CONSTRUCTION NOTES:

CONSTRUCTION NOTES WITHIN COUNTY RIGHT-OF-WAY:

- CONTRACTOR SHALL OBTAIN A PERMIT TO PERFORM WORK ON COUNTY HIGHWAYS FROM THE DEVELOPMENT SERVICES ADMINISTRATION TWO WEEKS PRIOR TO THE COMMENCEMENT OF WORK.
- STANDARD DETAIL DRAWINGS AND STANDARD SPECIFICATIONS OF THE DEPARTMENT OF PUBLIC WORKS SHALL BE INCLUDED AS PART OF THE CONSTRUCTION PLANS
- ALL CONSTRUCTION WORK SHALL STRICTLY CONFORM TO THE 2005 VERSION OF THE HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE PUBLIC WORKS
 CONSTRUCTION, AND THE SEPTEMBER 1984 "STANDARD DETAILS" FOR PUBLIC WORKS CONSTRUCTION OF THE DEPARTMENT OF PUBLIC WORKS, AS AMENDED.
- IF EXISTING UTILITIES, WHETHER OR NOT SHOWN ON PLANS, ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL AT HIS OWN EXPENSE BE REQUIRED TO REPAIR SUCH UTILITIES.
- REPAIR SUCH UILUIES.

 5. CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, AND OTHER PROTECTIVE DEVICES FOR THE PROTECTION, SAFETY AND CONVENIENCE OF THE PUBLIC, ACCORDING TO THE 2009 VERSION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE FOR STREETS AND HIGHWAY AND TO THE RULES AND RECULATIONS GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORKSITES AND/OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS ADOPTED BY THE HIGHWAY SAFETY CORDINATOR AND THE U.S. FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS".
- THE DIRECTOR PUBLIC WORKS AND/OR THE DIRECTOR OF THE DEPARTMENT OF WATER SUPPLY HAS THE RIGHT TO STOP CONSTRUCTION SHOULD ANY WORK BE FOUND CONTRARY TO THE APPROVED CONSTRUCTION PLAN OR DETRIMENTAL TO THE PUBLIC'S INTEREST.
- 7. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE DEVELOPMENT SERVICES ADMINISTRATION FIVE (5) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL
 CONFORMANCE WITH AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH AND COUNTY GRADING ORDINANCE.
- 9. THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS. THE COST INCLURRED FOR ANY NECESSARY REMEDIAL ACTION ORDERED BY THE DIRECTOR OF PUBLIC WORKS SHALL BE PAID BY THE CONTRACTOR.
- 10. CONSTRUCTION DEBRIS AND WASTES SHALL BE DEPOSITED AT AN APPROPRIATE WORK SITE. THE CONTRACTOR SHALL INFORM THE DIRECTOR OF PUBLIC WORKS OF THE LOCATION OF THE DISPOSAL SITES. THE DISPOSAL SITE MUST FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- 11. THE CONTRACTOR SHALL SUBMIT A TIFF AND FIVE (5) COPIES OF THE "AS-BUILT" DRAWINGS PRIOR TO THE FINAL APPROVAL OF THE IMPROVEMENTS. 12. IF THE CLEARANCE BETWEEN A WASTEWATER LINE AND A NEW OR EXISTING WATERLINE IS EIGHTEEN INCHES (18") OR LESS, THE WASTEWATER LINE SHALL BE CONCRETE—JACKETED IN ACCORDANCE WITH THE STANDARD DETAILS OF PUBLIC WORKS CONSTRUCTION DATED SEPTEMBER 1984, AS AMENDED.
- 13. SHOULD HISTORIC SITES SUCH AS WALLS, PLATFORMS, PAYEMENTS, OR MOUNDS, OR REMAINS SUCH AS ARTIFACTS BURIALS, CONCENTRATION OF SHELL OR CHARCOAL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IMMEDIATELY IN THE IMMEDIATE VICINITY OF THE FIND AND THE FIND SHALL BE PROTECTED FROM FURTHER DAMAGE. THE CONTRACTOR AND/OR LANDOWNER SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION (692–8015), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND AN APPROPRIATE MITIGATION MEASURE, IF NECESSARY.
- 14. THE COUNTY OF MAU IS NOT RESPONSIBLE FOR ANY PARK, ROADWAY, EASEMENT (INCLUDING BUT NOT LIMITED TO DRAIMAGE, SEWER, ACCESS, RECLAIMED WATER, OR AMGATION EASEMENT), OR ANY OTHER INTEREST IN REAL PROPERTY SHOWN ON THIS MAP OR SHOWN ON THESE PLANS, UNLESS THE MAU! COUNTY COUNCIL HAS ACCEPTED ITS DEDICATION BY A RESOLUTION APPROVED BY A MAJORITY OF COUNCIL MEMBERS AT A REGION OR SPECIAL MEETING OF THE MAU! COUNTY COUNCIL OR THE COUNTY OF MAU! HAS SIGNED ITS ACCEPTANCE VIA A CONVEYANCE DOCUMENT RECORDED IN THE BUREAU OF CONVEYANCES OF THE STATE OF HAWAII IN
- STEEL PLATE WARNING SIGNS ARE REQUIRED FOR ALL STEEL PLATES IN THE RIGHT-OF-WAY.
 WHEELCHAIR RAMP INSPECTION/CERTIFICATION FORMS SHALL BE REQUIRED FOR ALL NEWLY CONSTRUCTED RAMPS.
- 17. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE OF THERMOPLASTIC MATERIAL.
- A. TESTING OF MATERIALS SHALL BE CONDUCTED BY AN APPROVED INDEPENDENT TESTING AGENCY IN ACCORDANCE WITH ASTM STANDARD METHODS OR AS SPECIFIED BY THE DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION, AS FOLLOWS:
- i. EMBANKMENT/SELECT BORROW AND SUBGRADE MATERIALS: ONE (1) COMPACTION TEST PER 600 SQUARE YARDS PER LIFT
- ii. AGGREGATE SUBBASE COURSE: ONE (1) COMPACTION TEST PER 400 SQUARE YARDS; ONE (1) GRADATION AND SAND EQUIVALENT TEST PER LIFT PER PROJECT;
- iii. AGGREGATE BASE COURSE: ONE (1) COMPACTION TEST PER 300 SQUARE YARDS; ONE (1) GRADATION AND SAND EQUIVALENT TEST PER LIFT PER PROJECT; iv. ASPHALT CONCRETE PAVEMENT OR ASPHALT TREATED BASE COURSE; THREE (3) A.C. CORES FOR THICKNESS AN DENSITY TESTS PER PROJECT; v. TRENCH BACKFILL MATERIAL: ONE (1) TEST FOR EACH 300 LINEAL FEET OF TRENCH PER LIFT OF MATERIAL.
- B. CONTRACTOR SHALL SUBMIT ALL TESTING REPORTS INCLUDING RESULTS TO THE COUNTY'S INSPECTION AGENCY FOR REVIEW AND APPROVAL PRIOR TO COUNTY'S ACCEPTANCE OF WORK.
- THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE COUNTY OF ANY TESTING FAILURES AND CORRECT EACH FAILURE PRIOR TO PROCEEDING TO THE NEXT PHASE OF CONSTRUCTION. NONCOMPLIANCE WILL REQUIRE REMOVAL OF ALL SUBSEQUENT WORK TO CORRECT THE AREA OF FAILURE. ALL COSTS OF RE-TESTING, REMOVAL AND RECONSTRUCTION, SHALL BE BORNE BY THE CONTRACTOR.

GENERAL SITEWORK:

- 1. EACH PHASE OF ROAD CONSTRUCTION IS TO BE APPROVED BY THE D.P.W., D.S.A., PRIOR TO WORKING ON THE NEXT PHASE OF ROAD CONSTRUCTIO
- THE LATEST REVISIONS OF THE STANDARD DETAIL DRAWINGS AND STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION SHALL BE INCLUDED AS PART OF THE CONSTRUCTION PLANS.
- THE CONTRACTOR SHALL STRIPE STOP LINES, CROSSWALKS AND OTHER LINES, AS REQUIRED, AND SHALL INSTALL SIGNS IN ACCORDANCE WITH THE LATEST REVISIONS
 OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, DATED DECEMBER 2009."
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, AND OTHER PROTECTIVE DEVICES FOR THE PROTECTION, SAFERY, AND CONNERHINGE OF THE PUBLIC, ALL IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, DATED DECEMBER 2009."
- CONTRACTOR SHALL SUBMIT TO D.P.W., A STRIPING PLAN FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
- BENCH MARKS SHALL BE ESTABLISHED AND CERTIFIED BY A REGISTERED SURVEYOR, AND SUBMITTED TO THE DEVELOPMENT SERVICES ADMINISTRATION.

 THE CONTRACTOR SHALL MAINTAIN A "JOB SITE COPY" OF THE PLANS AT THE PROJECT SITE WHICH WILL RECORD ANY CHANGES MADE IN THE FIELD. COMPLETE
 "AS-BUILL" DRAWINGS STAMPED BY THE CONTRACTOR SHALL BE SUBMITTED AS A CONDITION FOR FINAL ACCEPTANCE OF THE PROJECT.
- 8. ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS SHALL BE CHECKED AND VERIFIED PRIOR TO THE START OF CONSTRUCTION, AND ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
- 9. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY AND FINISONMENTAL CHARTY.
- 10. WHEN TRENCH EXCAVATION IS ADJACENT TO OR UNDER EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STRABLIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE—INS AND SETTLEMENT, AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES WITH DEALINES, STRUTS OR UNDERPHININGS FULLY PROTECT IT FROM DAMAGE.

 11. THE CONTRACTOR SHALL RESTORE ALL IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION TO ITS ORIGINAL OR BETTER CONDITION.
- 12. SMOOTH RIDING CONNECTIONS SHALL BE CONSTRUCTED AT THE LIMITS OF NEW ROAD CONSTRUCTION, INCLUDING THE BEGINNING AND END OF PROJECT, CONNECTING APPROACHES, SIDE STREETS AND DRIVEWAYS AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
- 13. ALL SAW CUTTING WORK SHALL BE CONSIDERED INCIDENTAL TO ROADWAY EXCAVATION. THE CONTRACTOR SHALL CLEAN UP ANY CUTTINGS AND SHALL NOT WASH DOWN MATERIAL INTO THE STORM DRAIN OR SEWER SYSTEMS.
- 14. ALL WORK SPECIFIED IN THE CONTRACT BUT NOT LISTED SEPARATELY IN THE PROPOSAL SCHEDULE SHALL BE CONSIDERED INCIDENTAL TO OTHER VARIOUS CONTRACT ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.
- 15. ALL WORK TO REMOVE TEMPORARY FACILITIES BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS IN THE PROPOSA
- 16. ALL NECESSARY PERMITS FOR WORK WITHIN THE JURISDICTION OF THE COUNTY OF MAU! AND THE STATE OF HAWAII SHALL BE OBTAINED BY THE CONTRACTOR AT HIS OWN COST.
- 17. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND COUNTY, INCLUDING BUS SYSTEMS DIMSION, POLICE DEPARTMENT, FIRE DEPARTMENT, EMERGENCY MEDICAL SERVICES, AND DEPARTMENT OF HEALTH IN WRITING AT LEAST FIVE (5) DAYS BEFORE START OF CONSTRUCTION.
- 18. A MINIMUM OF 35" CLEAR WIDTH AND 80" HEADROOM CLEARANCE HEIGHT SHALL BE MAINTAINED ALONG SIDEWALK AND POTENTIAL WALKWAYS.

 19. THE CONTRACTOR SHALL PROVIDE FOR ACCESS TO AND FROM ALL EXISTING SIDE STREETS, DRIVEWAYS AND ADJACENT PROPERTIES AT ALL TIMES
- 20. THE CONTRACTOR IN ADDITION TO ANY FENCING REQUIRED FOR DUST AND EROSION MITIGATION, SHALL INSTALL ANY REQUIRED FENCING, AND TO IMPLEMENT ANY OTHER MEASURES, TO PROVIDE A SAFE AND SECURE CONSTRUCTION SITE.
- 21. ALL EXISTING DRIVEWAYS SHALL BE KEPT OPEN UNLESS ALTERNATE MEANS OF INGRESS/EGRESS ARE PROVIDED TO THE SATISFACTION OF BOTH THE PROPERTY OWNER AND THE COUNTY.
- 22. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN A SAFE AND PASSABLE CONDITION, OR ALTERNATE FACILITIES FOR PEDESTRIANS MUST BE CONSTRUCTED. ALL ALTERNATE FACILITIES TO BE ADA COMPLIANT. PEDESTRIAN CONNECTIVITY BETWEEN WALKWAYS AT INTERSECTIONS SHALL ALSO BE PROVIDED.
- 23. ALL WORK INCLUDING REPAIR OF DAMAGED PAVEMENT AND SHOULDERS SHALL BE INSPECTED AND APPROVED BY THE DEPARTMENT OF PUBLIC WORKS. ALL UNAPPROVED WORK SHALL BE CONSIDERED UNACCEPTABLE AND SHALL BE REWORKED AND CORRECTED AS DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS, AT THE CONTRACTOR'S EXPENSE.
- 24. DURING NON-WORKING HOURS, ALL TRENCHES SHALL BE COVERED WITH A SAFE NON-SKID BRIDGING MATERIAL AND ALL LANES SHALL BE OPENED TO PUBLIC VEHICULAR AND PEDESTRIAN TRAFFIC.
- 25. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORZED WITHIN COUNTY RIGHT-OF-WAY EXCEPT AT LOCATIONS DESIGNED IN WRITING AND APPROVED BY THE COUNTY ENGINEER.
- 26. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MINIMIZE OBSTRUCTIONS AND INCONVENIENCE TO THE PUBLIC AND HE SHALL HAVE UNDER CONSTRUCTION NO GREATER LENGTH OR AMOUNT OF WORK THAT HE CAN EXECUTE PROPERLY WITH DUE REGARD TO THE RIGHTS OF THE PUBLIC.
- 27. THE CONTRACTOR AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. THE COUNTY OF MAUI MAY REQUIRE SUPPLEMENTARY HEALINES AN INFESSIORS.
 - 28. PRIOR TO STARTING ANY EXCAVATION ACTIVITIES, THE CONTRACTOR SHALL CONTACT THE HAWA'I ONE CALL CENTER AT 1-866-423-7287.
- 29. CONTRACTOR (INCLUDING SITEWORK CONTRACTOR AND ALL SUB-CONTRACTORS) SHALL BE EXPECTED TO COORDINATE EARTHWORK ACTIVITIES SUCH THAT ALL ROCK ALONG BUILDING FOUNDATIONS, FOOTNICS, UTILITY (INCLUDING RIGGATOR) TERMICATOR) TERMICATORS, ETC. SHALL BE OVER-EXCAVATED AND REMOVED AS REQUIRED ALLOW ALL PROJECT IMPROVEMENTS ID BE PROPERTY INSTALLED AND COMPLETED (CONSISTENT WITH THE REQUIREMENTS IN THESE PROJECT SPECIFICATIONS AND SUBSURFACE INVESTIGATION REPORT). THE PROJECT GEOTECHNICAL ENGINEER SHALL BE NOTIFIED PRIOR TO COMMENCING WITH BACKFILL AND COMPACTION OPERA OF ANY OVER-EXCAVATED AREAS.
- 30. THE CONTRACTOR SHALL OBTAIN THE FOLLOWING PERMITS FROM THE DEVELOPMENT SERVICES ADMINISTRATION (D.S.A.) OF THE DEPARTMENT OF PUBLIC WORKS (D.P.W.), COUNTY OF MAUI, BEFORE ANY WORK IS BEGUN:
- "WORK TO PERFORM ON COUNTY HIGHWAY PERMIT", TWO (2) WEEKS PRIOR TO COMMENCEMENT OF WORK.
- "DRIVEWAY PERMIT", TWENTY-FOUR HOURS PRIOR TO COMMENCEMENT OF WORK ON ANY DRIVEWAY.
- C. "GRADING PERMIT", FOUR (4) WEEKS PRIOR TO COMMENCEMENT OF ANY CLEARING AND GRUBBING. A SATISFACTORY DUST AND EROSION CONTROL PLAN AND/OR OUTLINE SHALL BE SUBMITTED BY THE CONTRACTOR.

EXISTING UTILITIES:

- THE LOCATION, DEPTH AND TYPE OF THE VARIOUS EXISTING UTILITY LINES SHOWN ON THE CONSTRUCTION PLANS WERE DETERMINED ON THE BASIS OF THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION, DEPTH AND TYPE PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE EXISTING UTILITIES AS SHOWN ON THE CONSTRUCTION
 PLANS AND IN GROUND, AND NOT PROCEED WITH ANY FURTHER WORK UNTIL WRITTEN NOTIFICATION IS RECEIVED FROM THE ENGINEER.
- ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON PLANS SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION, AND IF DAMAGED DURING CONSTRUCTION, SHALL BE REPAIRED SOLELY AT CONTRACTOR'S EXPENSE.
- OKENIED AND UNDERGRUND UTILITIES MY EVIST MADNE ACROSS. AND IN THE VICINITY OF THE PROPOSED IMPROVEMENTS MAD MY NOT BE READ OF THE PROPOSED OF THE RESPECTIVE COUNTY OF STATE ARRESPONDING FOR CONTRICTION THE RESPECTIVE COUNTY OF STATE ARRESPONDING FOR S
- CONTRACTOR SHALL PERFORM A THOROUGH FIELD INVESTIGATION AND ANY EXISTING ITEMS OR IMPROVEMENTS TO BE RETAINED (INCLUDING BIT NOT LIMITED TO, HANDHOLES, MAINCLES, VALVES, VALVE BOXES, FIRE HYDRAYIS, LIGHT POLES, METERS, METER BOXES, LANDSCAPE BIRGILATION, ETC.), METHER OR NOT SHOWN ON THE PLANS, SHALL BE ADJUSTED TO NEW PINISH GRADE.
- 6. LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON PLANS AND/OR PROFILES, ARE APPROXIMATE ONLY, WERE DETERMINED ON THE BEST INFORMATION AVAILABLE, AND ARE BASED ON AVAILABLE CONSTRUCTIONS PLANS FOR SAME, ASSUMING STANDARD MINIMUM COVERS, AND YISBUE FIELD FEATURES. CONTRACTOR SHALL CONTINUE TO A THROUGH FIELD INVESTIGATION TO VERITY AND LICATION, DEPTH, SZE, AND TYPE OF ALL ENISTING UTILITIES, PRIOR TO COMMENCEMENT OF CONSTRUCTION. SHOULD ANY DISCREPANCIES OCCUR, CONTRACTOR SHALL IMMEDIATELY MOTIFY PORMERE BEFORE PROCEEDING ANY FURTHER WITH THE WORK.
- CONTRACTOR SHALL ADJUST ELEVATIONS OF ALL EXT'G. WATER, SEWER, DRAIN, ELECTRICAL, LANDSCAPING AND IRRIGATION TO MATCH FINAL ROADWAY PROFILE AND FINISH GRADES

ENVIRONMENTAL PROTECTION

- THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS
 AND OTHER AREAS. THE COSTS INCURRED FOR ANY NECESSARY REMEDIAL ACTION BY THE CHIEF ENVIRONMENTALIST SHALL BE BORNE BY
 THE CONTRACTOR.
- THE CONTRACTOR SHALL KEEP THE PROJECT AREA AND SURROUNDING AREAS FREE FROM DUST NUISANCE, ALL IN ACCORDANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. ALL COSTS SHALL BE BORNE BY THE CONTRACTOR
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL
 AND WATER QUALITY STANDARDS OF THE PUBLIC HEALTH REGULATIONS OF THE STATE DEPARTMENT OF HEALTH AND THE COUNTY'S GRADING
 OPENINACE.
- 4. ALL CUT AND FILL SLOPES SHALL BE SOODED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED OR WITHIN 14 DAYS OF LAST DISTURBANCE.
- CONSTRUCTION DEBRIS AND WASTES SHALL BE DEPOSITED AT APPROPRIATE SITES. THE CONTRACTOR SHALL INFORM THE OWNER OF THE LOCATION OF DISPOSAL SITES. THE DISPOSAL SITE SHALL ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS" AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL". BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
- 8. THE CONTRACTOR SHALL OBTAIN A COPY OF; AND COMPLY WITH NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (FILE NO. H. ?: FROM OWNER AND ITS REQUIREMENTS FOR THE PROJECT. THE CONTRACTOR SHALL NOT START CONSTRUCTION UNTIL NOTICE OF GENERAL PERMIT COVERAGE (NGPC) IS RECEIVED FROM THE DEPARTMENT OF HEALTH, STATE OF HAWAII AND HAS SATISFIED ANY OTHER APPLICABLE REQUIREMENTS OF THE MPDES PERMIT PROGRAM.
- O. IN ACCORDANCE WITH CHAPTER 11-55, WATER POLLUTION CONTROL AND CHAPTER 11-54, WATER QUALITY STANDARDS, TITLE 11, HAWAI'I ADMINISTRATIVE RULES, THE CONTRACTION SHALL BE RESPONSIBLE FOR ENSURING THAT THE BEST MANAGEMENT PRACTICE (BMP) TO MINIMIZE OR PREVENT THE DISCHARGE OF SEDIMENTS, DEBRIS AND OTHER WATER POLLUTANT INTO STATE WATERS IS PROVIDED AT ALL TIMES.

- STECS). THE DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE SEDURENT AND EROSION CONTROL ORDINANCE NO. 800.

 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISTAINING AND PAYING FOR ALL APPLICABLE PERMITS FROM THE DEPARTMENT OF HEALTH INCLUDING BUT NOT LIMITED TO NATIONAL POLLUTION DISCHARGES PROPE TO COMMENCING CONSTRUCTION. NPDES PERMIT FOR STORM WATER, HYDROGRATIC TEST AND DEWARERING DISCHARGES PROPE TO COMMENCING CONSTRUCTION. HYDES PERMIT SHALL BE REQUIRED PRIOR TO GRADING OR GRUBBING WORK OVER AN AREA OF ONE ACRE OR MORE.

 3. CONTRACTOR SHALL PREPARE A SITE SPECIFIC STORM WATER POLLUTION PREVIOUND PLAN (SWIPPP) IN ACCORDANCE WITH HAR, CHAPTER 11–55, APPENDIX C, SCOTION 7 PRIOR TO SUBMITHING THE NOI. CONTRACTOR SHALL COMPLY WITH ALL TERMS, CONDITIONS, AND REQUIREMENTS IN HAR CHAPTER 11–55, APPENDIX C. CONTRACTOR SHALL IMPLEMENT, OPERATE, AND MAINTAIN CONTRACTOR'S SWIPPP TO ENSURE THAT STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES WILL NOT VIOLATE HAR, CHAPTER 11–55, APPENDIX C.

 CHAPTER 11–55; AND HAR, CHAPTER 11–56, APPENDIX C.
- 1. BEST MANAGENET PRACTICES (BMTS) SHALL BE EMPICADE AT ALL TIMES TO THE MAXIMUM EXTENT PRACTICABLE TO PREVENT DAMAGE BY SEDIMENTATION, EROSION OR DUST TO STREAMS, WATERCOURSES, NATURAL AREAS AND THE PROPERTY OF OTHERS.

 15. IN ACCORDANCE WITH CHAPTER 11—46, COMMUNITY NOISE CONTROL, HAMPAI ADMINISTRATURE RULES, THE PROPERTY OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING PETENTE CONTROL MESSURES TO MINIMEZ OR PREVENT CONSIDER NOISE FROM IMPORTING THE RESOLUTION RELATED MOSE FROM IMPORTING THE RESOLUTION HEALTED MOSE FROM IMPORTING THE RESOLUTION FOR CONSTRUCTION WORK.
- CONTINUOUS DURING THE CONSTRUCTION WORK.

 THE PROPERTY MAY HARBOR RODERTS WHICH WILL BE DISPERSED TO THE SURROUNDING AREAS WHEN THE SITE IS CLEARED. IN ACCORDANCE WITH CHAPTER 11-26, ENTILED VECTOR CONTROL OF TITLE 11, HAR, THE APPLICANT SHALL ASCERTAIN THE PRESENCE OR ASSENCE OF RODENTS ON THE PROPERTY. SHOULD THE PRESENCE OF RODERTS ON THE APPLICANT SHALL ERADICATE THE RODERTS PRIOR TO CLEARING THE SITE.

PLAN NOTES FOR CHLORINATION OF WATER SYSTEM PIPELINES:

- WATER MAINS AND APPURTENANCES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651. ALL PROCEDURES AND MATERIALS (LIQUID CHLORINE OR CALCIUM HYPOCHLORITE) USED FOR THE CHLORINATION OF THE PROJECT SHALL CONFORM TO AWWA REQUIREMENTS.
- PRIOR TO CHLORIMATION, THE PROJECT PIPELINES SHALL BE THOROUGHLY CLEAVED. CLEANING OF LIERS 2. MAGGES BERRY REGIGNE USING FORM PIES. SHALLEFL LINES OAN BE FLUSHED IN ACCORDANCE WITH AWAR REQUIRELENTS IF ADECUMENT WATER SHIPPLY IS PROVIDED, OTHERWISE BY PIGGING. THE CONTRACTOR SHALL SUBMIT HIS PLAN FOR PIPELINE CLEANING, INCLUDING FITTING REQUIREMENTS FOR PIGGING, FOR APPROVAL PRIOR TO PROCEEDING.
- THE INTERIOR SURFACES OF THE PROJECT SHALL BE EXPOSED TO THE CHLORINATING SOLUTION FOR A MINIMUM OF 24 HOURS AND THE
 CHLORINE RESIDUAL SHALL NOT BE LESS THAN 10 PPM AFTER SUCH TIME.

- STATEM.

 FOLLOWING THE ACCEPTABLE FLUSHING OF THE HIGH CONCENTRATION CHLORINE SOLUTED, TO ASSECUTIVE SETS OF ACCEPTABLE SAMPLES SHALL BET TAKEN AT LEAST 24 HOURS APART FROM REPRESENTATION FOR THE THE HIGHEST AND SUBJECTED TO MICROBIOLOGIAL TESTS.

 PERFORMED BY A CERTIFIED LABORATORY APPROVED BY THE DEPARTMENT OF HEALTH. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED AND TESTED FROM EVERY 1,200 FEET OF THE NEW WATER MAIN, PLUS ONE SET FROM THE END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH. POSTURE RESULTS WILL NOT BE ACCEPTABLE AND THE CHRITE CHLORINATION PROCESS WILL BE REPORTED.
- ANALYSIS FOR RESIDUAL CHLORINE SHALL BE MADE IN ACCORDANCE WITH "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER", AMERICAN PUBLIC HEALTH ASSOCIATION, CURRENT EDITION.
- 9. MICROBIOLOGICAL TESTS SHALL BE MADE IN ACCORDANCE WITH "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER AMERICAN PUBLIC HEALTH ASSOCIATION, CURRENT EDITION.

 10. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH AN OF THE FOREGOING.

Signature

11/14/2017 9 Updoted Notes Per DSA on \$8/10/16 SUCCESSION AS CONSTRUCTION OF THIS PROJECT WILL ES LIABLES OF THE WHAT ADMINISTRATION AUGUSTATION ACCOUNT. ACCOUNT.

SIGNATURE DATE
THIS WORK WAS PREPINED BY ME OR UNDER MY
SUPERISON AND CONSTRUCTION OF THIS PROJECT

PLAN NOTES FOR WATER SYSTEM:

- 1. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF WATER SUPPLY (DWS), IN WRITING, ONE (1) WEEK PRIOR TO COMMENCEMENT OF WORK.
- ALL MATERIALS USED AND METHODS OF CONSTRUCTION OF WATER SYSTEM FACILITIES SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF DWS STANDARDS. CONTRACTOR SHALL OBTAIN THE LATEST REVISIONS OF THE DWS STANDARD DETAILS BEFORE COMMENCING CONSTRUCTION.
- ALL WATER SYSTEM WORK SHALL BE PERFORMED BY CONTRACTORS POSSESSING VALID STATE OF HAWAII CONTRACTOR'S LICENSES, REGARDLESS OF THE VALUE OF THE WORK.
- THE EXACT DEPTH AND LOCATION OF EXISTING WATERLINES, SERVICE LATERALS AND OTHER UTILITIES ARE NOT KNOWN. IT SHALL
 BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE SAME PRIOR TO TRENCHING FOR THE NEW WATERLINE. THE COST OF LOWERING,
 RELOCATING OR ADJUSTING EXISTING WATERLINES, SERVICE LATERALS AND OTHER UTILITIES SHALL BE CONSIDERED INCIDENTAL TO
 THE COST OF THE NEW WATERLINE, UNLESS NOTED OTHERWISE, AND WILL NOT BE PAID FOR SEPARATELY.
- CONCRETE FOR REACTION BLOCKS AND ANCHOR BLOCKS SHALL BE DWS CLASS 2500.
- THE MAXIMUM DISTANCE BETWEEN VALVE AND NUT AND TOP OF VALVE MANHOLE COVER SHALL BE THREE (3) FEET.
- THE CONTRACTOR SHALL SUBMIT A MATERIALS LIST TO DWS FOR APPROVAL PRIOR TO CONSTRUCTION.
- A THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY FITTINGS AND OTHER MATERILS AND EQUIPMENT REQUIRED FOR THE HOOK-UP. HE SHALL VERRY THE EACH LOCATION, DETH. YPE. AND CONDITION OF THE EXISTING LINE BEFORE ORDERING MATERIALS FOR THE HOOK-UP. HE SHALL, HOWEVER, CHECK WITH DWS BEFORE EXCAVATING FOR VERRICATION PURPOSES.
- B. WHENEVER FEASIBLE, MECHANICAL JOINT FITTINGS SHALL BE USED FOR BURIED APPLICATIONS, AND FLANGED JOINT FITTINGS SHALL BE USED FOR EXPOSED APPLICATIONS.
- AUTHORIZED DWS PERSONNEL MAY BE REQUIRED TO MAKE THE FINAL CONNECTION TO THE EXISTING LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY DWS FOR SAID WORK, INCLUDING THE COST OF PRESSURE TESTING AND DISINEFETION.
- D. IF THE DWS PROVIDES ONLY INSPECTION AND SUPERVISING OPERATORS, AND DOES NOT PROVIDE PERSONNEL FOR THE ACTUAL CONNECTION, THE CONTRACTOR SHALL PROVIDE ALL PIPEFITTERS AND LABORS TO MAKE THE CONNECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL EQUIPMENT AND LABOR FOR TRENCH EXCAVATION, BACKFLLING, CLEANING, AND CHLORINATION, PAVING, AND OTHER WORK NECESSARY TO COMPLETE THE HOOK-UP, AS DIRECTED BY AND TO THE SATISFACTION OF DWS.
- MINIMUM COVER OVER WATER MAIN, 6" DIAMETER OR LARGER, SHALL BE 3'-0". MINIMUM COVER FOR 4" DIAMETER SHALL BE 2'-6". MINIMUM COVER FOR DIAMETERS LESS THAN 4" SHALL BE 1'-6". BOLTS FOR EXPOSED FLANGED DUCTILE IRON PIPE JOINTS SHALL BE EITHER SILICON BRONZE BOLTS AND NUTS OR 316 STAINLESS STEEL BOLTING WITH THE HEAVY DUTY STAINLESS STEEL NUTS (ONLY) FURNISHED WITH TRIPAC 2000 BLUE COATING SYSTEM. ANTI-SEZES STALL NOT BE USED. T-BOLTS FOR DUCTILE IRON MECHANICAL JOINT (MJ) PIPE AND FITTING CONNECTIONS IN UNDERGROUND SITUATIONS SHALL BE ONE OF THE FOLLOWING SYSTEMS:
- A. 316 STAINLESS STEEL T-BOLTS WITH THE HEAVY DUTY STAINLESS STEEL NUTS (ONLY) FURNISHED WITH TRIPAC 2000 BLUE COATING SYSTEM. ANTI-SEIZE SHALL NOT BE USED.
- B. COR-TEN T-BOLTS AND NUTS WITH HIGH GRADE ZINC SACRIFICIAL ANODES, EQUIVALENT TO "DURATRON" SACRIFICIAL "SAC-NUT"
 MODULES, INSTALLED ON THE NUTS FOR ALL STANDARD COR-TEN T-BOLTS.
- C. COR-TEN T-BOLTS AND NUTS BOTH FACTORY COATED WITH TRIPAC 2000 BLUE COATING SYSTEM BY "TRIPAC FASTENERS ALL BURIED METALS SHALL BE WRAPPED WITH POLY-WRAP. FOR ALL BURIED INSTALLATIONS OF DUCTILE IRON PIPE AND FITTINGS, POLY-WRAP IS REQUIRED EXCEPT WITHIN CONCRETE JACKETS.
- LUBRICATE HYDRANT NOZZLE THREADS WITH NON-TOXIC GREASE
- 12. LIGIBICATE HIDWAIT NOZZEE INFROMOS WITH FOUND TOKEASE.

 13. THE CONTRACTOR SHALL PAINT AND NUMBER THE FIRE FORATT. NUMBERING TO BE FURNISHED BY DWS.

 14. WATER MAINS AND APPUREDANCES SHALL BE SUBJECT TO HYDROSTATIC TESTING IN ACCORDANCE WITH THE LATEST REVISION OF AWAY GOOD, UNDER THE "HYDROSTATIC ESTENG" SECTION, TO A PRESSURE OF AT LEAST 1.5 TIMES THE WORKING PRESSURE. UNLESS OTHERWISE STATED IN THE CONSTRUCTION DOCUMENTS OR LIMITED BY THE PRESSURE RATING OF EQUIPMENT, THE PRESSURE TEST AND LEAGUE ESTS AND LEAGUE ESTS AND LEAGUE ESTS AND LEAGUE TEST AND LEAGUE EST PRESSURE AS A STATE OF THE WATER STSTEM PRIOR TO ACCEPTANCE.
- THE CONTRACTOR SHALL SUBMIT TWO SETS OF RECORD DRAWINGS VIA A CONSULTANT PRIOR TO ACCEPTANCE OF THE WATER SYSTEM. AN ELECTRONIC IMAGE FILE IN TIF FORMAT SHALL BE PROVIDED TO THE DWS FOR ALL PROJECTS.

CLEARING AND GRUBBING:

NO CLEARING AND GRUBBING MATERIALS SHALL BE DEPOSITED IN COUNTY SANITARY LANDFILLS. CONTRACTOR SHALL MAKE THEIR OWN ARRANGEMENTS FOR SATISFACTORY DEPOSIT OF SAME.

EXISTING GRADES:

EXISTING GRADES SHALL BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH GRADING WORK. SHOULD ANY DISCREPANCIES BE DISCOVERED IN THE EXISTING GRADES OR DIMENSIONS GIVEN ON THE PLANS, THE CONTRACTOR SHALL MIMEDIATELY NOTIFY THE EXONICER BEFORE PROCEEDING FUTHER WITH ANY WORK, OTHERMISE HE WILL BE HELD RESPONSIBLE FOR ANY COST INVOLVED IN CORRECTION OF CONSTRUCTION PLACED DUE TO SUCH DISCREPANCIES.

EROSION CONTROL:

THE FOLLOWING MEASURES SHALL BE TAKEN TO CONTROL EROSION DURING THE SITE DEVELOPMENT PERIOD:

1. MINIMIZE TIME OF CONSTRUCTION.

- 2. RETAIN EXISTING GROUND COVER UNTIL LATEST DATE TO COMPLETE CONSTRUCTION. EARLY CONSTRUCTION OF DRAINAGE CONTROL FEATURES.
- USE TEMPORARY AREA SPRINKLERS IN NON-ACTIVE CONSTRUCTION AREAS WHEN GROUND COVER IS REMOVED.
 STATION WATER TRUCK ON SITE DURING CONSTRUCTION PERIOD TO PROVIDE FOR IMMEDIATE SPRINKLING, AS NEEDED, IN ACTIVE CONSTRUCTION ZONES (WEEKENDS AND HOLIDAYS INCLUDED).
- 6. USE TEMPORARY BERMS AND CUT-OFF DITCHES, WHERE NEEDED, FOR CONTROL OF EROSION
- GRADED AREAS SHALL BE THOROUGHLY WATERED AFTER CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY AND ON WEEKENDS. 8. ALL CUT AND FILL SLOPES SHALL BE SODDED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED.

HISTORICAL PRESERVATION NOTES:

- SHOULD HISTORIC SITES SUCH AS WALLS, PLATFORMS PAVEMENTS AND MOUNDS OR REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATION OF CHARCOAL OR SHELLS ARE EVOLUMERED DURING CONSTRUCTION WORK, WORK SHALL CASE IN THE MINE DAY CHARCOAL SHELLS ARE EVOLUMED FROM FURTHER DAMAGE. THE CONTRACTOR SHALL IMMEDIATELY CONTRACT HE STORE CRESERVATION DIMISION (245-5169), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND AN APPROPRIATE MINICATION MOUNTED.
- THE CONTRACTOR SHALL ESTABLISH ON THE HEAU/RETENTION BASIN LOT, PERMANENT 60 FOOT WIDE AND 100 FOOT WIDE BUFFER AND ADDRESS AND THE FEBRUARY OF THE 60 FOOT WIDE BUFFER TO THE 60 FOOT THE FOOT THE FEBRUARY OF THE FOOT TH
- SHOULD CALCIUM HYPOCHLORITE BE USED, NO SOUD AND/OR UNDISSOLVED PORTION OF THE COMPOUND SHALL BE INTRODUCED INTO ANY SECTION OF THE 24-HOUR DISINFECTION PERIOD. REPRESENTATIVE SAMPLES SHALL BE TAKEN AND ANALYZED TO ASSURE A CHLORINE THE DIRECTION.

 AT THE END OF THE 24-HOUR DISINFECTION PERIOD. REPRESENTATIVE SAMPLES SHALL BE TAKEN AND ANALYZED TO ASSURE A CHLORINE THE DIRECTION. MEASUREMENTS FOR CHLORINE RESIDUAL TEST SHALL BE TAKEN AND ANALYZED TO ASSURE A CHLORINE THE DIRECTION. MEASUREMENTS FOR CHLORINE RESIDUAL TEST SHALL BE TAKEN AND ANALYZED TO ASSURE A CHLORINE THE DIRECTION. MEASUREMENTS FOR CHLORINE RESIDUAL TEST SHALL BE TAKEN AND ANALYZED TO ASSURE A CHLORINE THE DIRECTION. MEASUREMENTS FOR CHLORINE RESIDUAL TEST SHALL BE THOROUGHLY PLUSHED AND FILLED WITH POTABLE WATER SHALL CONTACT OWNER'S ARCHAEOLOGICAL CONSULTANT.

 5. SHOULD THE EXISTINE POTABLE WATER SYSTEM AND ADAIN TESTED FOR CHLORINE RESIDUAL THE PROJECT SHALL CONTACT OWNER'S ARCHAEOLOGICAL CONSULTANT A MINIMUM OF FOUR (4) DAYS PRIOR TO THE BEGINNING OF THE THE THE WATER IN THE PROJECT HAS A COMPANABLE OF THE THE WATER THE WATER IN THE PROJECT HAS A COMPANABLE OF THE THE WATER TO BE THE THE WATER IN THE PROJECT HAS A COMPANABLE OF THE THE WATER TO BE THE THE THE WATER TO BE THE THE WATER TO BE TH



KUALONO SUBDIVISION TITLE CONSTRUCTION NOTES

DKO RMA
DESIGNED BY CHECKED BY 04004 20.01 WAN/WIS RMA
DRAWN BY APPROVED BY 6-28-16 AS NOTED

CONSTRUCTION NOTES:

SITE STRUCTURES:

MATERIALS DATA:

CONCRETE: f'c = 4,000 P.S.I. (MIN.) CONC. MASONRY UNIT (CMU): ASTM C90, GRADE N, f'm = 1,500 P.S.L. (MIN.) MORTAR: ASTM C270, TYPE S, f'c = 1,800 P.S.I. (MIN.)

GROUT: ASTM C476, f'c = 3,000 P.S.I. (MIN.)

STEEL REINFORCEMENT: ASTM A615 GRADE 60

FRAMING LUMBER: DOUGLAS FIR/LARCH, GRADE MARKED PER WCLIB SPECIFICATIONS, NO. 2 OR BETTER

FOUNDATIONS AND LOAD DATA (APPROXIMATE ONLY):

WATER UNIT WEIGHT: 62 PCF BACKFILL AND SUBGRADE: MOIST UNIT WEIGHT: 110 PCF INTERNAL FRICTION ANGLE: # =

EQUIVALENT LATERAL FLUID PRESSURE: ACTIVE STATE: LEVEL BACKFILL: 40 PCF SLOPING BACKFILL: 50 PCF RESTRAINED CONDITION: 55 PCF

PASSIVE STATE: LEVEL BACKFILL: 300 PCF

ADDITIONAL DESIGN SURCHARGE: 50 PSF

FRICTIONAL COEFFICIENT: H = 0.40

ALLOW. BEARING PRESSURE: qcllow = 3,000 P.S.F.

- DESIGN CODES (INCLUDING ALL LATEST AMENDMENTS THERETO):

 •ACI 318-11, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY"
- · AASHTO "LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION" (WHERE APPLICABLE)
- •SEI / ASCE 7-02, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 2ND EDITION" INTERNATIONAL CODE COUNCIL, "INTERNATIONAL BUILDING CODE, 2006 EDITION", INCLUDING ALL MAUI COUNTY AMENDMENTS THERETO (CHAPTER 16.26B OF MAUI COUNTY CODE).

AT ALL CONSTRUCTION JOINTS, AS SHOWN AND ALLOWED ON THE DRAWINGS, WHEN CONCRETE IS PLACED AGAINST PREVIOUSLY MARDENED CONCRETE, THE INTERFACE SHALL BE CLEAN, FREE OF LATTANCE, AND INTERNITIONALLY PROUBLENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4 INCH. CONTRACTOR SHALL APPLY EPOXY-MODIFIED, CEMENTITIOUS BONDING AGENT TO PREPARED JOINT PRIOR TO PLACING FRESH CONCRETE AGAINST EXISTING CONCRETE IN ACCORDANCE WITH ALL MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS ("SIKA ARMATEC 110 EPOCEM" OR APPROVED EQUAL).

PLACEMENT OF REINFORCING STEEL IN RETAINING WALL STEMS:

THE CONTRACTOR SHALL VERIFY TO THE OWNER'S REPRESENTATIVE OR STRUCTURAL ENGINEER (TO BE RETAINED BY OWNER) THAT THE VERTICAL TENSION ROINFORCEMENT IS PROPERLY POSITIONED IN ACCORDANCE WITH THE DIMENSIONS SPECIFIED ON THE CONSTRUCTION PLANS:

1. DURING PLACEMENT OF THE FIRST COURSE OF 8" CMU AND 12" CMU (WHERE OCCURS) FOR CMU WALLS. 2. UPON COMPLETION OF FORMING AND PROR TO PLACEMENT OF CONCEPTE FOR REINFORCED CONCRETE WALLS. A WRITTEN RECORD OF THIS OBSERVATION SHALL BE PROVIDED TO THE ENGINEER WITHIN TWO (2) WORKING DAYS.

ALL SPLICES, AS SHOWN AND ALLOWED ON THE DRAWINGS, BUT NOT OTHERWISE SPECIFIED, SHALL BE LAPPED 1.3 TIMES THE DEVELOPMENT LENGTH (i_0) OF THE SMALLER LAPPED BARS AND SHALL BE STAGGERED SUCH THAT NOT MORE THAN 50% OF THE BARS ARE LAP—SPLICED WITHIN THE REQUIRED LAP LENGTH. BAR SPLICES SHALL BE LOCATED MANY FROM CONSTRUCTION JOINTS.

CONTRACTOR SHALL NOT COMMENCE BACKFILLING, NOR IMPOSE ANY LOAD UPON THE STRUCTURE OUTSIDE OF TIS OWN WEIGHTS, UNTIL MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 3,000 P.S.L. (OR OTHERWISE SPECIFIED) HAS BEEN VERRIFIED BY ASTN. G3.1 TEST CYLINDER. CONTRACTOR SHALL LIMIT THE CONSTRUCTION LIVE LOADS DURING THE PLACEMENT AND COMPACTION OF THE BACKFILL BY USING SMALLER COMPACTION EQUIPMENT AS REQUIRED. CONTRACTOR SHALL PROVIDE ANY LATERAL SUPPORT AS REQUIRED DURING CONSTRUCTION FOR CONSTRUCTION LIVE LOAD SURCHARGES.

FORM AND FALSEWORK REMOVAL (MINIMUM ELAPSED TIME):

COLUMNS AND VERTICAL WALL SURFACES:		
MAXIMUM HEIGHT 20 FT.	3	DAYS
HEIGHT GREATER THAN 20 FT.	7	DAYS
VERTICAL SIDES OF BEAMS	2	DAYS
SUPPORT UNDER ARCHES, BEAMS AND SLABS	. 14	DAYS
FOOTING SIDES (IF NOT CAST AGAINST EARTH)	24	HOURS

FOUNDATION AND SUBGRADE:

THE FOUNDATIONS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE SOILS ENGINEER PRIOR TO PLACING ANY STEEL REINFORCEMENT OR CONCRETE, TO VERIFY THAT THE ENCOUNTERED SUBSURFACE CONDITIONS ARE IN ACCORDANCE WITH THE DESIGN ASSUMPTIONS. UNSUITABLE MATERIALS BELOW ALL STRUCTURES SHALL BE REMOVED TO A MINIMUM DEPTH OF 1"-0" OR AS REQUIRED BY THE SOILS ENGINEER AND REPLACED WITH ACCEPTABLE GRANULAR MATERIALS. INCLUDING MATERIALS AS CALLED FOR ON THE PLANS, TO THE SAINSACTION OF THE SOILS ENGINEER. ALL MATERIALS BELOW AND ADMICTNIT OSTRUCTURES, INCLUDING SUBGRADE, SHALL BE COMPACTED TO A MINIMUM OF 95% ASTM D1557 RELATIVE COMPACTION.

FORM AND FALSEWORK REMOVAL (MINIMUM ELAPSED TIME):

COLUMNS AND VERTICAL WALL SURFACES:		
MAXIMUM HEIGHT 20 FT.	. 3	DAYS
HEIGHT GREATER THAN 20 FT.	. 7	DAYS
VERTICAL SIDES OF BEAMS	. 2	DAYS
SUPPORT UNDER ARCHES, BEAMS AND SLABS	14	DAYS
FOOTING CIDES (IF NOT OVER ACCURET FARTH)		110110

FOUNDATION AND SUBGRADE:

THE FOUNDATIONS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE SOILS ENGINEER PRIOR TO PLACING ANY STEEL REINFORCEMENT OR CONCRETE, TO VERIEY THAT THE ENCOUNTERED SUBSURFACE CONDITIONS ARE IN ACCORDANCE WITH THE DESIGN ASSUMPTIONS. UNSUTTABLE MATERIALS BELOW ALL STRUCTURES SHALL BE REMOVED TO A MINIMUM DEPTH OF 1'-0' OR AS REQUIRED BY THE SOILS ENGINEER AND REPLACED WITH ACCEPTABLE GRANULAR MATERIALS, BLOW AND ADJACENT TO STRUCTURES, INCLUDING SMATERIALS AS CALLED FOR ON THE PLANS, TO THE SATISFACTION OF THE SOILS ENGINEER. ALL MATERIALS BELOW AND ADJACENT TO STRUCTURES, INCLUDING SMORPACE, STALL BE COMPACTION OF 95% ASTIM DIS57 RELATIVE COMPACTIONS.

CONCRETE SURFACE FINISH:

CONCRETE SOURTACE FINISH:

CONCRETE SAULA EF PLACED AND COMPACTED TO PRODUCE A SURFACE OF EVEN TEXTURE, FREE FROM YOLDS, WATER OR AIR POCKETS, AND SO THAT THE COASES ACCRECATE IS FORCED AWAY FROM THE FORMS TO LEAVE A MORTRAS RUSTRACE. ALL FORM BOLTS AND ITES SHALL BE REMOVED TO A DEPTH OF AT LEAST ONE (1) MOH BELOW THE SUPFACE OF THE CONCRETE AND THE RESULTING HOLES OR DEPRESSIONS SHALL BE CLEAVED. WETTED AND FILLED WITH MORTRA. THITED AS REQUIRED. ALL SURFACES EXPOSED TO WES HALL BE RUBBED TO OBTAIN SATISFACTORY COLOR MATCH TO THE SURROUNDING CONCRETE. ALL FINS AND OTHER REGUISTION OF STANING SHALL BE REMOVED. ALL POCKETS AND PHINCLES SHALL BE FILLED WITH MORTRA. ANY DISCLORATION OR STANING SHALL BE REMOVED. ALL POCKETS AND PHINCLES SHALL BE FILLED WITH MORTRA. ANY DISCLORATION OR STANING SHALL BE REMOVED. FROM ALL SURFACES EXPOSED TO VEW. ALL EXPOSED SURFACES SHALL THEN BE RUBBED TO PRODUCE A SURFACE SURFACE SHOULD SHALL BE REMOVED. BE SURFACES SHALL THEN BE RUBBED TO PRODUCE A SURFACE SURFACE SHOULD SHALL SHALL BE FROM UNSIGHTLY BULGES AND DEPRESSIONS DUE TO FORM IMPRESSIONS AND OTHER IMPERFECTIONS.

PRECAST MEMBERS:

FOR PORTIONS OF THE STRUCTURE THAT WILL BE PRECAST, EXTREME CARE SHALL BE EXERCISED IN HANDLING, STORNG, MOVING, AND ERECTING PRECAST CONCRETE MEMBERS TO AVOID TWISTING, RACKING, OR OTHER DISTORTION THAT WOULD RESULT IN CRACKING OR DAMAGE TO THE MEMBERS. PRECAST MEMBERS SHALL BE HANDLED, TRANSPORTED AND ERECTED IN AN UPRIGHT POSITION AND THE POINT OF SUPPORT AND DIRECTION OF THE RECENTIONS WITH RESPECT TO THE MEMBERS SHALL BE APPROXIMATELY THE SAME AS WHEN THE MEMBER IS IN ITS THAT POSITION. UNITS DAMAGED BY IMPROPER STORING OR HANDLING SHALL BE REPLACED BY THE CONTRACTOR, AT THE CONTRACTORS EXPENSE.

ENDIRECTING FABRICS AND GEOTEXTILES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE REQUIREMENTS HEREIN AND THE CONTRACT SPECIFICATIONS, OR, IN THE ABSENCE OF SUCH CRITERIA, IN ACCORDANCE WITH ALL MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. ENGINEERING FABRICS AND GEOTEXTILES SHALL BE FURNISHED IN POTECTIVE COVER CAPABLE OF PROTECTING THE FABRIC FROM ULTRAMOLET RAYS, ABRASION AND WATER, AND SHALL NOT BE LEFT EXPOSED TO SUNLIGHT IF BACKFUL IS NOT PROMPTLY PLACED, MATERIAL THAT BECOMES TORN OR OTHERWISE DAMAGED THROUGH ANY CAUSE SHALL BE REMOVED AND REPLACED WITH UNDAMAGED FILTER FABRIC, IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, AT THE CONTRACTOR'S EXPENSE.

FILTER FABRIC:

FILTER FABRIC SHALL BE MANUFACTURED FROM POLYESTER, NYLON OR POLYPROPYLENE MATERIAL, OR ANY COMBINATION THEREOF. UNLESS OTHERWISE APPROVED BY THE SOILS ENDINEER, THE FABRIC SHALL BE NON-MOWEN, SHALL BOT ACT AS A WICKING AGENT, SHALL BE PERMEABLE AND POSSESS AN EQUIVALENT OPENING SIZE (EOS) COMPATIBLE WITH THE ADJACENT MATERIAL, AND SHALL CONFORM TO THE FOLLOWING:

4	WEIGHT, OUNCES PER SQUARE YARD, MIN. (ASTM DESIGNATION: D-3776)	
100	TENSILE STRENGTH, POUNDS, MIN. (ASTM DESIGNATION: D-1682)	
15	ELONGATION, PERCENT, MIN. (ASTM DESIGNATION: D-1682)	
40	PUNCTURE STRENGTH, POUNDS, MIN. (ASTM DESIGNATION: D-751)	
25	TRAPEZOIDAL TEAR STRENGTH, PERCENT, MIN. (ASTM DESIGNATION: D-1117)	
25	ABRASION RESISTANCE, POUNDS, MIN. (ASTM DESIGNATION: D-3884)	
30 TO 70	EQUIVALENT OPENING SIZE (EOS) (CORPS OF ENGINEERS CW-02215)	

MISCELLANFOLIS METALS:

MISCELLANEOUS IRON AND STEEL ITEMS SHALL CONFORM TO THE DIMENSIONS AND DETAILS SHOWN ON THE PLANS. UNLESS OTHERWISE SPECIFIED, MATERIALS SHALL CONFORM TO THE FOLLOWING

JE CONTONIONS.	
STEEL BARS, PLATES AND SHA	PESASTM DESIGNATION: A36, A575, A576 (AISI OR M GRADES 1016 THROUGH 1030 EXCEPT GRADE 1017)
BOLTS AND NUTS	ASTM DESIGNATION: A307
GRAY IRON CASTINGS	
DUCTILE IRON	CASTINGS ASTM DESIGNATION: A536, GRADE 65-45-12
CARBON STEEL	
CAST IRON PIPE	COMMERCIAL QUALITY, STANDARD SOIL
STEEL DIDE	COUNTERCIAL CHALITY WELDED

WELDING SHALL CONFORM TO THE REQUIREMENTS IN AMERICAN WELDING STANDARDS AWS D1.1, STRUCTURAL WELDING CODE.

FABRICATION SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN CONFORMANCE WITH THE PRACTICE IN MODERN SHOPS. BURRS, ROUGH AND SHARE BOGES, AND OTHER FLAWS SHALL BE REMOVED. WARPED PIECES SHALL BE STRAIGHTENED AFTER ALL FABRICATION AND GALVANIZING. PIELES SIMILE DE STIRACHTEREU AFTER SALL BE GALVANIZED AFTER FABRICATION.
UNIESS OTHERWISS SPECIED, ALL STEEL TIENS SHALL BE GALVANIZED AFTER FABRICATION.
COMPONENTS OF BOLITED ASSEMBLIES SHALL BE GALVANIZED SEPARATELY PRIOR TO ASSEMBLY.
GALVANIZED SUPPRACES THAT ARE ABRADED OR DAMAGED AT ANY TIME AFTER THE APPLICATION OF THE
ZINC COATING SHALL BE REPAIRED BY THOROUGHLY WRE BRUSHING THE DAMAGED AREAS AND REMOVING
ALL LOOSE AND CRACKED COATING, AFTER WHICH THE CLEANED AREAS SHALL BE PAIRTED WITH TWO (2)
APPLICATIONS OF UNTHINNED ZINC-BOCH PAINT CONTORNING TO THE REQUIREMENTS OF MILITARY
SPECIFICATION DOD—P-21036A—SPRAY CANS SHALL NOT BE USED.

PRE-CAST REINFORCED CONCRETE PIPE, BOX CULVERTS, AND MANHOLES:

- PRECAST CONCRETE PIPE (STANDARD AND BEVELED SECTIONS) AND PRE-FABRICATED BENDS WITH MANHOLES SHALL BE AMERON OR APPROVED EQUAL (CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIALS).
- PIPE AND BOX CULVERT SHALL BE INSTALLED STARTING AT THE EXTREME DOWNSTREAM END AND PROGRESS UPSTREAM. PIPE, BOX CULVERT AND MANHOLE JOINTS SHALL BE WATERTIGHT, BUTT TO BUTT. ALL JOINTS SHALL BE:
 - A. COMPLETELY WRAPPED AROUND THE ENTIRE EXTERIOR PERIMETER WITH BUTYL RESIN SEALANT WITH GROSS-LAMINATED POLYOLERIN PLASTIC BARRIOR (CONWRAP CS-212 OR APPROVED EQUAL) PRIOR TO BACKFILLING.
- COMPLETELY MORTARED AROUND THE INTERIOR PERIMETER WITH FAST-SETTING, NON-SHRINKING REPAIR COMPOUND (ALL-CRETE 20 MINUTE SET OR APPROVED EQUAL) AFTER THE PIPE IS BACKFILLED.

WHERE PRECAST CONCRETE PIPE REINFORCEMENT IS EXPOSED AT ENDS, ALL PIPE REINFORCEMENT SHALL BE CAREFULLY REMOVED TO A DEPTH OF AT LEAST ONE (1) INCH BELOW THE SURFACE OF THE CONCRETE. WITHOUT DAMAGE TO THE ADJOINING CONCRETE THE RESULTING HOLES OR DEPRESSIONS SHALL BE CLEAKED, WETTER AND FILLED WITH POLYMER-MODIFIED, NON-SHRINK MORTAR.

MISCELLANEOUS:

COUNTY OF MAUI, THE ENGINEER AND THE SOILS ENGINEER SHALL BE NOTIFIED A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO THE PLACEMENT OF ANY CONCRETE.

WATER POLLUTION AND EROSION CONTROL NOTES

- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 208-WATER POLLUTION AND EROSON CONTROL IN THE "NAMALI STANDARD SPECIFICATION FOR ROAD AND BRODGE CONSTRUCTION STANDARD SPECIFICATION FOR ROAD AND BRODGE CONSTRUCTION CONTROL AND STANDARD SPECIFICATION FOR THE STANDARD SPECIFICATION CONTROL OF SECTION FOR THE STANDARD SPECIFICATION CONTROL OF SECTION FOR STANDARD STANDARD SPECIFICATION FOR STANDARD SPECIFICATION FOR STANDARD SPECIFICATION FOR STANDARD STANDARD SPECIFICAT
- THE CONTRACTOR SHALL FOLIOW THE GUIDELINES IN THE CURRENT GTY AND COUNTY OF HONOLULU STORM WITER BEST MANAGEMENT PRACTICE MANUAL, DATED NOVEMBER 2011 AND THE FEA'S CURRENT BEST MANAGEMENT PRACTICES IN DEVLOPING, INSTALLING AND MANTAINING THE BEST MANAGEMENT PRACTICES TO DEVLOPING, INSTALLING AND MANTAINING THE BEST MANAGEMENT PRACTICES (BUPS) FOR THE PROJECT. WHERE THE GUIDELINES DIFFER, THE MOST STRINGENT GRITERIA SHALL GOVERN, UNLESS OTHERMISE APPRACED BY THE FROMER THE MOST STRINGENT GRITERIA SHALL GOVERN, UNLESS OTHERMISE APPRACED BY THE FROMER THE MOST STRINGENT GRITERIA SHALL GOVERN, UNLESS OTHERMISE APPRACED BY THE FROMER THE MOST STRINGENT GRITERIA SHALL GOVERN, UNLESS OTHERMISE APPRACED BY THE FROMER THE MOST STRINGENT GRITERIA SHALL GOVERN, UNLESS OTHERMISE APPRACED BY THE FROMER THE PROJECT.
- C. THE CONTRACTOR SHALL KEEP A COPY OF THE APPROVED BMP, NOI, ETC. ON THE PROJECT SITE. THE BMP SHALL BE UPDATED TO REFLECT ANY CHANGES MADE DURING THE COURSE OF CONSTRUCTION FOR THE DURATION OF 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 ASSESSED PER DAY.
- E. THE ENGINEER MAY DEDUCT THE COST FROM THE PROGRESS PAYMENT FOR ALL CITATIONS RECEIVED BY THE OWNER FOR NON COMPLIANCE, OR THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR THE FULL AMOUNT OF THE OUTSTANDING COST INCURRED BY THE OWNER, WHICHEVER IS GREATER.
- IN ACCORDANCE WITH CHAPTER 11-60.1, AIR POLLUTION CONTROL. TITLE 11. HAWA! ADMINISTRATIVE RULE THE CONTROL ON SHALE BEEN POINTED. THE PROUNT OF THE PROPERTY OF THE PROUNT OF THE
- G. IN ACCORDANCE WITH CHAPTER 11–55, WATER POLLUTION CONTROL AND CHAPTER 11–54, WATER QUALITY STANDARDS, TITLE 11, HAWAIT JOURNISTRATURE PULES, THE CONTRACTOR SHALL BE RESPONSI FOR ENSURING THAT THE BEST MANAGEMENT PRACTICE (BMP) TO PREVENT THE DISCHARGE OF SEDMENTS, DEBRIS AND OTHER WATER POLLUTIANTS INTO STATE WATERS IS PROVIDED AT ALL TIMES.
- SEDIMENTS, DEBMS AND OTHER WATER POLLUTANTS HIN'O STATE WATERS IS PROVIDED AT ALL TIMES. IN ACCORDANCE WITH CHAPTER 11-58, SOLD WASTE MANAGEMENT CONTROL TITLE 11, HAWMITERAL, DEMOLITION WASTE AND CONSTRUCTION WASTE GENERATE DE YTHE PROJECT ARE DISPOSED OF IN A MANNER OR AT A SITE APPROVED BY THE STATE DEPARTMENT OF HEALTH. DISPOSAL OF ANY OF THESE WASTES BY BURNING IS PROHIBITED. THE CONTRACTOR SHALL INFORM THE CONTRY ENGINEER AS TO THE LOCATION OF THE DISPOSAL STEEKS. THE DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRANGE ORDINANCES.
- IN ACCORDANCE WITH CHAPTER 11-46, COMMUNITY NOISE CONTROL, HAWAI'I ADMINISTRATIVE RULES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING EFFECTIVE CONTROL MEASURES TO MINIMIZE OR PREVENT CONSTRUCTION RELIZED NOISE FROM IMPACTING THE RESIDENTS IN THE MIMEDIAT AREA. IF REQUIRED, NOISE REDUCTION MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR DURING THE CONSTRUCTION WORK.

2. WASTE DISPOSAL:

- A WASTE MATERIALS ALL WISTE MATERIALS SHALL BE COLLECTED AND STORED IN A SECURELY LIDGED METAL DUMSTER THAT DOES NOT LEX. THE DUMSTER SHALL MEET ALL LOCA, AND STATE SAUD WASTE MANAGEMENT REQUIATIONS. ALL TRASH AND CONSTRUCTION DEEDS FROM THE STE SHALL BE DEPOSITED IN THE DUMSTER. THE DUMSTER SHALL BE EMPTIED A MINIMUM OF TWICE PER WEEK OR AS OFTEN AS IS DEEDED NECESSARY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED DONITE. THE CONTRACTOR'S SUPERVISORY PERSONNEL SHALL BE INSTRUCTED RECARDING THE CORRECT PROCEDURE FOR WASTE DISTORDER FOR WASTE DISTORDER FOR WASTE DIN THE OFFE TRAILER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
- MAXAD WASTE: ALL WAXADOUS WASTE MATERIUS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY COCAL OF STATE RESULTION AND BY THE MANUFACTURER. THE CONTRACTOR'S SITE PERSONNEL BE INSTRUCTED IN THESE PRACTICES AND SHALL BE RESPONSIBLE FOR SEEMS THAT THESE PRACTICES ARE FOLLOWED.
- C. SANITARY WASTE: ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK, OR AS REQUIRED.

3. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:

- A. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND WITHIN 24 HOURS FOLLOWING ANY RAINFALL EVENT OF 0.5 INCHES OR GREATER.
- B. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS AFTER THE INSPECTION.
- C. BUILT UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE—THIRD THE HEIGHT OF THE FENCE. SILT SCREEN OR FENCE SHALL BE INSPECTED FOR DEPTH OF SEMMENT, TEARS, TO VERIFY THAT THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS OR CONCRETE SLAB AND TO VERIFY THAT THE FENCE POSTS ARE FRIMLY IN THE GROUND. THE BOTTOM OF THE SILT SCREEN SHALL BE INSPECTED AND VERRIED THAT IT IS BURIED A MINIMUM OF 6 INCHES BELOW THE EXISTING GROUND.
- E. TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASH OUTS AND HEALTHY GROWTH.
- F. THE CONTRACTOR SHALL PROMPTLY SUBMIT TO THE ENGINEER A MAINTENANCE INSPECTION REPORT WITHIN ONE WEEK AFTER FACH WEEKLY INSPECTION. THE REPORT SHALL ALSO INCLUDE ANY CHANGES IN THE SITE SPECIFIC BMF, INCLUDING THE DISCONTINUANCE OF ANY BMP AND THE DATE IT WAS DISCONTINUED OR MODIFIED.
- G. THE CONTRACTOR SHALL SELECT A SPECIFIC INDMIDUAL PERSONNEL WHO SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT
- H. PERSONNEL SELECTED FOR THE INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE TRAINING FROM THE CONTRACTOR. THEY SHALL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES INCESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.
- ALL SLOPES AND EXPOSED AREAS SHALL BE GRASSED AS FINAL GRADES HAVE BEEN ESTABLISHED, GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA IN WHICH WORK HAS BEEN INTERREPRIED ON PELAYED OF EXPOSED FOR MORE THAN 15 DAYS SHALL BE GRASSED IN ORDER TO PREVENT DUST, EROSION AND SILT RUNOFF. AREAS WITH IMPORTED SOILS SHALL BE GRASSED NOT MORE THAN 5 WORKING DAYS AFTER FINAL GRADES HAVE BEEN ESTABLISHED.
- J. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND FULLY ESTABLISHED.
- K. BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE EMPLOYED AT ALL TIMES TO THE MAXIMUM EXTENT PRACTICABLE TO PREVENT DANAGE BY SEGMENTATION, EROSION OR DUST TO STREAMS, WATERCOURSES, NATURAL AREAS AND THE PROPERTY OF OTHERS.
- NATIONAL AREAS AND THE PROPERTY OF CHEEKS.

 PROVIDE AT ALL LOCATIONS WHERE VEHICLES INTER ONTO THE ROADWAY FROM AN UNPAYED AREA, A STABILIZED CONSTRUCTION ENTRANCE IN THE WATER POLILITION, DUST, AND EROSION CONTROL SUBMITIALS. MINIMUM LENGTH SHOULD BE 50 FEET MINIMUM WIDTH SHOULD BE 30 FEET MINIMUM DEPTH SHOULD BE 12 NOFES AND UNDERTAIN WITH GEOTESTILE FABRIC, MODIFY THE STREAMLED CONSTRUCTION ENTRANCE AS NEEDED TO ELIMINATE MINIOR TRACKING OF MATERIAL ONTO THE ROADWAY FOR MORE ANY DEPTH SHOULD BE SHOULD SHOULD BE SHOULD
- M. INCLUDE DESIGNATED CONCRETE WASHOUT AREA(S) IN THE WATER POLLUTION, DUST, AND EROSION CONTROL SUBMITTALS.
- N. THE CONTRACTOR SHALL CONTAIN, REMOVE AND DISPOSE OF SLURRY GENERATED FROM SAWCUTTING PAYEMENT IN ACCORDANCE WITH APPROVED BMP PRACTICES, PAYMENT FOR CONFIDENDINT, REMOVAL, AND DISPOSAL OF SLURRY SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.

4. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

MATERIALS POLLUTION PREVENTION PLAN:

A ALL APPLICABLE MATERIALS OR SUBSTANCES EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION SHALL BE ADOED TO THE INVENTORY OF THE CONSTRUCTION CONTRACTOR'S SITE—SPECIFIC BMP PLAN. SOME EXAMPLES ARE USETED BELOW: FERTILIZERS CONCRETE

DETERGENTS PETROLEUM BASED PRODUCTS PAINTS (ENAMEL AND LATEX)CLEANING SOLVENTS METAL STUDS WOOD MASONRY BLOCK

- B. 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 ORLY ENOUGH PRODUCTS AS IS REQUIRED TO DO THE JOB.
- C. ALL MATERIALS 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.
- E. SUBSTANCES SHALL BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
- F. A PRODUCT SHALL BE USED UP COMPLETELY BEFORE DISPOSING OF THE CONTAINER. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
- H. THE CONTRACTOR SHALL CONDUCT A DAILY INSPECTION TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE. SUBMIT THE INSPECTION REPORTS TO THE ENGINEER ON A WEEKLY BASIS.
- HAZARDOUS MATERIAL POLLUTION PREVENTION PLAN: A. PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
- ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS (MSDS) SHALL BE RETAINED AND MADE AVAILABLE
 TO THE ENGINEER UPON REQUEST.
- C. SURPLUS PRODUCTS SHALL BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND LOCAL AND STATE RECOMMENDED ACTIONS. ONSITE AND OFFSITE PRODUCTS SPECIFIC PLANS:
- A. THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ONSITE:
- PETROLEUM BASED PRODUCTS: ALL ONSITE VEHICLES 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 ONSITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
- 8. FERTILIZERS: FERTILIZERS SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WARRE. STORAGE SHALL BE IN A COVERED SHOED. THE CONTENTS OF ANY PARTILLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
- D. PAINTS: ALL CONTAINERS SHALL BE SEALED AND STORED WHEN NOT REQUIRED FOR USE. DO NOT DISCHARGE EXCESS PAINT TO THE KAHOMA CHANNEL. DISPOSE PROPERLY ACCORDING TO MANUFACTURES' INSTRUCTIONS OR STATE AND LOCAL REQUIATIONS.

 D. CONCRETE TRUCKS: CONCRETE TRUCK DRIMN WASH WATER SHALL BE WASHED OUT OR DISCHARGED ONLY AT A DESIGNATION SITE. DO NOT DISCHARGE WATER IN THE KAHOMA CHANNEL, RADIONAY DRAINING SYSTEM OF WATERS OF THE UNITED STATES. CONTACT DRAINING WATER BRANCH DEPARTMENT OF HEALTH AT 588-4258 TO RECEIVE PERMISSION TO DESIGNATE A DISSOON. STEEL CLEAN DISPOSAL SITE AS REQUIRED OR AS REQUESTED BY THE OWNER'S REPRESENTATIVE.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL APPLICABLE PERMITS FROM THE DEPARTMENT OF HEALTH INCLUDING BUT NOT LIMITED TO NATIONAL POLLUTION DISCHARGE LIMINATION SYSTEM (MPDES), NOTCE OF INTELLATING AND LIMITED TO NATIONAL POLLUTION DISCHARGE LIMINATION SYSTEM (MPDES), NOTCE OF INTELLATION AND GENERAL PERMIT FOR STORM MATERY HORDISTATIC TEST AND DEWATERING DISCHARGES PRIOR TO COMMENCIANG CONSTRUCTION, NODE OF THE PROPERTY OF THE PROP
- B. THE CONTRACTOR SHALL OBTAIN AND COMPLY WITH NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS FOR ALL PROVECTS WHICH WILL DISTURE ONE (1) ACRE ON MORE OF LAND. THE CONTRACTOR SHALL NOT START CONSTRUCTION UNITL NOTICE OF GENERAL PERMIT COVERAGE (NOPC) IS RECEIVED FROM THE OPERATIVENT OF HEALTH, STATE OF HAWA'I AND HE SATISHED ANY OTHER APPLICABLE REQUIREMENTS OF THE NPOSE SPERMIT PROCRAM.
- C. THE CONTRACTOR SHALL COMPLETE AND SUBMIT A CONTRACTOR'S CERTIFICATION OF NPDES COMPLIANCE, INCLUDING COMPLETION OF THE BEST MANAGEMENT PRACTICE (BMP) CHECKLIST AND SUBMITTAL OF A WRITTEN SITE SPECIFIC BMP FLAM AND DRAWNINGS, PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT A SITE SPECIFIC STORM WATER POLLUTION PREVENTION
 PLAN (SWPPP) WITHIN 10 CALENDAR DAYS OF THE AWARD OF CONTRACT THAT FULLY COMPUES WITH
 THE REQUIREMENTS OF HAWAII ADMINISTRATIVE RULES (HAR) 11-55, APPENDIX C AND THE STATE
 DEPARTMENT OF HEALTH.

6. SITE SPECIFIC SPILL PREVENTION PLAN:

CONTRACTOR SHALL:

- . PREPARE AND POST A SITE SPECIFIC SPILL PREVENTION PLAN (SSSPP) TO INCLUDE MEASURES TO PREVENT AND CLEAN UP EACH SPILL. ALL EQUIPMENT AND PROCEDURES IN THE SSSPP SHALL BE IN PLACE DURING CONSTRUCTION ACTIVITY.
- B. THE CONTRACTOR SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. DESIGNATE AT LEAST THREE SITE PERSONNEL WIND SHALL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS SHALL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. POST THE NAMES OF RESPONSIBLE SPILL PERSONNEL IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.
- C. CLEARLY POST MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP AND MAKE SITE PERSONNEL AWARE OF THE PROCEDURES AND THE LOCATION OF INFORMATION AND CLEANUP SUPPLIES.
- D. KEEP MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP IN THE MATERIAL STORAGE AREA
- E. CLEANUP ALL SPILLS IMMEDIATELY AFTER DISCOVERY.

 F. KEEP THE SPILL AREA WELL VENTILATED, PERSONNE SPALL HEAR X-PROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH HAZARDOUS SUBSTANCE. REPORT SPILLS OF TOXIC HAZARDOUS MATERIAL TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT TO THE SIZE.

reflect the and details and epoclications as constructed

Harry Cjown 11/14/2017

Signature



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