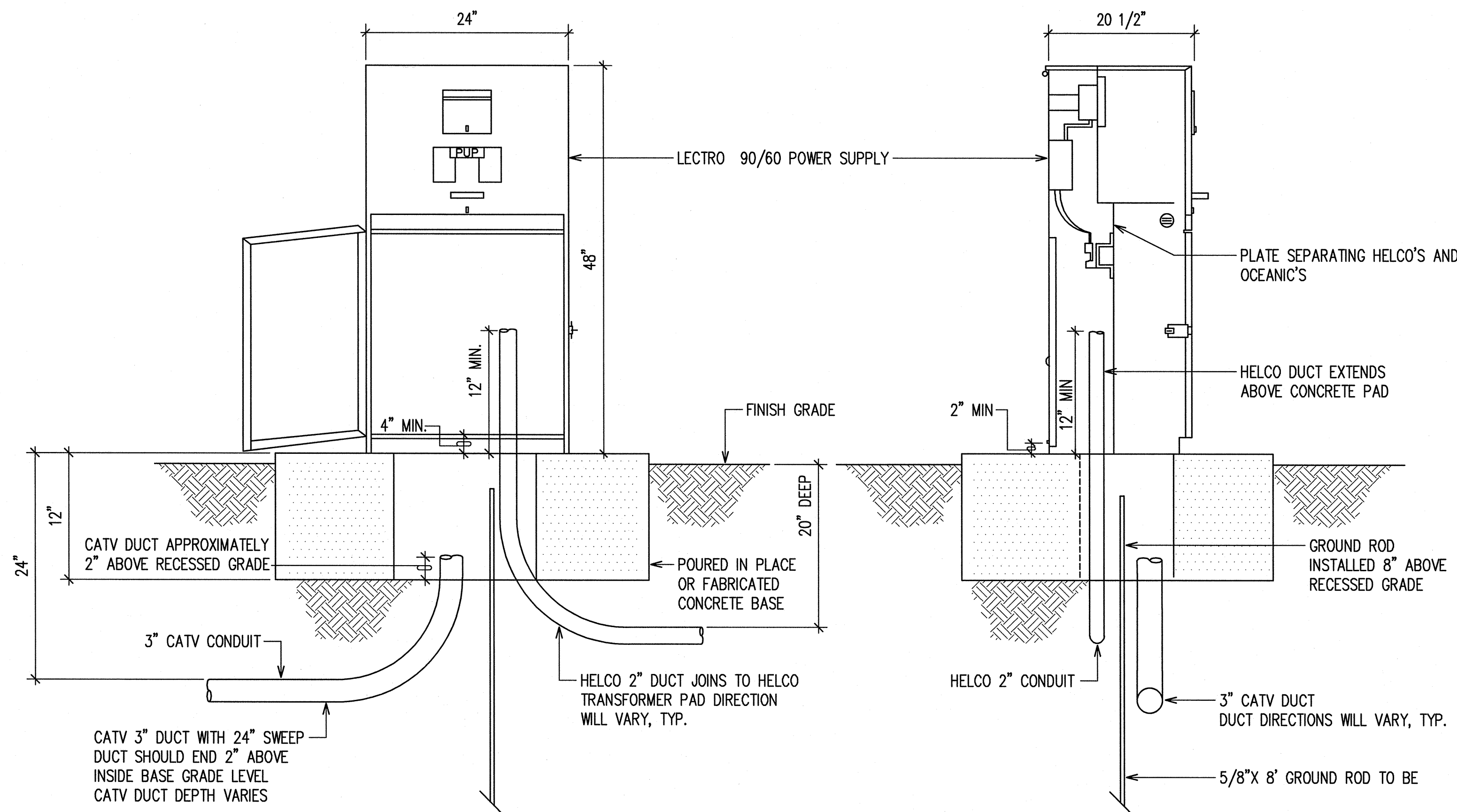
TOP VIEW



END VIEW



CATV POWER SUPPLY EASEMENT



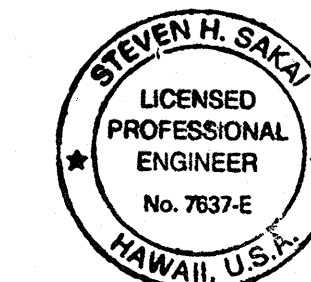
POWER SUPPLY PAD DESIGN

CATV POWER SUPPLY PEDESTAL DETAILS

NOT TO SCALE

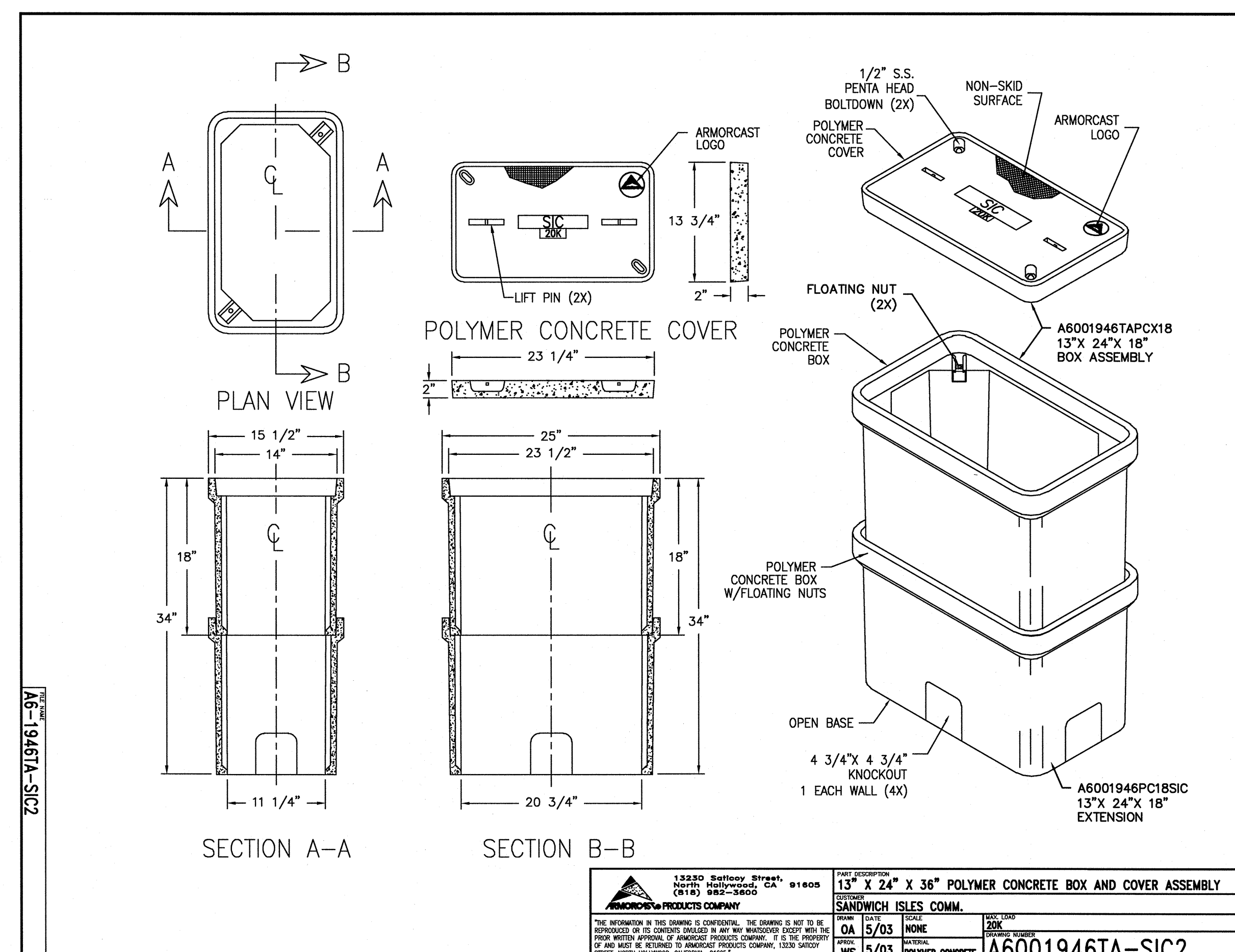
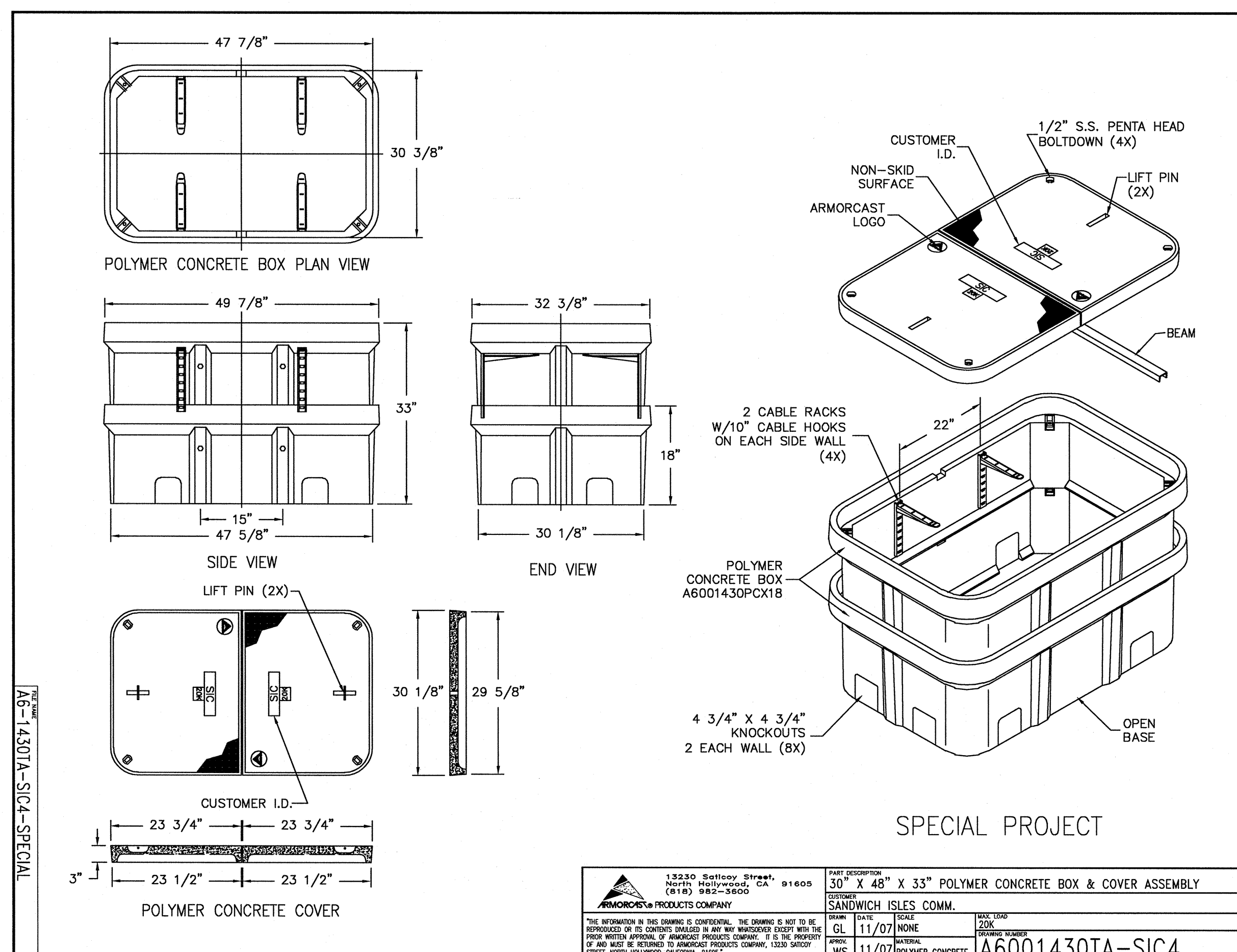
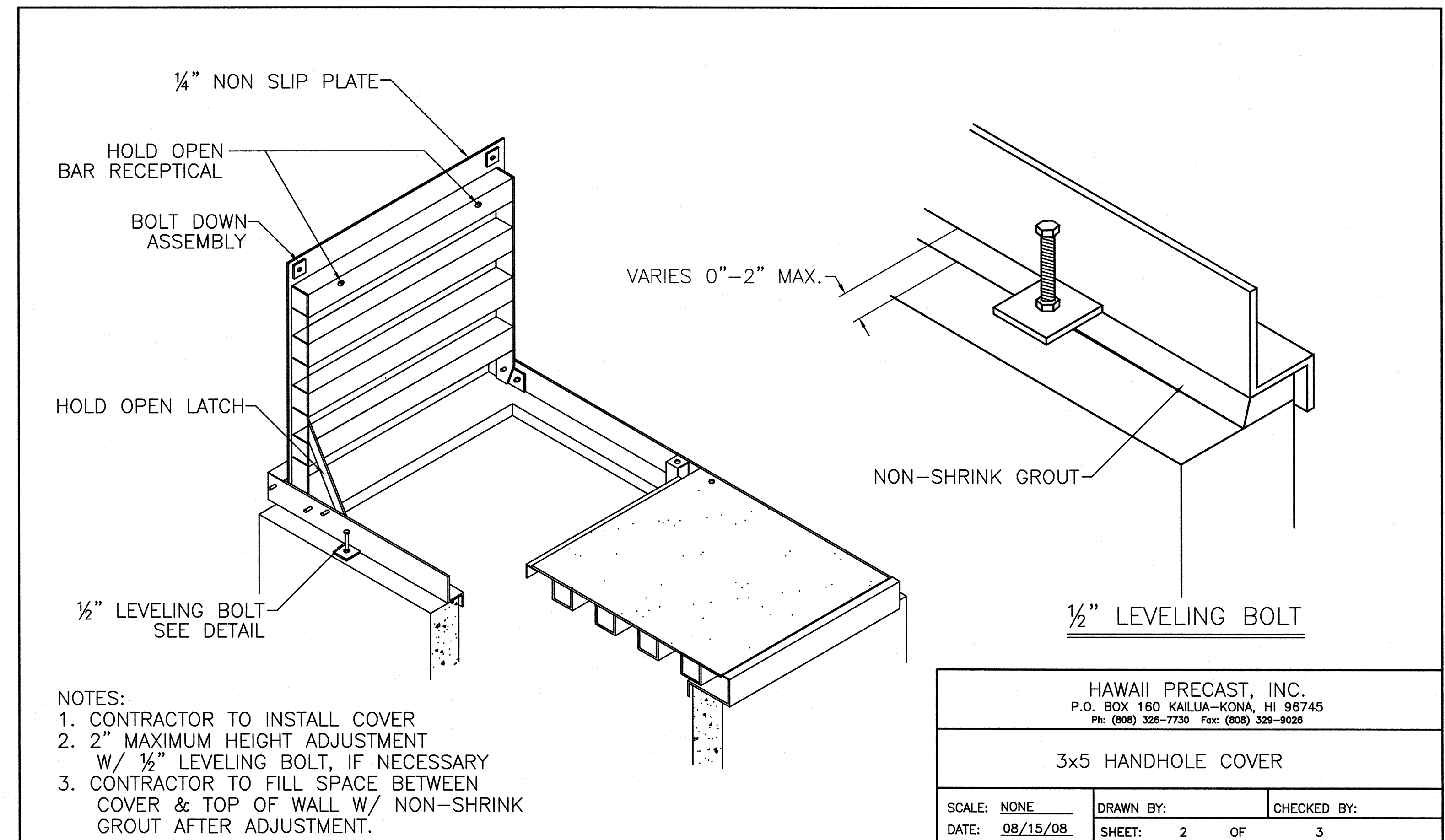
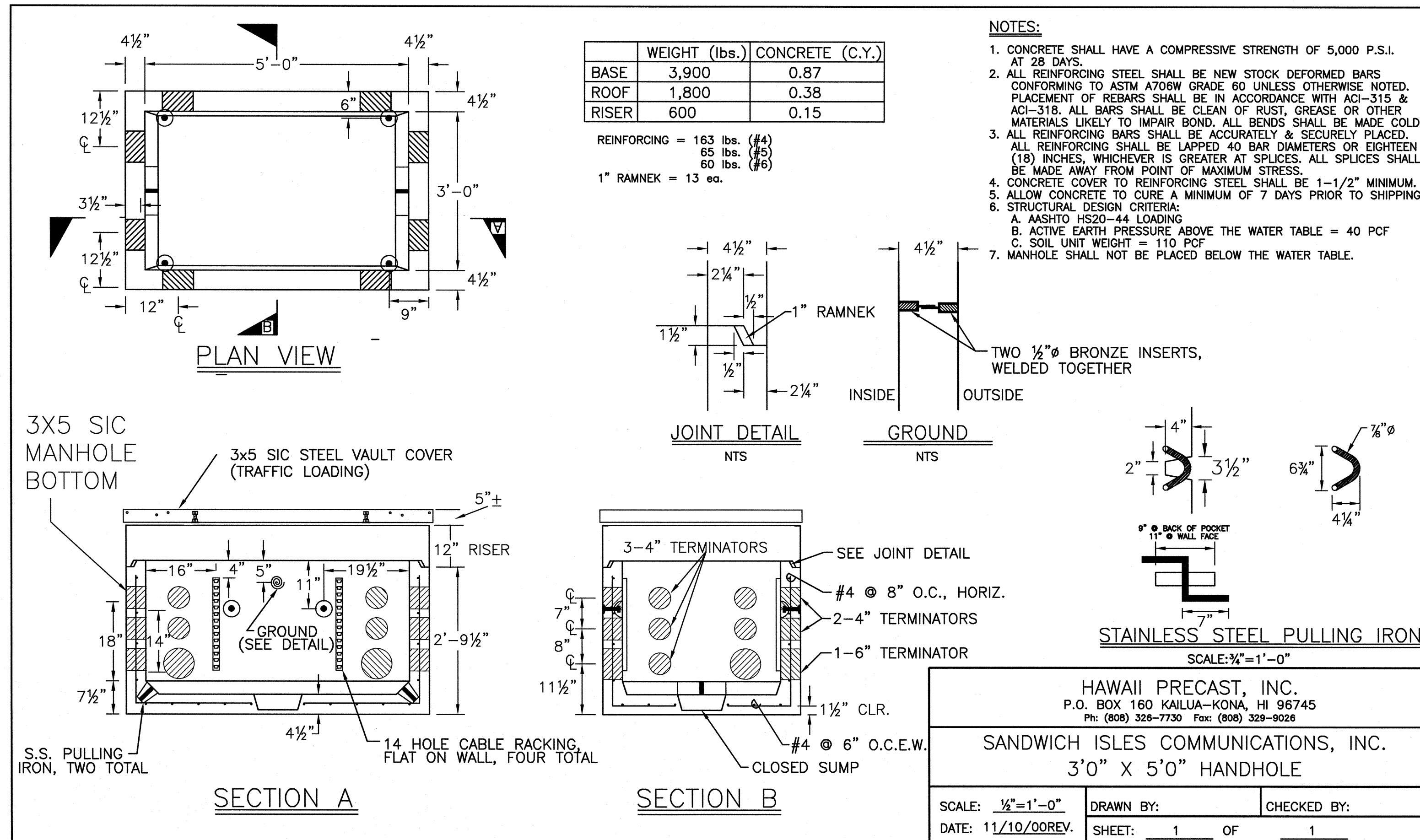
CONSTRUCTION NOTES

- GROUND ROD IS TO BE ON THE USER SIDE NOT HELCO SIDE OF THE PEDESTAL. TOP OF THE GROUND ROD TO BE 8" ABOVE COMPACTED LOWERED GRAVEL IN PAD AND LOCATED ON THE FRONT CATV SIDE.
- GROUND WIRE TO ORIGINATE FROM THE GROUND ROD AND TO BE CONNECTED TO HELCO SIDE THROUGH A MODIFIED HOLE IN THE CENTER PEDESTAL PLATE. GROUND WIRE SIZE WILL BE #6 CONDUCTOR.
- HELCO CONDUIT SHOULD BE EXTENDING 12" MIN. ABOVE CONCRETE PAD WILL BE ADJUSTED AT INSTALLATION
- CATV DUCT TO BE LOCATED AT FRONT OF PAD OPENING ON THE CATV SIDE OF THE PEDESTAL CENTER ACCESS AND TO BE 1" ABOVE THE RECESSED GRAVEL GRADE.
- LOCATION OF CONDUITS FOR BOTH CATV AND HELCO WILL VARY WITHIN OPEN AREA ACCORDING TO LOCATION AND DIRECTION OF THE CONDUIT SOURCE.
- CATV HOUSING TO BE ATTACHED BY DRILLED IN EXPANDABLE ANCHORS.
- HELCO SECONDARY FEEDER WILL BE SINGLE PHASE 220V FEEDER SIZE WILL BE MINIMUM #6 CONDUCTORS FOR RUNS LESS THAN 100'.
- POWER SUPPLY PEDESTAL WILL BE PROVIDED AND INSTALLED BY OCEANIC CABLE PERSONEL. ELECTRICAL CONTRACTOR TO INSTALL CONCRETE PAD, GROUND ROD, AND DUCTS JOINING CATV EQUIPMENT PAD TO HELCO TRANSFORMER PAD AND CATV PULL BOX DURING NEW DEVELOPMENT INFRASTRUCTURE CONSTRUCTION.
- ELECTRICAL CONTRACTOR TO COMPLETE ALL NECESSARY BACKFILL OF COMPACTED MATERIAL BEFORE CONSTRUCTION OF THE CONCRETE PAD.

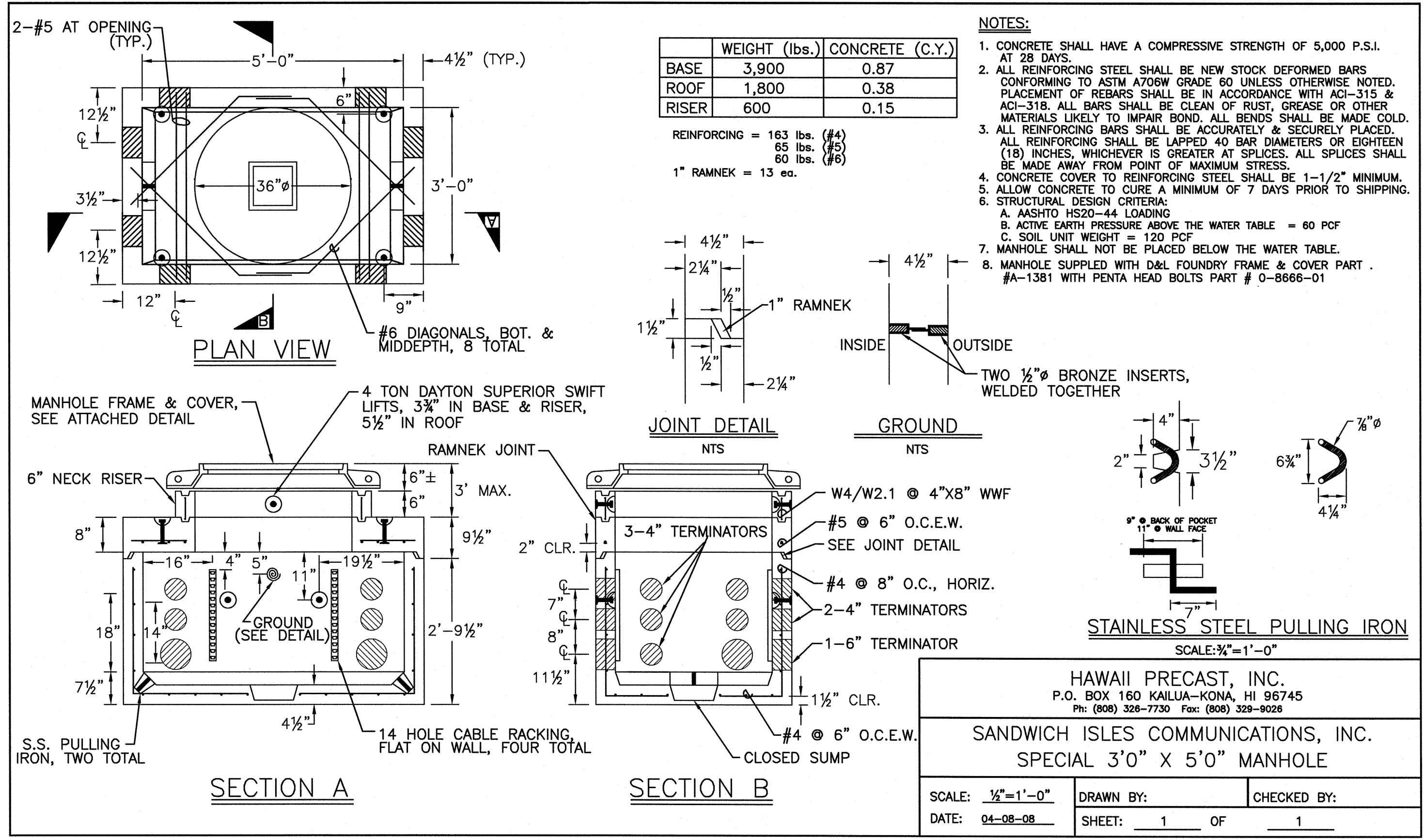
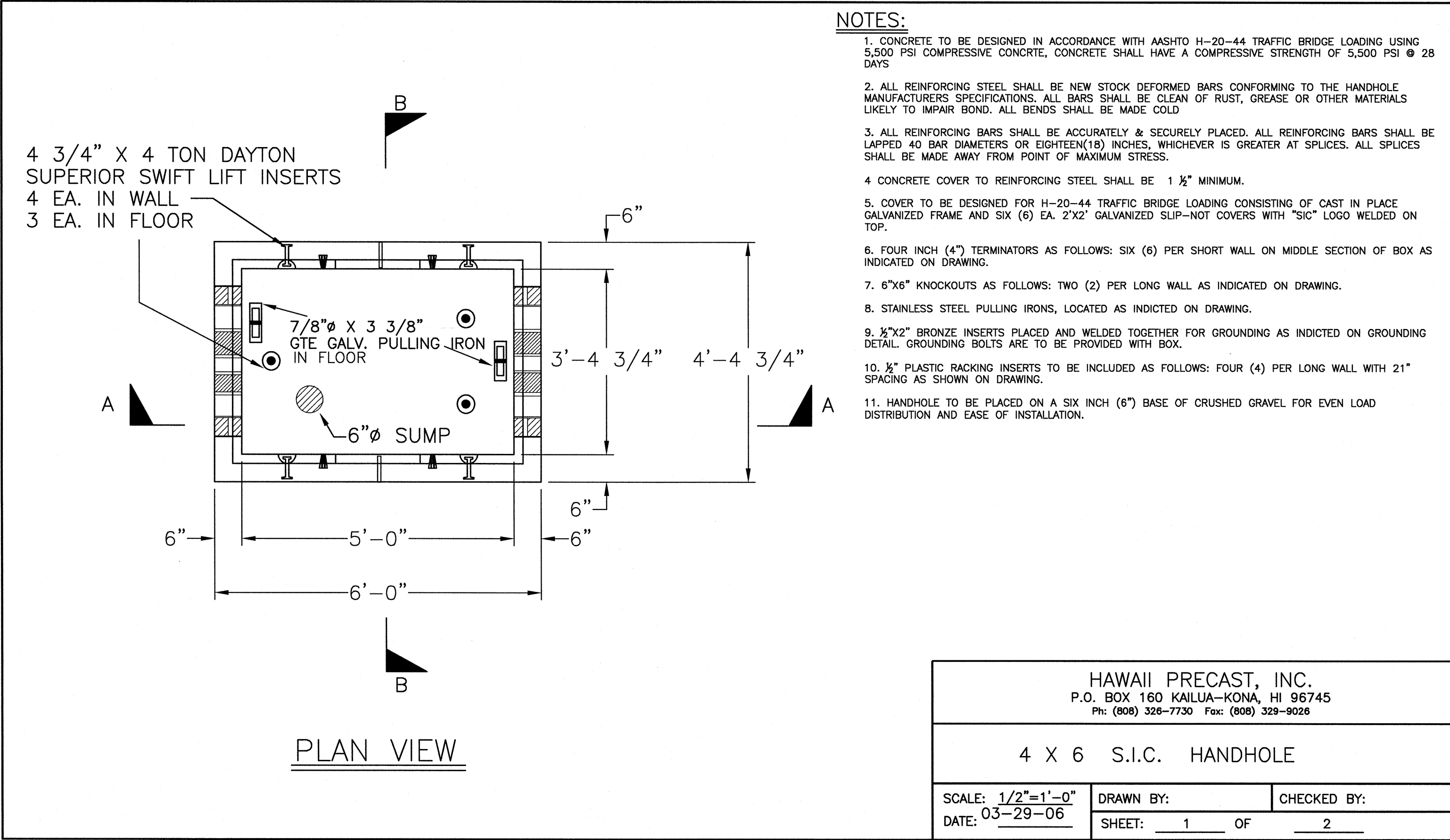


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. LICENSE EXPIRATION DATE: 04/30/12

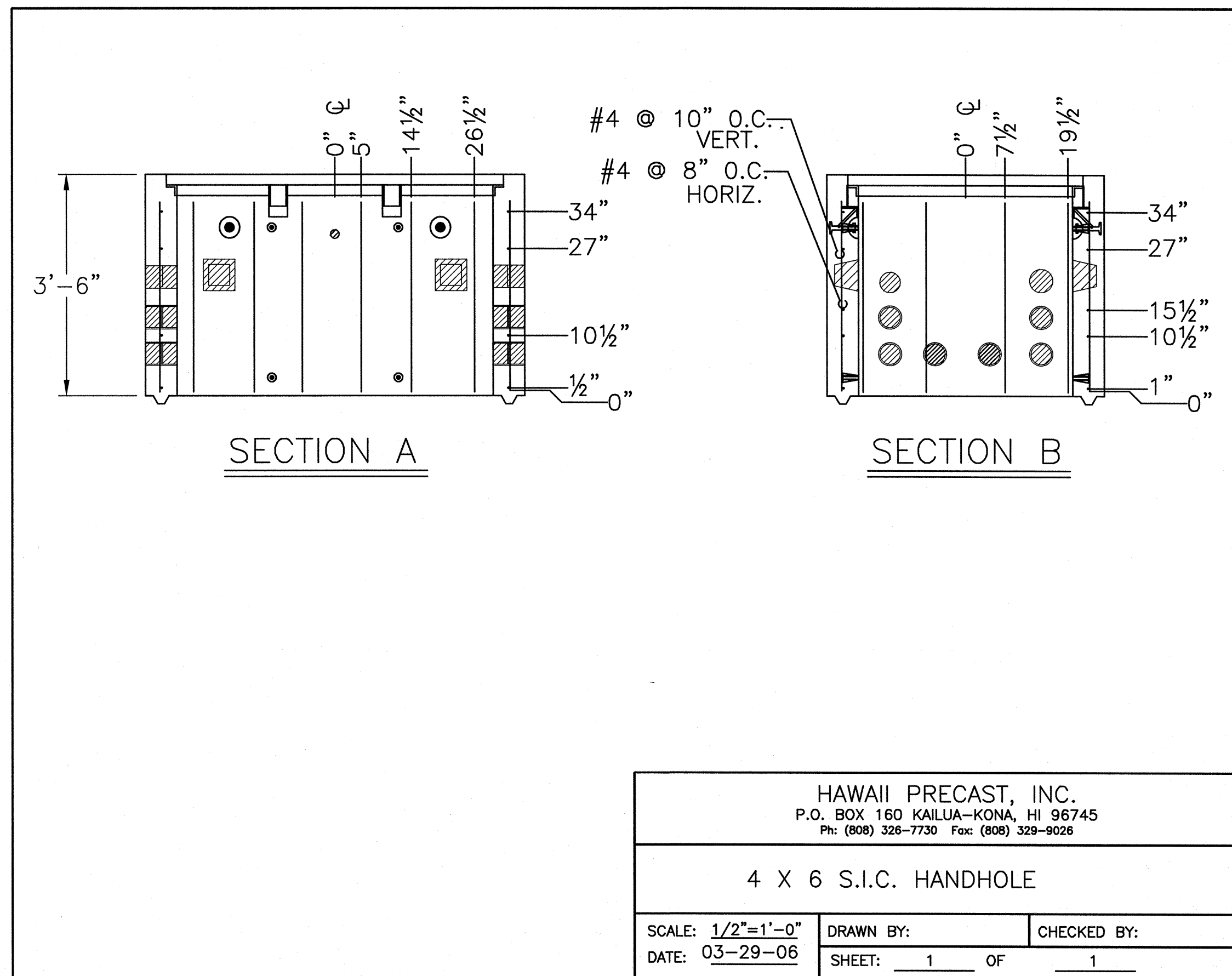
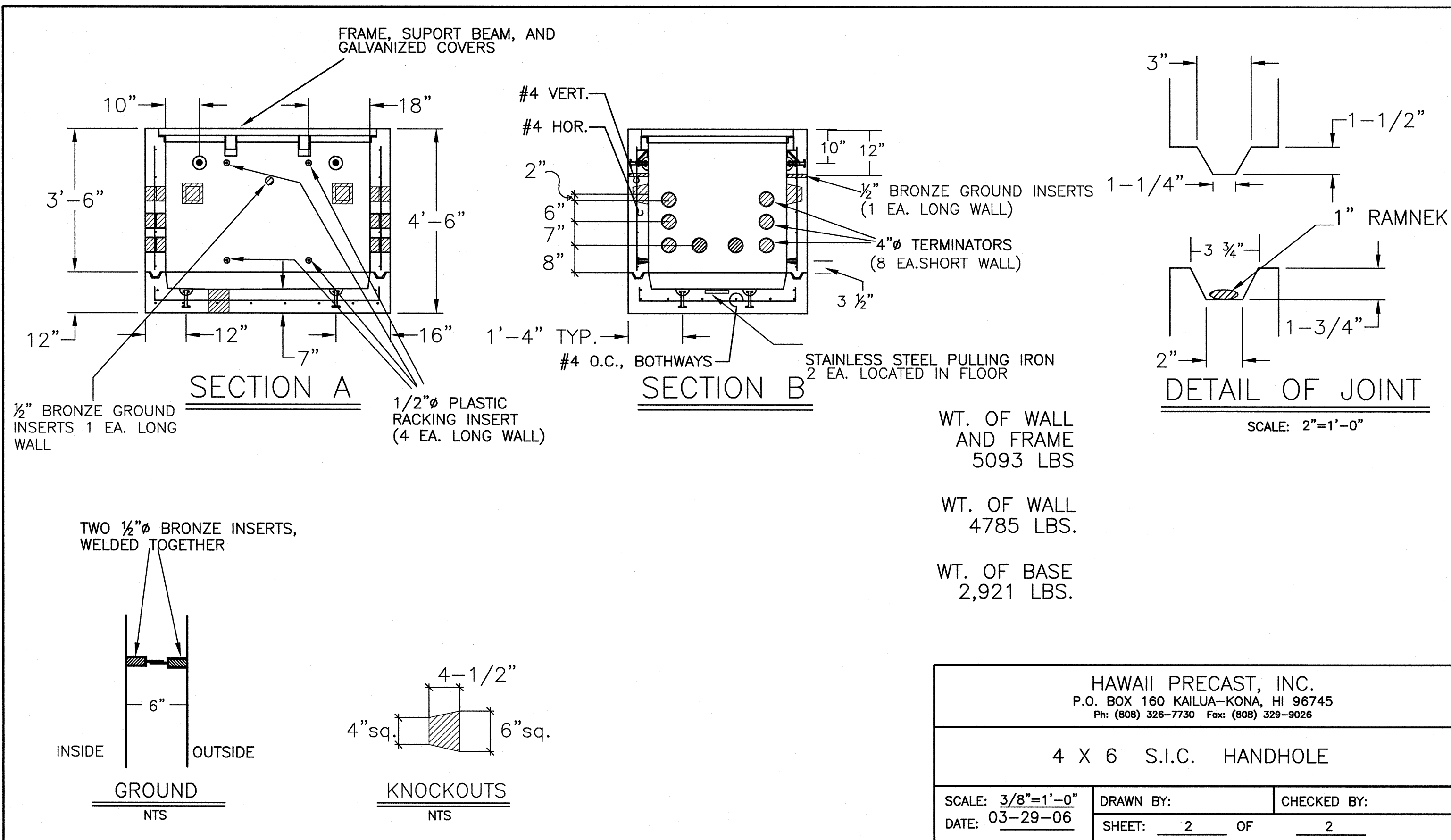
REVISION DATE	DESCRIPTION		MADE BY	APPROVED
<div>cp&e</div> <div>Community Planning and Engineering, Inc.</div> <div>Engineering Design Construction Management Infrastructure Planning</div> <div>1100 Alokua Street, Sixth Floor Honolulu, Hawaii</div>				
LALAMILO HOUSING PHASE 2A, INCREMENT 1 WAIMEA, SOUTH KOHALA, HAWAII SUBD. FILE NO. SUB-07-000603 OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS TAX MAP KEY: 6-6-01: 77				
CATV POWER SUPPLY				
DRAWN BY: CAD		ENGINEER: GDT	CHECKED BY: SS	
APPROVED:				
HAWAII ELECTRIC LIGHT CO.		DATE	DATE	
SANDWICH ISLES COMMUNICATIONS, INC.		DATE	DATE	



FOR REFERENCE ONLY



UM 3x5



UH 4x6

FOR REFERENCE ONLY

REVISION DATE	DESCRIPTION	MADE BY	APPROVED
Community Planning and Engineering, Inc.			
Engineering Design Construction Management Infrastructure Planning			
1100 Alakea Street, Sixth Floor Honolulu, Hawaii			
LALAMILO HOUSING			
PHASE 2A, INCREMENT 1			
WAIMEA, SOUTH KOHALA, HAWAII			
SUBD. FILE NO. SUB-07-000603			
OWNER & DEVELOPER: DEPARTMENT OF HAWAIIAN HOME LANDS			
TAX MAP KEY: 6-6-01: 77			
SIC REFERENCE DRAWINGS II			
DRAWN BY: CAD	ENGINEER: GDT	CHECKED BY: SS	
APPROVED:			
DATE		DATE	
SANDWICH ISLES COMMUNICATIONS, INC.			
DATE		DATE	

FILE	POCKET	FOLDER	NOL
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