

STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 ENGINEERING DIVISION

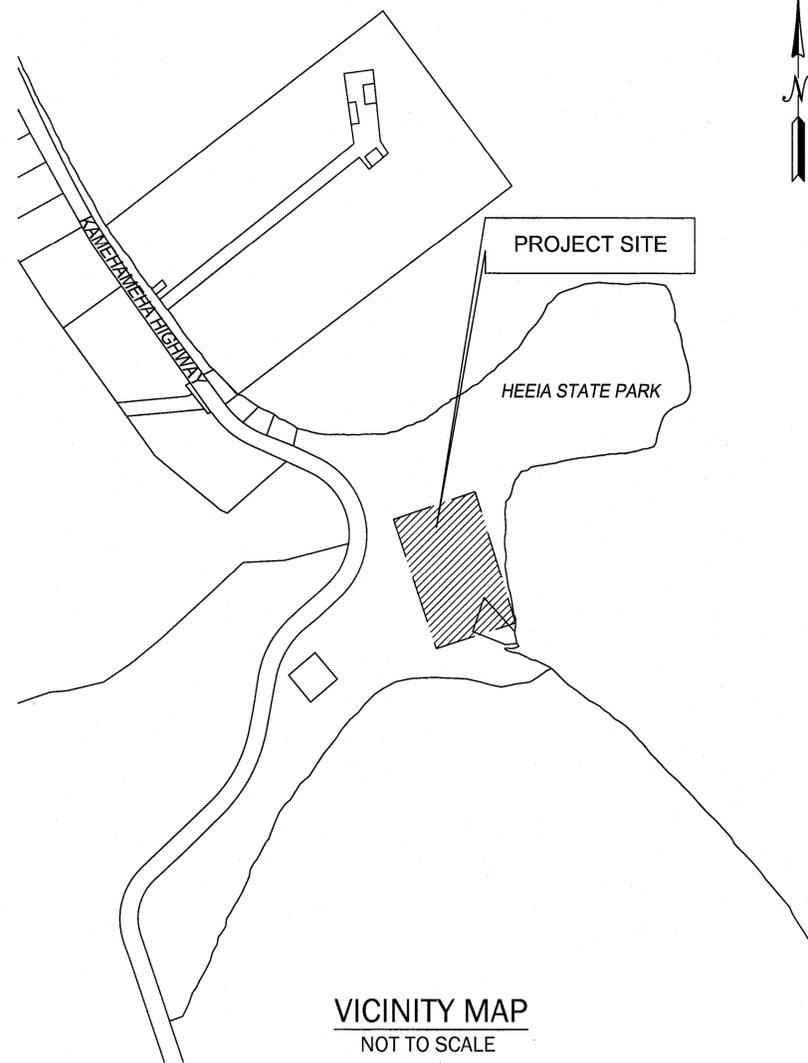
FOR
 DIVISION OF STATE PARKS

JOB NO. F27C793B

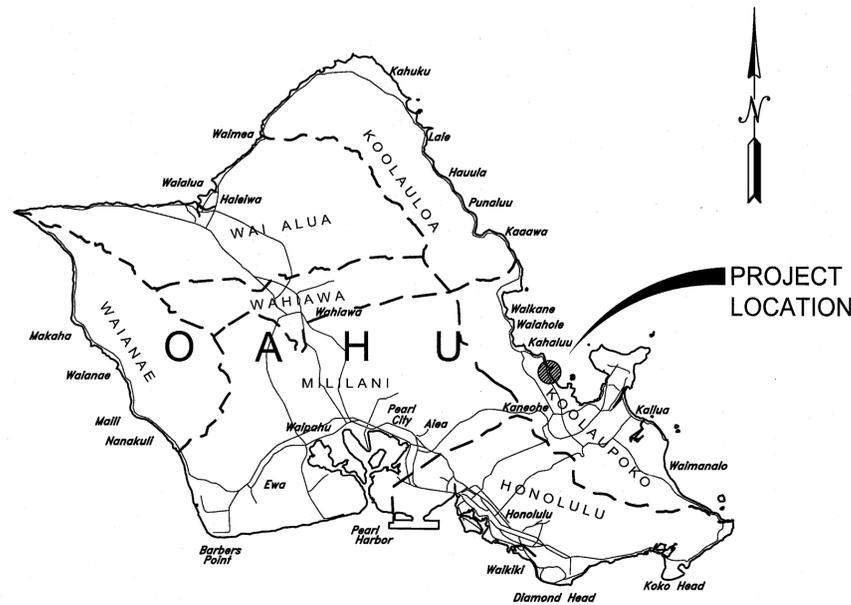
HEEIA STATE PARK REPAIRS TO SERVICE ROAD

KANEOHE, OAHU, HAWAII

TMK: 4-6-005: 009



VICINITY MAP
 NOT TO SCALE



LOCATION MAP
 NOT TO SCALE

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APPROVED:

DATE: 5.4.16

Curt A. Cottrell
 CURT A. COTTRELL
 ADMINISTRATOR
 DIVISION OF STATE PARKS
 DEPARTMENT OF LAND AND NATURAL RESOURCES

APPROVED:

DATE: 5/3/16

Carty S. Chang
 CARTY S. CHANG, P.E.
 CHIEF ENGINEER
 ENGINEERING DIVISION
 DEPARTMENT OF LAND AND NATURAL RESOURCES

DRAWING NO.
 T-1

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING VALVE BOXES, UTILITY MANHOLES, DRAINAGE GRATINGS, CENTERLINE MONUMENTS, ETC. AND SHALL HAVE THEM RAISED TO MEET NEW PAVEMENT GRADE.
2. THE CONTRACTOR SHALL PROVIDE SMOOTH-RIDING CONNECTION TO EXISTING STREETS AND DRIVEWAYS AND AT BEGINNING AND ENDING OF PROJECT LIMITS AS DIRECTED BY THE ENGINEER.
3. ANY PAVEMENT, STRUCTURES, SIGNS AND OTHER APPURTENANCES DAMAGED BY THE CONTRACTOR AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ITS ORIGINAL, OR BETTER CONDITION AT NO COST TO THE STATE.
4. ALL SURVEY MONUMENTS TO BE AFFECTED BY NEW CONSTRUCTION SHALL BE RECONSTRUCTED.
5. ALL PAVEMENT SAW CUTTING WORK SHALL BE CONSIDERED INCIDENTAL TO ASPHALT CONCRETE PAVEMENT, STATE MIX No. IV AND WILL NOT BE PAID FOR SEPARATELY. SAW CUTTING LIMITS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
6. UNPROTECTED PAVEMENT DROPOFFS SHALL NOT BE ALLOWED DURING NON-WORKING HOURS, EXCEPT WHERE APPROVED BY THE ENGINEER IN WRITING.

CONSTRUCTION NOTES:

1. ALL CONSTRUCTION WORK IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PUBLICATIONS "HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2005" AND ITS AMENDMENTS AND "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION DATED SEPTEMBER 1984" AS AMENDED OF THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU AND THE COUNTIES OF KAUA'I, MAUI AND HAWA'I UNLESS OTHERWISE SPECIFIED ON THE PLANS OR SPECIFICATIONS.
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 AT NO COST TO THE STATE. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE RESPECTIVE UTILITY COMPANIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROPOSED ADJUSTMENTS OR OTHER DISCREPANCY WITH THE PLANS.
3. THE CONTRACTOR SHALL NOT INTERRUPT ANY EXISTING UTILITY SERVICE UNLESS WITH WRITTEN PERMISSION FROM THE ENGINEER.
4. ALL WORK CALLED FOR ON THE PLANS AND NOT ITEMIZED IN THE PROPOSAL AND ALL WORK NOT CALLED FOR BUT REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT, SHALL BE CONSIDERED INCIDENTAL.
5. THE PARK SHALL REMAIN OPEN DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL INSTALL ADEQUATE TEMPORARY BARRICADES AND WARNING SIGNS TO PROTECT THE PUBLIC DURING THE CONSTRUCTION PERIOD. PROVIDE AND MAINTAIN A SAFE PEDESTRIAN ACCESS TO THE PARKING AREA AND TO THE PARK FACILITIES THROUGHOUT THE CONSTRUCTION PERIOD, AND SHALL BE IN CONFORMANCE WITH ADAAG 4.1.1(4) AND 4.3.

CONSTRUCTION NOTES – SOLID WASTE:

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 MATERIAL. ANY MATERIAL BROUGHT TO THE COUNTY LANDFILLS WILL BE SUBJECT TO THE INSTITUTED TIPPING FEE SYSTEM, WITH NO EXCEPTIONS OR EXEMPTIONS.

HISTORICAL PRESERVATION NOTES:

1. SHOULD HISTORIC REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATIONS OF SHELL OR CHARCOAL BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL CEASE IMMEDIATELY IN THE IMMEDIATE VICINITY OF THE FIND. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PLANNING DEPARTMENT AND STATE HISTORIC PRESERVATION DIVISION AT (808) 742-7033, WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND THE APPROPRIATE MITIGATION MEASURES, IF NECESSARY.

PUBLIC HEALTH, SAFETY AND CONVENIENCE NOTES:

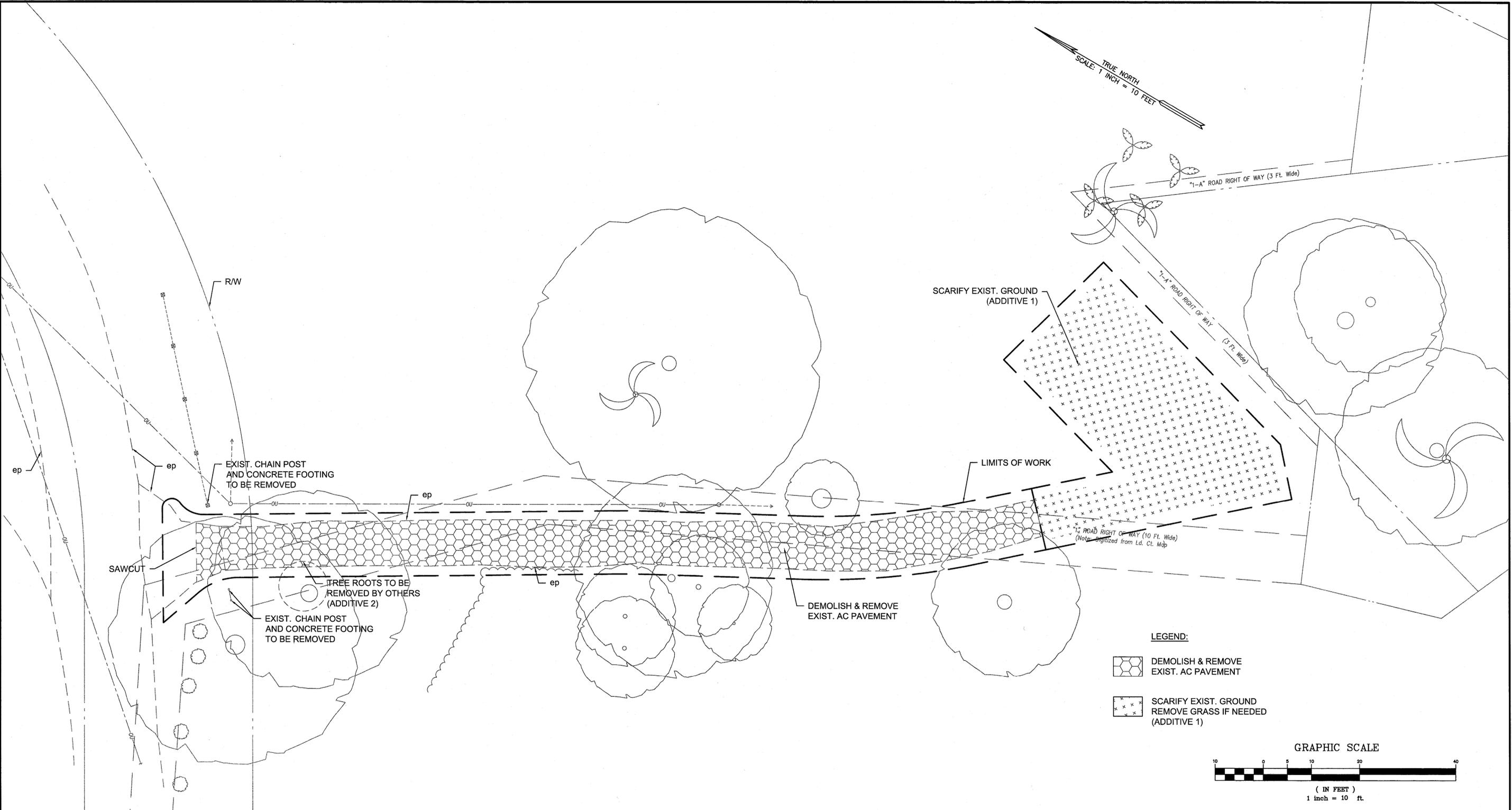
1. CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
2. THE CONTRACTOR AT HIS/HER EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM RUBBISH, DUST, NOISE, EROSION, ETC. THE WORK SHALL BE DONE IN CONFORMANCE WITH THE AIR AND WATER POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
3. NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SILT OR DEBRIS IN ANY FORM TO FALL SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATION OCCUR, THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC.
5. THE CONTRACTOR'S ATTENTION IS DIRECTED TO CHAPTER 46, PUBLIC HEALTH REGULATIONS, DEPARTMENT OF HEALTH, STATE OF HAWAII, "COMMUNITY NOISE CONTROL," IN WHICH MAXIMUM PERMISSIBLE NOISE LEVELS HAVE BEEN SET. IF THE CONSTRUCTION WORK REQUIRES A PERMIT FROM THE DIRECTOR OF HEALTH, THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 46 AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR THE CONSTRUCTION ACTIVITIES. APPLICATION AND INFORMATION ON VARIANCES ARE AVAILABLE FROM THE ENVIRONMENTAL PROTECTION AND HEALTH SERVICES DIVISION, 1250 PUNCHBOWL ST., HONOLULU, HI 96813 OR BY TELEPHONE (548-6455).

ABBREVIATIONS

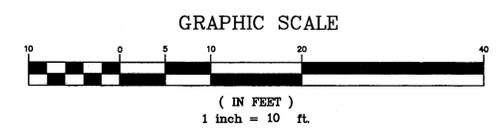
A.C.	ASPHALTIC CONCRETE	NO.	NUMBER
CY	CUBIC YARD	O.C.	ON CENTER
CL	CENTERLINE	O/S	OFFSET
DET.	DETAIL	P, PAV'T	PAVEMENT
DIA.	DIAMETER	RT.	RIGHT
DWC.	DRAWING	R/W	RIGHT OF WAY
EL., ELEV	ELEVATION	S	SLOPE
ep	EXIST. EDGE OF PAVEMENT	SHT	SHEET
EP	NEW EDGE OF PAVEMENT	SF	SQUARE FEET
EXIST., EX	EXISTING	STA.	STATION
FG	FINISHED GROUND	STD.	STANDARD
FT.	FEET, FOOT	TYP.	TYPICAL
HAR	HAWAII ADMINISTRATIVE RULES	T.M.K.	TAX MAP KEY
HORIZ.	HORIZONTAL	VB	VALVE BOX
MAX.	MAXIMUM	VERT	VERTICAL
MIN.	MINIMUM	WL	WATER LINE
MOS.	MONTHS	WV	WATER VALVE

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
GENERAL NOTES					
DESIGNED: MA		SUBMITTED: <i>[Signature]</i>			
DRAWN: MA		DATE: MAY 2016			
CHECKED: VS		SCALE: AS SHOWN			
APPROVED: <i>[Signature]</i>		DATE: MAY - 5 2016		DRAWING NO. C-1	
CHIEF ENGINEER		DATE			

TRUE NORTH
SCALE: 1 INCH = 10 FEET

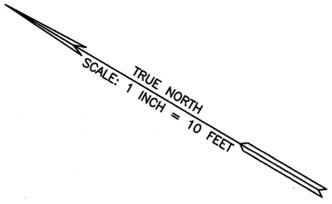


- LEGEND:**
- DEMOLISH & REMOVE EXIST. AC PAVEMENT
 - SCARIFY EXIST. GROUND REMOVE GRASS IF NEEDED (ADDITIVE 1)



"1-B" ROAD RIGHT OF WAY (10 Ft. Wide)
Note: Digitized from Ld. Ct. Map

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
DEMOLITION PLAN					
DESIGNED: MA			SUBMITTED: <i>[Signature]</i>		
DRAWN: MA			DATE: MAY 2016		
CHECKED: <i>[Signature]</i>			SCALE: AS SHOWN		
APPROVED: <i>[Signature]</i>			DRAWING NO. C-2		
CHIEF ENGINEER			MAY - 5 2016 DATE		



"1-A" ROAD RIGHT OF WAY (3 Ft. Wide)

"1-A" ROAD RIGHT OF WAY (3 Ft. Wide)

TMK: 4-6-005: 004

END PROJECT
STA. 2+31

BEGIN PROJECT
STA. 0+00

SERVICE ROAD CL

"1" ROAD RIGHT OF WAY (10 Ft. Wide)
(Note: Digitized from Ld. Ct. Map)

"1" ROAD RIGHT OF WAY (10 Ft. Wide)
(Note: Digitized from Ld. Ct. Map)

Sta. 0+91.75
R=200'

Sta. 0+99.90
R=200'

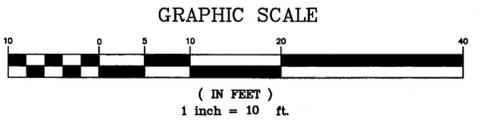
Sta. 1+30.91
R=150'

Sta. 1+65.94
R=150'

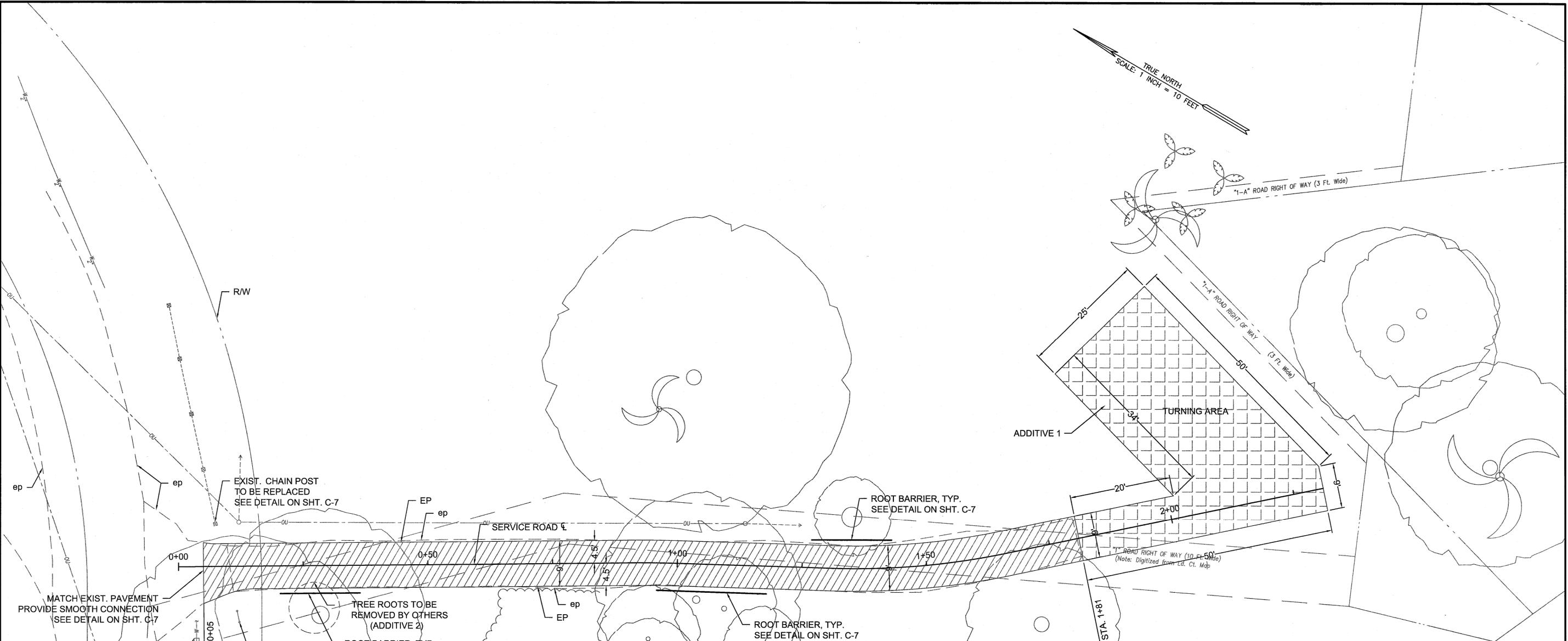
CURVE DATA

	①	②
Δ	2°20'02"	13°22'44"
Δ/2	1°10'01"	6°41'22"
R	200.00'	150.00'
T	4.07'	17.59'
L	8.15'	34.95'
Lc	8.15'	35.03'

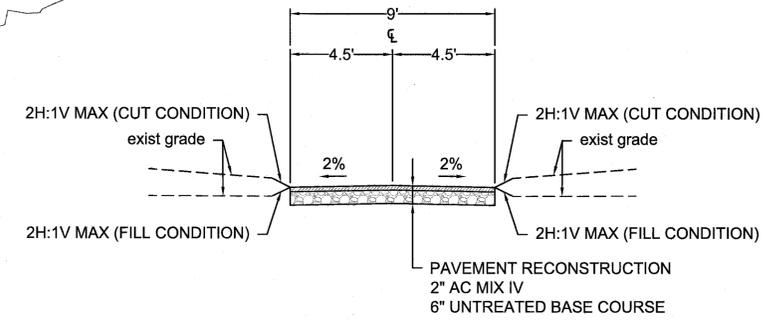
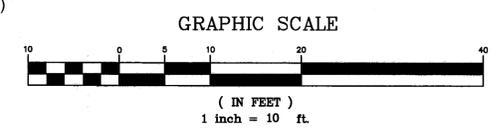
LOT 1946-C
(Map 231)



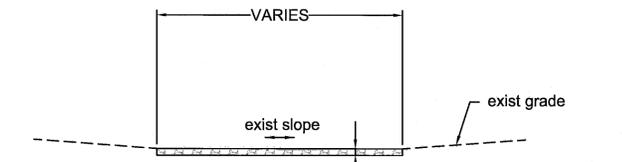
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
ALIGNMENT PLAN					
DESIGNED: MA		SUBMITTED: <i>VS</i>			
DRAWN: MA		DATE: MAY 2016			
CHECKED: VS		SCALE: AS SHOWN			
APPROVED: <i>Cyly</i>		DATE: MAY - 5 2016		DRAWING NO. C-3	
CHIEF ENGINEER					



- LEGEND:**
- PAVEMENT RECONSTRUCTION
2" AC MIX IV
6" UNTREATED BASE COURSE
 - PAVEMENT TREATMENT
SCARIFY EXIST. GROUND
3" UNTREATED BASE COURSE
TO BE COMPACTED
(ADDITIVE 1)

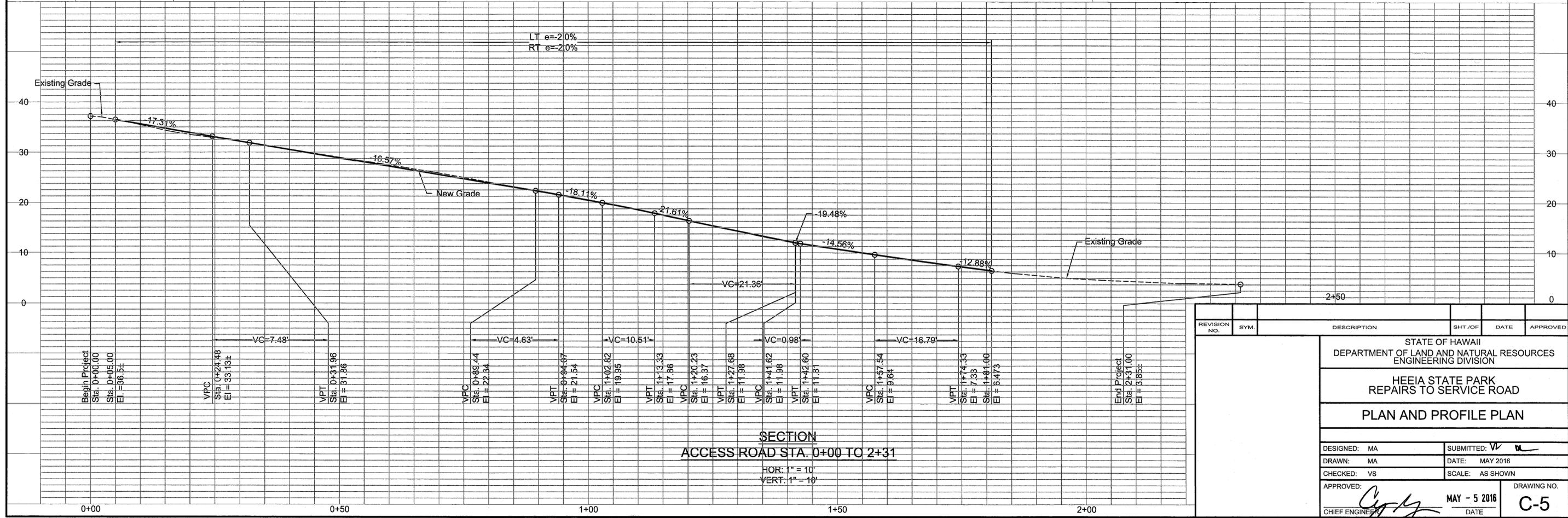
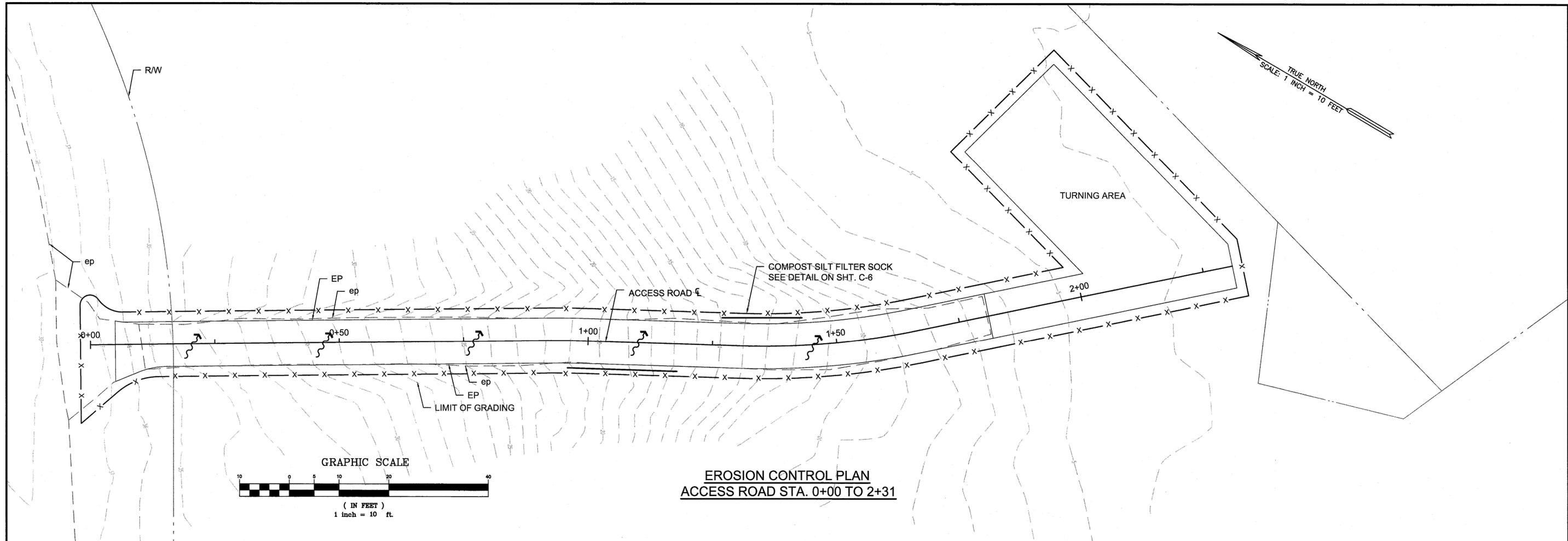


**TYPICAL SECTION
PAVEMENT RECONSTRUCTION
STA. 0+30 TO STA. 1+80
Scale: 1" = 4'**



**TYPICAL SECTION
PAVEMENT TREATMENT
Scale: NTS**

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STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
ROADWAY PLAN					
DESIGNED:	MA	SUBMITTED:	[Signature]		
DRAWN:	MA	DATE:	MAY 2016		
CHECKED:	VS	SCALE:	AS SHOWN		
APPROVED:	[Signature]		DRAWING NO.	C-4	
CHIEF ENGINEER:	MAY - 5 2016		DATE		



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
PLAN AND PROFILE PLAN					
DESIGNED:	MA	SUBMITTED:	VR	DATE:	MAY 2016
DRAWN:	MA	CHECKED:	VS	SCALE:	AS SHOWN
APPROVED:	<i>[Signature]</i>			DATE:	MAY - 5 2016
CHIEF ENGINEER				DRAWING NO.	C-5

EROSION CONTROL NOTES

TEMPORARY EROSION CONTROL NOTES:

1. FOLLOW SEQUENCE OF OPERATION AS RECOMMENDED ON PAGES 23 AND 24 OF THE "RULES RELATING TO SOIL EROSION STANDARDS AND GUIDELINES", APRIL 1999, OF THE DEPARTMENT OF PLANNING AND PERMITTING, CITY & COUNTY OF HONOLULU.
2. THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF LAND TO BE EXPOSED AT ANY TIME.
3. EXPOSED AREAS THAT ARE NOT AT FINAL GRADE AND ARE EXPECTED TO BE EXPOSED FOR MORE THAN 30 DAYS SHALL BE PLACED WITH A VEGETATIVE COVER OR BE MULCHED (AT A RATE OF 45 CUBIC FEET PER 1,000 SQUARE FEET) IN ORDER TO PREVENT EROSION AND SILT RUNOFF.
4. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN PLACE AND ESTABLISHED.

PERMANENT EROSION CONTROL MEASURES:

1. ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED.

BMP NOTES:

TEMPORARY EROSION CONTROL MEASURES:

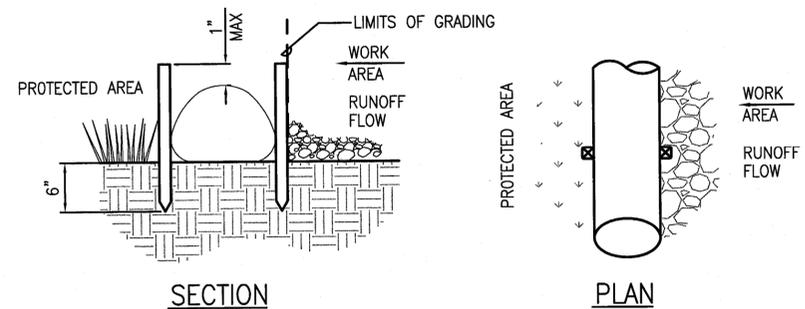
1. PRIOR TO CLEARING LAND FOR GRADING, TEMPORARY EROSION CONTROL MEASURES, SUCH AS SILT FENCES SHALL BE INSTALLED.
2. OPENING AND CLEARING OF LAND FOR GRADING SHALL BE PERFORMED INCREMENTALLY TO MINIMIZE EROSION POTENTIAL.
3. AREAS NOT WITHIN THE LIMITS OF GRADING SHALL REMAIN VEGETATED DURING GRADING OPERATIONS.
4. SILT WHICH HAS ACCUMULATED ON SILT FENCE SHALL BE REMOVED AND DISPOSED OF ON A BI-WEEKLY BASIS.
5. WHEN CLEARED OR GRUBBED AREAS ARE NOT TO BE GRADED OR DISTURBED FOR 30 DAYS OR MORE, SEED, PLANT OR HYDROSEED TEMPORARY VEGETATION.
6. THE CONTRACTOR'S EQUIPMENT STORAGE AREAS SHALL BE PROTECTED THROUGH THE USE OF EARTH BERMS AND/OR ABSORPTION MATERIALS TO PREVENT POLLUTANTS FROM DISCHARGING INTO STATE WATERS. THE CONTRACTOR SHALL INSPECT AND MAINTAIN STORAGE AREAS.

SEQUENCE FOR SEDIMENT CONTROL:

1. INSTALL SILT FENCE OR COMPOST SILT FILTER SOCK.
2. COMMENCE GRADING OPERATIONS.
3. GROUND COVER, SUCH AS GRASSING, MULCHING OR NETTING TO BE INSTALLED IMMEDIATELY AFTER FINAL GRADES ARE ESTABLISHED.

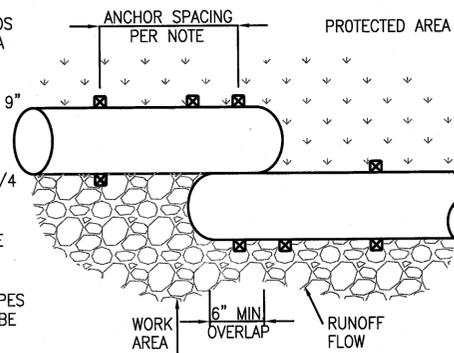
LEGEND:

- x — x — COMPOST SILT FILTER SOCK, SEE DETAIL
- — — — — LIMITS OF GRADING
- ~ ~ ~ ~ ~ EXIST. APPROXIMATE FLOW DIRECTION



NOTES:

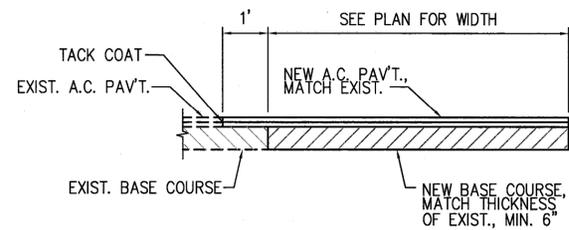
1. COMPOST SHALL NOT CONTAIN BIOSOLIDS AND SHOULD BE CONSISTENT WITH EPA GUIDELINES.
2. COMPOST SILT FILTER SOCK SHALL BE 9" IN DIAMETER.
3. WOOD ANCHOR STAKES SHALL HAVE A NOMINAL CLASSIFICATION OF 3/4 BY 3/4 INCH AND MIN. LENGTH OF 16".
4. NO REBAR OR OTHER METAL RODS ARE TO BE USED AS ANCHORS.
5. ANCHOR SPACING TO BE 10' FOR SLOPES LESS THAN 2:1. ANCHOR SPACING TO BE 5' FOR SLOPES AT 2:1.



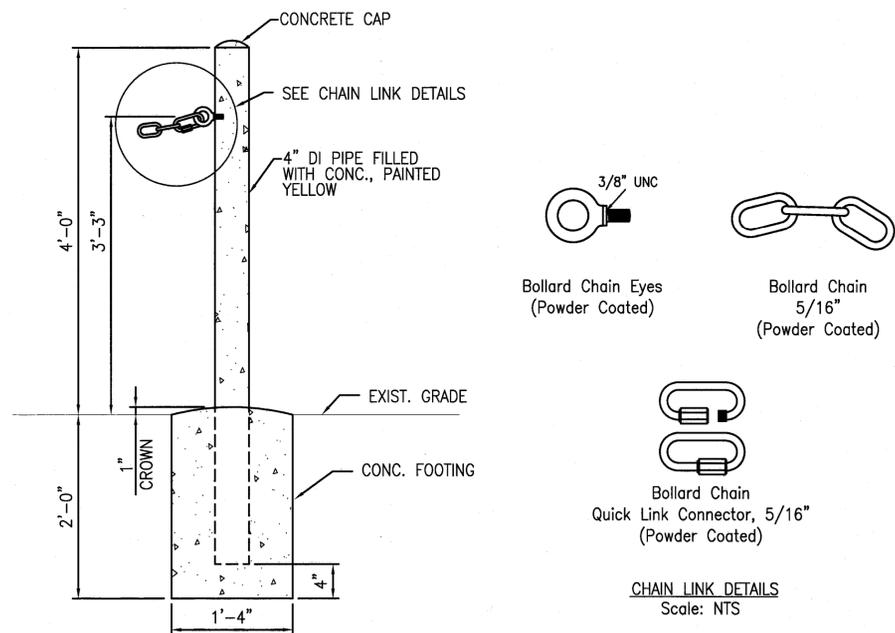
OVERLAP

1
C-6 COMPOST SILT FILTER SOCK
SCALE: 1"=1'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
EROSION CONTROL NOTES					
DESIGNED: MA	SUBMITTED: <i>V ML</i>				
DRAWN: MA	DATE: MAY 2016				
CHECKED: VS	SCALE: AS SHOWN				
APPROVED: <i>[Signature]</i>	MAY - 5 2016		DRAWING NO. C-6		
CHIEF ENGINEER	DATE				

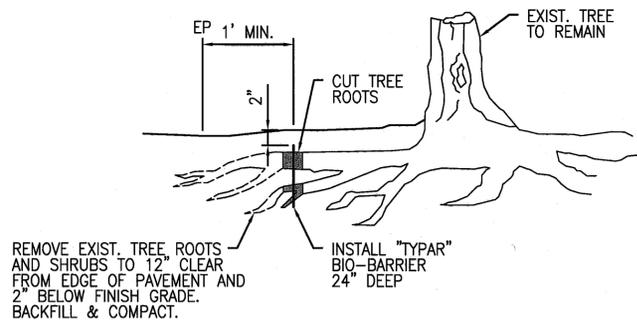


CONNECTION DETAIL – NEW A.C. PAVT.
SCALE: 1/2" = 1'-0"



BOLLARD DETAIL
SCALE: 1" = 1'-0"

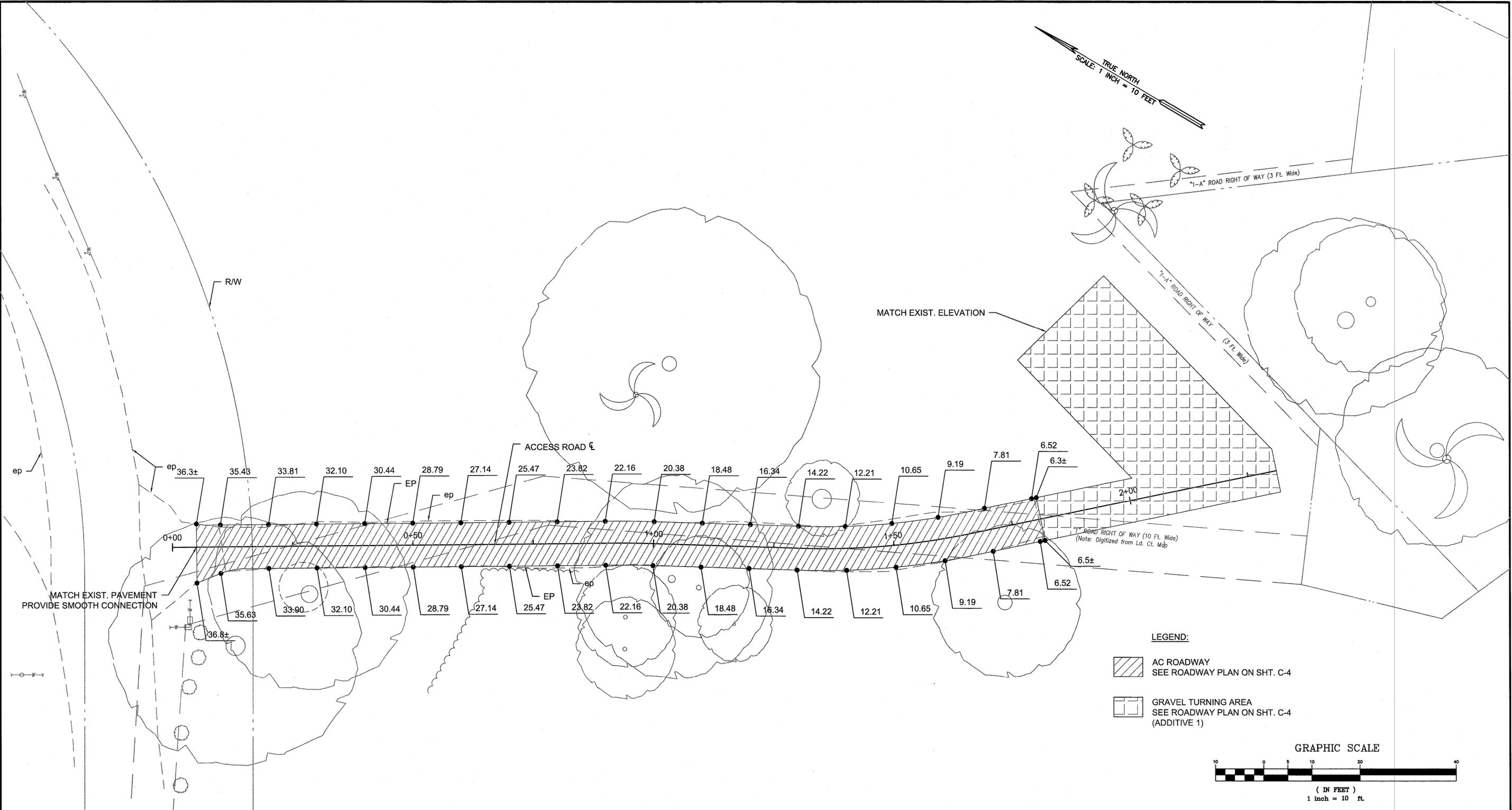
NOTE:
CONTRACTOR TO HIRE AN ARBORIST
TO ASSESS TREE HEALTH FOR ALL
ROOT CUTTINGS.



ROOT BARRIER DETAIL
SCALE: 1" = 1'-0"

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STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
MISCELLANEOUS DETAILS					
DESIGNED: MA			SUBMITTED: <i>[Signature]</i>		
DRAWN: MA			DATE: MAY 2016		
CHECKED: VS			SCALE: AS SHOWN		
APPROVED: <i>[Signature]</i> CHIEF ENGINEER			MAY - 5 2016 DATE		DRAWING NO. C-7

TRUE NORTH
SCALE: 1 INCH = 10 FEET

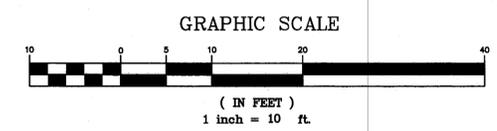


MATCH EXIST. PAVEMENT
PROVIDE SMOOTH CONNECTION

MATCH EXIST. ELEVATION

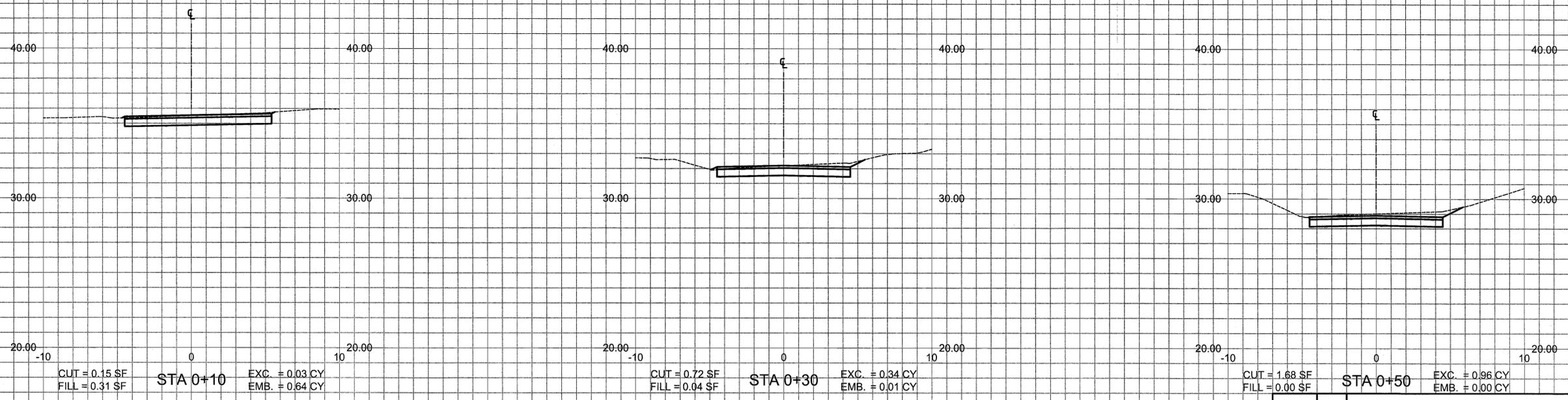
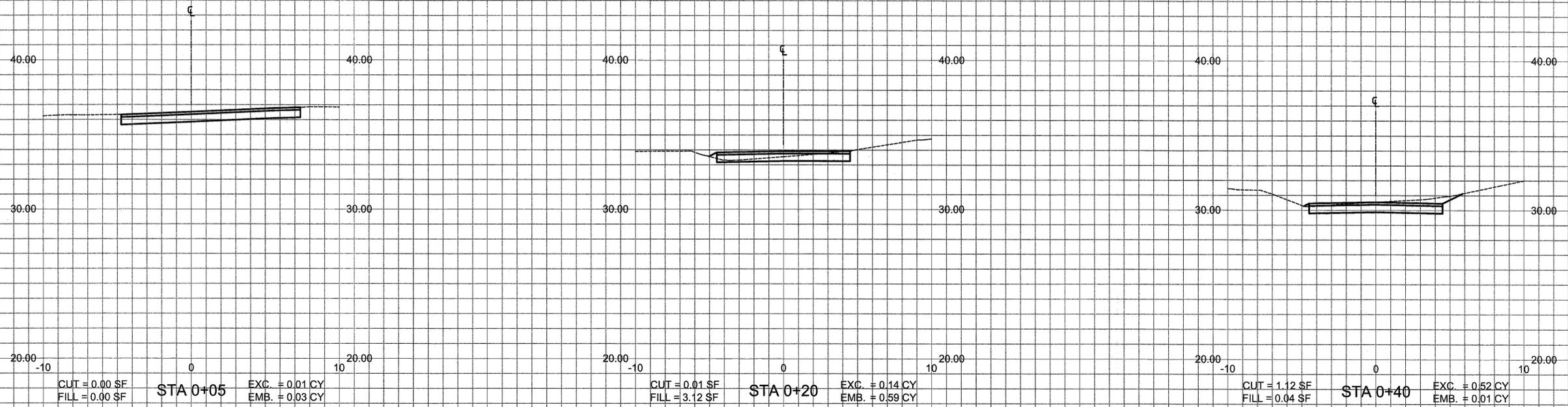
LEGEND:

-  AC ROADWAY
SEE ROADWAY PLAN ON SHT. C-4
-  GRAVEL TURNING AREA
SEE ROADWAY PLAN ON SHT. C-4
(ADDITIVE 1)

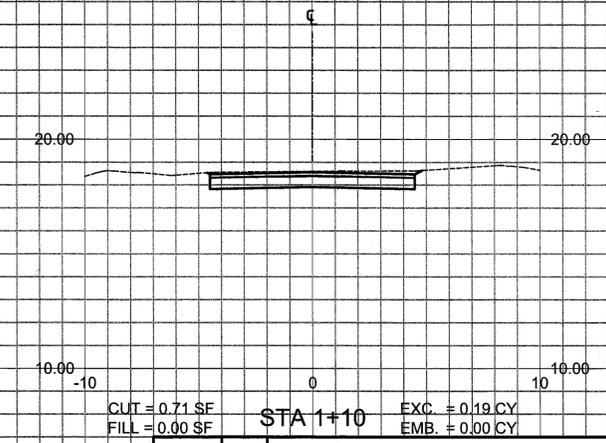
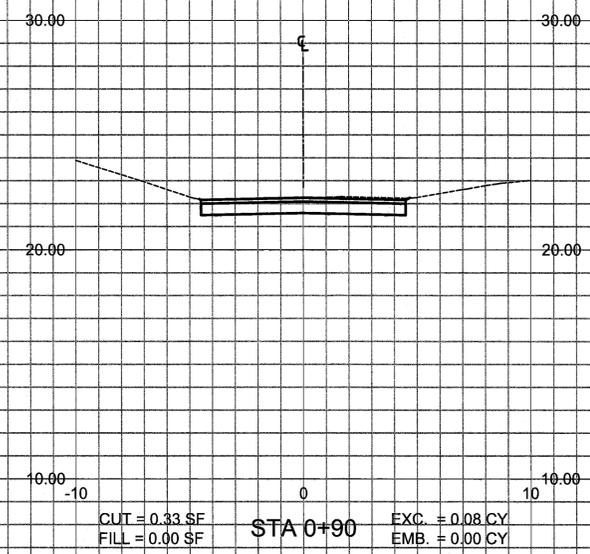
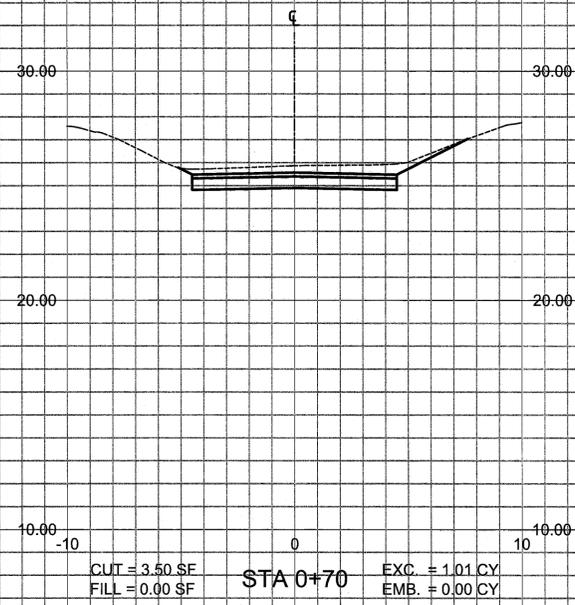
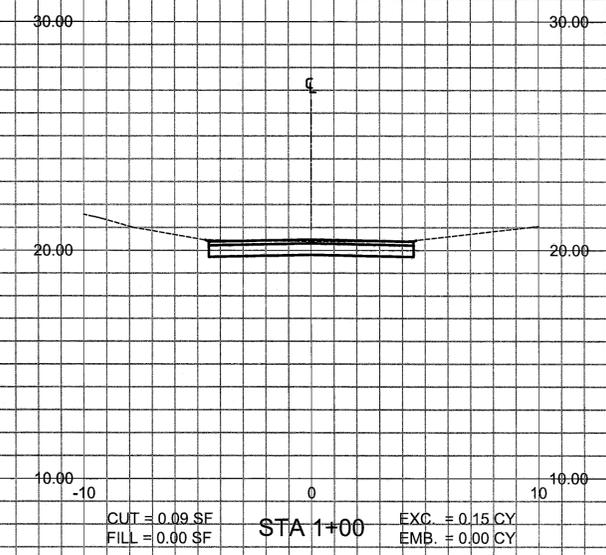
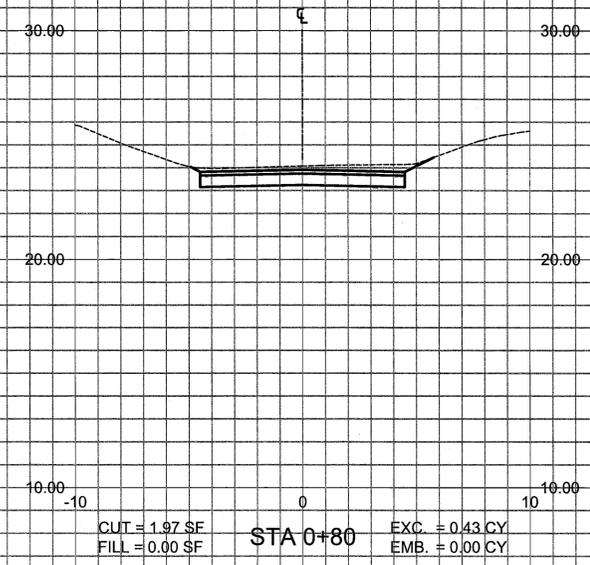
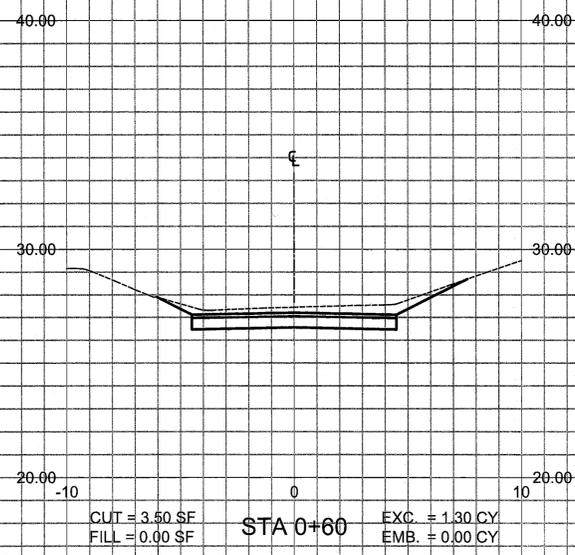


1" ROAD RIGHT OF WAY (3 FL. Wide)
Note: Digitized from Ld. Ct. Map

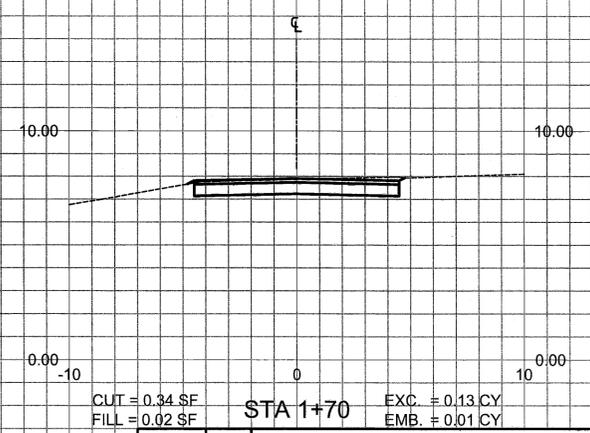
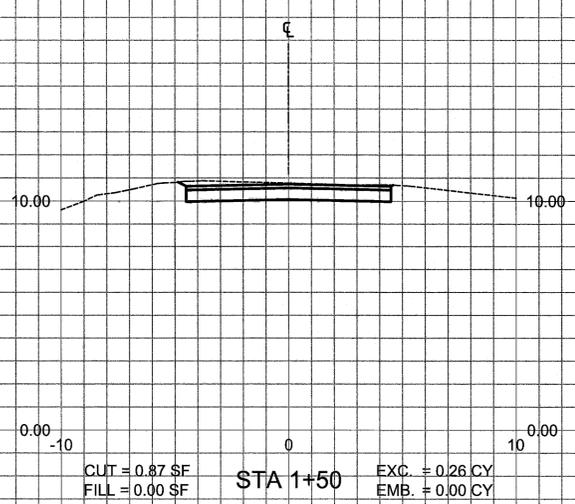
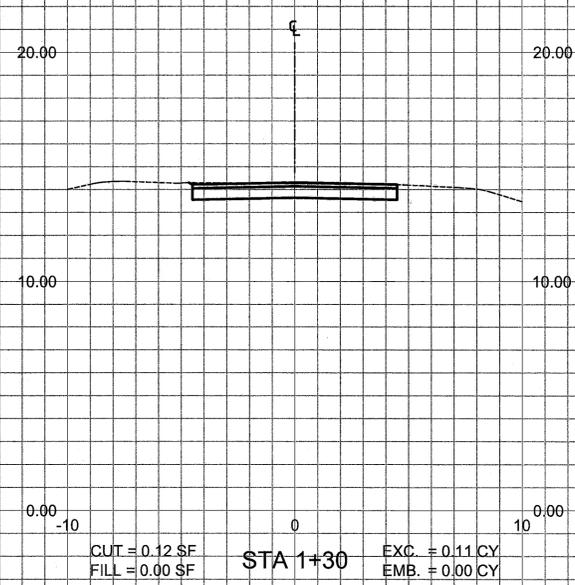
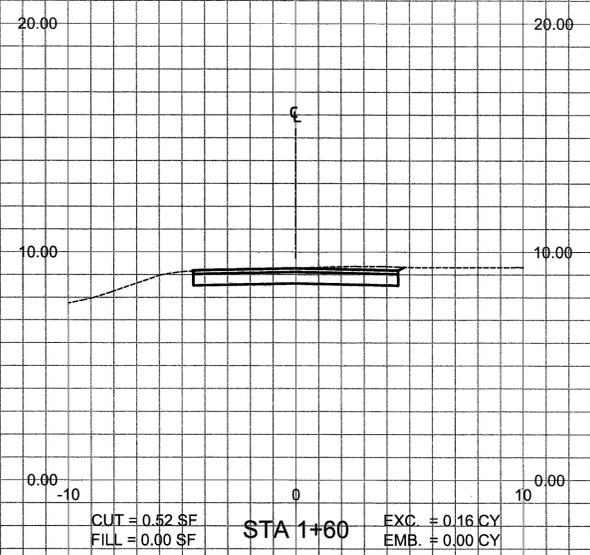
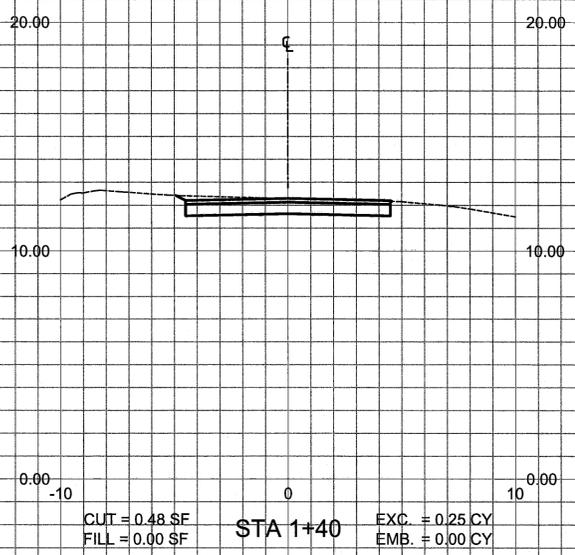
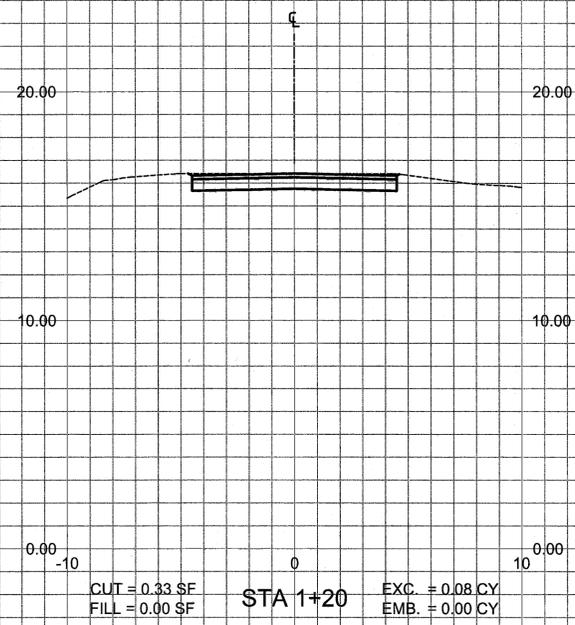
REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
SPOT ELEVATION PLAN					
DESIGNED: MA			SUBMITTED: <i>[Signature]</i>		
DRAWN: MA			DATE: MAY 2016		
CHECKED: VS			SCALE: AS SHOWN		
APPROVED: <i>[Signature]</i>			DRAWING NO. C-8		
CHIEF ENGINEER			DATE: MAY - 5 2016		



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
X-SECTION PLAN - 1					
DESIGNED: MA			SUBMITTED: <i>[Signature]</i>		
DRAWN: MA			DATE: MAY 2016		
CHECKED: VS			SCALE: AS SHOWN		
APPROVED: <i>[Signature]</i>			DATE: MAY - 5 2016		DRAWING NO. C-9
CHIEF ENGINEER					



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
X-SECTION PLAN - 2					
DESIGNED: MA			SUBMITTED: <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
DRAWN: MA			DATE: MAY 2016		
CHECKED: VS			SCALE: AS SHOWN		
APPROVED:			DATE: MAY - 5 2016	DRAWING NO. C-10	
CHIEF ENGINEER					



REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
X-SECTION PLAN - 3					
DESIGNED: MA			SUBMITTED: <i>[Signature]</i>		
DRAWN: MA			DATE: MAY 2016		
CHECKED: VS			SCALE: AS SHOWN		
APPROVED: <i>[Signature]</i>			DATE: MAY - 5 2016	DRAWING NO. C-11	
CHIEF ENGINEER					

20.00 20.00

10.00 10.00

0.00 0.00

20.00 20.00

10.00 10.00

0.00 0.00

TOTAL			
CUT = 16.71 SF	EXC. = 6.12 CY		
FILL = 3.58 SF	EMB. = 1.28 CY		

CUT = 0.34 SF	EXC. = 0.01 CY
FILL = 0.03 SF	EMB. = 0.00 CY

STA 1+80

CUT = 0.00 SF	
FILL = 0.00 SF	

STA 1+81

REVISION NO.	SYM.	DESCRIPTION	SHT./OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION					
HEEIA STATE PARK REPAIRS TO SERVICE ROAD					
X-SECTION PLAN - 4					
DESIGNED: MA			SUBMITTED: <i>[Signature]</i>		
DRAWN: MA			DATE: MAY 2016		
CHECKED: VS			SCALE: AS SHOWN		
APPROVED: <i>[Signature]</i>			DATE: MAY - 5 2016	DRAWING NO. C-12	
CHIEF ENGINEER					