| FED.ROAD DIST.NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-037-1(24) | 2005 | 3 | 288 |

## GENERAL NOTES

1. THE SCOPE OF WORK FOR THIS PROJECT INCLUDES WIDENING THE EXISTING THREE LANE HIGHWAY TO A FOUR LANE HIGHWAY BY REMOVING THE EXISTING INBOUND LANE AND CONSTRUCTING TWO INBOUND LANES WITH A GRASSED MEDIAN AND CONSTRUCTING AN EMRGENCY ESCAPE RAMP. IMPROVEMENTS INCLUDE CLEARING, GRUBBING, REMOVAL OF EXISTING PAVING, GRADING, BRIDGE AND DITCH CROSSING STRUCTURES, DRAINAGE SYSTEM, UTILITY RELOCATIONS, HIGHWAY LIGHTING, TRAFFIC SIGNALS, TRAFFIC SIGNS AND PAVEMENT MARKINGS, GUARDRAILS, FENCES, AGRICULTURAL IRRIGATION RELOCATION, AND EROSION CONTROL.

2. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FOLLOWING SECTIONS OF THE SPECIAL PROVISIONS: SUBSECTION 107.13–PUBLIC CONVENIENCE AND SAFETY; SUBSECTION 107.21–CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES; AND SECTION 645–TRAFFIC CONTROL.

3. AT THE END OF EACH DAY'S WORK, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND OTHER OBSTRUCTIONS TO PERMIT FREE AND SAFE PASSAGE OF PUBLIC TRAFFIC.

4. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES, MANHOLES, MONUMENTS AND STRUCTURES AS SHOWN ON THE PLANS ARE FROM THE THE LATEST AVAILABLE DATA BUT THE ACCURACY IS NOT GUARANTEED. THE ENCOUNTERING OF OTHER OBSTACLES DURING THE COURSE OF WORK IS POSSIBLE. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGES INCURRED TO THE EXISTING FACILITIES AND/OR IMPROVEMENTS AS A RESULT OF HIS OPERATIONS.

5. THE EXACT LOCATIONS AND LIMITS OR AREAS TO BE FILLED WITH LEVELING COURSE, RECONSTRUCTED AND COLD PLANED SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

6. THE CONTRACTOR SHALL NOTIFY IN WRITING, THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF ENGINEERING, CONSTRUCTION BRANCH SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING, TWO (2) WEEKS PRIOR TO STARTING PAVING OPERATIONS.

8. SMOOTH RIDING CONNECTIONS SHALL BE CONSTRUCTED AT ALL LIMITS OF RESURFACING, INCLUDING THE BEGINNING AND END OF PROJECT, CONNECTING APPROACHES, AND SIDE ROADS AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

9. DRESSING OF SHOULDERS SHALL CONSIST OF CLEARING, GRUBBING, GRADING RESHAPING AND COMPACTING THE UNPAVED SHOULDERS WITH SUITABLE MATERIAL AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.

10. EXISTING DRAINAGE SYSTEM WILL BE FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS TO FURNISH MATERIALS, EQUIPMENT, LABOR, TOOLS AND INCIDENTALS NECESSARY TO MAINTAIN FLOW. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO VARIOUS CONTRACT ITEMS.

11. THE CONTRACTOR SHALL PROVIDE FOR ACCESS TO AND FROM ALL EXISTING SIDE ROADS AT ALL TIMES.

12. ALL SAW CUTTING WORK SHALL BE CONSIDERED INCIDENTAL TO ROADWAY EXCAVATION.

13. ALL CONSTRUCTION SIGNS SHALL BE LEFT IN PLACE UNTIL ALL CONSTRUCTION ITEMS HAVE BEEN COMPLETED. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE ENGINEER TO REMOVE CONSTRUCTION SIGNS.

14. ALL WORK TO REMOVE TEMPORARY FACILITIES BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS IN THE PROPOSAL.

15. THE CONTRACTOR SHALL HAVE EXISTING UTILITY LINES TONED PRIOR TO INSTALLING GUARDRAILS IN THE VICINITY OF THE UTILITY LINES. IF THE PROPOSED GUARDRAIL POSTS ARE WITHIN 3 FEET OF THE UTILITY LINES, THE CONTRACTOR SHALL EXCAVATE AND EXPOSE THE UTILITY LINE TO DETERMINE ALIGNMENT AND DEPTH. THE CONTRACTOR SHALL INSTALL GUARDRAILS IN THESE AREAS BY ACCEPTABLE METHODS OTHER THAN DRIVING, SUCH AS HAND DIGGING TO PREVENT DAMAGES TO THE EXISTING LINES.

16. REVEGETATION FOR TEMPORARY MULCHING AND PERMANENT RESTORATION SHALL CONSIST OF PRIMROSE WILLOW, JOB'S TEARS AND CALIFORNIA GRASS. THE AREAS OF EXPOSED GROUND SHALL BE IMMEDIATELY HYDROMULCHED WITH THE REVEGETATION MATERIAL TO PREVENT EROSION.

17. UTILITY POLES AND OBSTRUCTIONS SHALL BE RELOCATED OUTSIDE OF THE CLEAR ZONE UNLESS OTHERWISE SHOWN ON THE PLANS.

18. ALL STRUCTURES WITHIN THE CLEAR ZONE SHALL BE REMOVED UNLESS OTHERWISE STATED AND SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS ITEMS OF WORK.

19. TRAFFIC SIGNS, POSTS, FENCES, GUARDRAILS SHALL BE RETURNED TO THE STATE HIGHWAY BASEYARD. THEY SHALL BE INVENTORIED, AND STOCKPILED ON A PALLET. GUARDRAIL END TREATMENTS WITH FOOTINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

## GRADING NOTES

1. ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH CHAPTER 14, ARTICLES 13, 14, 15 AND 16, AS RELATED TO GRADING, SOIL EROSION AND SEDIMENT CONTROL, OF THE REVISED ORDINANCES OF HONOLULU, 1990, AS AMENDED.

2. NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE COSTS INCURRED FOR ANY REMEDIAL ACTION SHALL BE PAYABLE BY THE CONTRACTOR.

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 CHAPTER 11–60, "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 OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT–LADEN RUNOFF FROM LEAVING THE SITE.

6. ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING SHALL NOT BE DELAYED UNTIL ALL GRADING WORK HAS BEEN COMPLETED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA WITHIN WHICH WORK HAS BEEN INTERRUPTED OR DELAYED SHALL BE PLANTED.

7. FILLS ON SLOPES STEEPER THAN 5:1 SHALL BE KEYED.

8. THE ENGINEER SHALL BE INFORMED OF THE LOCATION OF THE BORROW/ DISPOSAL SITE FOR THE PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE BORROW/DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.

9. NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE DISTRICT ENGINEER, PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH HAWAII ADMINISTRATIVE RULES, CHAPTER 11–43, "COMMUNITY NOISE CONTROL FOR OAHU".

10. THE LIMITS OF THE AREA TO BE GRADED SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.

11. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, CHAPTER 11–55, "WATER POLLUTION CONTROL" AND CHAPTER 11–54, "WATER QUALITY STANDARDS" 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 EARTH MOVING PHASE OF THE GRADING 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 GRADING PERMIT.

15. IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND FEDERAL REQUIREMENTS.

16. NON–COMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHOULD COMMENCE IMMEDIATELY. ALL REMEDIAL WORK SHALL BE BILLED TO TO THE CONTRACTOR. ALL REMEDIAL WORK SHALL BE NO COST TO THE STATE. FURTHERMORE, VIOLATORS SHALL BE SUBJECTED TO ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES.

17. THE BENCH MARK FOR THIS PROJECT IS THE P.K. NAIL AT STA. "M–1", ELEVATION = 109.88 MSL, AS SHOWN ON "CONTROL DATA" PLAN.

18. PRIOR TO PLACEMENT OF ANY FILL, THE EXISTING GROUND SHALL BE SCARIFIED TO A DEPTH OF SIX INCHES AND COMPACTED TO A MINIMUM OF 90 PERCENT COMPACTION AS DETERMINED BY AASHTO T–180.

19. AFTER CLEARING AND GRUBBING, ADDITIONAL ROOTS AND OTHER VEGETA– TION FOUND IN THE UPPER 6 TO 8 INCHES SHALL BE REMOVED.

## GRADING NOTES (CONTINUED)

20. CONSTRUCTION OBSERVATION AND FIELD DENSITY TESTING SHALL BE PERFORMED BY THE STATE, WHERE TEST AND/OR OBSERVATIONS INDICATE THAT THE DENSITY OF UNIFORMITY OF ANY PORTION OF THE FILL IS INADEQUATE, THAT PORTION SHALL BE REMOVED AND REWORKED UNTIL THE REQUIRED DENSITY OR UNIFORMITY HAS BEEN SATISFACTORILY OBTAINED.

## WASTE MANAGEMENT NOTES

1. THE CONTRACTOR SHALL DEVELOP AND SUBMIT TO THE ENGINEER A SOLID WASTE MANAGEMENT PLAN FOR THE DISPOSAL OF CLEARED AND GRUBBED MATERIAL FROM THE PROJECT SITE DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE CENTRAL MAUI LANDFILL SUPERVISOR AT 877–5319 REGARDING SUITABILITY OF THIS MATERIAL AS LANDFILL COVER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.

## STATE HISTORIC PRESERVATION NOTES

1. IN THE EVENT THAT HISTORIC REMAINS (I.E. SUBSURFACE FIRE PITS, ARTIFACTS, OR HUMAN SKELETAL REMAINS) ARE INADVERTENTLY UNCOVERED DURING CONSTRUCTION, ALL WORK SHALL CEASE IN THE VICINITY AND THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION IN WAILUKU (BOYD DIXION AT 243–5169).

## LEGEND

| | |
|---|---|
| ○ *BFV* | EXISTING BUTTERFLY VAVLE |
| ● *BFV* | NEW BUTTERFLY VALVE |
| ○ *ARV/VRV* | EXISTING AIR RELIEF VALVE / VACUUM RELIEF VALVE |
| ● *ARV/VRV* | NEW AIR RELIEF VALVE / VACUUM RELIEF VALVE |
| *IRR-8* | EXISTING PVC IRRIGATION PIPE, SIZE IN INCHES |
| ~~*IRR-8*~~ | NEW PVC IRRIGATION PIPE, SIZE IN INCHES |
| CTG | CONNECTION TO GRATED DRAIN INLET |
| NTS | NOT TO SCALE |
| *A.I.P.* | ABANDON IN PLACE |
| B1 | BORING LOCATION |
| (A) | REFERS TO CURVE DATA ON GENERAL PLAN |

## HC&S NOTES

1. THE WIDENING OF HALEAKALA HIGHWAY REQUIRES THE RELOCATION/RECONNECTION OF EXISTING HC&S IRRIGATION LINES, REMOVAL AND REPLACEMENT OF WOODEN GATE AT KAUHIKOA DITCH, RELOCATION/REPLACEMENT OF EXISTING GRADED FIELD ROADS, RELOCATION/REPLACEMENT OF CANE HAULER OIL & GRAVEL ROAD, PROVIDING SMOOTH RIDING CONNECTIONS TO KEAHUA ROAD, AND MODIFICATIONS TO HC&S STREET LIGHTS AT KEAHUA ROAD. PRIOR TO COMMENCING WORK IN HC&S PROPERTY, THE CONTRACTOR SHALL OBTAIN A "RIGHT–OF–ENTRY AGREEMENT" FROM THE LAND OWNER (HC&S) FOR WORK WITHIN THE "TEMPORARY WORK AREA IN HC&S PROPERTY" AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH HC&S AT NO ADDITIONAL COST TO THE STATE.

## NOTES FOR WORK WITHIN HC&S CANE FIELD AREAS AND FOR IRRIGATION SYSTEM MODIFICATIONS:

1. WORK NOTIFICATION:
   CONTRACTOR SHALL NOTIFY HAWAIIAN COMMERCIAL & SUGAR COMPANY (HC&S) AT LEAST 2 WEEKS IN ADVANCE PRIOR TO STARTING ANY WORK ON CANE FIELD AREAS AND IRRIGATION SYSTEMS (SIPHONS, DITCHES, DRIP IRRIGATION SYSTEM). THEY SHALL COORDINATE THEIR WORK SCHEDULE WITH HC&S TO MINIMIZE ANY INCONVENIENCE AND DISRUPTION OF THE AGRICULTURAL OPERATIONS. THE CONTRACTOR SHALL ASSUME ALL LIABILITY, FINANCIAL OR OTHERWISE, IN CONNECTION WITH THIS CONTRACT THAT MAY ARISE DUE TO INCONVENIENCE, DELAY OR LOSS EXPERIENCED BY HIM FROM THE PRESENCE OR OPERATIONS OF HC&S WORKING ON THEIR AFFECTED CANE FIELDS.

2. RELOCATION OF IRRIGATION PIPELINES AND APPURTENANCES:

   A. EXISTING PIPELINES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY EXACT LOCATION INFIELD IN COORDINATION WITH HC&S.
   B. COORDINATE WITH HC&S FOR THE FINAL LOCATION OF RELOCATED PIPELINES AND APPURTENANCES, INCLUDING RISER ASSEMBLIES, VALVES, AIR VENTS, FLUSH OUTS, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW FITTINGS AS REQUIRED, INCLUDING CONCRETE REACTION BLOCKS, TO COMPLETE THE RELOCATION AND CONNECTION TO EXISTING PIPELINES, WHERE PIPELINE EXTENSIONS ARE REQUIRED, THE NEW PIPELINE SHALL BE OF THE SAME MATERIAL AND CLASS AS THAT OF THE EXISTING PIPE.

3. CROP DAMAGES: CROPS THAT ARE DAMAGED BY THE CONTRACTOR OUTSIDE THE PROJECT LIMITS SHALL BE PAID BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE. LIKEWISE, IRRIGATION DITCHES, PIPELINES, ETC. WHEN DAMAGED, SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF HC&S.

4. INSTALLATION OR RELOCATION OF HC&S PIPELINES FOR EACH FIELD MUST BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS. THE CONTRACTOR MUST COORDINATE WITH HC&S THE TIMING OF ANY WORK TO BE DONE ON THESE PIPELINES AND CULVERTS.

## NEW FENCE NOTES:

1. NEW FENCE SHALL BE CONSTRUCTED AT BOTH NORTH & SOUTH RIGHT OF WAY LINES, OFFSET 12 INCHES AS SHOWN ON THE TYPICAL SECTION.

2. CONSTRUCT NEW FENCE BETWEEN STATION 46+12 (BOTH SIDES OF R/W) AND STA. 248+00 (BOTH SIDES OF R/W).

3. DO NOT CONSTRUCT FENCE OR GATE WHERE "ACCESS IS PERMITTED" AS SHOWN ON THE PLANS.

ERIC N. S. HEE
LICENSED PROFESSIONAL ENGINEER
No. 5292–C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Eric N. S. Hee

ENGINEERS SURVEYORS HAWAII, INC.
LICENSE EXPIRATION DATE: 4/30/06

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**GENERAL NOTES**

HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH–037–1(24)

SCALE: AS NOTED DATE: SEP., 2005

SHEET No. 1 OF 3 SHEETS

ORIGINAL PLAN | NOTE BOOK | No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

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| FED.ROAD DIST.NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | NH-037-1(24) | 2005 | 4 | 288 |

## WATER QUALITY CONTROL (BEST MANAGEMENT PRACTICES)

1. WASTE DISPOSAL PRACTICES:
   A. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED SO AS TO PREVENT DISCHARGE OR ACCIDENTAL SPILLAGE OF POLLUTANTS, SOLID WASTE, DEBRIS AND OTHER OBJECTIONABLE WASTES IN SURFACE AND SUBSURFACE WATERS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DISPOSED OF BY THE CONTRACTOR AT APPROVED DISPOSAL FACILITIES. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED OR BURNED ON OR OFFSITE. SANITARY WASTES SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH STATE AND CITY & COUNTY REGULATIONS.
   B. SHOULD ANY DEBRIS FALL INTO THE STREAM CHANNEL, THE CONTRACTOR SHALL REMOVE IT BY THE END OF EACH WORK DAY.

2. OTHER CONTROLS:
   A. CONSTRUCTION MANAGEMENT TECHNIQUES:
      THE FOLLOWING CONSTRUCTION MANAGEMENT TECHNIQUES SHALL BE EMPLOYED AS APPROPRIATE:
      1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL BEFORE ANY EARTHWORK OPERATIONS BEGIN.
      2. SURFACE RUNOFF SHALL BE DIVERTED WITH BERMS, CHANNELS, SEDIMENT TRAPS, AND OTHER APPROPRIATE MEASURES, AS PRACTICAL.
      3. PERMANENT VEGETATION SHALL BE INSTALLED AS SOON AS PRACTICAL.
   B. MAINTENANCE AND INSPECTION PROCEDURES FOR EROSION AND SEDIMENT CONTROLS:
      1. ALL CONTROL MEASURES SHALL BE INSPECTED DAILY AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER.
      2. ALL CONTROL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER, AND IF ANY REPAIRS ARE NECESSARY, THEY SHALL BE INITIATED AS SOON AS POSSIBLE.
      3. DIVERSION DITCHES SHALL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.

## TEMPORARY EROSION CONTROL

1. FOLLOW SECTION 639 OF THE STANDARD SPECIFICATIONS AND ANY SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF LAND TO BE EXPOSED AT ANY ONE TIME.
3. GRADING OPERATIONS SHALL PROCEED FROM THE HIGHER GROUND AREA FIRST, WHERE EXCAVATION OPERATIONS ARE NECESSARY. THE EXISTING VEGETATION ON THE LOWER AREA SHALL BE LEFT IN PLACE AS LONG AS FEASIBLE TO SERVE AS A FILTERING MEDIUM.
4. IF THE EXCAVATED MATERIAL FROM THE HIGHER AREA IS NEEDED TO FILL THE LOWER AREAS DESCRIBED IN #3 ABOVE, FILLING OPERATIONS SHALL BE DONE IN PHASES IN ORDER THAT EROSION AND SEDIMENTATION PROBLEMS CAN BE HELD TO A MINIMUM.
5. GRASSING (COMMON BERMUDA GRASS OR STAR GRASS CUTTINGS AT THE RATE OF 50 BUSHELS PER ACRE OR AN AVERAGE OF 2 SPRIGS PER SQUARE FOOT OR HYDROMULCH WITH SEEDS) OF ALL AREAS GRADED SHALL BE DONE IMMEDIATELY AFTER FINAL GRADES ARE ESTABLISHED.
6. GRADED AREAS THAT ARE NOT AT FINAL GRADE AND IS EXPECTED TO BE EXPOSED FOR MORE THAN 30 DAYS, SHALL BE MULCHED (AT THE RATE OF 45 CUBIC FEET PER 1,000 SQUARE FEET) IN ORDER TO PREVENT EROSION AND SILT RUNOFF.
7. THE ABOVE PROCEDURE FOR EROSION AND SEDIMENT CONTROL MAY BE REVISED BY THE CONTRACTOR TO CONFORM TO HIS GRADING OPERATION PROCEDURE. THE CONTRACTOR SHALL PLAN, DESIGN AND SUBMIT TO THE ENGINEER, AN EROSION CONTROL PLAN AS SPECIFIED UNDER SECTION 639 OF THE STANDARD SPECIFICATIONS.

## WATER POLLUTION AND EROSION CONTROL NOTES:

A. GENERAL:
1. THE CONTRACTOR IS REMINDED OF THE THE REQUIREMENTS OF SECTION 209 – WATER POLLUTION AND EROSION CONTROL, IN THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION". SECTION 209 DESCRIBES BUT IS NOT LIMITED TO: SUBMITTAL REQUIREMENTS; SCHEDULING OF A WATER POLLUTION AND EROSION CONTROL CONFERENCE WITH THE ENGINEER; CONSTRUCTION REQUIREMENTS; METHOD OF MEASUREMENT; AND BASIS OF PAYMENT.
2. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE "BEST MANAGEMENT PRACTICES MANUAL FOR CONSTRUCTION SITES IN HONOLULU" DATED MAY 1999 IN DEVELOPING, INSTALLING AND MAINTAINING THE BEST MANAGEMENT PRACTICES (BMP) FOR THE PROJECT.

## CONTINUATION

3. THE ENGINEER MAY ASSESS LIQUIDATED DAMAGES OF UP TO $25,000 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.
4. THE ENGINEER WILL DEDUCT THE COST FROM THE PROGRESS PAYMENT FOR ALL CITATIONS RECEIVED BY THE DEPARTMENT FOR NON-COMPLIANCE, OR THE CONTRACTOR SHALL REIMBURSE THE STATE FOR THE FULL AMOUNT OF THE OUTSTANDING COST INCURRED BY THE STATE.
5. FOR PROJECTS THAT REQUIRE AN 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 PRACTICES. 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.

B. WASTE DISPOSAL:
1. 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 OFTEN AS IS DEEMED NECESSARY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ONSITE. 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 AND CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

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

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

C. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:
1. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY RAINFALL EVENT OF 0.5 INCHES OR GREATER.
2. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS AFTER THE INSPECTION.
3. BUILT-UP SEDIMENT SHALL BE REMOVED FORM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
4. SILT SCREEN OR FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, 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 SHALL BE INSPECTED AND VERIFIED THAT IT IS BURIED A MINIMUM OF 6-INCHES BELOW THE EXISTING GROUND.
5. TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS AND HEALTHY GROWTH.
6. A MAINTENANCE INSPECTION REPORT SHALL BE MADE PROMPTLY AFTER EACH INSPECTION BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL SELECT A MINIMUM OF THREE PERSONNEL WHO SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
8. 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 NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

D. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:
1. MATERIALS POLLUTION PREVENTION PLAN
   a. APPLICABLE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION. OTHER MATERIALS AND SUBSTANCES NOT LISTED BELOW SHALL BE ADDED TO THE INVENTORY.

| | |
|---|---|
| CONCRETE | FERTILIZERS |
| DETERGENTS | PETROLEUM BASED PRODUCTS |
| PAINTS (ENAMEL AND LATEX) | CLEANING SOLVENTS |
| METAL STUDS | WOOD |
| TAR | MASONRY BLOCKS |

   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 ONLY ENOUGH PRODUCT AS IS REQUIRED TO DO THE JOB.

## CONTINUATION

   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.
   d. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
   e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
   f. WHENEVER POSSIBLE, A PRODUCT SHALL BE USED UP COMPLETELY BEFORE DISPOSING OF THE CONTAINER.
   g. 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.

2. HAZARDOUS MATERIAL POLLUTION PREVENTION PLAN
   a. PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
   b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS (MSDS) SHALL BE RETAINED.
   c. SURPLUS PRODUCTS SHALL BE DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR LOCAL AND STATE RECOMMENDED METHODS.

3. ONSITE AND OFFSITE PRODUCT SPECIFIC PLAN
   a. THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ONSITE:
      1) 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.
      2) FERTILIZERS:
      FERTILIZERS USED 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 WATER. STORAGE SHALL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
      3) PAINTS:
      ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE HIGHWAY DRAINAGE SYSTEM BUT SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
      4) 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 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.
   b. OFFSITE VEHICLE TRACKING:
   A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE SHALL BE CLEANED DAILY OR AS REQUIRED TO REMOVE ANY EXCESS MUD, COLD PLANED MATERIALS, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE SHALL BE COVERED WITH A TARPAULIN.

4. SPILL CONTROL PLAN
   a. A SPILL PREVENTION PLAN SHALL BE POSTED AND ADJUSTED TO INCLUDE A DESCRIPTION AND CAUSE OF EACH SPILL, MEASURES TO PREVENT AND CLEAN UP EACH SPILL.
   b. 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.
   c. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
   d. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE.
   e. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

## CONTINUATION

   f. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
   g. SPILLS OF TOXIC HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.

E. PERMIT REQUIREMENTS:
1. A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT IS REQUIRED FOR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOUR SETS OF THE WATER POLLUTION AND EROSION CONTROL SUBMITTALS AS DETAILED IN SUBSECTION 209.03 OF THE SPECIFICATIONS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL PERMIT CONDITIONS. PERMITS MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
   a. NPDES PERMIT FOR CONSTRUCTION ACTIVITIES

## IRRIGATION SLEEVES NOTES

1. CONTRACTOR SHALL INSTALL FOUR (4) – INCH DIAMETER PVC IRRIGATION SLEEVES FROM NORTH RIGHT-OF-WAY TO THE MEDIAN. THE CONTRACTOR MAY USE THESE SLEEVES DURING PLANTING PERIOD AND ESTABLISHMENT PERIOD. THE SLEEVES SHALL REMAIN AND BECOME THE PROPERTY OF THE STATE UPON COMPLETION OF PLANT ESTABLISHMENT PERIOD. CAP THE ENDS OF THE PIPE AS REQUIRED BY THE ENGINEER. THE SLEEVES SHALL BE INSTALLED AT STA. 42+00, 56+50, 70+50, 86+70, 100+50, 113+10, 125+25, 142+00, 156+00, 170+00, 182+75, 194+75, 205+50, 216+00, 219+00, 238+50, 241+50, AND 258+00. THEY SHALL HAVE THREE (3) FEET MINIMUM COVER AND EXTEND PAST THE SHOULDERS A MINIMUM OF TEN (10) FEET. PAYMENT SHALL BE INCIDENTAL TO THE VARIOUS GRASSING ITEMS.
2. WHEN USED FOR PLANT ESTABLISHMENT AND PLANTING PERIOD, CONTRACTOR, AT THE DIRECTION OF THE ENGINEER MAY LEAVE EVERYTHING (LATERALS, CABLES, ETC.) IN THE SLEEVES FOR FUTURE USE. THE MAIN LINE SHOULD ALSO BE BURIED FOR FUTURE USE. PAYMENT SHALL BE INCIDENTAL TO THE VARIOUS GRASSING ITEMS.

ERIC N. S. HEE
LICENSED PROFESSIONAL ENGINEER
No. 5292-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Eric N. S. Hee

ENGINEERS SURVEYORS HAWAII, INC.
LICENSE EXPIRATION DATE: 4/30/06

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

# GENERAL NOTES

HALEAKALA HIGHWAY WIDENING, PHASE 2
HANA HIGHWAY TO PUKALANI BYPASS
FED. AID PROJ. NO. NH-037-1(24)

SCALE: AS NOTED DATE: SEP., 2005

SHEET No. 2 OF 3 SHEETS

4

ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
NOTE BOOK
No. DATE

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| FED.ROAD DIST.NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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| HAWAII | HAW. | NH-037-1(24) | 2005 | 5 | 288 |

## MAUI ELECTRIC COMPANY (MECO) NOTES

1. DOT CONTRACTOR SHALL COORDINATE HIS WORK WITH MAUI ELECTRIC COMPANY (MECO).
2. DOT CONTRACTOR SHALL SURVEY AND STAKE-OUT ALL NEW MECO POLE AND ANCHOR LOCATIONS, THIS ITEM OF WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS ITEMS OF WORK.
3. DOT CONTRACTOR SHALL PROVIDE 24-HOUR ACCESS TO ALL NEW POLE LOCATIONS. ACCESS SHALL BE A MINIMUM OF 12 FEET WIDE DIRT ROAD. THIS ITEM OF WORK WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS ITEMS OF WORK.
4. ALL MECO FACILITIES, POLES AND CABLES TAKEN OUT OF SERVICE SHALL BE REMOVED FROM DOT RIGHT-OF-WAY BY MECO.
5. MECO WILL INSTALL NEW ELECTRIC POLES, ANCHORS AND CABLES PER MECO UTILITY AGREEMENT WITH DOT.

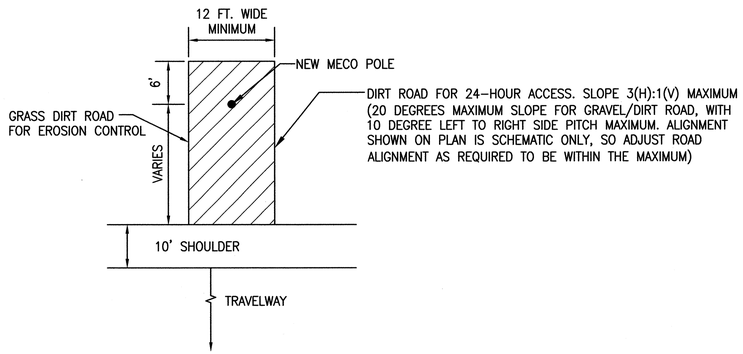
| NEW MECO POLES | | |
|---|---|---|
| POLE NO. | STATION | OFFSET LEFT |
| E15 | 173+65.15 | 81.28 |
| E16 | 175+74.08 | 81.76 |
| E17 | 177+82.13 | 85.12 |
| E18 | 179+89.98 | 91.69 |
| E19 | 181+70.62 | 100.51 |
| E20 | 183+50.70 | 112.05 |
| E21 | 185+87.68 | 131.88 |
| E22 | 188+23.72 | 155.70 |
| E23 | 190+64.77 | 132.52 |
| E24 | 193+06.76 | 114.23 |
| E25 | 195+49.18 | 101.26 |
| E26 | 197+92.11 | 92.68 |
| E27 | 200+35.07 | 89.38 |
| E28 | 202+56.45 | 90.66 |
| E29 | 205+11.09 | 95.69 |
| E30 | 207+65.34 | 108.02 |
| E31 | 210+05.91 | 108.71 |
| E32 | 212+46.77 | 109.44 |
| E33 | 214+87.48 | 112.72 |
| E34 | 217+28.19 | 105.72 |
| E35 | 219+70.93 | 100.04 |
| E36 | 221+94.34 | 129.89 |
| E37 | 224+19.16 | 130.57 |
| E38 | 226+43.64 | 126.26 |
| E39 | 228+68.33 | 118.94 |
| E43 | 240+29.61 | 70.84 |
| E44 | 242+39.55 | 73.04 |
| E45 | 244+49.36 | 74.59 |
| E45A | 246+59.66 | 76.28 |
| E46 | 248+69.55 | 78.28 |
| E47 | 249+72.39 | 79.86 |
| E48 | 252+27.99 | 79.90 |
| E49 | 254+83.82 | 80.08 |
| E50 | 257+39.69 | 79.29 |
| E51 | 259+95.46 | 80.40 |
| E52 | 262+41.55 | 85.60 |
| E53 | 264+75.57 | 80.95 |
| E54 | 267+03.99 | 76.67 |

| NEW MECO ANCHORS | | |
|---|---|---|
| ANCHOR NO. | STATION | OFFSET LEFT |
| E15 | 173+51.81 | 81.46 |
| E22(1) | 188+10.05 | 157.62 |
| E22(2) | 188+23.37 | 169.72 |
| E22(3) | 188+37.56 | 157.15 |
| E28(1) | 202+43.28 | 88.05 |
| E28(2) | 202+70.38 | 88.53 |
| E30 | 207+65.27 | 120.81 |
| E32(1) | 212+33.05 | 107.04 |
| E32(2) | 212+60.43 | 107.11 |
| E33 | 214+87.28 | 123.37 |
| E35 | 219+76.54 | 87.75 |
| E36 | 221+89.98 | 141.02 |
| E37(1) | 224+04.51 | 129.10 |
| E37(2) | 224+33.94 | 128.75 |
| E39 | 228+68.33 | 118.94 |
| E43 | 240+27.69 | 57.87 |
| E46(1) | 248+56.30 | 76.00 |
| E46(2) | 248+83.18 | 76.00 |
| E47 | 249+92.72 | 77.02 |
| E51(1) | 259+82.04 | 79.32 |
| E51(2) | 260.08.91 | 79.32 |

## LEGEND

E15 NEW MECO POLE NUMBER

● POLE TO BE INSTALLED BY MECO, LOCATION TO BE STAKED OUT BY CONTRACTOR (COST SHALL BE INCIDENTAL TO THE VARIOUS ITEMS OF WORK)




PLAN – ACCESS TO NEW MECO POLE FROM TRAVELWAY

NOT TO SCALE

ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

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ERIC N. S. HEE
LICENSED PROFESSIONAL ENGINEER
No. 5292-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Eric N. S. Hee

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SCALE: AS NOTED DATE: SEP., 2005

SHEET No. 3 OF 3 SHEETS